PLANNING BOARD

Tuesday, November 12, 2024 at 4:30 PM
Room 24 (Ground 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://www.portlandmaine.gov/602/Agendas-Minutes 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
Allow your computer to install the free Zoom app to get the best meeting experience. If you are not able to attend either in person or via Zoom, a recording will be available in the **Agenda Center** following the next meeting.

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Webinar ID: 815 2557 8980
International numbers available: https://portlandmaine-gov.zoom.us/u/kcTV6u8wWt

AGENDA:

WORKSHOP - 4:30 PM

i. Institutional Overlay Zone; 716 Stevens Avenue; University of New England, Applicant. The Planning Board will hold a hybrid workshop to consider a new institutional overlay zone and zoning map amendment for the University of New England's Portland Campus. The subject property totals approximately 75 acres, and is located within the R-3 and R-5 Residential zones, the I-L and I-H Industrial zones, and the B-2 Community Business zone. A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number ZN-003059-2024.

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

PUBLIC HEARING - 7:00 PM

1. COMMUNICATION ITEM

i. Monthly Communication - October 2024

2. REPORT OF ATTENDANCE AT THE MEETING HELD ON 10/22/2024.

Workshop
1 Hope Ave: Barker, Chann, Silk, Smith, and Stanley present. Murphy recused, Mazer absent.

Public Hearing
MSHA Letter: Barker, Chann, Murphy, Silk, Smith, and Stanley present. Mazer absent.
400 Commercial Street: Barker, Chann, Murphy, Silk, Smith, and Stanley present. Mazer absent.
2 Riverton Park: Chann, Murphy, Silk, Smith, and Stanley present. Barker recused, Mazer absent.

3. REPORTS OF DECISIONS AT THE MEETING HELD ON 10/22/2024.

i. Letter to Maine State Housing. Silk motioned, and Stanley seconded a motion to have the Planning Board Chair sign the letter drafted by staff and amended by the Board, and sent to the Maine State Housing Authority, requesting reconsideration of their funding stipulation for 165 Lambert Street/622 Auburn Street, requiring a parking ratio of 0.75 spaces per unit. Vote 6-0 (Mazer absent).

ii. Major Site Plan; 400 Commercial Street; 400 Commercial Street, LLC, Applicant. Stanley motioned, and Silk seconded a motion to waive Technical Manual Sec. 1.10.3 to reduce the minimum driveway aisle width to 22 feet. Vote 6-0, Mazer absent. Stanley motioned, and Silk seconded a motion to waive Site Plan Standard Sec. 14.6.2.C requires site and parking lot landscaping. Vote 6-0, Mazer absent. Stanley motioned, and Silk seconded a motion to approve the major site plan application. Vote 6-0, Mazer absent. Stanley motioned, and Silk seconded a motion to adopt the draft approval letter as amended as the Planning Board's

decision, and to authorize the Board Chair to sign the approval letter as drafted and amended. Vote 6-0, Mazer absent.

iii. Major Site Plan Amendment; 2 Riverton Drive; Portland Housing Authority, Applicant. Chann motioned and Murphy seconded a motion to waive Technical Manual Sec. 1.14 to allow for the provision of no EV-ready off-street parking. Vote 5-0, Barker recused, Mazer absent. Chann motioned, and Murphy seconded a motion to approve the major site plan amendment. Vote 5-0, Barker recused, Mazer absent. Chann motioned, and Murphy seconded a motion to adopt the draft approval letter as amended as the Planning Board's decision, and to authorize the Board Chair to sign the approval letter as drafted and amended. Vote 5-0, Barker recused, Mazer absent

4. NEW BUSINESS

i. Remand of Level III Site Plan and Subdivision; 19 Willis Street/33 Montreal Street; 37 Montreal, LLC, Applicant. The Planning Board will hold a hybrid public hearing to consider reopening application PL-000807-2019 in order to make additional findings of fact pursuant to orders from the Maine Supreme Judicial Court and Maine Superior Court related to height, setback, and design review requirements in connection with the approved application for a four-story, 12-unit residential building at 19 Willis Street. The development site is located within an R-6 zone. The application associated with the remand order, PL-000807-2019, was originally approved by the Planning Board at its December 14, 2021 meeting. No public comment will be taken for this item.

ii. Conditional Use; 465 Congress Street; Monument Hotel, LLC, Applicant. The Planning Board will hold a hybrid public hearing to consider a hotel inclusionary zoning application to facilitate the redevelopment of the former office building at 465 Congress Street into a 92-room hotel with restaurant and bar. The subject property totals 19,477 square feet and is located in the B-3 Downtown Business zone, and within the Congress Street Historic District. A project and plan summary are available for viewing on the city's CSS Portal (https://css.portlandmaine.gov/) by referencing Plan Number CU-003095-2024.

iii. Major Site Plan and Conditional Use; 100 W Commercial Street; New Yard, LLC, Applicant. The Planning Board will hold a hybrid public hearing to consider a proposal to construct a new 45,000 square foot vessel storage and maintenance building (Building H) within the Portland Yacht Services property. The subject property totals 17.77 acres, is zoned Waterfront Port Development Zone (WPDZ), and is 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-003033-2024 and CU-003037-2024.

Project Review Comments: Round 1
Comments Distributed on: October 17, 2024

Project Title: University of New England Institutional Overlay Zone (UNE IOZ)
Project File No.: ZN-003059-2024
Project Address: 716 Stevens Avenue
Project Planner: Natasha Kypfer, Senior Planner

Dear Caitlin Suhr, Alan Thibeault, and Mary Costigan:

We have completed our initial review of your application (ZN-003059-2024), a Map and Text Amendment, proposing a new Institutional Overlay Zone (IOZ) for the University of New England (UNE) at approximately 684 Stevens Avenue, proposed to be zoned: B-2 Community Business. This development triggers review by the Planning Board and City Council, and is subject to the following regulations: Amendments – Article 1.10 and Institutional Overlay (IOZ) – Article 8.5.

An overview of the City's review can be viewed in the below worksheet(s) and review comments.

Next Steps
Please review all feedback and reach out to me, as the lead project review manager, if you have any questions. We will look forward to our upcoming meeting, scheduled for Tuesday, October 22nd at 11AM. Further, we have preliminarily scheduled your item for a workshop before the Planning Board for Tuesday, November 12th.

Sincerely,

Natasha M. Kypfer

Natasha Kypfer
Senior Planner

Worksheet(s) Table Legend:
Provided on Page # = *Requirement Met*
Partially Provided on Page # = *Requirement Not Fully Satisfied*
Not Provided = *Requirement Not Satisfied*

Institutional Development Plan (IDP): Content Land Use Code, Section 8.5.4.C					
Category	**Sub-category**	**Requirement**	**Sub-requirement**	**Location, IDP Page #**	**Review Comments: Overview & Updates Requested**
1. Context information	*a. The institution's adopted mission, vision, or purpose statement*			Pages 4-5	As stated and provided for on pages 4-5, UNE is guided by its Mission, Vision, and Core Values, as well as its own strategic plan ("Our World, Our Future").
	b. A summary of relevant baseline data on the institution, including:	*i. A neighborhood context plan.*		Pages 11-12, Figure 1.1	The UNE's approximately 72-acre campus is bounded by Warren Ave., Bishop St. Extension, and Bishop St. to the north; Stevens Ave. to the east; and, Evergreen Cemetery and CMP's Utility Corridor to the south, as depicted in provided Figure 1.1.
		ii. An inventory of current programs and services.		Page 7-9	The UNE Portland campus houses three academic colleges: the Westbrook College of Health Professions (WCHP), the College of Dental Medicine, and the College of Graduate and Professional Studies. In addition, UNE operates two health clinics on campus: the Oral Health Center and the Dental Hygiene Center, as well as UNE North, the Center for Global Humanities, and cultural institutions that include the Maine Women Writers Collection and the UNE Art Gallery.
		iii. A current census of the number of people using the institution (e.g., employees, enrollment, patients), with an indication of maximums and minimums over time.		Page 18, Table 1.3	Table 1.3 titled "FTE Student, Faculty, and Professional Staff Data", includes population data from 2016-2023 for student, faculty and professional staff, and campus population. Please also add an additional column to Table 1.3 that includes patient figures visiting the campus (for example, dental patients to the Oral

				Health Center), further, consider incorporating part-time data, as the provided table only documents FTE.
		iv. An inventory and/or plan of all existing property holdings within the main campus and within the City of Portland, including an indication of functional land use links between off-campus properties and the main campus (e.g. remote parking).	Page 17, Table 1.2	Table 1.2 titled "UNE Owned Properties in the City of Portland", documents UNE's total of 17 parcels, the majority of which are contiguous in the campus core, while several are outparcels. Please speak to the functional land use links between off-campus properties and the main campus (e.g. remote parking and the Bishop Street shuttle service).
		v. An inventory and/or plan of existing facilities, including data on use, floor area, and any existing functional connections between facilities.	Page 16, Figure 1.5 Pages 21-22	The UNE campus map is provided on page 16 as Figure 1.5, depicting the 25 distinct facilities and 11 parking areas, with an inset map centered around the Campus Quad. Please supplement Figure 1.5 Campus Map with a table listing the 25 facilities and 11 parking areas identified in Figure 1.5, organized chronologically by facility number. Please also incorporate the parking spaces data from Table 3.5 here as well. The table should include columns for facility name, total floor area, and use. For parking areas, organize chronologically by parking area # and include columns for total square footage, total number of existing spaces, and a breakdown of ADA and EV spaces.
	c. A summary of the baseline characteristics of the existing campus and	*i. A summary of existing resources, such as historic, open space, and natural resources.*	Page 19-20	UNE's campus is the site of the Westbrook College Historic District, which includes six buildings built between 1834 and 1952. Further, existing open space and natural

	context of the institution, based on identified study areas, including:			resources are summarized, and include notation of the Portland Trails Forest City Trail connection and the Capisic Brook watershed area.
		ii. A summary of the existing transportation system, including vehicular, pedestrian, transit, bicycle, and parking supply, demand, and utilization.	Page 41-44, Table 3.5	Table 3.5 titled "UNE Portland Campus - Parking Spaces" details the currently 11 parking lots located on campus, plus the on-street parking along two principle campus roadways, which amounts to 882 spaces total, plus the 182 permitted spaces presently at the COM building. Please include a quick summary of the existing transportation system within the Context chapter, to incorporate what is detailed on pages 41-44.
		iii. A summary of existing public infrastructure supporting the institution, including demand, utilization and any capacity issues.	Page 20	Existing stormwater management systems utilize on-site infiltration systems, with secondary use of conveyance to the Stevens Ave. and Bishop St. CSO. Existing wastewater infrastructure for the campus is discharged to a CSO in College St. and Stevens Ave. Other public utilities include: PWD, CMP, and Unitil.
		iv. Relevant municipal plans, projects, and studies that may influence the IDP study area and opportunities for integrating institutional growth.	Page 21	A breakdown of the City's Comprehensive Plan, with tie in to the eight policy guide topics as they relate to UNE's work is provided with excerpts from Portland's Plan that UNE works to promote and advance are underscored and include the: environment, economy, historic resources, and housing. Please include additional studies that should be referenced in this section, such as the: Portland-South Portland Smart Corridor Plan (final report dated June 2018), the One Climate Future

				Plan, and the Forest Avenue Redesign Project. For example, within the Smart Corridor Plan on Page 143 it states: "[The] University of New England (UNE) office at 1075 Forest Avenue, shown in Figure 142 is a parcel that addresses the street well, and would be enhanced by the recommended planting palette and materials design guidelines found later in this section."
	d. A summary of public involvement in the development of the IDP, including major areas of public concern.		Page 22	UNE has worked to involve the public in the creation of the IDP during the IOZ submission process, this includes holding one of two required neighborhood meetings, which took place on June 13, 2024. Please be sure to update this section with the 10/30 neighborhood meeting date. Additionally, it may be beneficial to include a few sentences on the required review by both the Planning Board and City Council, as these will also be opportunities for public involvement.
2. Assessment of future institutional growth and change, including:	*a. A description of institutional needs and areas of future institutional growth and change, with:*	*i. A projected census of users (e.g., enrollment /employment/patient/ visitor figures and anticipated variations over time).*	Page 25, Table 2.2	Table 2.2 titled "Projected Growth of FTE Student, Faculty, and Professional Staff" provides a snapshot of data for the years of 2025, 2028, and 2033. Please include data on campus visitors, i.e. visiting faculty, prospective students, guests, etc.; to incorporate as a column in Table 2.2. Please also add patients seen for on-campus health visits.
		ii. Institutional objectives for property both within and outside the IOZ boundary (e.g. acquisition and/or disposition), including an indication of any functional land use connection for sites outside the IOZ boundary to the main campus.	Pages 26-28	UNE identifies five categories for key current and future institutional needs: campus reorganization, new building and renovation, educational/pedagogy

					improvements, campus infrastructure, and housing.
		iii. A development plan addressing anticipated or potential institutional needs and physical improvements, including the proposed boundary of the IOZ and any phasing of the development.		Pages 28-30, Table 2.3	A development plan is shown in Table 2.3, titled "10 +- Year Development Program", which identifies three core priority timelines: the short-term (0-5 years), medium-term (5-10 years), and long-term (10+ years).
	b. Analysis and associated plans that address the following elements in terms of anticipated growth or potential impacts within the identified study area, and support the development parameters as set out in the regulatory framework, including:	*i. Transportation and access, with:*	*a) An analysis of the projected changes in parking demand, supply, and impacts to the off-street and on-street parking capacity, including an explanation of the proposed parking plan.*		Please provide an analysis of the projected changes in parking demand, supply, and impacts, and a review of current parking conditions. The previous TDM plan could be utilized to assist in completing this section. Further, a discussion on how to mitigate neighborhood impact by reducing on-street parking usage by UNE students and personnel should be included here.
			b) An analysis of the projected changes in vehicular, pedestrian, transit, and bicycle access routes and facilities, their capacity, and safety.	Page 36-37, Tables 3.2 & 3.3	Table 3.2 titled "Trip Generation Analysis" provides a snap shot of vehicular usage projections for the student population in the years 2025, 2028, and 2033. Please provide more details, as it relates to pedestrian and bicycle usage in this section, which largely focuses on vehicular travel.
			c) A transportation, access, and circulation plan, representing the synthesis of the analysis, and including a program of potential improvements or set of guidelines to address access deficiencies to and within the IOZ. The plan should outline proposed mechanisms and potential strategies to meet transportation objectives, including transportation	Pages 38-44	UNE's original TDM plan was created in 2010, and is routinely updated, most recently in April 2022. Strategies that emerged from the plan include: education and promotion, carpooling & ridesharing, transit service, incentives, EV charging infrastructure, bicycle infrastructure, and pedestrian & bicycle access. Please provide a more detailed transportation, access, and circulation

			demand management, phasing, and when a Traffic Movement Permit (TMP) may be required.		plan, that expands beyond the strategies identified in the TDM. As an example, perhaps providing a circulation plan of the core campus as a visual could then highlight potential opportunities for connections to the existing and future trail network. Please also speak to the existing Traffic Movement Permit (TMP) in this section, whether UNE envisions surpassing the threshold for a new TEMP under your build-out plans, i.e. indicate when a revised TMP may be required, or triggered, in the future.
		ii. Environment, with:	*a) An analysis of potential cumulative impacts on natural resources and open spaces.*	Page 52	Please provide an expanded analysis under the 'Proposed Future Development and the Environment' paragraph, which should detail potential cumulative impacts to the existing natural resources and open spaces on campus. For example, perhaps some good data to capture here could be existing vs. proposed impervious lot coverage, the existing open space on campus vs. proposed loss or gain of open space over time, and the existing square footage of wetlands vs. potential impacts or gains in the future.
			b) An analysis of projected energy consumption, hazardous materials generation, noise generation, and similar issues as relevant.	Pages 57-60	UNE's operational sustainability is detailed within the categories of energy conservation, waste management practices, biomedical waster best practices, sustainable landscaping, and noise generation.
			c) An environmental plan, representing the synthesis of the analysis and including a proposed program or set of guidelines for future	Page 56, Figure 4.8	Figure 4.8 titled "Natural Resources and Campus Master Plan" shows proposed campus improvements in locations aimed to mitigate impact to natural resources.

			preservation, enhancement, conservation, and/or mitigation.		
		iii. Infrastructure, with:	*a) An analysis of projected public utility demand and the capacity of associated infrastructure.*	Pages 62-63	Utility demand and capacity are detailed through the lens of the various providers: water services supplied by PWD, electricity supplied by CMP, telephone & data services by Consolidated Communications and Spectrum, natural gas and heating fuels supplied by Unitil, and existing wastewater infrastructure.
			b) An analysis of projected public safety needs and projected impacts to the capacity of these services.	Page 64	UNE has security officers who provide 24/7 patrol and dispatch coverage of the campus, in addition, an emergency notification service (Rave Mobile Safety), provides faculty, staff, and students with timely updates during emergencies, speaking to the capacity of public safety as the campus grows.
			c) An infrastructure plan, representing the synthesis of the analysis and including a proposed program or set of guidelines to support sustainable growth.	Page 61-62, Figure 5.1	Figure 5.1 titled "Existing Stormwater Infrastructure and Campus Master Plan" illustrates existing City sanitary sewer and stormwater infrastructure surrounding and within the campus, as well, future stormwater run-off flows are detailed. Please include a set of guidelines to support sustainable growth at the conclusion of this chapter.
		iv. Design, with:	*a) An analysis of projected impacts to neighboring properties and public spaces, including potential shadow, wind, and lighting impacts, impacts of height and massing, and impacts to historic resources.*	Pages 65-72 Figures 6.1, 6.2, 6.3, & 6.4	The City wants to ensure UNE is adequately addressing potential impacts to the surrounding parcels, including: Evergreen Cemetery, the isolated parcels within the Campus, and properties on Mayfield Street. Please provide spot elevations on the buildings shown in Figure 6.2 to better dedicate heights. Provide rendering of

					proposed development looking from Mayfield Street towards proposed student housing building (west). Additionally, as UNE considered alternative building layouts and parking configurations for the conceptual student housing on the Gulliver's Field site?
			b) An analysis of transition areas between the institution and adjoining neighborhoods, including identification of key character defining components of the surrounding context.	Page 71-72, Figure 6.4	Figure 6.4 titled "Proposed Maximum Heights" has identified transition zones along the edges of the IOZ boundary. Please provide the design rationale for the proposed 50 ft height within the 25 ft-wide transition zone—was there any consideration of varying the maximum height to better align with the surrounding context? Did UNE consider mapping lower maximum heights along Capisic Brook, and what is the rationale for mapping 65 ft on the two outparcels fronting Stevens Avenue? Additionally, the parcel on Forest Avenue, under ReCode, would allow a height of up to 75 ft. We recommend removing the height limitation for that parcel should ReCode pass as proposed.
			c) An analysis of existing Crime Prevention Through Environmental Design issues and identification of how these principles would be addressed as part of the proposed campus development.	Page 72	UNE's Campus Safety and Security Department monitors through in-person patrols and CCTV cameras and provides response 24/7, which contribute to low crime statistics on campus.
			d) A conceptual built environment/public realm plan, representing the synthesis of the analysis and including a set of guidelines for urban design,	Pages 71-75	Figure 6.4 titled "Proposed Maximum Heights" could be expanded on as a conceptual built environment/public realm plan for this section. Has there been consideration for a more

			landscape, open space, and streetscape treatments, with particular attention to the treatment of edges (both within and abutting the IOZ boundary) to achieve compatible transitions.		targeted contextual set of heights throughout the campus to address varying building typologies in adjacent neighborhoods?
		v. Neighborhood engagement, with:	*a) A plan for ongoing community engagement that represents best practices, promotes collaborative problem solving around community concerns, fosters transparency, and identifies mechanisms for neighborhood feedback and institutional accountability.*	Pages 76-77	UNE outlines four steps in their effort to provide ongoing community engagement, which include: -Developing a comprehensive CMP -Providing monthly project updates for all current/active projects -Creating a dedicated email address to allow neighbors to forward questions, concerns, and feedback -Attendance as local community neighborhood association meetings
			b) A property management framework that identifies the institution's process for handling operational property issues with neighbors.	Page 76	UNE directly oversees the maintenance and care of its facilities; it does not inspect or approve any off-campus housing.
			c) Strategies for assuring communication pertaining to property acquisition and disposition in surrounding neighborhoods.	Page 77	UNE has established strategies for assuring communication pertaining to property acquisition and disposition in surrounding neighborhoods, including alerting abutting properties of the transition of ownership and providing the appropriate contact information.
			d) A set of construction management principles to apply to all institutional construction, that represent best practice, aim to minimize short- and long-term construction impacts on surrounding residents and businesses, and ensure a clear communication strategy is in place in advance of construction.	Pages 82-84, + Attachment A	UNE has identified construction management principles that will be implemented to minimize impacts to its surrounding neighborhoods from noise, vibrations, ground movement, truck traffic, dust control and other construction related factors.

Regulatory Framework: Content Land Use Code, Section 8.5.5.D			
Category	**Requirement**	**Location, R.F. – PDF Page # & Document Section**	**Review Comments**
1. Zoning boundary of the IOZ	*The area to which the regulations apply, as shown on the zoning map, subject to other provisions of this ordinance (i.e. the map amendment to the City's zoning map)*	Page 144, Figure 8-H	General comment: Please add page numbers to the Regulatory Framework document itself.
2. Phasing and schedules	*Requirements that relate to particular proposed phases*	N/A - No phasing or scheduling proposed (imminent site plan) at this time.	
	A chart showing the schedule or thresholds for submitting an amended IDP (or elements of an IDP, such as a Transportation Demand Management (TDM) Plan)		
3. Uses	*Clarification, as necessary, on permitted uses*	Page 146, Section C., Table 8-H	
4. Dimensional requirements	*Graphics, sketches, or standards, including details for transition zones within the IOZ boundary*	Pages 146-147, Section D., Figure 8-I	Staff requests further discussion regarding the proposed height map and how to consider the surrounding context. See attached comments.
5. Transportation	*Elements such as Transportation Demand Management Plan (TDM) trip reduction targets or contribution to area-wide TDM measures*	Page 148, Section E.	
	Broad parameters for ensuring pedestrian, vehicular, bicycle and transit access and safety		*City Staff is working with the applicant to draft language for this requirement section.*
	Parking ratios and management strategies		
	Thresholds for access improvements		
6. Environment	*The approach to the inclusion of open space and preservation of environmentally-sensitive areas*	Page 148, Section F.	
7. Mitigation measures	*The broad approach to identified mitigation measures, which would be addressed in greater detail in the site plan review process*	Page 148, Section G.	

	Thresholds for addressing deficiencies		*City Staff is working with the applicant to draft language for this requirement section.*
	Goals for preservation/protection		*City Staff is working with the applicant to draft language for this requirement section.*
8. Design	*Graphics and standards to clarify building placement and envelope (height and massing)*		*City Staff is working with the applicant to draft language for this requirement section.*
	Guidelines for integration of site features		
	Required treatments for transition zones and treatment for all edges (both within and abutting the IOZ boundary)		
	Guidelines for establishing campus identity		
9. Neighborhood integration	*Thresholds and strategies for neighborhood engagement*	Page 150, Section I.	
	Mitigation of impacts on neighboring properties, including construction impacts		*City Staff is working with the applicant to draft language for this requirement section.*
	Buffering requirements		
	Objectives for pedestrian linkages and safety		
	Other requirements that address community concerns		
10. Monitoring	*A schedule for regular monitoring reports on IDP implementation in accordance with the IDP*		This section should simply address monitoring, stating that updates will be provided to the Planning Authority every five years.

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Att. A

August 14, 2024

Kevin Kraft, Director of Planning and Urban Development
City of Portland
389 Congress Street
Portland, ME 04101

Re: University of New England
Application for Text and Map Amendment

Dear Kevin:

Woodard & Curran is pleased to submit this application for a text and map amendment on behalf of the University of New England (UNE). This application includes: 1) a text amendment to adopt the Regulatory Framework for the proposed UNE Institutional Overlay Zone (IOZ); and 2) a map amendment to change the underlying zoning of the UNE properties to B-2 Community Business with an IOZ overlay.

The City of Portland's Land Use Code includes a provision for the city's five major medical and higher education campuses to create an IOZ designation to facilitate a consistent, predictable, and clear growth management process. Consistent with that purpose, UNE is seeking to create a UNE IOZ to accommodate the development and growth of their campus.

UNE began pursuing the IOZ process in 2021 and has had meetings with Planning and other City staff, as well as neighborhood groups and members of the public, to develop its Institutional Development Plan (IDP). The IDP identifies and addresses anticipated long-term institutional needs to support UNE's continued ability to adapt and grow alongside changes in education and technology. The IDP and corresponding Regulatory Framework have been thoughtfully developed to balance the needs of the institution with the needs of the surrounding neighborhood and wider community.

As part of the IOZ process, UNE will simultaneously seek to change the underlying zoning of the campus to B-2 Community Business. The current underlying zoning on campus includes R-3, R-5, I-H, I-M, and B-2. Changing the underlying zoning entirely to B-2 will more accurately reflect the current uses within the campus and complement the surrounding zoning.

Thank you for your consideration. We look forward to working with you.

Sincerely,

Woodard & Curran, Inc.

Caitlin Suhr, PE
Project Manager

CITY OF PORTLAND
Planning & Urban Development Department

MAP AND TEXT AMENDMENT SUBMISSION CHECKLIST	
* Please submit each document and drawing as a separate PDF file * Please submit all drawings in a 24 x 36 sheet size * Please confirm each item by electronically checking the boxes to the left for each document/drawing	
GENERAL APPLICATION DOCUMENTS	
☑	**Project Description** • Cover Letter with detailed project description
☑	**Consistency with Comprehensive Plan** (Please see page 21 of IDP document) • Analysis of the consistency of the zone change request with the goals, policies and land use plan of Portland's Comprehensive Plan.
☑	**Proposed Text Amendment** (Please see Regulatory Framework) • Provide proposed language for text amendment(s) and cite the relevant sections to be revised in the Land Use code.
☑	**Completed Checklist – Map and Text Amendment Application (this document)**
☑	**Right, Title and Interest** • Deeds, leases, or purchase and sales agreements
PLANS	
☑	**Vicinity Map**
☑	**Proposed Map Amendment** (please use the Portland zoning map as a reference)
☐	**Site Plan (if applicable)** On a separate sheet, please provide a site plan of the property showing existing and proposed improvements, including such features as buildings, parking, driveways, walkways, landscape and property boundaries.

Att. C

WARRANTY DEED

(Maine Statutory Short Form)

KNOW ALL BY THESE PRESENTS, that I, ROSEMARY S. KIMBALL, of Yarmouth, County of Cumberland, and State of Maine, for consideration paid, GRANT to the UNIVERSITY OF NEW ENGLAND a non-profit corporation organized and existing under the laws of the State of Maine, the mailing address of which is 11 Hills Beach Road, Biddeford, Maine 04005-9599, with WARRANTY COVENANTS, certain real estate located in Portland, County of Cumberland and State of Maine, which is more particularly described in Exhibit A attached hereto and made a part hereof.

This conveyance is made SUBJECT, HOWEVER, to real estate taxes which are not yet due and payable, which, by acceptance hereof, Grantee assumes and agrees to pay.

MAINE REAL ESTATE TAX PAID

WITNESS my hand and seal this 28th day of February, 2006.

SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF:

Witness

Rosemary S. Kimball
Rosemary S. Kimball

STATE OF MAINE
County of Cumberland, SS.

February 28, 2006

Then personally appeared the above-named ROSEMARY S. KIMBALL and acknowledged the foregoing instrument to be her free act and deed.

Before me,

~~Notary Public~~/Maine Attorney-at-Law
Printed Name: Brianna Adams

Exhibit A

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

Beginning at a certain point on said College Street where the northerly line of said street is intersected by the extension southerly of a line passing through the middle division wall of a certain double house (the easterly part of which stands upon the premises hereby conveyed); thence northerly by said middle division wall and said wall extended to land now or formerly of the Portland Street Railroad Company; thence easterly by said land of said Railroad Company to land formerly of C. A. Hayden; thence southerly by said Hayden land to said College Street; thence westerly by said College Street to the point of beginning.

Being the same premises acquired by the Grantor and Paul J. Kimball (as joint tenants and not as tenants in common) by Warranty Deed dated January 29, 1987 and recorded in the Cumberland County Registry of Deeds in Book 7620 and Page 201. Paul J. Kimball died March 16, 1993, and his probate is located in the Cumberland County Probate Court, Docket # 93-399.

Received
Recorded Register of Deeds
Mar 01,2006 01:01:20P
Cumberland County
John B OBrien

QUITCLAIM DEED

THE STATE OF MAINE DEPARTMENT OF DEFENSE, VETERANS AND EMERGENCY MANAGEMENT successor in interest to the STATE OF MAINE, acting by and through the Acting Adjutant General pursuant to 37-B M.R.S.A. § 264, (the "Grantor"), FOR CONSIDERATION PAID, grants to the **UNIVERSITY OF NEW ENGLAND**, a Maine non-profit corporation, whose mailing address is 716 Stevens Avenue Portland, ME 04103 (the "Grantee"), certain real property, together with any improvements thereon, located at 760-780 Stevens Avenue, in the City of Portland, County of Cumberland and State of Maine, more particularly describes as follows:

> A certain lot or parcel of land with the buildings thereon situated on the westerly side of Stevens Avenue in the City of Portland in said County of Cumberland and State of Maine, being the same premises conveyed by Elizur B. Forbes to Portland and Forest Avenue Rail Road Company by deed dated March 22, 1864, and recorded in Cumberland County Registry of Deeds in Book 326, Page 212, in which deed said premises were bounded as follows:
>
> "A certain parcel of land fronting on the principal street at Stevens's Plains in Westbrook aforesaid, bounded as follows; beginning on said street at the southeast corner of land formerly of Jeremiah Beedle, now of Woodbury Polleys; thence running North sixty-four and a half degrees West five hundred seven and a half feet; thence North twenty-five and a half degrees East, thirty three feet; thence North sixty-three degrees West one hundred twenty-five feet; thence South seventy-five degrees forty-five minutes West seven hundred twenty feet; thence South sixty-four degrees east nine hundred ten and a half feet; thence North twenty and a quarter degrees east one hundred forty and a half feet; thence South sixty-six and a half degrees east, three hundred twenty four feet to the street or Stevens's Plains road before mentioned; thence North (by the line of the Street) nineteen degrees and three quarters east, two hundred ninety feet to the place of beginning - estimated to contain about nine and one quarter acres."

Meaning and intending to convey the same premises delineated on the Plan of Property in Portland, Maine made for the Adjutant General, Augusta, Maine prepared by H.I. & E.C. Jordan dated August 22, 1958.

For Grantor's source of title see: Warranty Deed from Portland Rail Road Company to the State of Maine dated October 14, 1940 and recorded at the York County Registry of Deeds in Book 1619, Page 299.

MAINE REAL ESTATE TAX PAID

By his signature hereon, the Acting Adjutant General certifies that the premises being conveyed in compliance with 37-B MRSA § 264, Section 6, Subsection 5 constitutes the Portland Armory, that he has designated an officer to inspect the premises, that he has determined the property to be unfit for military use, and has condemned the premises and furthermore that the premises are not being sold for less than appraised value as determined by a person licensed as a real estate appraiser under Title 32, chapter 123 and that the State of Maine Department of Defense, Veterans and Emergency Management is the successor in interest to the State Military Defense Commission of the State of Maine.

IN WITNESS WHEREOF, the State of Maine has caused this instrument to be executed in its name by Brigadier General Gerard F. Bolduc in his capacity as the Acting Adjutant General of the Maine National Guard, pursuant to 37-B M.R.S.A. § 264, this 11 day of June, 2015.

JA.
Witness

STATE OF MAINE

By: Gerard I. Bolduc

Gerard F. Bolduc
Brigadier General, The Acting Adjutant General

State of Maine
County of Kennebec, ss

June 11, 2015

The personally appeared the above-named Brigadier General Gerard F. Bolduc, The Acting Adjutant General of the Maine National Guard, and acknowledged the foregoing instrument to be his free act and deed and, pursuant to authorization of the Maine Legislature as found in 37-B M.R.S.A. § 264, the free act and deed of the State of Maine.

Before me,

under authority of 37-B MRSA 390-C.

ATTORNEY AT LAW

Notary Public/Attorney-at-Law
Commission Expires:
Print Name: STACY M. BRADBURY

Received
Recorded Register of Deeds
Jun 17,2015 08:54:11A
Cumberland County
Nancy A. Lane

MAINE REAL ESTATE TAX-Paid

WARRANTY DEED
Statutory Short Form

DLN: 1002440278302

KNOW ALL BY THESE PRESENTS, That **WJN Property Management, LLC,** a Maine Limited Liability Company, whose mailing address is 381 Falmouth Road, Falmouth, ME 04105, for consideration paid, grant to the **University of New England**, a Maine non-profit corporation with an address of 11 Hills Beach Road, Biddeford, ME 04005, with Warranty Covenants, the real property in the City of Portland, County of Cumberland and State of Maine, more particularly described as follows:

A certain lot or parcel of land, with the buildings thereon, situated on Stevens Avenue, in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at a point on the westerly side line of Stevens Avenue at the northeasterly corner of land of the Stevens Avenue Congregational Church; thence North 68° West by said Church property and property formerly of the Portland Street Railway Company, two hundred sixty and four tenths (260.4) feet to a post; thence North 23° 36' East by said Portland Street Railway Company land ninety-two (92) feet to a post; thence South 59° 19' East by the fence one hundred twelve and forty-seven hundredths (112.47) feet to a post; thence South 61° 35' East one hundred forty-six and twenty-four hundredths (146.24) feet to the westerly side of Stevens Avenue; thence South 20° 45' West fifty-eight and fifty-five hundredths (58.55) feet to said westerly side line of Stevens Avenue to the point of beginning.

Including herewith,

a. Any and all appurtenant rights, easements, rights of way, permits and approvals; and

b. Any and all improvements located on, under or above the above -described Real Property.

Meaning and intending to convey and conveying the real property described in a deed to WJN Property Management, LLC dated August 24, 2020 and recorded in the Cumberland County Registry of Deeds in Book 37103, Page 32.

Witness my duly authorized hand and seal this 27th day of June, 2024.

Witness:

WJN Property Management, LLC

Weston Nolan, Manager

1

DOC :21924 BK:40834 PG:211
RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS
06/27/2024, 02:36:12P
Register of Deeds Jessica M. Spaulding E-RECORDED

STATE OF **MAINE**
COUNTY OF **CUMBERLAND**, ss.

June 27, 2024
~~April 26, 2022~~

Personally appeared on the above date, the above-named Weston Nolan, Manager of WJN Property Management, LLC and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

~~Notary Public~~ Attorney at Law
Print name: Cary McCullen
~~Exp:~~ Bar No. 005999

SHORT FORM WARRANTY DEED

Saltz Associates, LLC, a Maine limited liability company of Portland, Maine ("Grantor"), for consideration paid, grants to **University of New England,** a Maine nonprofit corporation with a mailing address of 716 Stevens Avenue, Portland, ME 04103 ("Grantee") WITH WARRANTY COVENANTS, certain real property, together with any improvements thereon, located in the City of Portland, County of Cumberland, and State of Maine and more particularly described on Exhibit A attached hereto and made a part hereof.

MAINE REAL ESTATE TAX PAID

Being the same premises conveyed to the Grantor by Warranty Deed from Barry C. Saltz and Jeffrey I. Saltz dated October 20, 2001and recorded in the Cumberland County Registry of Deeds in Book 16999, Page 56.

IN WITNESS WHEREOF Saltz Associates, LLC has caused this instrument to be executed by Barry C. Saltz its Manager, thereunto duly authorized, this 25 day of September, 2013.

WITNESS:

John Norton
Print Name:

SATLZ ASSOCIATES, LLC

By: _____
Name: BARRY SALTZ
Its Manager

State of Maine
County of Cumberland, ss.

Date: September 25, 2013

PERSONALLY APPEARED the above-named Barry Saltz, Manager of Saltz Associates, LLC, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

_____
Notary Public
Print Name: Cathy Morrison
Commission Expires: 10/18/18

SEAL

EXHIBIT A

A certain lot or parcel of land with the buildings thereon situated in said Portland, in that part formerly Deering, on the Westerly side of Stevens Avenue, formerly called Stevens Plains Avenue, near Morrill's Corner, and bounded and described as follows:

Beginning at a stake on said Westerly side of Stevens Avenue, at the Northeasterly corner of the lot of land conveyed by The City of Portland to Ralph F. Goodhue by deed dated March 30, 1906, and recorded in the Cumberland County Registry of Deeds in Book 843, Page 431, formerly known as the School House Lot, said stake being distant Southerly along said Westerly side of Stevens Avenue Forty-One and Eight Hundredths (41.08) feet from a stone monument marking an angle in said Westerly line of Stevens Avenue; thence by said land now or formerly of said Goodhue on a course of N 69° 07' W One Hundred Eighty-Three and Forty-Five Hundredths (183.45) feet, more or less, to the lot of land conveyed by George H. Bangs to Elizabeth Hodgdon by deed dated September 20, 1900, and recorded by said Registry of Deeds, in Book 699, Page 24; thence by said land now or formerly of said Hodgdon on a course of N 26° 41' E Ninety-Five and Eighty-Five Hundredths (95.85) feet, more or less, to the lot of land conveyed by Nancy Kimball Roberts to Alice M. Winslow by deed dated December 19, 1913, and recorded in said Registry of Deeds in Book 922, Page 419, formerly belonging to Storer Libby; and thence by said land now or formerly of said Winslow on a course of S 60° 01' E One Hundred Seventy-Seven (177) feet, more or less, to the Westerly side of Stevens Avenue; thence by said Westerly side of Stevens Avenue, on a course of S 21° 10" W Twenty-Six and Twenty-Four Hundredths (26.24) feet to said stone monument marking an angle in said Avenue; and thence by said Westerly side of said Stevens Avenue on a course of S 22° 00' W Forty-One and Eight Hundredths (41.08) feet to the point of beginning. Said above mentioned courses being magnetic and of the date of 1942.

ALSO ANOTHER certain lot or parcel of land situated in said Portland, in that part formerly Deering, and bounded and described as follows:

Beginning at a stake in the rear of Stevens Avenue, on the line of land now or formerly of George C. Roberts, at the Northwesterly corner of the lot of land conveyed by the City of Portland to Ralph F. Goodhue by the deed above mentioned recorded in Book 843, Page 431, which lot of land was formerly known as the Morrills School House Lot; thence running Northerly by the line of said land now or formerly of said Roberts One Hundred Seven (107) feet, more or less, to a stake in the line of said Roberts land; thence running Easterly by the line of said Roberts land Sixty-Five (65) feet to a stake at the Northwesterly corner of the lot of land conveyed by Cora B. Roberts to one Christy E. Chandler by deed dated October 12, 1942, and recorded in said Registry of Deeds in Book 1693, Page 352; thence running Southerly by the Westerly line of said land conveyed by said Cora B. Roberts to said Christy E. Chandler, Ninety-Five and One-half (95 ½) feet, more or less, to the Northerly line of said land conveyed to said Goodhue, formerly said School House Lot, at a point distant Sixty-Five (65) feet Easterly from the point begun there; and thence running Westerly by the line of said Goodhue land, formerly of said School House Lot 65 feet to the point of beginning.

Received
Recorded Register of Deeds
Oct 03,2013 02:29:19P
Cumberland County
Pamela E. Lovley

MAINE REAL ESTATE TAX PAID

QUITCLAIM DEED WITH COVENANT

KNOW ALL BY THESE PRESENTS, that **DELTA REALTY LLC**, a Maine limited liability company ("Grantor"), having a mailing address of 380 Warren Avenue, Portland, Maine 04103, for consideration paid, hereby grants to the **UNIVERSITY OF NEW ENGLAND**, a Maine non-profit corporation ("Grantee"), having a mailing address of 11 Hills Beach Road, Biddeford, Maine 04005, with Quitclaim Covenant, that certain real property located in the City of Portland, Cumberland County, Maine, all more particularly bounded and described as follows:

See **Exhibit A** attached hereto and made a part hereof.

Meaning and intending to convey the real property described in a Quitclaim Deed to the Grantor herein from Northern Utilities, Inc., dated September 19, 2014 and recorded in the Cumberland County Registry of Deeds in Book 31788, Page 197, subject to the easements and rights granted Northern Utilities, Inc. pursuant to that certain Amended and Restated Gas Easement Deed dated November 9, 2015 and recorded in said Registry of Deeds in Book 32746, Page 142 (amended and restating that certain Gas Easement Deed dated September 19, 2014 and recorded in said Registry of Deeds in Book 31788, Page 200). Subject to current real estate taxes and stormwater fees to the City of Portland, Maine not yet due and payable.

IN WITNESS WHEREOF, DELTA REALTY LLC has caused this instrument to be signed and sealed on June 30, 2016.

DELTA REALTY LLC

Witness

By: Andrea Girard
Andrea Girard
Its Manager

State of Maine
County of Cumberland, ss. June 30, 2016

Personally appeared the above-named Andrea Girard in his/her said capacity 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 limited liability company.

Before me,

R. Clough

~~Notary Public~~/Maine Attorney at Law
Print Name: Lawrence R/Clough
My Commission Expires:

EXHIBIT A

A certain lot or parcel of land with the buildings thereon situated on the easterly side of Forest Avenue, in the City of Portland, County of Cumberland and State of Maine, being more particularly bounded and described as follows:

Beginning on the easterly sideline of Forest Avenue, said point being one hundred forty and two tenths (140.2) feet southerly from the intersection of Read Street and Forest Avenue;

Thence running in an easterly direction one hundred fifty-one and twenty-five hundredths (151.25) feet to Read Street;

Thence running in a southeasterly direction two hundred seventy-eight and thirty-nine hundredths (278.39) feet to a point, said point being the intersection of Read Street and Bell Street;

Thence running in a southerly direction, along the westerly sideline of Bell Street, twenty-one and five tenths (21.5) feet to a point;

Thence in a southwesterly direction and continuing along the westerly sideline of Bell Street, forty and twenty-five hundredths (40.25) feet to a point;

Thence running in a westerly direction seventy-six (76) feet to a point;

Thence, at an interior angle of ninety degrees (90°) from the last mentioned course, running in a northerly direction fifty (50) feet to a point;

Thence, at an exterior angle of ninety degrees (90°) from the last mentioned course, running in a westerly direction two hundred forty-four (244) feet to the easterly sideline of Forest Avenue;

Thence running in a northerly direction, along the easterly sideline of Forest Avenue, two hundred fourteen and fifteen hundredths (214.15) feet to the point begun at.

The Premises are conveyed subject to the rights and easements set forth in that certain Amended and Restated Gas Easement Deed from the Grantor herein dated November 9, 2015 and recorded in said Registry of Deeds in Book 32746, Page 142 (amended and restating that certain Gas Easement Deed dated September 19, 2014 and recorded in said Registry of Deeds in Book 31788, Page 200), pursuant to which, among other things, Northern Utilities, Inc. retained ownership and other rights with respect to certain underground gas pipe lines and related appurtenances located at the Premises.

Received
Recorded Register of Deeds
Jul 01,2016 09:56:04A
Cumberland County
Nancy A. Lane

WARRANTY DEED
(Maine Statutory Short Form)

KNOW ALL MEN BY THESE PRESENTS, that **PIKE INDUSTRIES, INC.**, a Delaware corporation with a place of business and mailing address at 58 Main Street, Westbrook, Maine 04092 ("Grantor"), for consideration paid, hereby grants to **UNIVERSITY OF NEW ENGLAND**, a Maine non-profit corporation with a mailing address of 11 Hills Beach Road, Biddeford, Maine 04005 ("Grantee"), with **WARRANTY COVENANTS**, those certain lots or parcels of land, together with any buildings and improvements thereon, situated in Portland, Cumberland County, Maine, being more particularly described on **Exhibit A** attached hereto and incorporated herein by reference (the "Premises").

MAINE REAL ESTATE TAX PAID

The following restrictions shall run with the land, shall inure to the benefit of the Grantor, and its successors and assigns, and shall be binding upon the Grantee, and its successors and assigns:

1. The Grantee covenants and agrees that the Premises shall not be used for excavation of earth materials, crushing of rock and other materials, production of hot-mix asphalt or other similar products (e.g., cement, ready mix concrete, etc.), storage of earth materials and/or hot-mix, cement or ready-mix products or the sale (retail or wholesale) and distribution of such materials from the Premises or the use of such material or existing processed material unless such excavation and/or use of such materials is for the benefit of the Grantee on the Premises or on contiguous land in common ownership of the Grantee.

2. In the event of a violation of any or all of this restrictive covenant, the Grantor, in addition to all other remedies available to it, may obtain an injunction against the Grantee issued by a court of competent jurisdiction enjoining such breach and shall be entitled to recover its costs and expenses, including, but not limited to, reasonable attorney's fees in the enforcement or defense of the restrictions or any of them.

Being parcels 2 and 3 in the deed of Oldcastle Materials, Inc. to Pike Industries, Inc. dated March 20, 2002, and recorded in the Cumberland County Registry of Deeds in Book 17835, Page 301.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be signed and sealed this 28th day of February, 2012.

WITNESS:

PIKE INDUSTRIES, INC.

_____

By: Brian J Donovan
Print/type name: Brian J. Donovan
Its: Authorized Agent

STATE OF MAINE
CUMBERLAND, ss.

February 28, 2012

Then personally appeared the above named Brian J. Donovan, its Authorized Agent, of Pike Industries, Inc. who acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Pike Industries, Inc.

Before me,

P. J. Van Hemel

~~Notary Public~~ / Maine Attorney-at-Law
Name Printed: Peter J. Van Hemel
My Commission Expires: _____

H:\DOCS\RATTEY\PIKE\UNE 39662\MSFWDEED3.DOC

EXHIBIT A

TRACT 1

A certain lot or parcel of land in the Morrill's Corner region of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Commencing at a point or stake standing on the old southerly line of the Portland & Rochester Railroad, now the Portland Terminal Company, and at a point where the same intersects with land formerly of Franklin M. Purington,

THENCE South 65 3/4° West 108 Rods 15 Links, more or less, to land now owned by the City of Portland;

THENCE North 24 1/4° West 5 Rods 16 Links, more or less, to a stake;

THENCE South 65 3/4° West 34 Rods 9 Links, more or less, to a stake standing on land owned by said City;

THENCE North 11° West 11 Rods 7 Links, more or less, to a stake, standing on land formerly owned by Hiram Sawyer;

THENCE North 61 1/2° East 107 Rods, more or less, to line of said location of Portland & Rochester Railroad;

THENCE by the line of said Railroad on its southerly side as aforesaid 83 1/4° East 38 1/2 Rods, more or less, to the place of beginning.

EXCEPTING from the above described premises, the premises conveyed by Adam W. Wilson to City of Portland by deed dated March 25, 1889, and recorded in the Cumberland County Registry of Deeds in Book 556, Page 132; and the premises conveyed by Adam W. Wilson to Boston & Maine Railroad by deed dated April 4, 1907, and recorded in said Registry in Book 803, Page 232, and by deed dated August 5, 1910, and recorded in said Registry in Book 863, Page 137.

TRACT II

Another certain lot or parcel of land situated near Morrill's Corner in that part of Portland that was formerly Deering, in the County of Cumberland and State of Maine, lying adjacent to and lying northwesterly of the above described premises, being bounded and described as follows:

Beginning at the northwesterly corner of land formerly of one Smith, on the southerly side of land formerly of Portland & Rochester Railroad, now the Portland Terminal Company, and running South 62° West 106 Rods to land of Portland Cemetery;

THENCE northwesterly by said Cemetery lot 30 Rods to the Old Kenney lot;

THENCE North 52 1/2° East by said Kenney's lot 49 Rods 2 Links to the Portland Terminal Company railroad land, formerly of the Portland & Rochester Railroad;

THENCE southeasterly by said Portland Terminal Company location 70 Rods to the first mentioned bounds or place of beginning.

EXCEPTING, however, from the above described premises two certain pieces or parcels of land, that first being 200 feet in length by 28 feet in width and lying parallel with the above-mentioned railroad, said parcel being conveyed by F.O.J. Bodge to Boston & Maine Railroad by warranty deed November 20, 1907, and recorded in the Cumberland County Registry of Deeds in Book 817, Page 29; and the second being a strip along a portion of the southeasterly and southwesterly side thereof, being conveyed by Lewis Lumber Co. to Central Maine Power Company by deed dated November 23, 1951, and recorded in said Registry in Book 2067, Page 107.

Both tracts are conveyed subject to the rights acquired for a sewer by the City of Portland by taking dated May 26, 1944, and recorded in the office of the City Clerk of the City of Portland, Maine, in Vol. 66, Page 263.

Also excepting the land described in the deed from Tilcon Minerals, Inc. to the City of Portland dated November 22, 1996, recorded in the Cumberland County Registry of Deeds in Book 12886, Page 212.

The premises are conveyed subject to the following rights and easements:

1. Rights and easements granted by Warren Bros. Roads Co. to Central Maine Power Company by instrument dated June 19, 1952, and recorded in the Cumberland County Registry of Deeds in Book 2097, Page 221.

2. Rights and easements granted by Warren Brothers Roads Company to Central Maine Power Company and New England Telephone and Telegraph Company by instrument dated January 27, 1967, and recorded in the Cumberland County Registry of Deeds in Book 2996, Page 102.

3. Rights and easements granted by Warren Brothers Co. to Portland Water District by instrument dated December 15, 1977, and recorded in the Cumberland County Registry of Deeds in Book 4150, Page 72.

4. Rights and easements granted by Warren Bros., a Div. of Ashland-Warren Inc. to Central Maine Power Company and New England Telephone and Telegraph Company by instrument dated January 31, 1978, and recorded in the Cumberland County Registry of Deeds in Book 4239, Page 326.

5. Rights and easements granted by Tilcon Minerals, Inc. to the City of Portland by deed dated November 22, 1996, and recorded in the Cumberland County Registry of Deeds in Book 12886, Page 214.

6. Rights and easements granted by Lewis Lumber Company to Central Maine Power Company by instrument dated November 23, 1951, and recorded in the Cumberland County Registry of Deeds in Book 2067, Page 106.

7. Rights, easements, and exceptions set forth in deed from Rosa Lewis to Warren Brothers Roads Company dated May 26, 1962, recorded in said Registry of Deeds in Book 2676, Page 74.

H:\DOCS\RATTEY\Pike\UNE 39662\EXHIBIT A.docx

Received
Recorded Register of Deeds
Mar 02,2012 11:36:47A
Cumberland County
Pamela E. Lovley

KNOW ALL MEN by these Presents, That

I Oliver Buckley of Westbrook in the County of Cumberland & State of Maine Esquire

in consideration of the sum of two hundred dollars paid by Francis O. J. Smith Esq (Treasurer of the Westbrook Seminary) of Westbrook in the County of Cumberland & State of Maine the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Treasurer and his Successors in Office

~~heirs and assigns~~ forever a certain lot of land situate in said Westbrook and bounded as follows. Viz beginning at a stake running North twenty six degrees East (on a ridge the same being the dividing line between land owned by Zachariah B. Stevens, and on the Western side of the County road twenty one rods eleven links thence South sixty five degrees East nine rods thence North fifteen degrees East four rods and five links thence North sixty nine degrees West thirty three rods thirteen links thence South twenty six degrees West twenty five rods thence South sixty nine degrees East twenty five rods to the first mentioned bounds containing four acres and twenty rods the conditions of this conveyance is such if the contemplated Westbrook Seminary shall not go into operation this deed is void, by my refunding the money I shall have received. The Trustees of the Seminary are to build and maintain a good and lawful fence between their lot and any land adjoining so longas the Seminary exists.

TO HAVE AND TO HOLD the aforegranted and bargained premises, with all the privileges and appertenances thereof, to the said Treasurer and his Successors in Office ~~heirs and assigns~~, to their use and behoof forever. And I do covenant with the said Treasurer & his Successors in office ~~heirs and assigns~~, that I am lawfully seized in fee of the premises; that they are free of all incumbrances; that I have good right to sell and convey the same to the said Treasurer & his Successors in Office to hold as aforesaid; and that I and my heirs shall and will warrant and defend the same to the said Treasurer & his Successors in Office ~~heirs and assigns~~ forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, I the said Oliver Buckley have hereunto set my hand and seal this twelfth day of January in the year of our Lord one thousand eight hundred and thirty two

SIGNED, SEALED AND DELIVERED, IN PRESENCE OF
Geo Bishop
Samuel Brimblecom

Oliver Buckley [L.S.]

CUMBERLAND, SS. January 12th 1832 Personally appeared Oliver Buckley and acknowledged the above instrument to be his free act and deed.—Before me,

Geo Bishop *Justice of the Peace.*

RECEIVED, January 17 1832, and recorded from the original, by
Samuel Small *Register.*

556

KNOW ALL MEN by these Presents, That

I James Hicks of Westbrook in the County of Cumberland and State of Maine Gentleman

in consideration of the sum of one hundred and twenty dollars paid by Francis O. J. Smith Esqr (Treasurer of the Westbrook Seminary) of Westbrook in the County of Cumberland & State of Maine the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Treasurer and his Successors in Office ~~heirs and assigns~~ forever a certain lot of land situate in said Westbrook and bounded as follows viz beginning at the North Easterly corner of land owned by J. B. Stevens and on the Western side of the County road running North fifteen degrees East six rods and two links thence North sixty nine degrees East twenty rods thence South fifteen degrees West six rods and two links thence South sixty nine degrees East twenty rods to the first mentioned bounds containing one hundred and twenty one rods the conditions of this conveyance is such if the contemplated Westbrook Seminary should not go into operation this deed is void by my refunding the money I shall have received. The Trustees of the Seminary are to build and maintain a good and lawful fence between their lot and my land adjoining so long as the Seminary exists

TO HAVE AND TO HOLD the aforegranted and bargained premises, with all the privileges and appertenances thereof, to the said Treasurer and his Successors in Office ~~heirs and assigns~~, to their use and behoof forever. And I do covenant with the said Treasurer his Successors in Office ~~heirs and assigns~~, that I am lawfully seized in fee of the premises; that they are free of all incumbrances; that I have good right to sell and convey the same to the said Treasurer his Successors in Office to hold as aforesaid; and that I and my heirs shall and will warrant and defend the same to the said Treasurer and his Successors in Office ~~heirs and assigns~~ forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, I the said James Hicks with Sophia my wife who hereby relinquishes her right to dower in the above premises have hereunto set our hand and seal this 12th day of January in the year of our Lord one thousand eight hundred and thirty two

SIGNED, SEALED AND DELIVERED, IN PRESENCE OF
Geo Bishop
Samuel Brimblecom

James Hicks L.S.
Sophia Hicks L.S.

CUMBERLAND, SS. January 12th 1832. Personally appeared James Hicks and acknowledged the above instrument to be his free act and deed.—Before me,

Geo Bishop *Justice of the Peace.*

RECEIVED, January 17 1832, and recorded from the original, by

Samuel Small *Register.*

KNOW ALL MEN by these Presents, That

We Zachariah B. Stevens, ~~Elvira Brackley Levi Hartley Gilbreth Hosea all~~ of Westbrook in the County of Cumberland and State of Maine Esqrs

in consideration of the sum of One hundred and thirteen dollars paid by Francis O. J. Smith Esq Treasurer of the Westbrook Seminary of Westbrook in the County of Cumberland State of Maine the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Treasurer and his Successors in Office

~~heirs and assigns~~ forever a certain lot of land situate in said Westbrook and bounded as follows viz beginning at a post near the North Easterly corner of my now dwelling house and on the Western side of the County road running North fifteen degrees East ten rods and three links thence North sixty nine degrees West twenty rods thence North fifteen degrees East one rod and fourteen links thence North sixty five degrees West twelve rods and nineteen links thence South twenty six degrees West fourteen rods and four links thence South seventy two degrees East thirty five rods to the first mentioned bounds containing two acres and seventy three rods the conditions of this conveyance is such if the contemplated Westbrook Seminary should not go into operation this deed is void by my refunding the money I shall have received. The Trustees of the Seminary are to build and maintain a lawful good fence between their lot and my land adjoining so long as the Seminary exists

TO HAVE AND TO HOLD the aforegranted and bargained premises, with all the privileges and appertenances thereof, to the said Treasurer & his Successors in Office ~~heirs and assigns~~, to their use and behoof forever. And I do covenant with the said Treasurer & his Successors in Office ~~heirs and assigns~~, that I am lawfully seized in fee of the premises; that they are free of all incumbrances; that I have good right to sell and convey the same to the said Treasurer to hold as aforesaid; and that I and my heirs shall and will warrant and defend the same to the said Treasurer & his Successors in Office ~~heirs and assigns~~ forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, I the said Zachariah B. Stevens with my wife Miriam who hereby relinquishes her right to dower in and to said premises have hereunto set our hands and seals this twelfth day of January in the year of our Lord one thousand eight hundred and thirty two

SIGNED, SEALED AND DELIVERED, IN PRESENCE OF
Geo Bishop
Samuel Brimblecom

Z. B Stevens Ls
Miriam Stevens Ls

CUMBERLAND, ss. January 12th 1832 Personally appeared Zachariah B. Stevens and acknowledged the above instrument to be his free act and deed.—Before me,

Geo Bishop *Justice of the Peace.*

RECEIVED, January 17 1832, and recorded from the original, by

Samuel Small *Register.*

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Know all Men by these Presents, That We Zachariah B. Stevens. Oliver Buckley Levi Hersey and Stillman S. Hersey all of Westbrook in the County of Cumberland and State of Maine Gentlemen in consideration of ten dollars paid by Francis O. J. Smith Esq Treasurer of the Westbrook Seminary of Westbrook in the County of Cumberland State of Maine the receipt whereof I do hereby acknowledge, do hereby remise, release, bargain, sell and convey, and forever quitclaim unto the said Treasurer and his successors in Office ~~heirs and assigns~~ forever, all the right, title and interest in and to a certain lot of land situate in said Westbrook, and bounded as follows viz beginning at a stake near the Northwest corner of land owned by James Hicks and on the western side of the County road and running North fifteen degrees East four rods and thirteen links, thence North sixty nine degrees West three rods twelve links thence South fifteen degrees West four rods five links thence South sixty five degrees East three rods sixteen links to the first mentioned bounds containing fifteen rods. the conditions of this conveyance is such if the contemplated Westbrook Seminary should not go into operation this deed is void. The Trustees of the Seminary are to build a good lawful fence between their lot and our land adjoining and maintain the same as long as the Seminary exists. The intention of the parties interested is to convey to the Westbrook Seminary all the land included in the plan of the site of said Seminary made by S. B. Stevens of which the title is vested in either of said parties

TO HAVE AND TO HOLD THE SAME, together with all the privileges and appurtenances thereunto belonging, to the said Treasurer and his Successors in Office ~~heirs and assigns~~ forever. And We do covenant with the said Treasurer his successors in Office ~~heirs and assigns~~ that We will warrant and forever defend the premises to the said Treasurer and his successors in Office ~~heirs and assigns~~ forever, against the lawful claims and demands of all persons claiming by, through, or under ~~no.~~ us

IN WITNESS WHEREOF, We the said Zachariah B. Stevens. Oliver Buckley Levi Hersey and Stillman S. Hersey have hereunto set our hand and seal this twelfth day of January in the year of our Lord one thousand eight hundred and thirty-two

SIGNED, SEALED AND DELIVERED IN PRESENCE OF
Geo Bishop
Samuel Brimblecom

Z. B. Stevens L.S.
Oliver Buckley L.S.
Levi Hersey L.S.
S. S. Hersey L.S.

Cumberland ss.—January 12th 1832 Personally appeared Z B. Stevens. Oliver Buckley Levi Hersey and S. S. Hersey and acknowledged the above instrument to be their free act and deed—BEFORE ME,

Geo Bishop Justice of the Peace.

RECEIVED January 17th 1832 and recorded from the original by

Samuel Smart REGISTER.

advertisement in said public paper.

Attest: Eben Leach Register

Received January 9th 1868. at 11h. 55m. A.M. and recorded according to the original. the same being endorsed on mortgage deed recorded in Book 350 Page 344.

Attest: Eben Leach, Register

Pierce
to
Trustees of
Westbrook Seminary

U. S. I. R.
Fifty Cents
C. S. P.
Oct. 19th 67

Know all men by these presents. that I. Cordelia S. Pierce. of Westbrook, in the County of Cumberland, and State of Maine. in consideration of three hundred sixty eight dollars. paid by the Trustees of Westbrook Seminary. the receipt whereof is hereby acknowledged. do hereby give. grant. bargain. sell, and convey. unto the said Trustees, their successors forever. a lot of land situated in said Westbrook. on the Westerly side of the County road leading over Stevens Plains. and bounded as follows viz: Beginning on said road, and at the South-easterly corner of the said Westbrook Seminary lot: thence Southerly on the line of said road. twenty feet to a stake: thence Westerly, on a line parallel with said Seminary lot. and holding the width of twenty feet from said Seminary lot. until it reaches the back line of said Cordelia's land, and strikes the said Seminary lot: thence Northerly on the line of said Seminary lot. twenty feet to a corner: thence on the dividing line. between said Seminary lot. and these premises. forty rods. more or less. to said County road. and first bound mentioned. Said Trustees are to make and maintain a suitable fence between the premises hereby conveyed and adjoining land. No building is to be placed on said premises. any nearer the dwelling house owned and now occupied by said Cordelia S. Pierce. than the Church now stands. which is partly on said premises. and no building is to be placed on said premises. any nearer the Plains road. than said Church now stands.

To have and to hold the above-granted premises, with all the privileges and appurtenances to the same belonging. to the said Trustees. their successors and assigns. to their use and behoof forever. And I. the said Cordelia S. Pierce. for myself. and my heirs. executors. and administrators. do covenant with the said Trustees. their successors and assigns. that I am lawfully seized in fee-simple of the afore-granted premises: that they are free from all incumbrances: that I have good right to sell and convey the same. to the said Trustees, their successors and as-

-signs forever. as aforesaid: and that I will. and my heirs. executors and administrators shall warrant and defend. the same. to the said Trustees. their successors and assigns forever. against the lawful claims and demands of all persons.

In witness whereof. I. the said Cordelia S. Pierce) have hereunto set my hand and seal. this ninth day of October. in the year of our Lord. eighteen hundred and sixty six.

Signed. sealed. and delivered in presence of us Grenville M. Stevens } Cordelia S. Pierce) Seal.

Cumberland ss. October 19th 1867: Then personally appeared the within-named Cordelia S. Pierce), and acknowledged the foregoing instrument to be her free act and deed.

Before me. Walter B. Goodrich). Justice of the Peace.

Received January 9th 1868 at 4h. 35m. P.M. and recorded according to the original.

Attest: Eben Leach. Register.

Bray et al
to
Green

This Indenture). made the 28th day of May. in the year of our Lord one thousand eight hundred and fifty nine. between Jefferson Bray and Sophia Bray his wife. of the City of Oshkosh. County of Winnebago and State of Wisconsin. of the first part. and Jary Green of Naples. County of Cumberland. State of Maine). of the second part.

Witnesseth. That the said parties of the first part. for and in consideration of the sum of fifty dollars. to them in hand paid. by the said party of the second part. the receipt whereof is hereby confessed. and acknowledged. have given. granted. bargained. sold. remised. released and quit-claimed) and by these presents do give. grant. bargain. sell. remise. release) and quit-claim. unto the said party of the second part. to his heirs and assigns forever. a certain piece or parcel of land situated in said Naples. and is a part of lot numbered one hundred and thirteen (113). on the Mc Arthur Gore. so called. and is a strip of land forty rods wide. bounded Southerly by land heretofore conveyed to Harrison O. Knight. and Northerly by a line forty rods distant from. said Knights Northerly line. and running parallel with said Knights Northerly line. and lies between Trickey Pond and William Berry's lands. containing twenty acres. be the same more or less.

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Piece
To
Westbrook Seminary

Know all Men by these Presents, That

I bordelia S. Pierce of Deering, in the County of Cumberland and State of Maine, Widow,
in consideration of the sum of Three Hundred Twenty Six & 78/100 Dollars paid by
the Westbrook Seminary, an Institution, duly incorporated by law and located at said Deering.
the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said
Westbrook Seminary, its Successors
~~heirs~~ and assigns forever, A certain lot of land situated in said Deering bounded and described as follows, Commencing at the corner made by the intersection of land of Freeman Porter, land of Evergreen Cemetery and the lot hereby conveyed, being the Northerly corner of said Porters homestead lot, Thence by said Cemetery land N. 30° E. 4 rods and 3 links to a point, Thence by said Seminary land N. 28° 30' E. 5 rods and 20 links to a corner, Thence by said Seminary land S. 70° 30' E. 6 rods to a corner, Thence S. 29° W. 10 rods, and 14 links to said Porters homestead lot, Thence by said Porters land, N. 63° W. 6 rods to the point of beginning, Being the Northerly portion of my homestead lot, and containing 16.339 Square feet,

To have and to hold the aforegranted and bargained Premises, with all the privileges and appurtenances thereof, to the said Westbrook Seminary, its Successors
~~heirs~~ and assigns, to their use and behoof forever. And I do covenant with the said
Grantee, its Successors
~~heirs~~ and assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances:

that I have good right to sell and convey the same to the said Grantee, its Successors and assigns to hold as aforesaid; and that I and my heirs shall and will warrant and defend the same to the said Grantee, its Successors,
~~heirs~~ and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, I the said bordelia S. Pierce
~~and of the said~~
~~in testimony of relinquishment of right of dower in the above described premises,~~ have hereunto set my hand and seal this Second day of October in the year of our Lord one thousand eight hundred and eighty two
Signed, Sealed and Delivered
in presence of
F. G. Stevens bordelia S. Pierce, Seal

~~**State of Maine,**~~ CUMBERLAND, ss. Oct. 2 1882 Personally appeared
the above named bordelia S. Pierce
and acknowledged the above instrument to be her free act and deed.
Before me, Frank G. Stevens, JUSTICE OF THE PEACE.
Received Oct 4 1882, at 10 o'clock 40 m., A. M., and recorded according to the original.
ATTEST, Frank G. Stevens. REGISTER.

Received September 22, 1904, at 11 h, 10 m. A. M., and recorded according to the original
Attest Ray P. Eaton Register

Pierce
T.
Westbrook
Seminary
et
al

Devise

Abstract of the Will of
Cordelia S. Pierce
State of Maine.

Cumberland ss. Probate Office.

Portland, Sept. 20. A. D. 1904.

I, Joseph B Reed, Register of the Probate Court, in and for said County, hereby certify that the last Will and Testament and Codicils of Cordelia S. Pierce late of Portland in said County, deceased, was proved, approved and allowed by the Judge of Probate for said County, at a Court held at Portland, on the tenth day of September A. D. 1904; and that the following is a true copy of so much of said Will and Codicils as devises Real Estate in the County aforesaid:

Fourteenth- I give and devise to Westbrook Seminary, its successors and assigns, the lot of land back of my homestead place in that part of said Portland which was formerly Deering, extending from the Easterly boundary line of land of said Seminary one hundred and twenty-five (125) feet to a line parallel with the aforesaid Easterly boundary of said Seminary's land, said last named line extending Southerly from other land of said Seminary to my Southerly boundary.

Fifteenth- I give and devise my homestead place where I now reside in said Portland extending back to the lot devised to the Westbrook Seminary in the section immediately preceding this, in trust to Cyrus O. Varney and Walter F. Goodrich, both of said Portland for a parsonage for "All Souls' Church" so called, on Stevens Plains Avenue in said Portland; reserving however to Ella Louise Fernald, before named, the privilege of occupying the upper tenement of the house, rent free, until she acquires a permanent home elsewhere; and to Mrs. Sarah B. Ballard above mentioned, the privilege of remaining in the lower tenement, rent free, during her life-time, provided she is living in said house at the time of my decease. The expenses of keeping said homestead in repair and providing for insurance and taxes are to be borne equally by Mrs. Sarah B. Ballard and Ella Louise Fernald, aforesaid, the said Trustees to determine what repairs are necessary and see that the same are made.

After the decease of Mrs. Sarah B. Ballard, the said Society of all Souls' Church shall assume all the expenses of said homestead.

Twentieth- I give and devise to Harry C. Stevens, son of Clifton Stevens, aforesaid, his heirs and assigns, a lot of land in said Portland adjoining the Unity club lot, East of the Rufus Dunham estate running East seven-

Cordelia S. Pierce (Deed)

ty-five(75) feet and thence South to the line of land of Alfred Stevens heirs;
Twenty-eighth: All the rest, residue and remainder of my estate, real, personal and mixed wherever found and however situated, I give, bequeath and devise in equal shares to Mrs. Sarah B. Ballard, Minnie Ballard York, Samuel R. Stevens, and Fannie R. Stevens hereinbefore mentioned their heirs and assigns forever.

Lastly: I hereby ridding and appoint Cyprus B. Varney of said Portland Executor of this my last will and testament, and request that he be not required to give any bond for the faithful execution of his said trust; and I also hereby revoke all former wills by me made.

Codicil. Third: For the reason that Mrs. Sarah B. Ballard has deceased and Ella Louise Fernald has attained the age of more than twenty-one years since the making of my said will, I hereby revoke the fifteenth section of my said will; and instead thereof, I hereby give and devise my homestead place described in said fifteenth section to said Ella Louise Fernald during the term of her natural life on condition that she pay to the society of "All Souls" Church named in said fifteenth section, the sum of six hundred dollars and to the executor of my said will the sum of four hundred dollars to be by him added to the residue of my estate, and distributed according to the residuary clause being the twenty eighth section of my said will as altered by this codicil; and I make the further condition that should the said Ella Louise marry her husband shall have no voice and take no part in the management and control of said homestead place. At the decease of the said Ella Louise Fernald I give and devise my said homestead place for a parsonage to said society of "All Souls" Church, its successors and assigns forever.

Fifth: The twentieth section of my said will wherein a certain lot of land is devised to Harry L. Stevens, is hereby confirmed except that said lot is hereby given and devised as running East seventy (70) feet instead of seventy five(75) feet and provided in said will.

Twenty eighth: All the rest residue and remainder of my estate, real, personal and mixed, wherever found and however situated, I give bequeath and devise to Samuel R. Stevens, Frances R. Stevens and Minnie Ballard York hereinbefore mentioned, their heirs and assigns forever.

Twelfth: In all other respects, except as altered or revoked by this codicil, I hereby ratify and confirm my said last will and testament made and executed on the second day of August A.D. 1899 aforesaid, and all the provisions thereof.

Codicil 3. Whereas I Cordelia A. Pierce of Portland in the County of Cumberland and State of Maine on the third day of June 1904 made and executed a codicil to my last will and testament dated the second day of August, 1899, now I do make this further codicil to my said

will to be taken with, and construed, as a part thereof to wit: I hereby add to the third section of said first codicil the following words, viz. But the said Ella Louise Fernald is hereby authorized and empowered at any time during her natural life to sell and convey by her own warranty deed so much of the land adjacent to my said homestead lot as lies westerly from, and in the rear of land of Mrs. Susie Whitman and of the same width of said Whitman lot taking the proceeds of such sale for her own benefit and use.

Witness my hand and the Seal of the Probate Court for said County of Cumberland, the day and year first above written.

Joseph B. Reed

Register.

Received, September 22, 1904, at 11h. 10m. A.M., and recorded according to the original

Attest Ray P. Cotton Register

Emery
To
Boyd et

Abstract of the Will of
Charlotte G. Emery
State of Maine.

Cumberland, ss Probate Office

Portland, Sept. 20, A.D. 1904.

Devise

I, Joseph B. Reed, Register of the Probate Court in and for said County, hereby certify that the last Will and Testament of Charlotte G. Emery late of Portland in said County, deceased, was proved, approved and allowed by the Judge of Probate for said County, at a Court held at Portland, on the tenth day of September, A.D. 1904; and that the following is a true copy of so much of said Will as devises Real Estate in the County aforesaid:

Second. I hereby give, devise and bequeath to my nephew Nicholas Emery Boyd, his heirs and assigns forever, in addition to any interest which I may possibly have in the bonds and personal estate, the one third interest in Nicholas Emery Homestead and the house and lot on Taylor Street, and the furniture in the said Emery Homestead house given to said Nicholas by will of his late mother, Theresa O. Boyd, and in which a life interest was given to me; the two lots of land lying between Danforth and Taylor Streets in said Portland and numbered three (3) and fifteen (15) on a Plan of Lots recorded in Cumberland Registry of Deeds, Plan Book 3, Page or Plan 27, which Plan is hereby referred to; Also one thousand dollars in money if there be so much money remaining of my own at the time of my decease.

Third. I hereby give, bequeath and devise to my niece, Julia Webster

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Know all Men by these Presents, That

I, Will W. Johnson, called as Grantee in my title deed to the premises hereby conveyed William W. Johnson, of the City of Portland, in the County of Cumberland, State of Maine,
in consideration of one dollar and other valuable and sufficient consideration, paid by Ruth S. Johnson, of said Portland, my wife,
the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Ruth S. Johnson, her heirs and assigns forever, a certain lot or parcel of land with the buildings by us erected thereon situated in said City on the Northwardly side of College Street, and bounded as follows: Commencing at a granite post standing on the Northwardly side line of said College Street and located two hundred feet more or less Westwardly of a lot of land conveyed by James P. Weston to C. A. Hayden by deed dated Oct. 6, 1881, and recorded in Cumberland County Registry of Deeds, in Book 485, Page 77; and from said granite post running by a line N. 26° E. one hundred and sixty-five feet to land now or formerly of the Portland Street Railroad Company; thence by line between this land and said Railroad Company land Southeastwardly fifty-three feet to a point; thence S.26°W. one hundred sixty-three and 1/10 -163.1- feet to said side line of College Street and thence on said Street line N. 64° W. fifty-three feet to the granite post and point of commencing. Being the same lot of land with said buildings now thereon which was conveyed to me by Warranty deed from Adela S. Adams, the widow and the heir at law of John M. Adams, dated August 22d, 1906, and recorded in said Registry in Book 801, Page 367.

See Book 3520 Page 128

U.S.I.R.
$3.00
W.W.J.
28/10/15

To Have and to Hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to the said Ruth S. Johnson, her heirs and assigns, to her and their use and behoof forever. And I do covenant with the said grantee, her heirs and assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances; save mortgage to Portland Savings Bank;

that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs, shall and will warrant and defend the same to the said Grantee, her heirs and assigns forever, against the lawful claims and demands of all persons, save said mortgage.

In Witness Whereof, I the said Will W. Johnson, have hereunto set my hand and seal this twenty-eighth day of October in the year of our Lord one thousand nine hundred and fifteen.

Signed, Sealed and Delivered in presence of

Henry W. Swasey, Will W. Johnson, Seal

State of Maine, CUMBERLAND, ss. October 28th, 1915. Then Personally appeared the above named Will W. Johnson, and acknowledged the above instrument to be his free act and deed.

Before me, Henry W. Swasey, *Justice of the Peace.*

Received February 19, 1916, at 10 o'clock 15 m. A. M., and recorded according to the original.

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Know all Men by these Presents, That

I, Frank B. Shepherd, of Portland, in the County of Cumberland and State of Maine,

in consideration of one dollar and other valuable consideration, paid by Charles A. Berry and Ethel N. Berry, both of said Portland, the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said Charles A. Berry and Ethel N. Berry as joint tenants and the survivor of them their assigns, and the heirs and assigns of the survivor of them forever, a certain lot or parcel of land, with the buildings thereon, situated in said Portland, bounded and described as follows: Commencing at the westerly side of Stevens Avenue, at the southeasterly corner of land of Whitman; thence southerly by said Stevens Avenue ninety-two (92) feet, more or less, to a point forty (40) feet northerly from the northeasterly corner of land of Evergreen Cemetery; thence westerly by the northerly line of a proposed street and keeping a distance of forty (40) feet from the Evergreen Cemetery northerly line, one hundred fifty-five (155) feet to a stake; thence northerly, at right angles to said last described course, to land of said Whitman; thence easterly by said Whitman land to the point of beginning. Being a part of the premises conveyed to me by Abbie Frances Leighton, by deed dated July 19th, 1920, and recorded in Cumberland County Registry of Deeds, Book 1061, Page 75, together with the right to pass and re-pass over said proposed street.

See Book 2857 Page 332

See Book 3169 Page 813

To Have and to Hold the aforegranted and bargained premises, with all the privileges and appurtenance thereof, to the said Charles A. Berry and Ethel N. Berry as joint tenants and the survivor of them, their assigns and ~~heirs and assigns~~ the heirs and assigns of the survivor of them, to their use and behoof forever. And I do covenant with the said Grantees as joint tenants and the survivor of them, their heirs and assigns, that I am lawfully seized in fee of the premises; that they are free of all encumbrances;

that I have good right to sell and convey the same to the said Grantees, to hold as aforesaid; and that I and my heirs shall and will warrant and defend the same to the said Grantees, as joint tenants and the survivor of them, their assigns, and the heirs and assigns of the survivor of them forever against ~~the lawful claims and demands of all persons~~ the lawful claims and demands of all persons.

In Witness Whereof, I the said Frank B. Shepherd, unmarried, have hereunto set my hand and seal this twentieth day of December in the year of our Lord one thousand nine hundred and twenty.

Signed, Sealed and Delivered in presence of

Harry L. Cram to F.B.S. Frank B. Shepherd Seal.

U.S.I.R. $4.50 F.B.S. 12/20/20

State of Maine, CUMBERLAND, SS. Portland, December 20, 1920. Personally appeared the above named Frank B. Shepherd and acknowledged the above instrument to be his free act and deed.

Before me,

Harry L. Cram, *Justice of the Peace.*

Received December 20, 1920, at 10 o'clock 26 m. A. M., and recorded according to the original.

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Know all Men by these Presents, That

We, Alice Roberts Goold of Portland in the County of Cumberland and State of Maine, and George C. Roberts of Lisbon Falls in the County of Androscoggin and State of Maine,

in consideration of One dollar and other valuable considerations, paid by Westbrook Seminary, a corporation organized and existing under the laws of Maine and located at Portland in said County of Cumberland and State of Maine,

the receipt whereof we do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Westbrook Seminary,its successors and assigns forever, a certain lot or parcel of land with the buildings thereon,situated on the northwesterly corner of College Street and Stevens Avenue in that part of Portland formerly Deering,in said County of Cumberland and State of Maine,bounded and described as follows: Beginning at said northwesterly corner of College Street,formerly known as Seminary Street, and Stevens Avenue and running westerly on the northerly side of said College Street one hundred (100) feet; thence running northerly in a line parallel to said Stevens Avenue by land now or formerly of Lydia J. Snow ninety (90) feet;thence running easterly in a line parallel to said College Street by land now or formerly of said Lydia J. Snow to the westerly side of said Stevens Avenue one hundred (100) feet;thence running southerly on the westerly side of said Stevens Avenue ninety (90) feet to the point of beginning.Being a part of the same premises conveyed to Lydia J. Snow by Joseph C. Snow by warranty deed dated December 13, 1880,recorded in Cumberland County Registry of Deeds, Book 478, Page 428,and the same premises conveyed by said Lydia J. Snow to Arabella W. Roberts by deed dated September 6, 1901, recorded in said Registry of Deeds, Book 705,Page 312, and said premises are conveyed subject to the right of drainage and right to maintain sewer therein reserved. Our title to said premises was acquired as devisees under the last will and testament of William W. Roberts,late of said Portland, deceased,extract from whose will is recorded in said Registry of Deeds, Book 1058,Page 368. Said premises are conveyed subject to taxes for the year 1923 which the Grantee hereby assumes and agrees to pay as a part of the consideration hereof.

U.S.I.R
$8.00
A.R.G.
G.C.R.
May 28/23

To Have and to Hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to the said Westbrook Seminary,its successors ~~heirs~~ and assigns, to --- and their use and behoof forever. And we do covenant with the said Grantee, its successors ~~heirs~~ and assigns, that we lawfully seized in fee of the premises; that they are free of all incumbrances; except as aforesaid; that we have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that we and our heirs, shall and will warrant and defend the same to the said Grantee,its successors ~~heirs~~ and assigns forever, against the lawful claims and demands of all persons. except as aforesaid.

In Witness Whereof, we the said Alice Roberts Goold and George C.Roberts and we, Allan O. Goold,husband of the said Alice Roberts Goold, and Nancy K. Roberts wife of the said George C. Roberts joining in this deed as Grantors, and relinquishing and conveying our right by descent and all other rights in the above described premises have hereunto set our hand sand seals this twenty-eighth day of May in the year of our Lord one thousand nine hundred and twenty-three.

Signed, Sealed and Delivered in presence of

Roscoe Phillips to A.R.G. A.O.G.

Ada S. Gilkey for both

Alice Roberts Goold Seal.
Allan O. Goold Seal.
Geo. C. Roberts Seal.
Nancy K. Roberts Seal.

State of Maine, CUMBERLAND, SS. May 28th, 1923. Personally appeared the above named Alice Roberts Goold and acknowledged the above instrument to be her free act and deed.

Before me, Roscoe Phillips, *Justice of the Peace.*

Received May 28, 1923, at 10 o'clock 45 m. A. M., and recorded according to the original.

Know all Men by these Presents, That

I, Charles A. Tracy, of Raymond, in the County of Cumberland and State of Maine,

in consideration of one dollar and other valuable consideration, paid by Westbrook Seminary and Junior College, a corporation organized and existing under the laws of the State of Maine and located at Portland, in said County and State,
the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Westbrook Seminary and Junior College, its successors and assigns forever, a certain lot or parcel of land, together with the buildings thereon, situated in said Portland and bounded and described as follows: Beginning at a point on the westerly side line of Stevens Avenue, so-called, ninety feet (90') northerly of the northerly corner of Stevens Avenue and College Street; thence westerly by an angle to the left of eighty-four degrees and nine minutes (84° 09') one hundred and three and ninety-seven one hundredths feet (103.97') to a point at an iron fence; thence northerly by an angle to the right of eighty-six degrees and sixteen minutes (86° 16') and by said iron fence and continuation thereof, sixty-three and sixty-five one hundredths feet (63.65') to land now or formerly of Justina O'Brion;thence easterly by an angle to the right of eighty-seven degrees and forty-six minutes (87° 46') and by said land now or formerly of Justina O'Brion one hundred and one and twelve one hundredths feet (101.12') to said Stevens Avenue; thence southerly by said westerly side line of Stevens Avenue seventy-four and forty-nine one hundredths feet (74.49') to point of beginning.

Being the same premises conveyed by Thalia L. Clement to Victor Brewster by deed dated October 19, 1908 and recorded in Cumberland County Registry of Deeds in Book 831, Page 38, and devised by said Victor Brewster to Elias Brewster, an abstract of the will of Victor Brewster being recorded in said Registry of Deeds in Book 1306, Page 44. Said Elias Brewster devised said property to the grantor herein, an abstract of the will of Elias Brewster being recorded in said Registry of Deeds in Book 1570, Page 448.

U.S.I.R. $7.15 C.A.T. 2/23/43

To Have and to Hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to the said Westbrook Seminary and Junior College, its successors

~~heirs~~ and assigns, to its and their use and behoof forever. And I do covenant with the said Grantee, its successors
~~heirs~~ and assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances;

that I have good right to sell and convey the same to the said Grantee
to hold as aforesaid; and that I and my heirs, shall and will warrant and defend the same to the said
Grantee, its successors
~~heirs~~ and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, I, the said Charles A. Tracy, and I, Nellie I. Tracy, wife of the said Charles A. Tracy, joining in this deed as Grantor, and relinquishing and conveying all right by descent and all other rights in the above described premises,

have hereunto set
our hands and seals this 23rd day of February in the year of our Lord
one thousand nine hundred and forty-three.

Signed, Sealed and Delivered in presence of

E. P. Perkins — Charles A. Tracy Seal

to both — Nellie I. Tracy Seal

State of Maine, CUMBERLAND, SS. February 23, 1943 Personally appeared
the above named Charles A. Tracy
and acknowledged the foregoing instrument to be his free act and deed.
Before me, Elliot P. Perkins, Justice of the Peace

Received February 23 19 43, at 12 o'clock 1 m. P. M., and recorded according to the original.

Know all Men by these Presents, That

I, Addie H. Lowd, of Portland, in the County of Cumberland and State of Maine,

in consideration of one dollar and other valuable consideration, paid by Westbrook Seminary and Junior College, a corporation organized and existing under the laws of the State of Maine and located at Portland, in said County of Cumberland, the receipt whereof I do hereby acknowledge, do hereby, give, grant, bargain, sell and convey unto the said Westbrook Seminary and Junior College, its successors and assigns forever, a certain lot or parcel of land with a dwelling house thereon, situated on the northerly side of College Street, in said Portland, numbered seventeen on said street and bounded as follows:

Beginning on the northerly side of College Street at the southwesterly corner of land formerly of J. C. Snow, now or formerly of George E. Donnelly; thence westerly by College Street eighty (80) feet to land now or formerly of Frances E. Skillin; thence northerly by land of Frances E. Skillin one hundred and thirty-nine (139) feet to land formerly of Captain Sargent, now or formerly of Justina B. O'Brien; thence easterly by land of Justina B. O'Brien eighty (80) feet to the northwesterly corner of said land now or formerly of George E. Donnelly; thence southerly by said land of George E. Donnelly one hundred forty-eight (148) feet to the place of beginning, containing 11,480 square feet, more or less.

Being the same premises conveyed to Fred Lowd and Roger W. Flint by deed dated June 30, 1927, recorded in Cumberland County Registry of Deeds, Book 1269, Page 183. Fred Lowd died August 22, 1940 leaving as his only heirs-at-law and next-of-kin, Addie H. Lowd, widow, Dorothy J. Flint, daughter, and Russell H. Lowd, son. Said Roger W. Flint, Dorothy J. Flint and Russell H. Lowd conveyed their interest in said premises to said Addie H. Lowd by deed dated September 3, 1940, recorded in said Registry, Book 1623, Page 395.

This conveyance is made subject to a certain mortgage given by Addie H. Lowd to Marguerite G. Davis, dated July 1, 1941, recorded in said Registry of Deeds in Book 1641, Page 250, on which there is due the principal sum of thirty-five hundred dollars ($3,500.00) and which the Grantee, as part of the consideration for this conveyance, assumes and agrees to pay.

Subject also to the 1944 taxes.

U.S.I.R.
$1.65
A.H.L.
7/8/44

To Have and to Hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to the said Westbrook Seminary and Junior College, its successors and assigns, to its and their use and behoof forever. And I do covenant with the said Grantee, its successors and ~~heirs and~~ assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances; except as aforesaid; that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs, shall and will warrant and defend the same to the said Grantee, its successors and ~~heirs~~ assigns forever, against the lawful claims and demands of all persons. except as aforesaid.

In Witness Whereof, I, the said Addie H. Lowd, widow, have hereunto set my hand and seal this 8th day of July in the year of our Lord one thousand nine hundred and forty-four.

Signed, Sealed and Delivered in presence of

Roger W. Flint — Addie H. Lowd Seal

State of Maine, CUMBERLAND, SS. July 8, 1944 Personally appeared the above named Addie H. Lowd and acknowledged the foregoing instrument to be her free act and deed.

Before me, Roger W. Flint, Notary Public Notarial Seal

Received July 11 1944, at 11 o'clock 45 m. A. M., and recorded according to the original.

All Souls Church Parish to Messiah-All Souls Universalist Church War.

KNOW ALL MEN BY THESE PRESENTS, That All Souls Church Parish, a corporation incorporated under the laws of Maine and located at Portland in the County of Cumberland, in consideration of one dollar and other considerations, paid by Messiah-All Souls Universalist Church, a corporation incorporated under the laws of Maine and located at said Portland, the receipt whereof it does hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said Messiah-All Souls Universalish Church, its successors and assigns forever, a certain lot or parcel of land with the buildings thereon, located at No. 706 Stevens Avenue in said Portland, and bounded northerly by land now or formerly of Westbrook Junior College, formerly called Westbrook Seminary, and by land of the grantee westerly by land now or formerly of Westbrook Seminary now Westbrook Junior College; southerly by land now or formerly of Rev. Harrison S. Whitman, and easterly by said Stevens Avenue, being the parsonage premises conveyed to the grantor by the following deeds:
Casco Realty Improvement Company to All Souls Church Parish, dated October 10, 1924, recorded Cumberland County Registry of Deeds, Book 1168, Page 366;
Theodore Kerr to All Souls Church Parish, deed dated October 17, 1924, recorded Book 1168, Page 367;
Ella Louise Perry to All Souls Church Parish, deed dated October 17, 1924, recorded Book 1168, Page 368;
City of Portland to All Souls Church Parish, deed dated October 10, 1928, recorded Book 1300, Page 58.
The premises hereby conveyed are subject to a lease given by All Souls Parish to Ella Louise Perry, dated October 17, 1924, recorded Book 1204, Page 65, and the property is conveyed subject to the following conditions,- viz: that the property herein conveyed shall be and continue to be occupied and used as a parsonage or for other religious purposes, by a society or religious organization of the Universalist denomination; to-wit,-a religious society in direct fellowship with and acknowledging the ecclesiastical authority of the Maine Universalist Convention and of the Universalist Church of America; and it is an express condition of this deed that in case the use or occupation of the aforesaid property should be diverted from the aforesaid purpose for a period of one year, then in such case the Maine Universalist Convention may enter in and upon the premises, take possession thereof and thereafter shall own, hold, use and dispose of the same for general Universalist purposes in accordance with the powers of that corporation.

TO HAVE AND TO HOLD the aforegranted and bargained premises with all the privileges and appurtenances thereof, to the said Messiah-All Souls Universalist Church, its successors and assigns, to its and their use and behoof forever, subject, however, to the conditions hereinbefore set forth.

AND it does covenant with the said Grantee, its successors and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances; except as aforesaid; that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that it and its successors shall and will warrant

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and defend the same to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, the said Grantor herein has caused these premises to be signed and its seal hereto affixed by the Trustees of the All Souls Church Parish, thereunto duly authorized, this 22d day of August, in the year of our Lord one thousand nine hundred and forty-four.

Signed, Sealed and Delivered in Presence of

ALL SOULS CHURCH PARISH, By the Seal
Trustees of All Souls Parish

Albert N. Whitney Seal
Clyde R. Chase Seal
Andrew G. Spinney Seal
Dora S. Wish Seal
Laura E. Sampson Seal
Emily C. McLaughlin Seal
Inez D. Blaisdell Seal
Florence M. French Seal
Trustees

Inez D. Blaisdell to
Albert N. Whitney
Clyde R. Chase
Andrew G. Spinney
Dora S. Wish
Laura E. Sampson
Emily C. McLaughlin
Florence M. French
Florence Vest
to Inez D. Blaisdell

State of Maine. Cumberland,ss. October 3, 1944.

Personally appeared the above named Inez D. Blaisdell and acknowledged the foregoing instrument to be her free act and deed as trustee of All Souls Church Parish and the free act and deed of All Souls Church Parish.

Before me, Florence Vest Notary Public Notarial Seal

Received October 4, 1944, at 11h 30m A. M., and recorded according to the original =

Reynolds to Welch War.

KNOW ALL MEN BY THESE PRESENTS, That I, Bessie V. Reynolds, of Gray in the County of Cumberland and State of Maine, in consideration of One Dollar and other valuable consideration, paid by Lauretta P. Welch, of Westbrook in said County and State, the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said Lauretta P. Welch, her heirs and assigns forever, the following described property:

a certain lot or parcel of land situated in said Gray, lying on the Westerly shore of the most Northerly part of Little Sebago Lake, and bounded and described as follows:

Beginning at an iron post on the shore of said Lake at a point five (5) feet Northerly of the most Northeasterly corner of land of said Bessie V. Reynolds, formerly of Harry A. Weeman; thence Westerly one hundred (100) feet more or less to an iron post at the Northwesterly corner of said land of Bessie V. Reynolds; thence Northerly on the line of the road seventy-five (75) feet to an iron post; thence Easterly one hundred (100) feet more or less to an iron post on the shore of the Lake; thence Southerly on the shore of the Lake seventy (70) feet to the point of beginning.

Said premises being a portion of the first parcel of land conveyed by Ralph J. Trumbull to Adelbert R. Reynolds by deed dated June 25, 1937, recorded in Cumberland Registry of Deeds in Book 1526, Page 151. Together with the right to cross and recross land now or formerly of Matthew C. Morrill in the road formerly used to reach said lot as conveyed to said Adelbert R. Reynolds by said deed of Ralph J.Trumbull.

All Souls Church Parish to Messiah-All Souls Universalist Church War.

KNOW ALL MEN BY THESE PRESENTS, That All Souls Church Parish, a corporation incorporated under the laws of Maine and located at Portland in the County of Cumberland, in consideration of one dollar and other considerations, paid by Messiah-All Souls Universalist Church, a corporation incorporated under the laws of Maine and located at said Portland, the receipt whereof it does hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said Messiah-All Souls Universalish Church, its successors and assigns forever, a certain lot or parcel of land with the buildings thereon, located at No. 706 Stevens Avenue in said Portland, and bounded northerly by land now or formerly of Westbrook Junior College, formerly called Westbrook Seminary, and by land of the grantee westerly by land now or formerly of Westbrook Seminary now Westbrook Junior College; southerly by land now or formerly of Rev. Harrison S. Whitman, and easterly by said Stevens Avenue, being the parsonage premises conveyed to the grantor by the following deeds:
Casco Realty Improvement Company to All Souls Church Parish, dated October 10, 1924, recorded Cumberland County Registry of Deeds, Book 1168, Page 366;
Theodore Kerr to All Souls Church Parish, deed dated October 17, 1924, recorded Book 1168, Page 367;
Ella Louise Perry to All Souls Church Parish, deed dated October 17, 1924, recorded Book 1168, Page 368;
City of Portland to All Souls Church Parish, deed dated October 10, 1928, recorded Book 1300, Page 58.
The premises hereby conveyed are subject to a lease given by All Souls Parish to Ella Louise Perry, dated October 17, 1924, recorded Book 1204, Page 65, and the property is conveyed subject to the following conditions,- viz: that the property herein conveyed shall be and continue to be occupied and used as a parsonage or for other religious purposes, by a society or religious organization of the Universalist denomination; to-wit,-a religious society in direct fellowship with and acknowledging the ecclesiastical authority of the Maine Universalist Convention and of the Universalist Church of America; and it is an express condition of this deed that in case the use or occupation of the aforesaid property should be diverted from the aforesaid purpose for a period of one year, then in such case the Maine Universalist Convention may enter in and upon the premises, take possession thereof and thereafter shall own, hold, use and dispose of the same for general Universalist purposes in accordance with the powers of that corporation.

TO HAVE AND TO HOLD the aforegranted and bargained premises with all the privileges and appurtenances thereof, to the said Messiah-All Souls Universalist Church, its successors and assigns, to its and their use and behoof forever, subject, however, to the conditions hereinbefore set forth.

AND it does covenant with the said Grantee, its successors and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances; except as aforesaid; that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that it and its successors shall and will warrant

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and defend the same to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, the said Grantor herein has caused these premises to be signed and its seal hereto affixed by the Trustees of the All Souls Church Parish, thereunto duly authorized, this 22d day of August, in the year of our Lord one thousand nine hundred and forty-four.

Signed, Sealed and Delivered in Presence of

ALL SOULS CHURCH PARISH, By the Seal
Trustees of All Souls Parish

Albert N. Whitney Seal
Clyde R. Chase Seal
Andrew G. Spinney Seal
Dora S. Wish Seal
Laura E. Sampson Seal
Emily C. McLaughlin Seal
Inez D. Blaisdell Seal
Florence M. French Seal
Trustees

Inez D. Blaisdell to
Albert N. Whitney
Clyde R. Chase
Andrew G. Spinney
Dora S. Wish
Laura E. Sampson
Emily C. McLaughlin
Florence M. French
Florence Vest
to Inez D. Blaisdell

State of Maine. Cumberland,ss. October 3, 1944.

Personally appeared the above named Inez D. Blaisdell and acknowledged the foregoing instrument to be her free act and deed as trustee of All Souls Church Parish and the free act and deed of All Souls Church Parish.

Before me, Florence Vest Notary Public Notarial Seal

Received October 4, 1944, at 11h 30m A. M., and recorded according to the original =

Reynolds to Welch War.

KNOW ALL MEN BY THESE PRESENTS, That I, Bessie V. Reynolds, of Gray in the County of Cumberland and State of Maine, in consideration of One Dollar and other valuable consideration, paid by Lauretta P. Welch, of Westbrook in said County and State, the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said Lauretta P. Welch, her heirs and assigns forever, the following described property:

a certain lot or parcel of land situated in said Gray, lying on the Westerly shore of the most Northerly part of Little Sebago Lake, and bounded and described as follows:

Beginning at an iron post on the shore of said Lake at a point five (5) feet Northerly of the most Northeasterly corner of land of said Bessie V. Reynolds, formerly of Harry A. Weeman; thence Westerly one hundred (100) feet more or less to an iron post at the Northwesterly corner of said land of Bessie V. Reynolds; thence Northerly on the line of the road seventy-five (75) feet to an iron post; thence Easterly one hundred (100) feet more or less to an iron post on the shore of the Lake; thence Southerly on the shore of the Lake seventy (70) feet to the point of beginning.

Said premises being a portion of the first parcel of land conveyed by Ralph J. Trumbull to Adelbert R. Reynolds by deed dated June 25, 1937, recorded in Cumberland Registry of Deeds in Book 1526, Page 151. Together with the right to cross and recross land now or formerly of Matthew C. Morrill in the road formerly used to reach said lot as conveyed to said Adelbert R. Reynolds by said deed of Ralph J.Trumbull.

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Know all Men by these Presents, That

I, Martha Babcock Webber, of Portland in the County of Cumberland and State of Maine, in consideration of One Dollar ($1.00) and other valuable considerations, paid by Westbrook Seminary and Junior College, a corporation organized and existing under the laws of the State of Maine and located at Portland in the County of Cumberland and State of Maine, the receipt whereof I do hereby acknowledge, do hereby, give, grant, bargain, sell and convey unto the said Westbrook Seminary and Junior College, its Successors and Assigns forever, the following described property:

A certain lot or parcel of land, with the buildings thereon, situated on Stevens Avenue in the City of Portland, formerly called the "Stevens Plains Road" in the City of Deering, bounded and described as follows:- Beginning on the westerly side of said road at the southerly corner of land formerly of Albert Jones; thence northwesterly on said Jones line twenty (20) rods, more or less, to land formerly of William Kenney; thence southerly by said Kenney's land four (4) rods, more or less, to land formerly of N. K. Sawyer; thence easterly by said Sawyer's land twenty (20) rods, more or less, to said road; thence northerly by said road four (4) rods, more or less, to the place of beginning; being the same premises conveyed to me by Justina B. O'Brien by deed dated July 13, 1932, recorded in Cumberland County Registry of Deeds in Book 1403, Page 305.

This conveyance is made subject to taxes for 1947 which the Grantee assumes and agrees to pay.

U.S.I.R.
$13.20
M.B.W.
8/12/47

To Have and to Hold the aforegranted and bargained premises, with all ~~the~~ privileges and appurtenances thereof, to the said Westbrook Seminary and Junior College, its Successors and Assigns, to it and their use and behoof forever. And I do covenant with the said Grantee, its Successors ~~heirs~~ and assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances; except as aforesaid; that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs, shall and will warrant and defend the same to the said Grantee, its Successors ~~heirs~~ and assigns forever, against the lawful claims and demands of all persons; except as aforesaid.

In Witness Whereof, I, the said Martha Babcock Webber, and I, M. Carroll Webber, husband of the said Martha Babcock Webber, joining in this deed as Grantor, and relinquishing and conveying my rights by descent and all other rights in the above described premises, have hereunto set our hands and seals this 12th day of August in the year of our Lord one thousand nine hundred and forty-seven.

Signed, Sealed and Delivered in presence of

Edward F. Dana — Martha Babcock Webber — Seal

Jayne E. Harrington — M. Carroll Webber M.D. — Seal

State of Maine, CUMBERLAND, ss. August 12, 1947 Personally appeared the above named Martha Babcock Webber and acknowledged the above instrument to be her free act and deed.

Before me, Edward F. Dana Justice of the Peace

Received August 12, 1947, at 2 o'clock 40m. P.M., and recorded according to the original.

Know all Men by these Presents, That

We, Clifford J. Knight and Alice M. Knight, both of Portland in the County of Cumberland and State of Maine

in consideration of One Dollar and other Considerations paid by George O.Chase and Ruth B. Chase, both of Newington in the County of Hartford and State of Connecticut

the receipt whereof we do hereby acknowledge, do hereby, give, grant, bargain, sell and convey unto the said George O. Chase and Ruth B. Chase, as joint tenants and not as tenants in common and their heirs and assigns and the survivor of them and the heirs and assigns of the survivor of them forever, a certain lot or parcel of land with the buildings thereon, situated in Deering in said Portland in the County of Cumberland and State of Maine, bounded and described as follows:

Beginning on the Northerly side of College Street at a stone monument at the intersection of land now or formerly owned by said Clifford J. Knight and land now owned by Westbrook Junior College; thence in a Westerly direction One Hundred Twenty-six and twenty-two hundredths (126.22) feet along said College Street to a stake; thence at a ninety degree (90°) angle Eighty-five and eight tenths (85.8) feet in a Northerly direction to a stake and land now or formerly of the State of Maine; thence One Hundred Twenty-Six and forty-five hundredths (126.45) feet in an easterly direction along land of the State of Maine to a stake; thence Seventy-eight and fifty-two hundredths (78.52) feet in a Southerly direction to the point of beginning.

Being the same premises conveyed to us by Elizabeth Milliken by deed dated December 19, 1956, recorded in Cumberland County Registry of Deeds, Book 2331,Page 248 to which deed and deeds referred to therein reference is made.

Real estate tax for 1957 to be pro-rated as of date of transfer.

To Have and to Hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to the said George O.Chase and Ruth B.Chase as joint tenants and not as tenants in common and their heirs and assigns and the survivor of them and the heirs and assigns of the survivor of them forever, to them and their use and behoof forever. And we do covenant with the said Grantees, their heirs and assigns, that we are lawfully seized in fee of the premises; that they are free of all incumbrances; except as aforesaid that we have good right to sell and convey the same to the said Grantees to hold as aforesaid; and that we and our heirs, shall and will warrant and defend the same to the said Grantees, their heirs and assigns forever, against the lawful claims and demands of all persons.

U.S.I.R. $15.95 C.J.K. 6/12/57

In Witness Whereof, We, the said Clifford J. Knight and Alice M. Knight, husband and wife, each joining in this deed as Grantor, and relinquishing and conveying all right by descent and all other rights in the above described premises,

---- hand s and seals this twelfth day of June have hereunto set in the year of our Lord one thousand nine hundred and fifty-seven.

Signed, Sealed and Delivered in presence of

Ralph M. Snyder, to both — Clifford J. Knight — Seal

Alice M. Knight — Seal

State of Maine, CUMBERLAND, ss. June 12, 1957. Personally appeared the above named Clifford J. Knight and acknowledged the foregoing instrument to be his free act and deed.

Before me, Ralph M. Snyder Justice of the Peace

Received June 12, 1957, at 3 o'clock 40 m. P. M., and recorded according to the original.

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No. 106

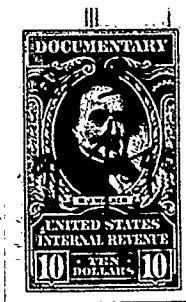
Know All Men by these Presents,

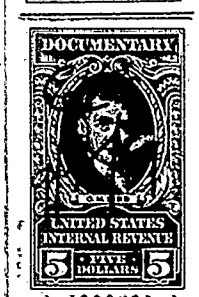
That I, GORDON L. SKILLIN of Waterville in the County of Kennebec and State of Maine

Skillin to Westbrook Seminary & Junior College -- War

in consideration of One Dollar ($1.00) and other valuable considerations

paid by WESTBROOK SEMINARY AND JUNIOR COLLEGE, a corporation organized and existing under the laws of Maine and located at Portland in the County of Cumberland and State of Maine



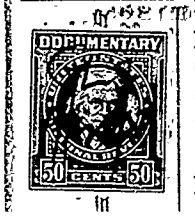


the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said Westbrook Seminary and Junior College, its successors

and Assigns forever,

the following described property:





A certain lot or parcel of land with the buildings thereon situated in said Portland, in that part formerly Deering, on the northerly side of College Street, and bounded and described as follows:

Beginning at a stone monument in the northerly side line of said College Street at the southwest corner of land of L. Laberton Moore; thence running westerly on said College Street one hundred one (101) feet, more or less, to the "Kenney" line; thence northerly on a line parallel with westerly line of said Moore's land one hundred thirty-one (131) feet, more or less, to the fence between the lot hereby conveyed and land, now or formerly, of the heirs of Capt. Sargent; thence easterly by said Sargent land and the fence one hundred (100) feet, more or less, to said Moore's land; thence southerly by said Moore's land one hundred thirty-nine (139) feet, more or less, to the point of beginning.

Also a certain other lot of land adjoining above described lot on the westerly side thereof, and bounded and described as follows:

Beginning on the northerly side line of said College Street, at the southwest corner of above described lot; thence running westerly on said College Street ten (10) feet, more or less, to a stone monument; thence northerly on a line parallel with the westerly side line of above described lot one hundred fifty-eight (158) feet, more or less, to the fence and land, now or formerly, of the Portland Railroad Company; thence easterly by the fence and said Portland Railroad Company's land seven (7) feet, more or less, to the corner of the fence and land, now or formerly, of the heirs of Capt. Sargent; thence southerly by the fence and said Sargent land twenty-eight (28) feet, more or less, to a post at the southwest corner of said Sargent land; thence easterly by said Sargent land and the fence three (3) feet, more or less, to the northwest corner of above described lot; thence southerly by above described lot one hundred thirty-one (131) feet, more or less, to the point of beginning.

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Said premises were conveyed to William H. and Frances E. Skillin by William T. Jordan et als by deed dated October 21, 1904, recorded in Cumberland County Registry of Deeds in Book 758, Page 242. William H. Skillin conveyed his interest to Frances E. Skillin by deed dated April 8, 1908, recorded in said Registry of Deeds in Book 820, Page 377. Frances E. Skillin died intestate on April 29, 1929, leaving no widower and as her sole heirs-at-law, Harlon L. Skillin and Maude E. Clement. Harlon L. Skillin conveyed his interest to Maude E. Clement by deed dated August 22, 1929, recorded in said Registry of Deeds in Book 1328, Page 44. Maude E. Clement devised said premises to the Grantor by Will, abstract of which is recorded in said Registry of Deeds.

To have and to hold the aforegranted and bargained premises, with all privileges and appurtenances thereof to the said Westbrook Seminary and Junior College, its successors

~~x~~ and Assigns, to its and their use and behoof forever.

And I do **covenant** with the said Grantee, its successors ~~x~~ and Assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances;

that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my Heirs, shall and will ~~Warrant and Defend~~ the same to the said Grantee, its successors ~~x~~ and Assigns forever, against the lawful claims and demands

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of all persons.

In Witness Whereof, I the said Gordon L. Skillin

and I, Norma Skillin wife of the said Gordon L. Skillin

joining in this deed as Grantor , and relinquishing and conveying my rights by descent and all other rights in the above described premises, have hereunto set our hands and seals this 25th day of September in the year of our Lord one thousand nine hundred and fifty-nine.

Signed, Sealed and Delivered in presence of

H. Paul Lancaster
Martha M. Rozzyk

Gordon L. Skillin
Norma L. Skillin

State of Maine,
Kennebec } ss.

25 September 19 59

Personally appeared the above named

Gordon L. Skillin

and acknowledged the above instrument to be his free act and deed.

Before me,

H. Paul Lancaster
Justice of the Peace

OCT 22 1959

REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 8 H 21 M A M, and recorded in
BOOK 2507 PAGE 303
Lawrence P. Lyon Register

425

Know All Men by These Presents, 425

That I, NELLIE A. DONNELLY, of Portland in the County of Cumberland and State of Maine,

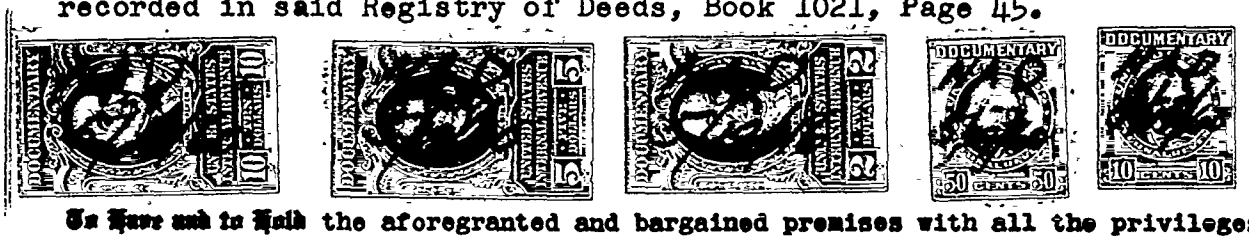
in consideration of One Dollar ($1.00) and other valuable consideration,

paid by WESTBROOK SEMINARY AND JUNIOR COLLEGE, a corporation existing under the laws of Maine and located at said Portland,

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey, unto the said WESTBROOK SEMINARY AND JUNIOR COLLEGE, its successors and assigns forever, a certain lot or parcel of land, situated on the northerly side of College Street, so-called, in said Portland, and bounded and described as follows:

Beginning at a point on the northerly side of said College Street at the southeasterly corner of land conveyed to the Grantee herein by Addie H. Lowd by deed dated July 8, 1944, and recorded in the Cumberland County Registry of Deeds, Book 1752, Page 321; thence northerly by other land of the Grantee herein one hundred fifty (150) feet, more or less, to land formerly of Capt. Sargent, now of the Grantee herein; thence easterly by said Sargent land forty (40) feet, more or less, to land formerly of Brewster, now of the Grantee herein; thence southerly by said Brewster land and land formerly of Arabella W. Roberts, now of the Grantee herein, one hundred fifty-three (153) feet, more or less, to said College Street; thence westerly by said College Street fifty-eight (58) feet, more or less, to the point of beginning.

Being a portion of the premises conveyed to the Grantor herein by Thalia L. Clement by Warranty Deed dated April 5, 1919, and recorded in said Registry of Deeds, Book 1021, Page 45.



To Have and to Hold the aforegranted and bargained premises with all the privileges and appurtenances thereof, to the said WESTBROOK SEMINARY AND JUNIOR COLLEGE, its successors and assigns, to its use and behoof forever.

And I do covenant with the said Grantee, its successors and assigns, that I am lawfully seized in fee of the premises, that they are free of all incumbrances;

that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs shall and will Warrant and Defend the same to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, I, the said NELLIE A. DONNELLY, being a widow,

have hereunto set my hand and seal this nineteenth day of May in the year of our Lord one thousand nine hundred and sixty.

Signed, Sealed and Delivered
in presence of

Richard C. Blanchard — Nellie A Donnelly

STATE OF MAINE

CUMBERLAND, ss. May 19, 1960.

Personally appeared the above named NELLIE A. DONNELLY and acknowledged the foregoing instrument to be her free act and deed.

Before me,

Kathryn Butterfield
Notary Public

STATE OF MAINE

CUMBERLAND, ss. REGISTRY OF DEEDS

Received at 11 H 35 M A M on MAY 23 1960 and recorded in Book 2539 Page 425

Attest Margaret L Weber, Deputy Register

Donnelly to Westbrook Seminary & Junior College -- War

Know All Men by These Presents,

397

That we, GEORGE O. CHASE and RUTH B. CHASE of Portland, in the County of Cumberland and State of Maine,

Chase & to Westbrook Seminary & Junior College - War

in consideration of One Dollar ($1.00) and other valuable consideration

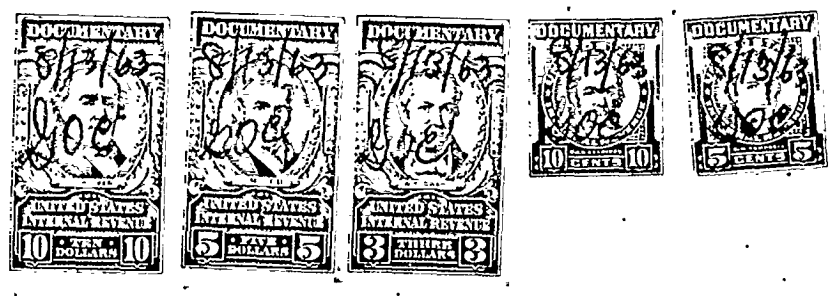
paid by WESTBROOK SEMINARY AND JUNIOR COLLEGE, a corporation incorporated and existing under the laws of the State of Maine, and located at said Portland,

the receipt whereof we do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said WESTBROOK SEMINARY AND JUNIOR COLLEGE, its successors

~~heirs~~ and assigns forever, a certain lot or parcel of land, with the buildings thereon, situated in Deering in said Portland, in the County of Cumberland and State of Maine, bounded and described as follows:

Beginning on the northerly side of College Street at a stone monument at the intersection of land now or formerly owned by Clifford J. Knight and land now owned by Westbrook Seminary and Junior College; thence in a westerly direction one hundred twenty-six and twenty-two hundredths (126.22) feet along said College Street to a stake; thence at a ninety (90) degree angle eighty-five and eight-tenths (85.8) feet in a northerly direction to a stake and land now or formerly of the State of Maine; thence one hundred twenty-six and forty-five hundredths (126.45) feet in an easterly direction along land of the State of Maine to a stake; thence seventy-eight and fifty-two hundredths (78.52) feet in a southerly direction along said land of said Westbrook Seminary and Junior College to the point of beginning.

Being the same premises conveyed to the grantors by Clifford J. Knight and Alice M. Knight by their Deed of Warranty dated June 12, 1957, and recorded in Cumberland County Registry of Deeds in Book 2320, Page 415.



398

To have and to hold the aforegranted and bargained premises with all the privileges and appurtenances thereof, to the said WESTBROOK SEMINARY AND JUNIOR COLLEGE, its successors

~~heirs~~ and assigns, to its and their use and behoof forever.

And we do covenant with the said Grantee, its successors ~~heirs~~ and assigns, that we are lawfully seized in fee of the premises, that they are free of all incumbrances;

that we have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that we and our heirs shall and will Warrant and Defend the same to the said Grantee, its successors ~~heirs~~ and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, I the said GEORGE O. CHASE

and RUTH B. CHASE

wife of the said GEORGE O. CHASE

joining in this deed as Grantors, and relinquishing and conveying our right by descent and all other rights in the above described premises, have hereunto set our hands and seals this fifth day of August in the year of our Lord one thousand nine hundred and sixty-three

Signed, Sealed and Delivered
in presence of

Norton H. Lamb
to both

George O. Chase MD
Ruth B. Chase

State of Maine. Cumberland ss. August 5, 1963.

Personally appeared the above named GEORGE O. CHASE and RUTH B. CHASE

and acknowledged the foregoing instrument to be their free act and deed.

Before me, Norton H. Lamb
~~Justice of the Peace~~
Notary Public

NORTON H. LAMB NOTARY PUBLIC MAINE

AUG 13 1963

REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 10 H 45 M AM, and recorded in
BOOK 2767 PAGE 397 Leonard P. Thayer Register

20429

Know All Men by These Presents. 69

That I, WILLIS W. JOHNSON, of Portland, in the County of Cumberland and State of Maine,

in consideration of One Dollar and other valuable considerations,

paid by WESTBROOK COLLEGE, a Maine corporation, located at said Portland.

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said WESTBROOK COLLEGE, its successors

heirs and assigns forever, a certain lot or parcel of land with the buildings thereon situated in said City of Portland on the Northerly side of College Street, and bounded as follows:- Commencing at a granite post standing on the Northerly side of College Street and located two hundred feet more or less Westerly of a lot of land conveyed by James P. Weston to C. A. Hayden by deed dated October 6, 1881, and recorded in Cumberland County Registry of Deeds, in Book 485, Page 77; and from said granite post running by a line N. 26 degrees E. one hundred and sixty-five feet to land formerly of the Portland Street Railroad Company; thence by line between this land and said Railroad Company land Southeasterly fifty-three feet to a point; thence S. 26 degrees W. one hundred sixty-three and 1/10 (163.1) feet to said side line of College Street and thence on said street line N. 64 degrees W. fifty-three feet to the granite post and point of commencing.

Meaning and intending to convey and hereby conveying all and the same premises conveyed by Will W. Johnson to Ruth S. Johnson by deed dated October 28, 1915 and recorded in the Cumberland County Registry of Deeds in Book 963, Page 174.

My title to the above described premises is derived under the Last Will and Testament of Ruth S. Johnson who died February 19, 1973 an abstract of whose will is recorded in said Registry of Deeds in Book 3382, Page 198.

To have and to hold the aforegranted and bargained premises with all the privileges and appurtenances thereof, to the said WESTBROOK COLLEGE, its successors

heirs and assigns, to its and their use and behoof forever.

And I do covenant with the said Grantee, its successors heirs and assigns, that I am lawfully seized in fee of the premises, that they are free of all incumbrances; except taxes assessed April 1, 1973 by the City of Portland, which said taxes are prorated as of the date of this conveyance;

that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs shall and will Warrant and Defend the same to the said Grantee , its successors heirs and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, I the said Willis W. Johnson

and Phyllis B. Johnson

wife of the said Willis W. Johnson

joining in this deed as Grantor , and relinquishing and conveying all right by descent and all other rights in the above described premises, have hereunto set our hand s and seal s this 24th day of August in the year of our Lord one thousand nine hundred and seventy-three.

Signed, Sealed and Delivered
in presence of

Willis W. Johnson

Phyllis B. Johnson

State of Maine. Cumberland ss. August 24th 19 73.

Personally appeared the above named

Willis W. Johnson

and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Justice of the Peace
Notary Public

AUG 28 1973

REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 2 H 14 M P M, and recorded in
BOOK 3450 PAGE 69 A. Curtis Haughton Register

26398

KNOW ALL MEN BY THESE PRESENTS, That the CITY OF PORTLAND, a body politic and corporate located in the County of Cumberland and State of Maine, in consideration of One Dollar ($1.00) and other good and valuable considerations, paid by Westbrook College, a corporation organized and existing under the laws of the State of Maine and located at 716 Stevens Avenue in said Portland in said County and State, the receipt whereof it does hereby acknowledge, does hereby give, grant, bargain, sell and convey, unto the said Westbrook College, its successors and assigns forever, certain real estate located in said Portland, lying Westerly of College Street and Southerly of Bishop Street, bounded and described as follows:

Beginning at a point on the Northerly line of the land of Portland Railroad Company where the same intersects with land hereby conveyed and land formerly of George H. Smardon, commonly known as the Smardon Gravel Pit, formerly Read's Gravel Pit; thence from said point North 19° 30' East 28.68 rods; thence North 60° West Seven and thirty-two hundredths (7.32) rods to a point; thence South 74° 45' West Thirty-six and sixty-four hundredths (36.64) rods to a point; thence North 5° West Two and fifty-six hundredths (2.56) rods; thence North 30° West Twenty-four and four tenths (24.4) rods; thence South 65° West Forty-seven and twelve hundredths (47.12) rods to center of ditch; thence up the center of said ditch towards what is known as pasture Two Hundred Ninety-eight (298) feet; thence in a straight line to a point in line of Evergreen Cemetery indicated by a spruce stump, said stump being on the intersection between land of said Cemetery and land conveyed by Luther B. Roberts to the said City of Portland; thence from said stump North 80° 21' East Three Hundred Seventy-one and two tenths (372.2) feet to an angle; thence from said angle North 76° 8' East, Five Hundred Ninety-six and twenty-two hundredths (596.22) feet to an angle; thence from said last named angle at a right angle South 12° 52' East Seventy-five (75) feet to land of said Portland Railroad Company; thence about North 76° 8' East by said Portland Railroad Company's land to the point of beginning.

Also a certain other parcel of land, abutting the above described premises and bounded and described as follows: Beginning at the center of the ditch between the hereinabove described premises and the land hereby conveyed and in line of land now or formerly owned by Adam Wilson and running Southerly by land of said Wilson to the Westerly corner of land of Evergreen Cemetery; thence South Twenty-four (24°) degrees East by land of said Cemetery One hundred and seventy-five (175) feet to a point; thence by land formerly of Dennis F. Gulliver, and being the premises hereinabove described, in a straight line to a point in the center of said ditch; said point being Two Hundred Ninety-eight (298) feet from the point of beginning; thence down the center of said ditch to the point of beginning.

Excepting and reserving from the above described premises that portion thereof conveyed by the Grantor to Central Maine Power Company by deed dated February 26, 1967, recorded in said Registry of Deeds in Book 2989, Page 13.

This conveyance is made subject to the right-of-way or easement granted by the Grantor to Central Maine Power Company by deed dated December 13, 1951, recorded in said Registry of Deeds in Book 2055, Page 463.

Reserving to the Grantor, its successors and assigns, the right perpetually to enter at any and all times upon a strip of land fifty (50) feet in width lying equally on either side of the storm drain and upon a strip of land fifty (50) feet in width lying equally on either side of the brook presently located on the premises herein conveyed and the right perpetually to maintain, repair, rebuild, relocate, or remove said storm drain and brook with all necessary fixtures and appurtenances within said strips of land, granting to the Grantee, its successors and assigns, the use and enjoyment of said strips of land for such purposes only as will in no way interfere with the perpetual use thereof by the Grantor, its successors and assigns, for the purposes above mentioned, except that no buildings or structures may be erected within said strips of land. Also reserving to the Grantor, its successors and assigns, the right perpetually to enter at any and all times upon the premises herein conveyed for the purpose of access and egress by itself, its servants and/or agents to and from said strips of land.

Being the same premises conveyed to the Grantor by deed of James Gulliver, Administrator, d.b.n.c.t.a., of the Estate of Stephen Gulliver by deed dated August 23, 1935, recorded in said Registry of Deeds in Book 1476, Page 441.

Also a certain lot of land lying in the rear of College Street, in the City of Portland, bounded and described as follows, to wit:

Beginning at a point on the Northerly side line of College Street and at the Westerly corner of land belonging to Francis L. Stone; thence North 25° 22' east by land of said Stone eighty-seven and nineteen one hundredths (87.19) feet to land of the Portland Railroad Company; thence North 62° 26' west by land of said Portland Railroad Company four hundred and thirty-one and ninety three one hundredths (431.93) feet to a point; thence North 76° 08' east by land of said Portland Railroad Company five hundred (500) feet to a point; thence north 13° 52' west seventy-five (75) feet to a point; thence south 76° 08' west five hundred and ninety-six and twenty-two one hundredths (596.22) feet to a point; thence south 80° 21' west three hundred and seventy-one and two tenths (371.2) feet to the stump of a large spruce tree in the boundary of Evergreen Cemetery; thence easterly by land of Evergreen Cemetery and land of Pine Grove Cemetery about seven hundred and sixty (760) feet to a point on the end of College Street; thence north 24° 55' east by the end of College Street thirty and thirty-five one hundredths (30.35) feet to a stone

monument at the end of the northerly side line of College Street; thence south 65° 05' east one hundred and twelve and ninety-four one hundredths (112.94) feet by the northerly side line of College Street to the point of beginning. Said premises being a part of the several promises conveyed to Luther B. Roberts by deed of S. K. Hamilton, Admr., dated June 22, 1910, and by deed of Daniel H. Reed to Luther B. Roberts, dated July 26th, 1909, recorded in Cumberland, ss. Registry of Deeds, Book 843, Page 402, to which several deeds, and the references contained, reference is hereby made for further particulars of description.

Excepting and reserving from the above described premises that portion thereof conveyed by the Grantor to Alice M. Knight by deed dated January 17, 1947, recorded in said Registry of Deeds, in Book 1852, Page 109.

Being the same premises conveyed to the Grantor by Luther B. Roberts by deed dated June 24, 1910, recorded in said Registry of Deeds in Book 861, Page 282, and subject to the reservations contained therein.

By acceptance of this deed, Grantee covenants and agrees that it will:

1. Provide a landscape buffer zone at least twenty-five (25) feet in width along the northerly and easterly lines of the premises herein conveyed in a manner satisfactory to the Planning Board of the City of Portland.

2. Secure from said Planning Board prior site plan approval for development of all or any part of the premises herein conveyed as such development shall occur.

TO HAVE AND TO HOLD the same, together with all the privileges and appurtenances thereunto belonging, to the said Westbrook College, its successors and assigns forever.

AND the said Grantor Corporation does covenant with the said Westbrook College, its successors and assigns, that it will warrant and forever defend the premises to it the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons claiming by, through, or under it.

258

IN WITNESS WHEREOF, the said City of Portland has caused this instrument to be sealed with its corporate seal and signed in its corporate name by JOHN G. DE PALMA, its Director of Finance, thereunto duly authorized, this 8th day of November in the year one thousand nine hundred and seventy-three.

SIGNED, SEALED AND DELIVERED
IN PRESENCE OF

Patricia E. Mealy

CITY OF PORTLAND

By John G. DePalma
Director of Finance

STATE OF MAINE
CUMBERLAND, ss.

Nov. 8, 1973.

Personally appeared the above named John G. DePalma, Director of Finance of said Grantor Corporation as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said corporation.

Before me,

Patricia E. Mealy
Justice of the Peace
Notary Public

NOV 8 1973
REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 2 h 27 M P M, and recorded in
BOOK 3481 PAGE 255 W. Ruth Hughes Register

UNIVERSITY OF NEW ENGLAND

INNOVATION FOR A HEALTHIER PLANET

Att. D

Institutional Development Plan

August 2024



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Attachment A: City of Portland Construction Management Plan General Template

1. CONTEXT

Since its inception as Westbrook Seminary in 1831, the University of New England (UNE) Portland campus has been an integral part of the Portland community, providing innovative and diverse education opportunities for its students. The campus has undergone strategic growth and curriculum enhancements to effectively meet the evolving educational and workforce requirements of Portland, Maine, and beyond.

UNE is recognized as a leading educator of healthcare professionals and is one of a handful of private universities with a comprehensive health education mission including medicine, pharmacy, dental medicine, nursing, and an array of allied health professionals. UNE's interprofessional education initiatives prepare future healthcare professionals to practice comprehensive and collaborative team-based care.



Mission, Vision, and Core Values

UNE is guided by its Mission, Vision, and Core Values, as well as its strategic plan entitle, *Our World, Our Future*, which was developed in 2018 and continues to guide the University forward today.

Mission

UNE prepares students to thrive in a rapidly changing world and, in so doing, to improve the health of people, communities, and our planet.

Vision

UNE realizes this mission through their commitment to a distinctive approach to education that puts UNE among the most experientially driven institutions of higher education in the nation. UNE provides teaching and learning that conjoins problem-based and hands-on learning, liberal education, and professional training to immerse students in an educational experience that prepares them with:

- Habits of mind, such as cultural, quantitative, and information literacy, critical thinking, tolerance for ambiguity, and problem-solving skills;
- Discipline-based knowledge in their chosen programs of study; and
- Professional competencies, including emotional intelligence, the ability to collaborate in diverse teams, the skills to communicate persuasively, and the attributes to be thoughtful leaders.



UNE is an institution that challenges students to learn broadly, master their professional skills, ask probing questions, and engage in respectful discourse in the context of a robust marketplace of ideas. In this way, students prepare themselves for further study and successful careers, deeply rewarding lives, and meaningful contributions to their communities and the world.

Core Values

UNE is guided by the following values, essential to the culture of the UNE community.

Student Centeredness - We put the aspirations, needs, and success of our students at the center of all we do.

Diversity, Inclusion, Connection - We believe the benefits of a richly varied campus community arise not only from the diversity of its people but also from a sense of belonging and the context this creates to explore and celebrate differences in backgrounds, experiences, and perspectives, underpinned by a sense of cultural humility and a commitment to ethical ideals.

Relentless Inquiry - We take nothing for granted and view thoughtful — even uncomfortable — questioning and civil discourse as essential to the pursuit of knowledge, contribution to society, and a life worth living. Our commitment to university-wide academic freedom is fundamental to this value.

Boundary Crossing - Solutions to the complex and varied challenges we face in our personal and professional lives, our communities, and society will not be found in any single discipline, college, physical location, or individual. Thus, our ability to move easily across such boundaries in order to collaborate with colleagues makes us better problem solvers and more likely to succeed in whatever ventures we undertake.

Learning Everywhere - We believe that teaching and learning should occur beyond traditional classrooms and laboratories — in any place ripe for inquiry and experimentation, including clinics, environmental and field-study sites, online forums, libraries, museums, theaters, and places of civic engagement, among many others.

Progressive Change - We are not afraid to take thoughtful risks in the pursuit of our shared goals. Our mindset is to strategically forecast and plan for possibilities in an unknown future.

Stewardship of Our Planet - We are committed to promoting environmental, social, and economic well-being to improve the health of individuals, communities, and ecosystems.

UNE's strategic plan, *Our World, Our Vision*, further outlines six strategic priorities that the University will focus on over the next five years.

- Provide Exceptional, Innovative Teaching and Experiential, Collaborative Learning Experiences
- Optimize Enrollment, Progress to Graduation, and Lifelong Learning
- Produce Focused Research and Scholarship
- Ensure a Welcoming, Inclusive, and Vibrant Community
- Expand Engagement with Local, Regional, and Global Partners
- Foster a Strong and Sustainable Resource Base

Current Campus Programming

The UNE Portland campus is primarily a graduate campus, focused on educating health professionals, and is currently home to three of the University's premier Colleges: the Westbrook College of Health Professions, the College of Dental Medicine, and the College of Graduate and Professional Studies. The **Westbrook College of Health Professions (WCHP)** includes more than 1,000 students, faculty, and staff working in graduate programs in Social Work, Physician Assistant, Occupational Therapy, Physical Therapy, and Nurse Anesthesia, and undergraduate programs in Nursing and Dental Hygiene. The WCHP is also home to the Interprofessional Simulation and Innovation Center, which provides training opportunities for both students and healthcare professionals from the region through the use of high-tech patient simulators. In the fall of 2013, the UNE **College of Dental Medicine** unveiled a state-of-the-art Oral Health Center, built on Stevens Avenue, as it welcomed its inaugural class of dental students on campus. The **College of Graduate and Professional Studies** is the University's online college (e.g., UNE Online), whose faculty and staff are also located on campus. UNE Online serves adult learners seeking promising careers in healthcare, education, and management, offering a range of professional graduate degrees and certificates. UNE Online oversees the University's Continuing Education efforts. These are professional certificate programs designed to meet the needs of the regional and national workforce. The **School of Pharmacy** welcomed its inaugural class of 100 students in fall 2009 within a newly erected building on Stevens Avenue; distinguished for its emphasis on research and development, the UNE School of Pharmacy offers a Pharm.D. Degree.

Campus Programming

Currently, the following programs are offered in person on the University's Portland campus:

- Dental Medicine
- Dental Hygiene
- Nursing
- Nurse Anesthesia
- Occupational Therapy
- Pharmacy
- Physical Therapy
- Physician Assistant
- Health, Wellness, and Occupational Studies
- Osteopathic Medicine (anticipated July 2025)

In addition to the academic offerings on campus, the University operates two clinics on campus which are open to the public: the Oral Health Center and the Dental Hygiene Center. The Oral Health Center serves as the clinical education hub for UNE's College of Dental Medicine, offering a wide range of oral health services to the community supervised by licensed faculty dentists. Services include cleanings, checkups, fillings, root canals, crowns, veneers, extractions, x-rays, partial dentures, dentures, bridges, and implants. In 2023, it provided low-cost care for 16,701 patient visits (over 139,000 visits in the last 10 years). The Dental Hygiene Clinic, serving as the clinical education center for the University's Dental Hygiene program, provides services such as oral inspections, nutritional counseling, scaling and plaque removal, sealant placement, oral hygiene instruction, blood pressure screenings, x-rays, fluoride treatments, and mouth guard fabrication. In 2023, it provided low-cost care for 2,540 patient visits (over 11,400 in the last 4 years).

UNE North

In addition to the University's academic programs and clinics, the campus includes UNE North, the Institute for North Atlantic Studies of the University of New England, located at 1075 Forest Avenue. UNE North is a signature interdisciplinary center that convenes faculty, professional staff, and students to partner with stakeholders from across the global North to address critical social, environmental, healthcare, and economic challenges in the North Atlantic and Arctic regions.



UNE North connects UNE's expertise with a robust network of academic, business, government, and non-governmental organizations to foster productive partnerships and solve common problems. UNE North supports students from across the University's colleges and disciplines to engage with this work, through their studies, and in their future careers.

Grounded in the United Nations Sustainable Development Goals, UNE North is a leader in promoting sustainable development in Maine, New England, and throughout the North Atlantic and Arctic region. UNE North is also focused on exploring innovative and scalable approaches to expand access to quality healthcare, particularly in underserved rural communities, through tools such as telehealth and digital medicine and by using pedagogical models such as collaborative interprofessional education. UNE North collaborates with the University's colleges to envision new academic programs, cultivate new research partnerships, and advance new study abroad opportunities for students.

Center for Global Humanities

The campus is also home to UNE's Center for Global Humanities (CGH), where prominent thinkers convene to interact with UNE students and the local community. The CGH hosts free, open to the public lectures and films dedicated to exploring the human condition in the 21st century.

Cultural Institutions

The campus also hosts two important Portland cultural institutions – the Maine Women Writers Collection, and the UNE Art Gallery.



Maine Women Writers Collection

The Maine Women Writers Collection was founded in 1959 by Grace Dow and Dorothy Healy to preserve and make available the writings of Maine women who had achieved literary recognition. Designated as a national Literary Landmark, the Maine Women Writers Collection hosts local women's studies programs and national conferences.



UNE Art Gallery

The UNE Art Gallery on campus was established in 1977 as the Joan Whitney Payson Gallery of Art. The gallery has a rich history of exhibitions, houses the University's permanent collection, and continues to bring imaginative and thought-provoking shows to UNE and to the public.

Campus History

The UNE Portland campus has a long history, dating back to 1830, with the founding of a co-educational boarding school called Westbrook Seminary. Established by the Kennebec Association of Universalists, the charter for Westbrook Seminary was signed by then Governor Daniel Smith on March 4, 1831. The campus's original eight acres were a gift to the Association from Zachariah Stevens, after whom Stevens Avenue is named. The first class was held on June 9, 1834, in the newly constructed Seminary Building, which is now called Alumni Hall.



Westbrook Seminary Building, circa 1834

By the 1890's, the Seminary offered four courses of study: a three-year English course and four-year programs titled scientific, ladies' classical, and preparatory. In the last part of the 19th century, the Seminary added chemistry and physics labs to Alumni Hall and promoted a serious interest in athletics that led to the construction of McArthur Gymnasium in 1900. Other notable buildings constructed during this time to support the expanding curriculum include Goddard Hall (1857), Ludcke Auditorium (1867), and Hersey Hall (1869).

Westbrook Junior College

Westbrook Seminary existed for 91 years until 1925 when the name was changed to Westbrook Junior College. As Westbrook Junior College, the school became a career-oriented women's two-year college, which prepared students to transfer as juniors to four-year colleges or universities. Under the guidance of president Dr. Milton D. Proctor, enrollment increased steadily through the 1930's, 40's, and 50's. During this period, new buildings were added on College Street and Stevens Avenue. In 1952 a new large multi-purpose building was erected and dedicated to Milton D. Proctor, Proctor Hall.

In 1958, Dr. Edward Y. Blewett became president of Westbrook Junior College. During his tenure, with generous assistance of the W.K. Kellogg Foundation, a Department of Dental Hygiene was established. Westbrook Junior College became the first residential junior college in the United States to offer a dental hygiene degree. In the 1960's, with the sustained growth and financial support from major grants and federal money, construction of six new buildings occurred: Coleman Hall (1961), Alexander Hall (1962), Linnell Hall (1962), McDougall Hall (1962), Ginn Hall (1962), and Blewett Hall (1967).

Westbrook College

On July 1st, 1970, Westbrook Seminary and Junior College entered a new stage of educational service with a new name, Westbrook College. Looking toward the future and prompted by federal legislation that prohibited the granting of federal funds to colleges that practiced gender discrimination, the College returned to co-educational.

The first Westbrook College male students enrolled in the 1973 fall semester. In 1975, the Art Gallery was constructed and opened. In the 1980's and early 1990's, the College continued to build upon the 1970's decisions and made a firm commitment to four-year programs that combined liberal arts with professional education. The new Abplanalp Library was constructed at the rear of the existing McArthur Gymnasium and opened in 1986, contributing to the College's academic strength, while the new Finley Recreation Center was completed in 1989, providing sports and leisure opportunities.

University of New England – Portland Campus

Through his tenure from 1987-1996, President William D. Andrews guided the College's transition from associate degree programs to baccalaureate degree programs. During this period, the College found itself caught in national trends of enrollment that especially hit small colleges hard. Seeking to bring Westbrook College into the 21st century, the Trustees voted to merge with the University of New England in Biddeford. On July 31st, 1996, the merger took place under the original 1831 Westbrook College charter.

Under the leadership of President Sandra Featherman, the Westbrook College campus of the University of New England has become a center of national excellence in health professions education. The current focus on interprofessional and experiential education, and recent and ongoing campus renovations, ensure a proud future for an institution that has enriched the lives of students, alumni, neighbors, and friends for the last 189 years.

Site & Neighborhood Context

The UNE campus occupies a triangular shaped 72-acre site in the Deering Center area of Portland and is bounded by Warren Avenue, Bishop Street Extension, and Bishop Street to the north; Stevens Avenue to the east; and the Evergreen Cemetery and Central Maine Power Utility Corridor to the south (see **Figure 1.1**). Within the campus there are several residential properties not owned by UNE along College Street. Also within the campus is the Westbrook College Historic District. UNE owns parcels located outside of campus proper at 812 Stevens Avenue, 798 Stevens Avenue, and 1075 Forest Avenue (also known as UNE North).

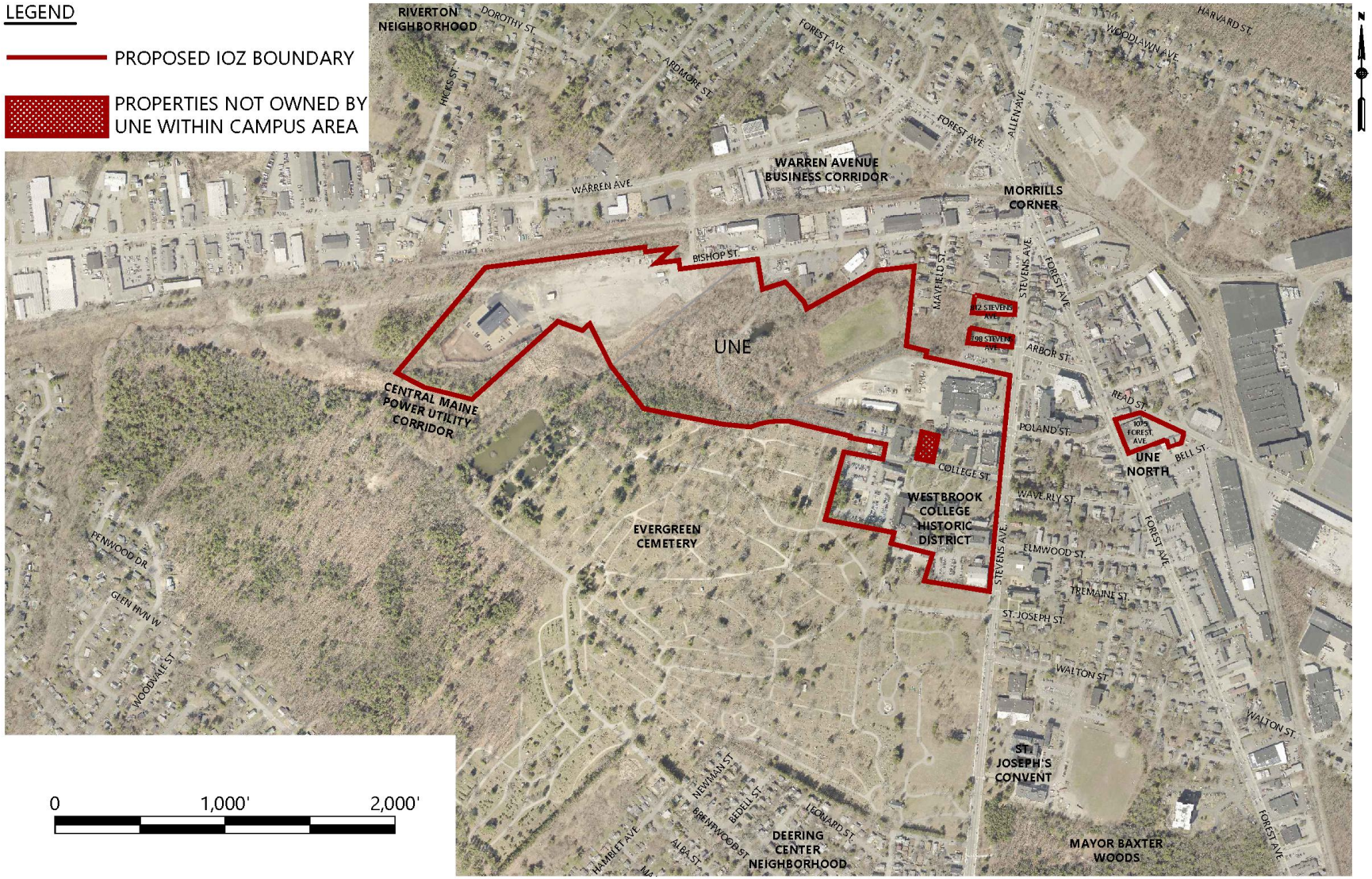


Figure 1.1 UNE Campus Site & Neighborhood Context Map

To the north of the campus, the area includes the Riverton Neighborhood, the Warren Avenue Business Corridor, and Morrill's Corner. To the south of the campus, the area includes St. Joseph's Convent, Mayor Baxter Woods, and the Deering Center Neighborhood. As stated above, the campus is adjacent to the Evergreen Cemetery, which is a 239-acre cemetery and National Historic Landmark established by the City in 1854. The Evergreen Cemetery is also utilized by the community for recreation and offers important community greenspace and recreational amenities including a network of forested trails for walking, cross-country skiing, and bird watching. Ponds located on the cemetery property also offer valuable habitat for wildlife.

Land Use

Land uses on campus and in the surrounding neighborhood include post-secondary facilities, institutional, business, residential, open space, transportation and utility uses (see **Figure 1.2**). Beyond the campus boundaries, the area includes the Stevens Avenue Congregational Church, Stevens Square Community Center, St. Joseph's Catholic Church, a catholic elementary school, St. Brigid, the Samuel Wilde Memorial Chapel, and the Portland Recovery Community Center. Business uses generally run along Warren Avenue, Bishop Street, Stevens Avenue and Forest Avenue and range from industrial to neighborhood food establishments and retail. Residential uses, the majority being detached single family homes, can be found in the area north of Warren and Woodlawn Avenues, between Stevens and Forest Avenue as well as south of Evergreen Cemetery. There are also a few multi-unit residential uses including The Park Danforth, a retirement community across from campus, and the Deering Pavilion, which provides senior living apartments. The open space uses in the area include Evergreen Cemetery, which has trails that connect to campus greenspace, and Mayor Baxter Woods.

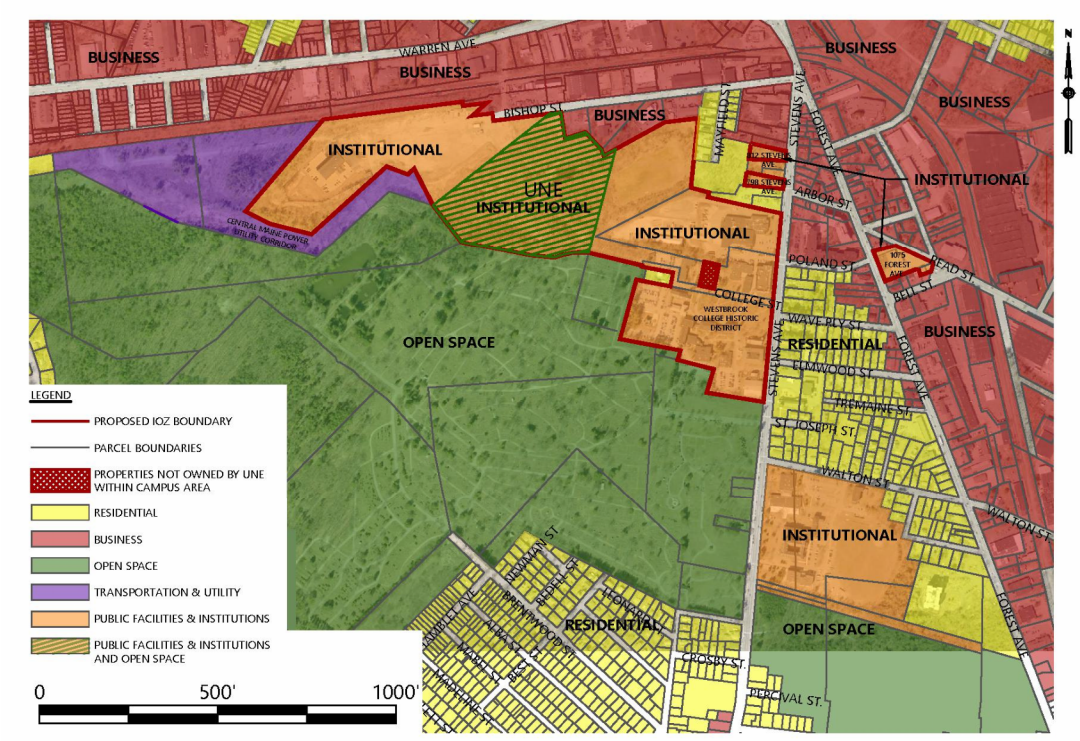


Figure 1.2 UNE Campus Site & Neighborhood Context: Existing Land Use

Zoning

The UNE campus is currently located within several zoning districts, including R3 and R5 Residential, IH Industrial – High Impact, IM Industrial – Moderate Impact, and B2 Business Community. Although the campus has remained in its original physical location since its establishment, the existing underlying zoning regulations do not effectively facilitate institutional development, as they primarily cater to residential and industrial uses. The campus core is located within the R5 Residential district, in which institutional uses are only conditionally allowed. Due to the inadequacy of the base regulatory framework of these zoning districts, development on the campus has historically been governed by these zones through conditional use. UNE has developed this Institutional Development Plan (IDP) and new Institutional Overlay Zone (IOZ) to better support the institutional needs of the campus. See **Figure 1.3** for a map of UNE's IOZ in its zoning context. As part of the IOZ process, UNE will simultaneously seek to change the underlying zones within the campus to B2 Business Community. See **Figure 1.4** for the proposed zoning map. This change will allow for simplification of the IOZ Regulatory Framework, will more accurately reflect the current uses within the campus, and will complement the surrounding zoning.

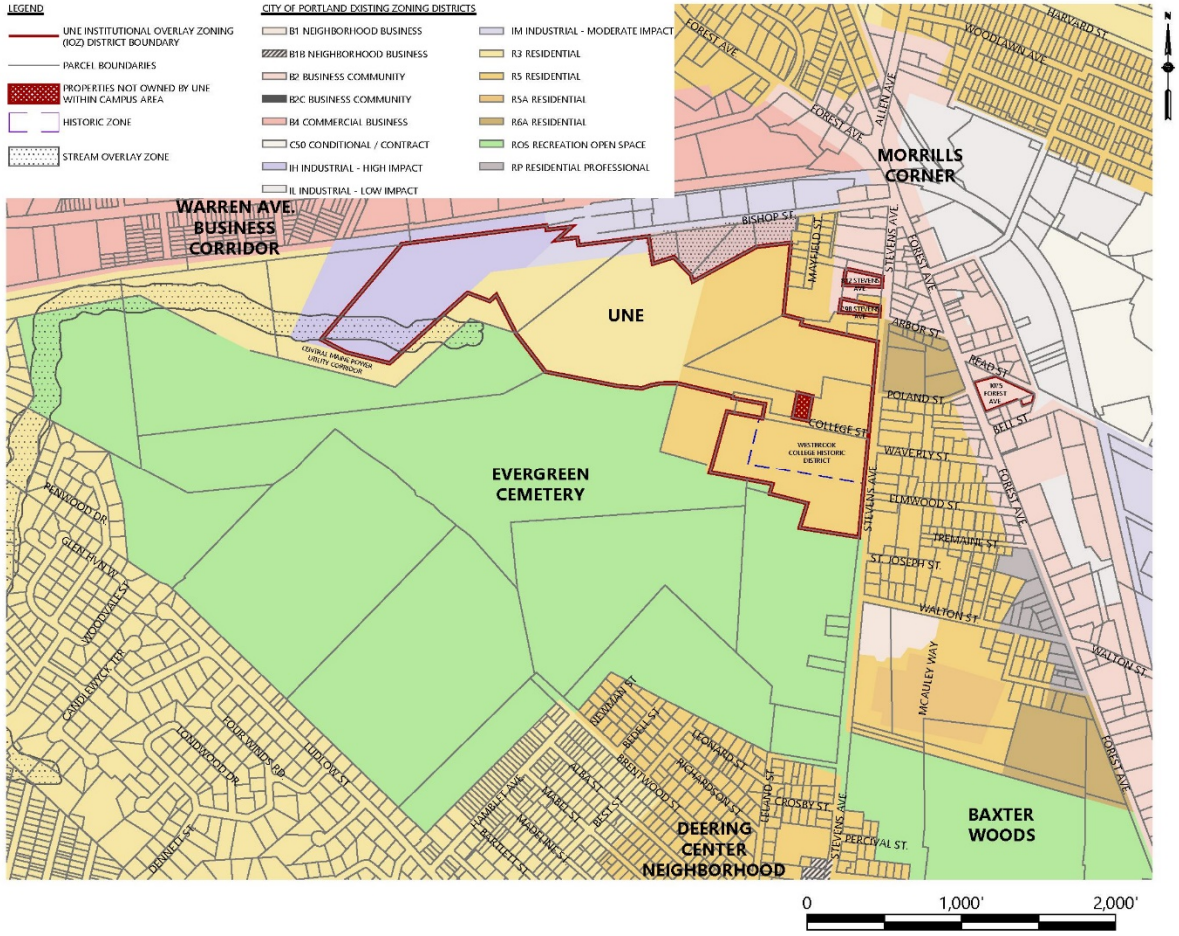


Figure 1.3 UNE Campus Site & Neighborhood Context: Existing Zoning

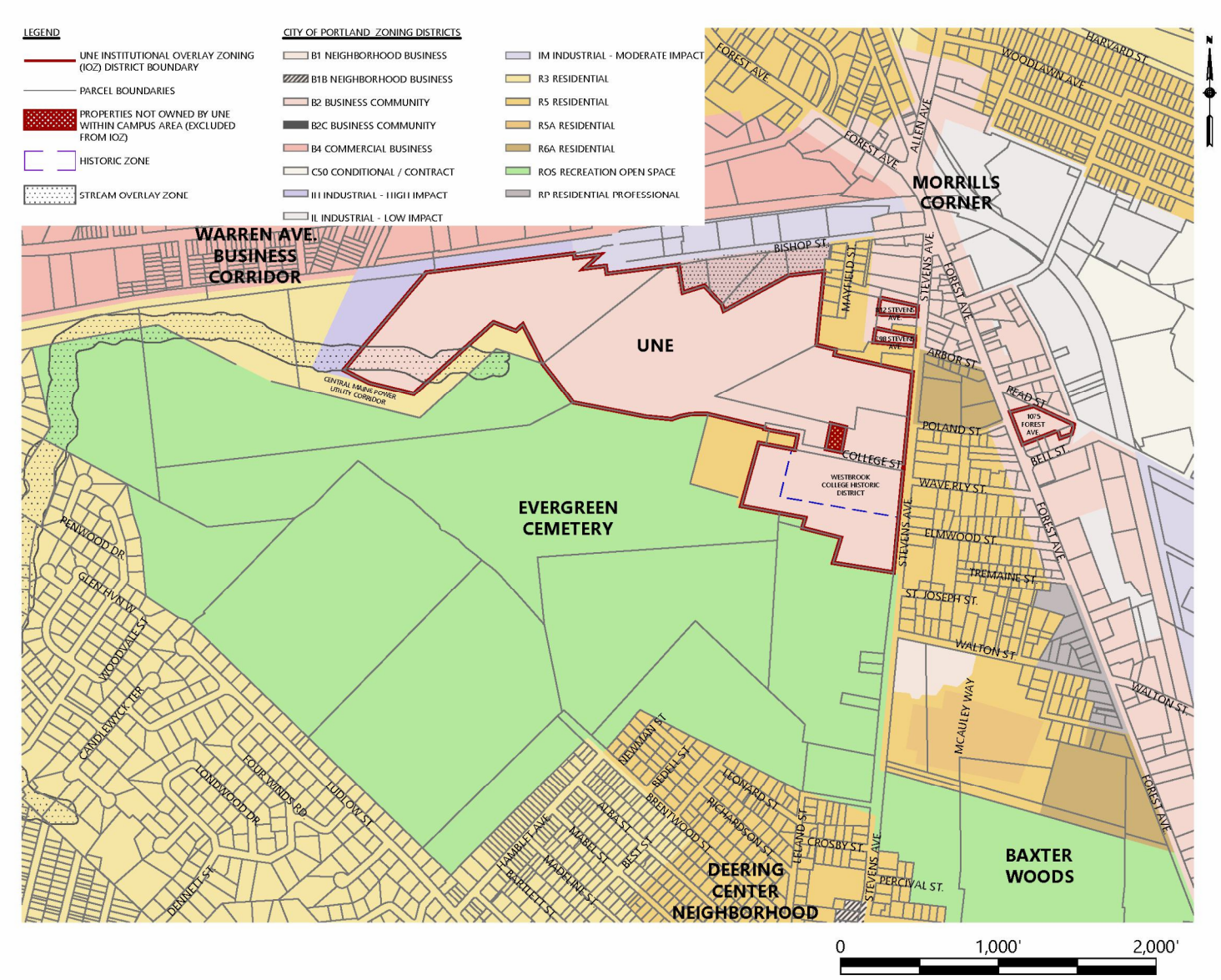


Figure 1.4 UNE Campus Site & Neighborhood Context: Proposed Zoning

Current Campus Buildings

The UNE campus includes 25 separate facilities and 11 parking areas, with a historic campus core located in the southeastern quadrant of the campus, centered around a Campus Quad (see **Figure 1.5**).

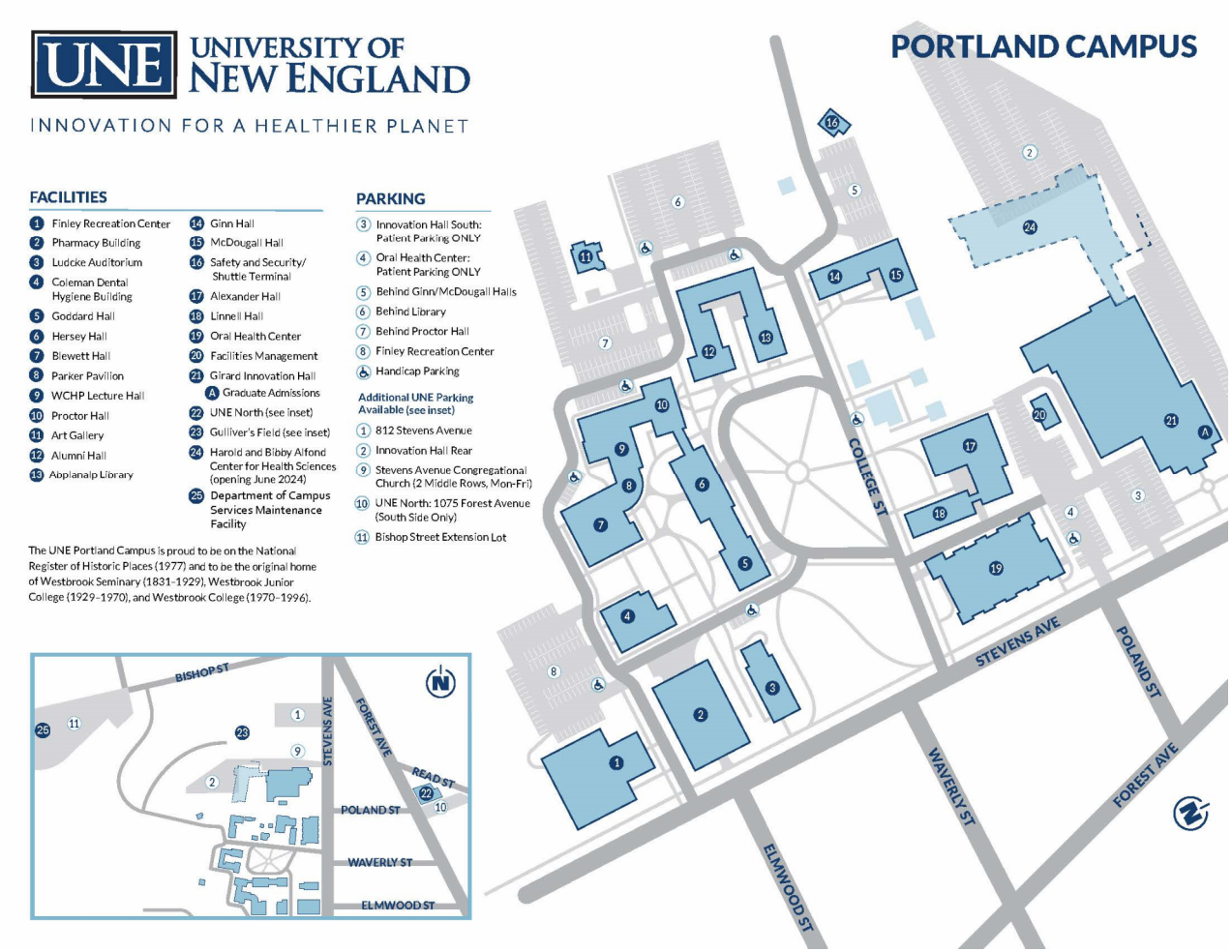


Figure 1.5 Campus Map

Property Ownership

UNE owns a number of properties that make up the Portland campus, listed in **Table 1.2** below.

Table 1.2

UNE Owned Properties in the City of Portland

Parcel Address	*Current Land Use*	*Parcel Address*	*Current Land Use*
Contiguous Campus Core			
684 Stevens Avenue	Post Secondary School	63 College Street	Post Secondary School
706 Stevens Avenue	Post Secondary School	79 College Street	Post Secondary School
710 Stevens Avenue	Post Secondary School	83 College Street	Post Secondary School
714 Stevens Avenue	Post Secondary School	0 Bishop Street	Post Secondary School / Parking
772 Stevens Avenue	Post Secondary School	**Outparcels**	
1 College Avenue	Post Secondary School	812 Stevens Avenue	Post Secondary School
31 College Street	Post Secondary School	1075 Forest Avenue	Post Secondary School
41 College Street	Post Secondary School	32 Bell Street	Post Secondary School
51 College Street	Post Secondary School	798 Stevens Avenue	Post Secondary School

Current Campus Populations

The UNE campus focuses mainly on graduate health professions programs and operates as a commuter (non-residential) campus. Clinical experience is integral to all academic programs, with varying criteria for timing and duration. As students rotate into clinical settings, the campus population fluctuates throughout the academic year. UNE boasts around 100 clinical affiliations, spanning 65 sites in Portland and over 450 statewide.

In recent years, the total number of students and staff present on campus has been declining, in part due to the COVID-19 pandemic, and the shift towards offering a hybrid model of study where students can attend classes online. Flexible work arrangements are also available for faculty, with UNE encouraging non-student facing personnel to work remotely when feasible. **Table 1.3** summarizes the full-time equivalent (FTE) student, faculty, and professional staff present on campus since 2016.

Table 1.3

FTE Student, Faculty, and Professional Staff Data

Year (Fall Matriculation)	FTE Student Population	Full-time Faculty and Professional Staff	Total Full-time Campus Population
2016	1,362	470	1,832
2017	1,304	472	1,776
2018	1,282	467	1,749
2019	1,247	456	1,703
2020	1,162	442	1,604
2021	1,198	578	1,776
2022	1,098	541	1,639
2023	979	568	1,547

Typically, students complete their degree programs on either the Portland or Biddeford campus, with faculty and staff primarily assigned to one campus. While some commuting between campuses does occur, the trend towards remote work and the use of virtual meeting platforms like Zoom has led to fewer faculty and staff traveling between campuses for meetings, resulting in reduced traffic in the surrounding areas.

In addition to accommodating students, faculty, and professional staff, the campus regularly hosts special events and functions utilizing its larger venues, including the function halls in Innovation Hall, Ludke Hall, and Parker Pavilion, as well as occasionally outdoors on the main campus green. These events typically occur outside of regular university operational hours, often on Saturdays, Sundays, and after 5 pm on weekdays, to minimize disruption to core educational activities.

Baseline Characteristics of the Institution

Existing Resources

Historic

UNE's campus includes one of the twelve locally designated historic districts in the City of Portland, the Westbrook College Historic District, which is also nationally registered. The Westbrook College Historic District is composed of a cohesive, homogeneous group of nineteenth and twentieth century buildings that initially formed the rural campus of Westbrook Seminary. The district includes six buildings on the campus that were built between 1834 and 1952:

Westbrook Seminary Building (now Alumni Hall) built in 1833, this building was the first erected in the district, and was originally built with a tower relocated from the Market House in Portland.

Goddard Hall and Hersey Hall were the next buildings erected, in 1857 and 1869, respectively. They were sited at a right angle to Alumni Hall, beginning the idea of a campus quadrangle.

The Universalist Church (now Ludcke Hall) was designed by Francis H. Fassett in 1867 to front on Stevens Avenue, with its axis parallelling that of Goddard and Hersey halls and is Gothic Revival in style.

McArthur Gymnasium (now part of Abplanalp Library) was built in 1900 and designed by Francis H. and Edward F. Fassett. Its location beside Alumni Hall reinforced the campus plan of an L-shared grouping of buildings facing a quadrangle.

Proctor Hall was erected in 1952 between Hersey Hall and Alumni Hall, effectively closing the L-shaped campus group that compliments the massing and style of Goddard and Hersey Halls.

To date, Goddard, Hersey, and Alumni Halls have undergone historical interior renovations and have maintained and/or restored the exteriors to their original grandeur and color. Similarly, modifications to Ludcke and Proctor Hall, and the Abplanalp Library have been completed in conformance with all applicable historic preservation regulations and considerations. The renovation of Alumni Hall was awarded the 2016 Honor Award by Maine Preservation. As UNE expands its campus, it remains mindful of its historical character, aiming to design new facilities that harmonize with the existing historic district.

Existing Open Space and Natural Resources

UNE's campus boasts significant open space with its large campus green located at the main entrance on College Street, and through its preservation of existing freshwater wetland areas. The campus consists of natural area, open space, and ample opportunity for both passive and active recreation for students and the surrounding community offering amenities such as biking and walking trails, a central campus quad in the Westbrook College Historic District, tree-lined streets and pedestrian pathways, and forested area that offers wildlife and bird watching. The Portland Trails Forest City Trail crosses campus along College Street and provides a connection between on- and off-site recreational opportunities. UNE is committed to

partnering with Portland Trails to extend their nearly 70-mile network of trails onto the Campus, with the goal of safely linking the Evergreen Cemetery section of walking paths to those in North Deering and providing more opportunities for the community to access Portland's open space and natural areas. The forested areas of campus are host to hardwood and coniferous tree species and emergent wetland species. These vegetative species comprise the riparian forest and scrub-shrub wetland complex surrounding the Capisic Brook headwaters. The City of Portland has identified Capisic Brook as its highest priority watershed and has outlined implementation measures to address water quality in the watershed, as summarized in the Capisic Brook Watershed Management Plan. UNE recognizes the ecological role the campus natural resources provide and is committed to implementing measures that promote groundwater recharge, increase flood capacity, reduce downstream erosion and pollution, and benefit wildlife habitat. A review of existing natural resources including open space and recreation, ecological communities, aquatic resources, and the Capisic Brook Watershed; an assessment of potential impact and impact avoidance of proposed future development; natural resource protection measures; and a review of the campus's operational sustainability is provided in Chapter 4, Environmental Plan, of this IDP.

Existing Transportation System

The campus is serviced by a variety of transportation infrastructure, including several arterial highways in close proximity with convenient access to Maine Turnpike (via Riverside Street, Warren Avenue and Bishop Street) and access to I-295 via Forest Avenue; metro transit bus service; pedestrian infrastructure; EV charging stations; and a bicycle network. The new connector drive will allow direct access for UNE community members between the core campus and Bishop Street, allowing users to bypass Morrill's Corner. Based upon the last traffic impact study, performed for the recent permitting process for the relocation of the College of Osteopathic Medicine (COM) to the Portland campus, all campus drives operate at good levels of service ("A" or "B") with no capacity constraints. Stevens Avenue has dedicated marked bike lanes from Pleasant Avenue to south of Bishop Street, providing direct access to the campus. Similarly, there are dedicated bike lanes on Forest Avenue within the campus vicinity, excluding Morrill's Corner where there are shared motor vehicle – bike lanes. UNE provides bicycle racks at a ratio of 1 bicycle rack space per every 20 UNE community members. There is access to showers and lockers facilitating bicycle commuting. Transit service is provided via Greater Portland Metro Route 9, which connects downtown Portland to North Deering via Stevens Avenue and also by Metro Route 2, which connects downtown Portland to Riverton via Forest Avenue. There are two Route 9 Metro stops located on campus.

Existing Utility Infrastructure

Existing stormwater management systems utilize on-site infiltration systems, with secondary use of conveyance to the Stevens Avenue and Bishop Street combined sewer system. Existing wastewater infrastructure for the campus is discharged to a combined sewer system in College Street and Stevens Avenue. Additionally, UNE participates in the City of Portland's Fats, Oils, and Grease (FOG) Program to responsibly dispose of these biproducts. Maintenance of these systems is performed regularly to ensure that they are operating effectively. For water supply the campus is serviced by the Portland Water District. For electricity, the campus is serviced by Central Maine Power. Unitil currently provides natural gas service to the campus.

Compliance with the City of Portland Comprehensive Plan

UNE views itself as a partner to the City of Portland and this partnership is integral to their shared sustainable future. The campus was used to host two of the four Community Forums in 2016 that included presentations and engagement activities to shape Portland's Plan 2030. UNE is an important stakeholder and, as a major employer and educator of healthcare professionals, helped provide information and input for developing Portland's Plan 2030. Portland's Plan 2030 focuses primarily on eight aspects of Portland's identity and performance: environment, waterfront, transportation, housing, recreation and open spaces, facilities, historic resources, and economy. Excerpts from the plan that UNE works to promote and advance are provided here:

Environment

- "Develop climate resilience through specific carbon reduction goals, comprehensive climate adaptation strategies, and protections for the city's most vulnerable infrastructure."
- "Adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation."

Economy

- "Support job creation and business growth through public initiatives and private, institutional, and regional partnerships."
- "Develop programs that support industries with high-growth/high value potential such as life sciences, food production, information technology, and marine-related industries."
- "Modify ordinances and make strategic investments to better promote business development and job creation in priority areas."
- "Ensure that the growth of Portland's educational, medical, and cultural institutions is integrated into Portland's urban fabric through the use of high-quality design, management of impacts, community partnerships, and innovative planning."

Historic Resources

- "Stabilize and enhance historic areas of the city by ensuring quality investment in existing structures and compatible infill development."
- "Ensure an appropriate balance of continuity and change as Portland grows and evolves."

Housing

- "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."
- "Identify priority growth areas."
- "Allow for a range of housing models in City codes, whether small units, co-housing, or others that may suit changing needs and demographics."

Recreation & Open Space

- "Sustain and build our system of parks, trails, and open spaces to enhance our quality of life, protect our environment, and promote the economic well-being of our remarkable city by the sea."
- "Provide high-quality, well-designed, well-maintained, safe, and integrated parks, trails, public open spaces, and recreational opportunities accessible to all residents."
- "Strengthen connections between open spaces."

Facilities & Services

- "Continue to work in partnership with regional and State agencies, neighboring communities, nonprofit organizations, and private property owners in support of efficient, sustainable City services."

Transportation

- "Promote multi-modal accessibility, enabling residents and visitors of all ages and abilities to participate fully in the social and economic life of the community."
- "Enhance regional trail connections."

Public Involvement in the IDP

Prior to submission of UNE's Institutional Overlay Zone (IOZ) application to the City, UNE held two neighborhood meetings. The first meeting was held on June 13, 2024, at 6pm at the UNE campus at 716 Stevens Avenue, Hannaford Lecture Hall, Room 109, in the Pharmacy Building. This meeting was appropriately noticed in accordance with the Land Use Code. In an effort to be more inclusive, UNE noticed abutters within 1,000 feet of the campus, rather than the required 500 feet. Thirteen members of the community were in attendance. The purpose of this meeting was to provide a general overview of the IOZ process to the community and solicit community input on what should be considered in this Institutional Development Plan (IDP). The second neighborhood meeting was held on July 2, 2024, at 6pm in the same location and six members of the public were in attendance. Similarly, the purpose of the meeting was to provide a general overview of the IOZ process and solicit feedback for the IDP. Community input helped inform the development of this IDP. After the submission of UNE's IOZ Application to the City, a third neighborhood meeting will be held. In addition to the notice to abutters within 1,000 feet of the campus, community members that provided their email addresses at previous meetings will be notified electronically.

2. CAMPUS MASTER PLAN

Campus Master Planning Process

UNE has undergone a campus master planning process to evaluate its existing and future facilities' capacity to deliver state-of-the-art educational programs to its students. Through this evaluation, the University has identified development opportunities to support the future growth requirements of UNE and its educational programs on campus.

Over the past decade, UNE has expanded its educational programs and delivery methods, particularly in healthcare. This growth necessitated infrastructure changes to support its mission of providing high-level healthcare education in Maine, especially in the local Portland area. The Campus Master Plan has been developed to accommodate a dynamic campus that continues to evolve alongside changes in education and technology. This IDP identifies potential development and expansion projects aligned with this goal that may be developed at the campus to accommodate growth long-term.

Current Facility Assessment

The first step in the master planning process included evaluation of the current campus and its facilities to establish a baseline for UNE's Campus Master Plan. This evaluation included review of the age and condition of existing buildings, the current interior building layouts, departmental allocation of various educational programs, as well as the overall campus infrastructure including utilities, roadways, parking lots, open space areas, and pedestrian facilities. Establishing this baseline allowed UNE to identify areas to be evaluated and considered as part of future campus development.

Current and Future Program Requirements

As a leading educator of healthcare professionals, UNE is committed to providing a transformational learning experience to its students. To achieve this goal, and the priorities outlined in its Strategic Plan, UNE has identified current and future program requirements that will enable the campus to adapt and thrive in a rapidly changing world.[1] Anticipating these changes and establishing a framework that will provide maximum flexibility to support future adaptation were a key component of identifying future program requirements and developing the Campus Master Plan. Consideration of the projected trends of campus users and anticipated daily populations were also an integral part of identifying future needs and are discussed in Section 2.2.

Planning factors that were considered in establishing the Campus Master Plan and this IDP are outlined in **Table 2.1**.

[1] University of New England (2018). *Charting Our Future: Strategic Plan 2018-2023*. https://www.une.edu/sites/default/files/3_charting_our_future-strategic_plan_2018-2023_draft.pdf

Table 2.1

Campus Planning Factors

Factor	Consideration
INNOVATION & TECHNOLOGY	Ability to support future programs such as telemedicine, virtual technologies, artificial intelligence, and related technologies to enhance innovative and dynamic classroom and experiential learning opportunities
INTER-PROFESSIONAL EDUCATION	Strengthen the inter-professional educational model which brings all of the healthcare related programs together, on one campus, in an environment where there are co-educational opportunities to allow for real life interactions
HOUSING	Provision of on-campus housing to help offset a high-cost and high-demand housing atmosphere in the City of Portland; to foster community; afford more time to study and learn; and reduce traffic in and around the campus
OPEN SPACE & NATURAL RESOURCES	Emphasis on preserving natural resource areas and siting new development to have minimal impacts to existing wetlands and streams, and prioritizing open space for recreational use by students, faculty, staff, and the public
NEIGHBORHOOD CONTEXT	Siting and design of development projects such that they complement the surrounding neighborhood, including considerations for traffic and pedestrian access

Adjacencies

UNE has identified program adjacencies as a significant challenge, particularly as it relates to its interprofessional educational model. Maximizing key programmatic adjacencies was a large driver of the Campus Master Plan.

Currently, the College of Osteopathic Medicine (COM) is located on UNE's Biddeford campus, and the majority of the Westbrook College of Health Professions (WCHP) programs and College of Dental Medicine (CDM) are based on the Portland campus. All three colleges currently utilize space on both campuses, which causes large inefficiencies in the educational model and requires students and faculty to travel long distances. One of the major aspects of this Campus Master Plan addresses these inefficiencies by bringing all of these colleges together onto the Portland campus and providing more appropriate building spaces to support educational programming for the COM, CDM and WCHP colleges. The new COM building,

the Harold and Bibby Alfond Center for Health Sciences, is currently under construction, and expected to be completed in 2025. The COM building is represented as facility number 24 on **Figure 1.4**, UNE Portland Campus Map.

Projected Campus Populations

UNE is projecting an increase in full-time equivalent student, faculty, and professional staff populations over the next 10+ years, as noted in **Table 2.2**. The relocation of the COM from UNE's Biddeford to Portland campus will result in an increase of approximately 400 students and 160 faculty and professional staff on the Portland campus.

Looking forward to the next 10+ years, UNE anticipates a moderate increase in student enrollment year over year. These estimates have been calculated based on historical growth data, considering predictable swings in programmatic capacities and enrollments, limits to programs, and additional offerings. The Fall 2025 student population was determined using the current student population and the projected student population for the Harold and Bibby Alfond Center for Health Science, once complete.

Table 2.2

Projected Growth of FTE Student, Faculty, and Professional Staff

Year (Fall Matriculation)	FTE Student Population	Full-time Faculty and Professional Staff	Total Full-time Campus Population
2025	1,400	750	2,150
2028	1,600	760	2,360
2033	1,750	760	2,510

At the beginning of the 2023-2024 Academic year, 108, or 26% of the Faculty and Staff on the Portland campus, were participating in Flex Work scheduling, which affords them the ability to work remotely at least one day per week. This program is expected to continue. This has reduced parking and traffic demands. The vast majority of the academic programs on campus have face to face programming, with little or no online options. Most majors have clinical requirements to be on campus, which place students in local, statewide, or regional clinical settings. UNE does have a strong online academic program; however, none of those students come to the campus, and thus are not considered in the parking or other areas of impact analysis.

The UNE Portland campus does not currently provide on-campus housing as most of its students are enrolled in graduate degree programs. Currently, most of UNE's Portland students commute from areas in and around Portland. The student population enrolled at UNE's Portland campus generally consists of students aged 22 years and above, who may already have established off-campus housing accommodation. Roughly 72% of UNE students, faculty, and staff live within a 20-mile commuting distance of campus.

UNE is aware of the current housing challenges in the City of Portland, including a limited supply of affordable housing options, and intends to develop on-campus housing to help alleviate some of the housing challenges for its students. Incorporating on-campus housing will help to reduce the number of vehicle trips to and from campus, as well as foster a sense of community amongst students. As described in **Table 2.3**, UNE is considering construction of a new residence hall that would provide 350 beds for students and their families.

Key Institutional Needs

UNE's current and future facility needs can be summarized into 5 main categories:

1. Campus Reorganization
2. New Building and Renovation Need
3. Educational/Pedagogy Improvements Need
4. Campus Infrastructure Needs
5. Housing

Campus Reorganization

For decades, UNE's Portland campus has been the home of many of the University's health profession programs. In 2025, when the COM moves from the Biddeford campus to Portland, the campus will solidify its place as the center of health care education in Northern New England. To recognize that transformation, UNE renamed the campus as the Portland Campus for Health Sciences. The establishment of a unique, nationally recognized Institute for Professional Education and Practice in Portland can only be achieved with the relocation of COM. This reorganization is UNE's highest priority and will allow it to establish a world-class academic healthcare campus in Portland, oriented around inter-professional education with the goal of empowering the next generation of world class health care providers at a single location. The relocation of COM to the Portland campus will allow UNE to strengthen its collaboration with clinical partners throughout the state. Relocation of COM to the Portland campus will also afford the opportunity to repurpose spaces on the Biddeford campus and expand existing undergraduate programs to address critical workforce needs for the State.

New Building and Renovation Need

To achieve the goals of UNE's Strategic Plan, which include providing exceptional, innovative teaching and experiential, collaborative learning experiences, UNE will need to both renovate its existing facilities, and build new academic and support spaces. The age of existing campus buildings and their suitability as structures to meet the needs of a dynamic and evolving educational model are important considerations for identifying anticipated future renovations. Through its evaluation of existing facilities, UNE has identified several buildings that will need renovations and expansions to house relocated educational programs and to improve its support departments, such as Information Technology Services, Campus Services, and Facilities Management. Additionally, lack of housing in and around Portland has deterred students from pursuing a degree at UNE. Anticipated renovation, expansion, and new building projects are summarized in **Table 2.3**, and reflected on the Campus Master Plan included as **Figure 2.1**.

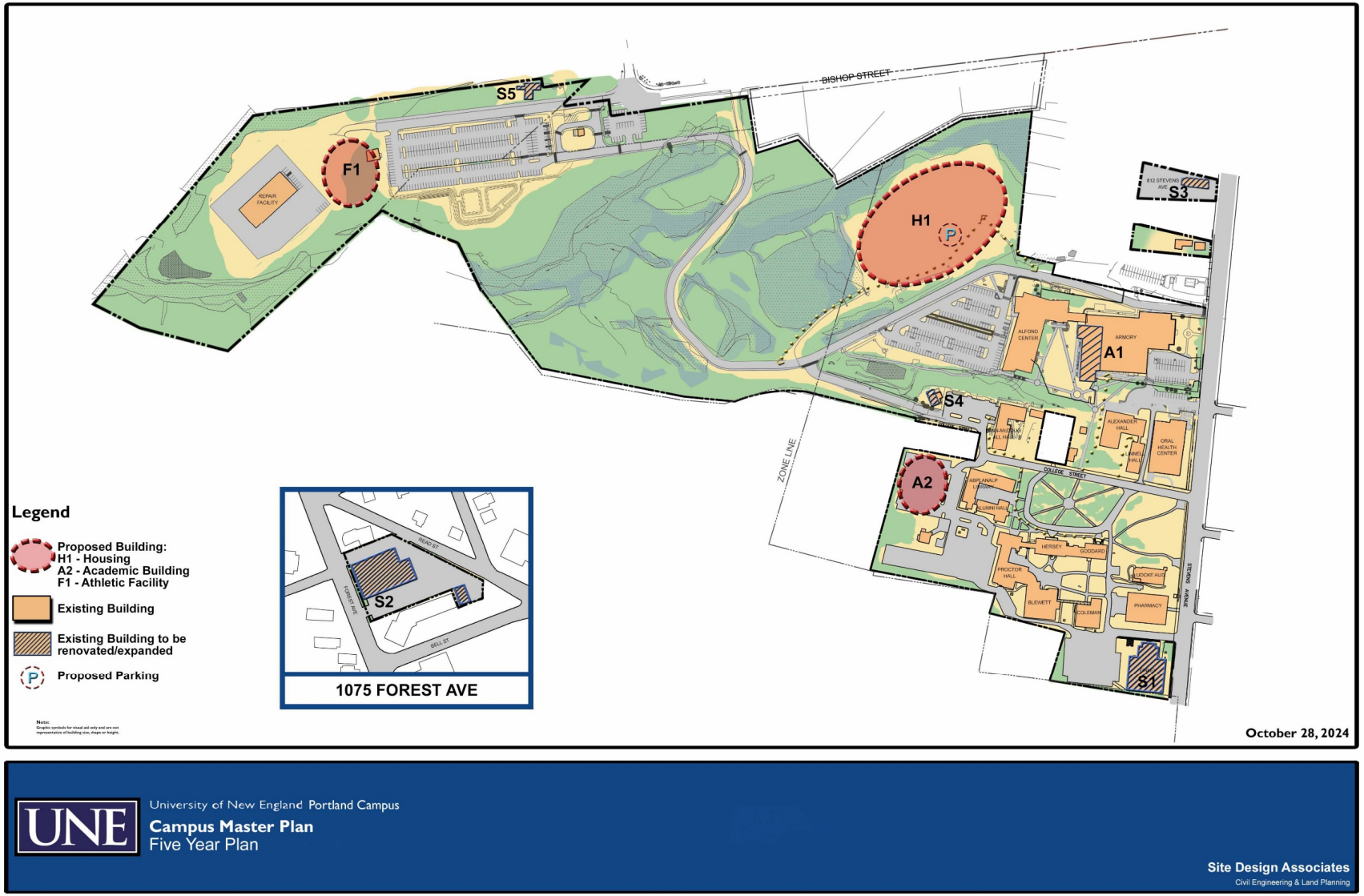


Figure 2.1 Campus Master Plan

Educational/Pedagogy Improvements Need

UNE continually endeavors to improve the way its faculty provides educational programs to its students. Ever-changing technology has also presented challenges for the University as it attempts to stay on the cutting edge in its efforts to provide world-class curriculums. Through its assessment of the current facilities on the Portland campus, it has become evident that UNE will need to undertake future facility projects to upgrade its existing classroom, lecture, laboratory, and study spaces. Mainly, larger academic spaces that facilitate hands on learning as opposed to lecture halls. Additionally, new spaces will be needed to incorporate an emphasis on higher technology, such as virtual reality, high-definition simulation and media that supports telemedicine and digital health. Projects identified within this IDP reflect and support this need.

Campus Infrastructure Needs

Through its extensive evaluation of the existing campus and facilities, UNE has identified infrastructure needs to support the campus reorganization and pedagogy improvements. Existing infrastructure evaluated as part of the master planning process included utilities such as electrical, water, and gas; stormwater systems; access roadways and sidewalks; and parking lots. Parking will be enhanced and expanded to support the additional faculty, staff, and students anticipated. During the construction of the Harold and Bibby Alfond Center for Health Sciences and the Maintenance Facility, UNE, with approval of the utility companies, installed the supporting water, sewer, electrical, communications and natural gas infrastructure to support the future adjacent projects.

Housing

UNE understands there is an increased need for student housing options as programs continue to grow and expand at the UNE Portland campus. Currently, UNE's Portland campus is comprised of commuter students. Existing housing resources are provided to students for off-campus housing options within the area. New housing on campus to support student growth is a vital component that UNE has incorporated within the UNE Campus Master Plan to limit housing pressures on adjacent neighborhoods.

10+ Year Development Plan

UNE's Campus Master Plan identifies anticipated projects which may be developed in the coming years, and identifies short- (0-5 year), medium- (5-10 year), and long-term (10+ year) priorities. These projects and priorities are summarized in **Table 2.3** below, and are represented graphically on the Campus Master Plan, included as **Figure 2.1**. The projects represent the possible future development on the campus, but the realization of these projects and priorities will only occur if the financial and philanthropic plans can support them.

Table 2.3

10+-Year Development Program

Priority 1: Short-Term Development Plan (0-5 years)					
Campus Master Plan Identifier	**Project**	**Use Category**	**Total Square Footage**	**Approx. Height**	**Estimated Occupancy**
H1	Residence Hall	Housing	175,000	85 feet	350 beds
A1	Innovation Hall Renovation/Expansion	Academic	24,000	50 feet	2 offices
S3	812 Stevens Ave. Renovation/Expansion	Support	10,000	35 feet	6 offices
Priority 2: Medium-Term Development Plan (5-10 years)					
Campus Master Plan Identifier	**Project**	**Use Category**	**Total Square Footage**	**Approx. Height**	**Estimated Occupancy**
S2	UNE North/1075 Forest Ave. Renovation/Expansion	Support	60,000	65 feet	10 offices
S4	79 College Street Renovation/Expansion	Support	2,500	35 feet	2 offices
S5	Bishop Street Renovation/Expansion	Support	2,000	35 feet	N/A
Priority 3: Long-Term Development Plan (10+ years)					
Campus Master Plan Identifier	**Project**	**Use Category**	**Total Square Footage**	**Approx. Height**	**Estimated Occupancy**
A2	Academic Building	Academic	60,000	65 feet	20 offices
F1	Athletic Facility	Athletic	65,000	50 feet	12 offices

IOZ Boundary and Anticipated Property Acquisition

IOZ Boundary

The proposed IOZ boundary includes the extent of properties currently owned by UNE, as identified in **Table 1.1**, and as shown on **Figure 1.3**, UNE Zoning Context Map. The IOZ boundary includes the contiguous campus core area, as well as the four outparcels located at 812 Stevens Avenue, 798 Stevens Avenue, 32 Bell Street, and 1075 Forest Avenue.

Anticipated Property Acquisition

There is no additional property acquisition anticipated with this Institutional Development Plan.

3. TRANSPORTATION PLAN

Overview

UNE's Portland campus is in a great location, served by several arterial highways in close proximity. It provides connectivity to both pedestrian infrastructure and bicycle networks. Metro transit service is also provided by two (2) bus routes. UNE has had a Transportation Demand Management (TDM) plan in place since 2010, encouraging and promoting alternative modes of transportation to reduce trips and decrease on-site parking needs. It is regularly updated to respond to changing conditions and campus modifications. This reduces traffic impact both on campus and off-site, improving traffic flow in the surrounding area. Lowering the number of vehicular trips through TDM actions also reduces environmental impacts and impacts on the area's neighborhoods.

Campus Location and Access

The Portland campus is located off of Stevens Avenue, as shown below in **Figure 3.1**. Stevens Avenue is classified as a minor arterial. Nearby Forest Avenue is a major arterial while Warren Avenue, to the north, is a minor arterial. Allen Avenue towards the northeast is also a minor arterial. This location, within close proximity of four arterials, provides convenient access to the Maine Turnpike (via Riverside Street), Warren Avenue and Bishop Street. Access to I-295 is provided by Forest Avenue.

Vehicular Access

Vehicular access is provided by multiple unsignalized drives to Stevens Avenue as well as by a drive to Bishop Street. The new connector drive, currently under construction, will allow

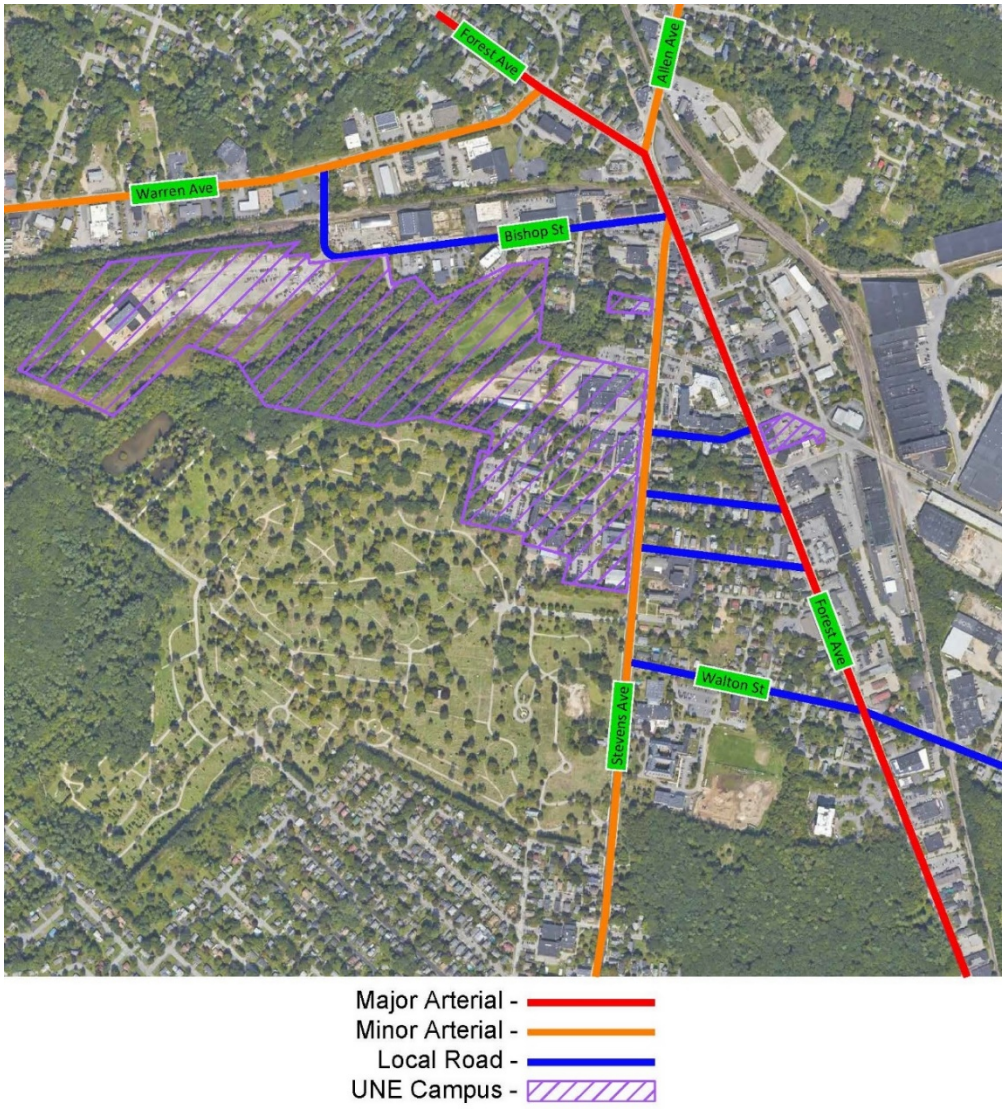


Figure 3.1 Arterial Highways

direct access for UNE community members between the core campus and Bishop Street, allowing users to bypass Morrill's Corner. Based upon the last traffic impact study, performed for the recent permitting process for the relocation of the COM to the Portland campus, all campus drives operate at good levels of service ("A" or "B") with no capacity constraints. Because the Portland campus currently has no on-campus housing, it is a commuter campus. Students and staff arrive from Portland and surrounding communities, as well as from the Biddeford campus. Short-term plans include the addition of student housing, identified on the Campus Master Plan as H1, which will reduce off-site trips. Based upon the most recent student and staff survey, 57 % utilize private vehicles to drive alone to campus while the remaining 43 % utilize alternative modes or a combination of modes.

Pedestrian Access

Pedestrian access is provided by numerous sidewalks both on campus and off campus. Sidewalks are provided on both sides of Stevens Avenue and on both sides of Forest Avenue, which are shown in **Figure 3.2**. This figure also shows a one-mile radius of the campus, which is considered the low end of a reasonable walk commute. There are crosswalks across Stevens Avenue and Forest Avenue in the vicinity of the campus at both signalized and unsignalized locations. These area pedestrian facilities also provide pedestrian access to other educational facilities, namely Longfellow Elementary School, Lincoln Middle School, and Deering High School as well as the local businesses frequented by UNE community members.

A sidewalk will be provided along the length of the new connector road. The Portland Trails network of trails abuts the campus and could be utilized by some local community members to access the campus. UNE is actively working with Portland Trails to extend this network across the UNE campus along, which could provide additional

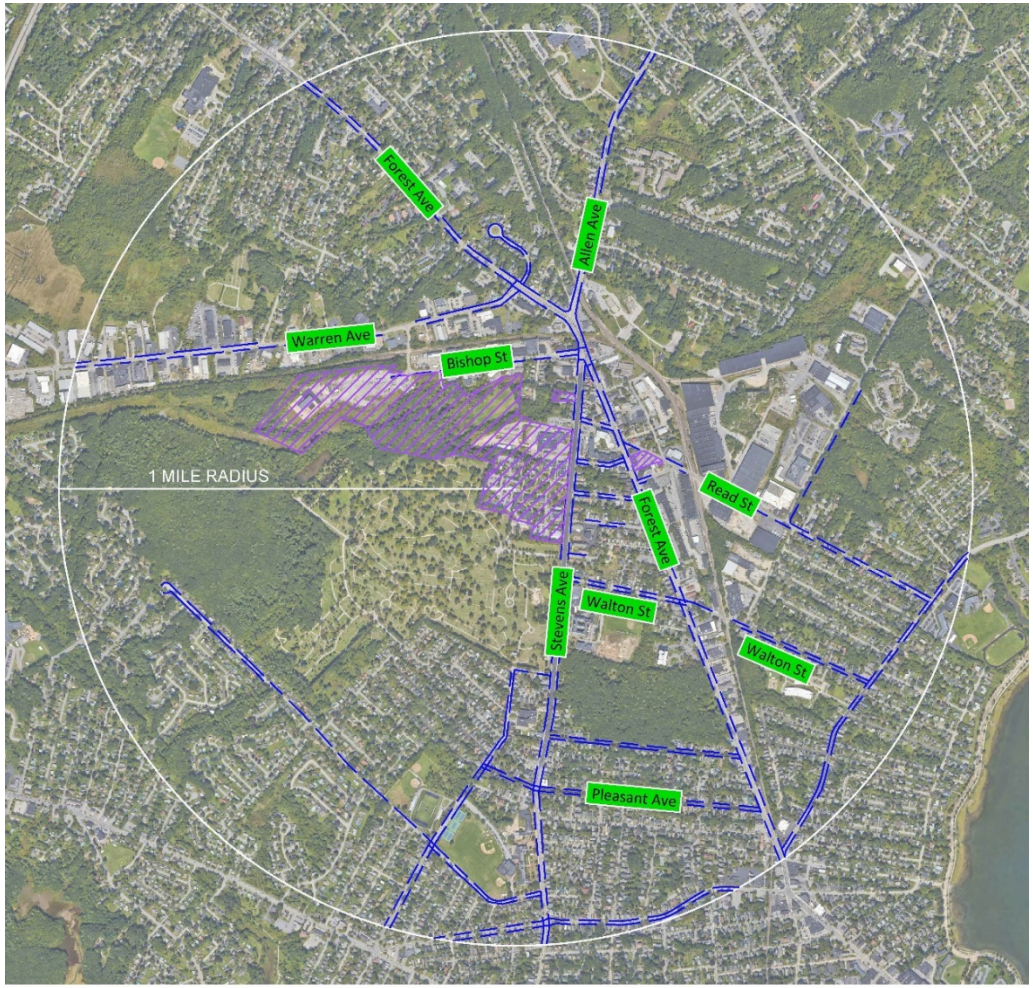


Figure 3.2 Area Sidewalk Network

alternative pedestrian access to the campus, as well as rerouting the Portland Trails route away from Morrill's Corner. The extensive area sidewalk system is shown below in **Figure 3.2**.

Bicycle Access

Stevens Avenue has dedicated marked bike lanes from Pleasant Avenue to south of Bishop Street, providing direct access to the campus (see **Figure 3.3**). Similarly, there are dedicated bike lanes on Forest Avenue within the campus vicinity, excluding Morrill's Corner where there are shared motor vehicle – bike lanes. UNE will be providing shared bike lanes on their new connector road, which will allow bikers destined to and from the west to bypass Morrill's corner.

UNE provides bicycle racks at a ratio of 1 bicycle rack space per every 20 UNE community members. There is access to showers and lockers in the Finley Recreation Center facilitating bicycle commuting. Additional shower and locker facilities are being added at the Harold and Bibby Alfond Center for Health Sciences building.

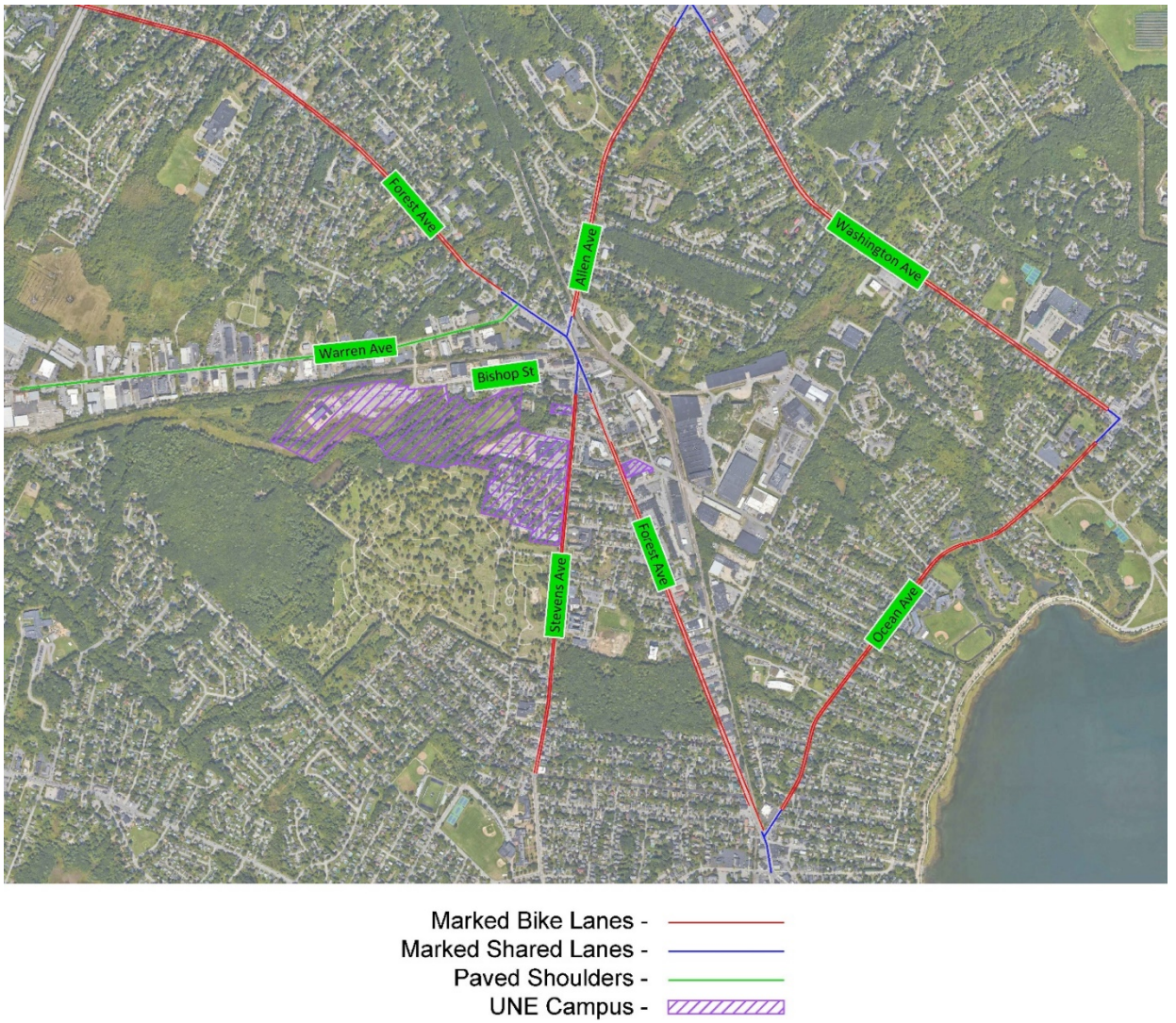


Figure 3.3 Current Bicycle Facilities

Transit Service

Transit service is provided via Greater Portland Metro Route 9, which connects downtown Portland to North Deering via Stevens Avenue and also by Metro Route 2 which connects downtown Portland to Riverton via Forest Avenue. There are two Route 9 Metro stops located on the Portland campus, both of which are equipped with shelters. Several Route 2 stops on

Forest Avenue are within 1,000 feet of the core campus, with one stop at UNE North, located at 1075 Forest Avenue, and Route 2 connects directly to the Metro Pulse (the downtown hub).

UNE provides free bus passes to all students and staff to encourage Metro use. Ridership averaged approximately 1,000 rides per month prior to the COVID-19 pandemic and then declined steeply. Ridership has increased slowly since 2022 to approximately 300 rides per month in 2023. Based upon the most recent 2024 data, monthly Metro ridership currently exceeds 350. The UNE bus pass program also allows free use of the Biddeford Saco Old Orchard Beach Transit, including the Express to Biddeford, as well as the South Portland Bus Service.

Existing Conditions

Traffic Volumes

Existing average annual daily traffic (AADT) data for the vicinity of the campus was obtained from "Traffic Volume Counts, 2014 and 2012 Annual Reports", published by MaineDOT and their Interactive Traffic Map. This data is summarized below:

Table 3.1

Average Annual Daily Traffic

Location	2008	2010	2013	2016	2019	2022
Bishop Street, west of Forest Avenue	--	--	1650	--	--	--
Walton Street, west of Forest Avenue	--	2800	3120	2580	--	--
Forest Avenue, NW of Warren Avenue	2020	19010	19820	18140	--	17370
Forest Avenue, no. of Arbor Street	--	--	24500	22140	22570	18730
Forest Avenue, no. Walton Steet	--	--	21830	--	--	16610
Forest Avenue, so. of Walton Avenue	--	--	21710	--	--	17030

Table 3.3 (cont.)

Average Annual Daily Traffic

Location	2008	2010	2013	2016	2019	2022
Stevens Avenue, so. of Walton Avenue	--	12510	11680	11620	--	--
Stevens Avenue, no. of Walton Avenue	--	11170	10980	11180	--	--
Stevens Avenue, so. of Forest Avenue	--	10360	10050	11230	--	8320
Warrens Avenue, SW of Forest Avenue	13370	11560	13130	11390	12380	13300
Allen Avenue, no. of Goodridge Ave	--	18210	--	16040	16220	17340

Traffic volumes in the vicinity of the campus have generally declined over the long term 2008 to 2022 period. This includes both Forest Avenue and Stevens Avenue volumes. Warren Avenue volumes are currently similar to previous 2008 levels, but they have grown in the more recent 2016 to 2022 period. Allen Avenue similarly declined long-term but has shown recent growth from 2016 to 2022.

Based upon this data, a 0.50 % growth rate was used to project previous turning movement counts, conducted during the COM study, and at Morrill's Corner in 2022, to existing 2024 conditions. This 0.5 % growth is currently being applied in most Maine locations. These existing 2024 peak hour volumes for the campus vicinity and access drives are shown in **Figure 3.4.**

Trip Generation Analysis

The Portland UNE campus currently has a student population of 979. The campus was recently permitted in 2022 for a student population of 1,598 during Site Plan Review for the relocation of the COM from Biddeford to the Portland campus (1,198 students at that time with the addition of 400 COM students). Projected short-, mid- and long-term student populations are as follows:

Table 3.2

Trip Generation Analysis

Year	Student Population
Fall 2025	1,400
Fall 2028	1,600
Fall 2033	1,750

Given the current student population, the campus is expected to serve 1,400 students in Fall of 2025 when the COM program is relocated. The expected mid-term growth in student population is expected to reach the previously permitted student population of 1,600 in Fall of 2028. Longer term growth projections show the campus reaching a total student population of 1,750 in 2033. This is an increase of approximately 150 students over the 2022 permitted enrollment of 1,598 students.

Trip generation analysis was performed for this projected student growth utilizing the Institute of Transportation Engineer (ITE) Trip Generation manual, the most recent 11th Edition. Land use code 550 – University/College was utilized for the analysis. The calculations were performed on the on the basis of students, which is the best fitting independent variable for the prediction of university trips. The calculations were performed for the

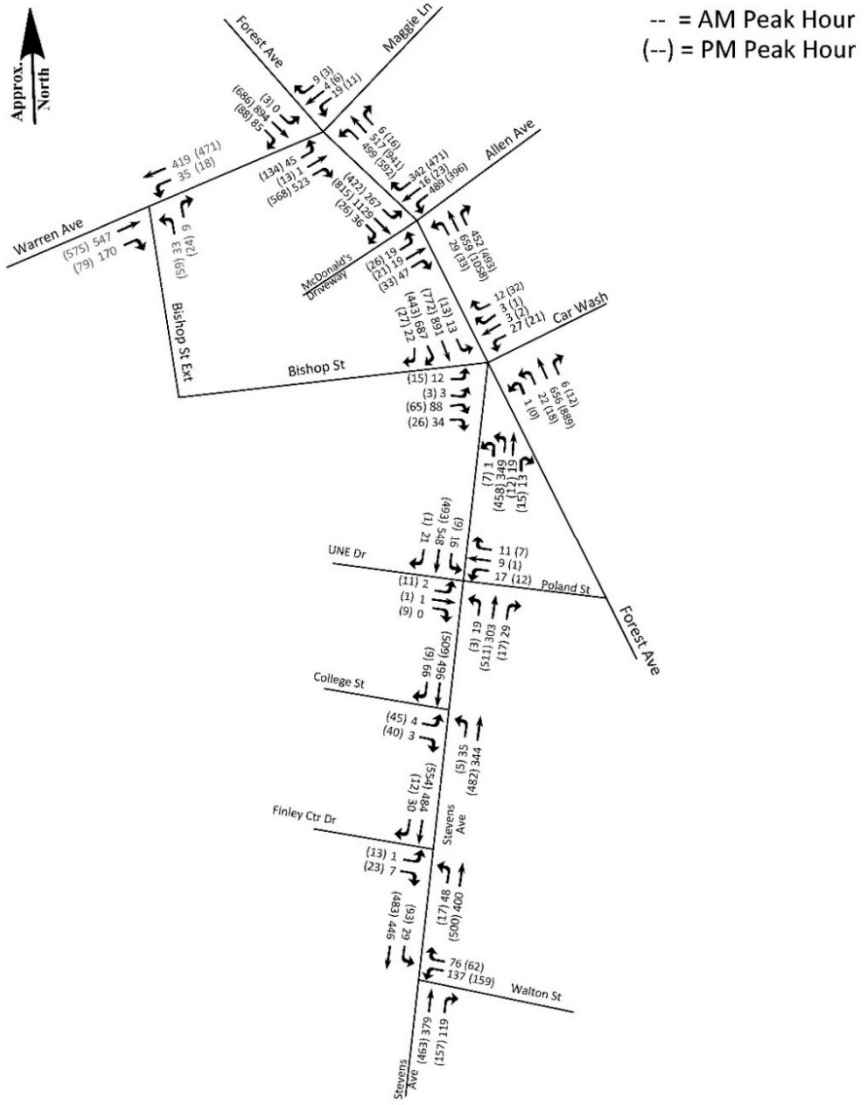


Figure 3.4 Estimated 2024 Traffic Volumes

approximate 150-student increase over previously permitted student population, to a future student population of 1,750. The results are summarized in the following table:

Table 3.3

ITE Trip Generation

Time Period	New One-way Trips	Time Period	New One-way Trips
Daily	234	PM Peak Hour	23
Entering	117	Entering	7
Exiting	117	Exiting	16
AM Peak Hour	23		
Entering	18		
Exiting	5		

The projected long-term growth in student population through 2033 is expected to result in a small increase in trips accessing the campus, 23 one-way trips in both the AM and PM Peak hours. This level of new traffic wouldn't be expected to have any significant impact off-site on either existing or future traffic operations. Typically, a development won't have any significant impact unless it generates in excess of 25 new lane hour trips in a left-turn lane or 50 new lane hour trips in a through or right turn lane. The maximum of 18 new trips, entering the campus during the AM peak hour, would be split between several arrival directions (north, south and west) and between multiple drives. As a result, the lane hour increases will be fewer than 10, due to the expected growth in student population. The 234 new daily trips represent less than a 2 % increase on Stevens Avenue volumes. Hence, the expected increase in trips due to projected student population growth should have no measurable impact either on campus or off-site.

Capacity Constraints

Numerous traffic impact studies have been performed for UNE building projects. The most recent study was "Traffic Impact Study, COM, UNE, Portland, Maine," which was performed by Sewall in 2022. The only capacity constraint identified in the study area for the planned and approved 400-student increase was Morrill's Corner, which includes the signalized intersections of Stevens Avenue, Forest Avenue and Bishop Street, and Forest Avenue/Allen Avenue. The level of service (LOS) at these Forest Avenue intersections was found to be an unacceptable LOS "E" or "F" for several movements and/or approaches. The projected increases in volumes due to the COM relocation were not found to have any significant impact on Morrill's Corner levels of service or delays. Similarly, the minor increase in peak hour trips, 23 one-way trips during the AM and PM peak hour, for

the projected long-term growth of the university would have no significant impact on Morrill's Corner operations since these trips are split between several drives, northbound, southbound and westbound directions and between entering/exiting trips. The resulting new lane hour trips would be fewer than ten (10) having no measurable impact off-site on Morrill's Corner operations. Additionally, as previously noted, the new connector drive will reduce existing trips at Morrill's Corner.

Opportunities for Improvement

As previously noted, the only capacity constraint identified in previous studies is Morrill's Corner, including the intersection of Stevens Avenue/Forest Avenue/Bishop Street and the intersection of Forest Avenue/Allen Avenue. It is important to note that area traffic volumes have not changed significantly since these studies were performed and that UNE's student population is currently well below the permitted/previous study level. Morrill's Corner intersections have had known capacity constraints and associated queuing issues for over a decade. The "Portland – South Portland Smart Corridor Plan," completed in 2019, outlined improvements for Morrill's Corner. These improvements include removing Bishop Street from the signal system and limiting exits there to right turns out, and access management improvements/restrictions to other Forest Avenue parcels. Under the preferred plan, the level of service for Morrill's Corner are improved as follows:

Table 3.4

Portland-South Portland Smart Corridor Plan - Potential Morrill's Corner Improvements

Peak Hour/ Intersection	Existing/ No Build	Preferred Alternative
AM Forest Avenue/ Allen Avenue	F	D
AM Forest Avenue/ Stevens Avenue/ Bishop Street	E	C
PM Forest Avenue/ Allen Avenue	E	C
PM Forest Avenue/ Stevens Avenue/ Bishop Street	D	C

While this study was completed in 2019, the improvements have not yet been funded for implementation as the City of Portland has been focusing attention on other transportation priorities.

UNE has previously paid impact fees to the City of Portland for Morrill's Corner improvements. UNE contributed a $29,000 impact fee to the city as part of the 2008 approval for the School of Pharmacy.

The Morrill's Corner improvements would also be expected to address and reduce crash potential at these high crash intersections and along the adjacent links. As previously noted, the new connector drive, currently under construction, will reduce existing trips through Morrill's Corner by

allowing UNE community members to directly travel to/from the campus core to/from Warren Avenue, bypassing Morrill's Corner. This reduction in volumes should also improve operations and reduce crash potential.

UNE will continue to update their Transportation Demand Management Plan and strive to reduce off-site trips as described in the following section. The planned addition of on-campus housing is also expected to reduce daily commuting trips to the campus.

Transportation Demand Management Plan

UNE has had a Transportation Demand Management (TDM) plan since 2010, which is routinely updated. The most recent update was completed in April of 2022. The primary goal of the plan is to reduce vehicle trips to campus and, thus, reduce demand for on-site parking. The plan further aims to reduce traffic impacts, both on-campus and off-site, improve traffic flow in the surrounding area, and reduce UNE's Scope 3 carbon emissions.

UNE hopes to achieve these goals by implementing TDM strategies that promote and encourage alternative modes of transportation. In 2019, a "Transportation Think Tank" (TTT) committee formed, with representation from Campus Planning, Student Affairs, Safety and Security, Undergraduate and COM Student Governments, Sustainability Office, and the Environmental Council. With oversight from the TTT committee, the TDM strategies are regularly reviewed and updated to respond to changing conditions and needs. The TTT committee actively engages in implementing and promoting the TDM strategies outlined below.

TDM Strategies

Education and Promotion

UNE provides both educational and promotional material regarding the advantages of alternative transportation modes. The TDM Coordinator regularly publishes the "*Movements*" newsletter, which is hung in all bathroom stalls throughout the campus, ensuring visibility and contemplation. The newsletter informs the UNE community about ongoing, new, or revised transportation programs, events and resources, like bus maps and schedules, GoMaine carpool/rideshare information, parking updates, bike infrastructure updates, incentive program information and safety practices for pedestrians, among other topics. Additionally, the university regularly provides specific TDM-related information to the campus community through various methods and media formats, including bulletin boards, strategically placed bus schedule brochure holders, weekly community-wide emails, digital screens, and website.

Carpooling & Ridesharing

UNE utilizes the GoMaine service to encourage "greener commuting" to each campus as well as between campuses when required. UNE has its own landing page on the GoMaine website, which helps users find carpool partners, map out alternative transportation methods with transit, walking and biking routes, incentivizes users with rewards, and offers emergency "ride home guarantee" for regular users. Additionally, UNE takes advantage of the expertise of GoMaine staff for educational and promotional events.

The university provides free parking to carpoolers and dedicates some of the most convenient parking spaces as incentives. The university offers GoMaine tutorials every year. The TTT committee has identified the need to streamline carpool permitting procedures, which would make the

incentive more desirable while making administration of the program less cumbersome. This is a continued goal for the committee for the upcoming year.

Transit Service

As previously noted, UNE provides free GP Metro, South Portland City Bus Services, and Biddeford, Saco Old Orchard Beach Bus Transit (BSOOB) passes for all students, faculty, and staff to encourage transit usage. Each of these services provides GPS trackers with mobile apps for cell phones, which aid riders in knowing exactly where the bus is located and how close it is to their stop. The TTT committee actively engages with administration from these transit providers to update materials and promote ridership.

Incentives

Since 2008, UNE has continually promoted the use of alternative modes of transportation through incentives and promotions, including:

- Raffling of new bicycles and iPads for transportation competitions
- Providing free coffee and doughnuts to users of the Bishop Street parking lot
- Free use of electric vehicle charging stations
- Free public transit passes.

The university is currently considering dedicating additional prime campus parking spaces as carpool spaces to encourage greater carpooling.

UNE has considered disincentives but given the distance that many students and staff commute, whom have no alternative since they are located too far to walk, bike or utilize transit, disincentives would unfairly punish students and staff whom have no other reasonable alternative, especially in light of the current affordable housing crisis in Southern Maine. Additionally, the UNE Portland Campus is a graduate campus with nontraditional students. Many of which have families, jobs and most must participate in clinical experiences. All of which limit opportunities for alternative transportation usage.

EV Charging Infrastructure

UNE provides free charging for electric vehicles. UNE has eight (8) Level 2 chargers at the Bishop Street parking lot, two of which are reserved for handicapped parking. There are also (62) 100v charging outlets in that lot. There will be additional charging capacity at the Harold and Bibby Alfond Center for Health Sciences parking lot with (10) Level 2 chargers and (26) spaces with 100v outlets. At this time, there are only 17 electric vehicles registered with the University on the campus. The TTT Committee will continue to monitor the growth of EV adoption in the campus community and will advise administration regarding further expansion of charging infrastructure as needed.

Bicycle Infrastructure

UNE promotes bicycling as a convenient means to access campus for those students and employees that reside within the appropriate range, and for exercise and wellness benefits. The university has several bikes on campus that the UNE community members can borrow to utilize during the

day. Bike racks are conveniently located across campus for community members to store their personal bikes as well. UNE has previously discussed, and would consider, being a site for a city-wide bike share program.

There is access to showers and lockers in the Finley Recreation Center further facilitating bicycle. The Harold and Bibby Alfond Center for Health Sciences building will include men's, women's and gender-neutral locker room facilities, with showers. These additional facilities will encourage and support greater commuting by active transportation means. The new shared connector drive will provide better access for bicyclists destined to and from the west.

Pedestrian & Bicycle Access

As previously presented, there is an extensive sidewalk system surrounding the campus as well as bike facilities. The shared bike lanes that will be provided on the new connector drive will provide additional opportunities for UNE community members to bike to campus, without having to bike through Morrill's Corner, with its intimidating shared vehicle bicycle lanes.

UNE is committed to partnering with Portland to extend their trail system through UNE property in an effort to safely link the Evergreen Cemetery section of walking paths to those in North Deering. Currently, several large sections of the Portland Trail system are adjacent to UNE's Portland campus in Baxter Woods Park and Evergreen Cemetery. Hikers and walkers wishing to move from the Evergreen Cemetery area to the North Deering section of Portland must traverse busy streets like Stevens and Allen Avenues, through Morrill's Corner, in order to reach the next trailhead. As part of UNE's initiative to construct the Institute for Interprofessional Education and Practice on its Portland Campus, the access road that links College Street to UNE's Bishop Street parking lot will be improved, with additional lighting and features to improve safety.

UNE Community Member Surveys

UNE routinely performs student and staff surveys to determine arrival and departure times, transportation modality and parking usage, as well as to gauge interest in various alternative transportation and incentive programs. The results have guided UNE in making adjustments to its TDM plan, including infrastructure upgrades, and bus schedule changes. Hot mapping of faculty, staff, and student home addresses was utilized to identify additional measures for enhanced promotional activities towards fostering alternative transportation modes and associated programs.

Based upon the most recent 2023 survey, students and staff on campus are currently utilizing the following mode choices:

- Combination of Modes 34 %
- Carpool/Van 3 %
- Transit 1 %
- Bicycle 1 %
- Walk 3 %
- Remote 1 %
- Drive Alone 57 %

While the majority drive alone to campus, a large percentage of the community uses a combination of modes to reach campus.

The Director of Safety and Security monitors the effectiveness of the TDM plan through biannual parking utilization studies. The TDM Coordinator and TTT Committee use the data collected from these parking studies to continually review and anticipate parking demand on campus and guide ongoing revisions to the TDM plan.

Data analysis conducted during development of the 2022 plan found that 13% of the campus community live within a walkable 1.5 miles radius and a bikeable 1.5 - 5-mile radius of the campus. It was also found in the survey that 11.5% of the survey respondents walk to campus 1-9% of the time. Comments indicate that 31% of the survey respondents desire to use an alternative mode of transportation, but are unable due to external commitments, such as work, daycare pickups and clinical requirements. Opportunities to increase the alternative modes of transportation percentage exist, and efforts will continue to be made to identify incentives that would increase these modes of commuting, including the extension of the Portland Trails network through the campus, which would allow Deering Center and Riverton residents to more easily walk to campus.

Parking

While there are several alternative transportation modes available to access the campus and many use a combination of modes, the majority of students and staff arrive by private vehicle. Based upon the most recent parking counts, conducted in fall of 2023, parking demand peaks between 10:00 AM and 2:00 PM and varies by day. There are currently eleven parking lots located on campus plus on-street parking along two campus roadways. The lot locations are shown on the campus map in **Figure 1.4**. The number of spaces located in these lots is detailed below:

Table 3.5

UNE Portland Campus – Parking Spaces

Lot Description	Number of Spaces
Lot 1 – 812 Stevens Avenue	30
Lot 2 – COM	182 (permitted)
Lot 3 – Innovation South	33
Lot 4 – Oral Health Center	24
Lot 5 – Ginn/ MCD	28
Lot 6 – Library	103
Lot 7 – Proctor	121
Lot 8 – Finley	89
Hersey Circle	4
Ludke	3
Bishop	344
UNE North	72
Church	31
Total Spaces	**882 plus 182 (permitted)**

There will be 1,064 parking spaces on campus after the COM project is completed. In 2022, there were 1,241 spaces available, so the university has been decreasing spaces over time as new projects are completed and parking needs are re-evaluated.

Most campus lots require the purchase of parking permits. The largest number of vehicles recorded during the fall 2023 counts in the university lots was 796. This represents 75 % of the overall on campus capacity with the COM completion. This highest weekly demand occurred on Wednesday at 1:00 PM.

There is a shuttle bus provided between the more remote Bishop Street lot and the campus core to increase that lot's usage. There is a heated shelter with Wi-Fi at each end of the shuttle route to encourage ridership. The Bishop Street lot does not require a parking permit, providing free parking to further encourage its use. The shuttle runs continuously from 7 AM to 7 PM with minimal wait times. With these incentives, parking in this more remote lot has increased significantly from 37 vehicles in 2012 to an average of 233 during the peak period in 2019. The average peak daily use in this lot in 2023 was 245 vehicles, which occurred while half of the lot (300 spaces) was closed for construction.

In addition to the on-campus parking, there is also on-street parking located on surrounding streets, which is available to UNE community members. This on-street parking includes College Avenue on campus and parking along both sides of Stevens Avenue off campus.

The City of Portland has implemented residential parking permits and one-hour parking restrictions on many side streets in the vicinity of campus, reducing the amount of on-street parking available to UNE community members. As long as there continues to be free on-street parking along Stevens Avenue without any time restrictions, in close proximity to the campus core, continued use of these spaces by staff and students is expected to occur given their convenience.

The goals for UNE in terms of parking are:

- Continue to provide an adequate parking supply on-campus
- Reduce parking needs over time through continued TDM actions
- Reduce neighborhood impact by reducing on-street parking usage by UNE students

4. ENVIRONMENTAL PLAN

Existing Natural Resources

Open Space and Recreation

The UNE Portland campus consists of natural area and open space, with opportunity for both passive and active recreation. Approximately 53 percent of the 72-acre campus is open space and offers amenities such as biking and walking trails, a central campus quad, tree-lined streets and pedestrian pathways, and forested area (see **Figure 4.1**) that offers wildlife and bird watching opportunities. There are two gardens on the campus; the Medicinal Herbal Garden, which is a demonstration of the types of medicinal herbs used in phytotherapy, and the Community Garden, which is managed by volunteer faculty and staff and produces vegetables for personal consumption and donation to local charities.

The campus is located adjacent to industrial, commercial, residential, as well as other open space uses. The adjacent 239-acre Evergreen Cemetery offers important community greenspace and recreational amenities including a network of forested trails for walking, cross-country skiing, and bird watching. The Portland Trails Forest City Trail crosses campus along College Street and provides a connection between on- and off-site recreational opportunities. UNE is committed to partnering with Portland Trails to extend their nearly 70-mile network of trails onto the campus, with the goal of safely linking the Evergreen Cemetery section of walking paths to those in North Deering and overall providing more opportunities for the community to access Portland's open space and natural areas.



Figure 4.1 Existing Open Space on Campus

Ecological communities

The campus contains varied natural resource features and is characterized by two levels of generally flat topography with both landscaped and natural greenspace punctuated by campus facilities.

Forested areas are host to hardwood and coniferous tree species such as speckled alder (*Alnus rugosa*), red maple (*Acer rubrum*), willow (*Salix* spp.), winterberry (*Ilex verticilata*), green ash (*Fraxinus pennsylvanica*), and balsam fir (*Abies balsamea)*. Emergent wetland species on the campus include cattails (*Typha latifolia*), sensitive fern (*Onoclea sensibilis*), jewel weed (*Impatiens capensis*), and blue flag (*Iris versicolor*). These vegetative species comprise the riparian forest and scrub-shrub wetland complex surrounding the Capisic Brook headwaters. **Figure 4.2** illustrates delineated resources within the campus footprint as well as wetlands and streams identified in the United States Fish and Wildlife Service (USFWS) National Wetland Inventory and United States Geological Survey (USGS) National Hydrography Dataset. There are vernal pools, open waters, perennial and intermittent streams, and forested, scrub-shrub, and emergent wetlands delineated on campus.

Consultation with DEP in 2017 determined no records of Significant Wildlife Habitat exist onsite and there are no records of Imperiled (S2) or Critically Imperiled Natural Communities (S1) listed for the site. Additionally, no USFWS Critical Habitat is listed as occurring on campus and according to the Maine Beginning with Habitat map viewer, no Essential or Significant Habitats are recorded on campus. Lastly, no Important Bird Areas are listed by Maine Audubon as occurring on campus.



Figure 4.2 Ecological Communities and Aquatic Resources

Aquatic Resources

Aquatic natural resources can be found on campus and include the headwaters of Capisic Brook. Capisic Brook is listed on the 2022 Maine DEP Integrated Water Quality Monitoring and Assessment Report as '*impaired*' and is included in the City of Portland's Capisic Brook Watershed Management Plan. Capisic Brook, a small tributary to the Fore River, consists of several branches, with headwaters on campus located near north of Gulliver's Field.

Streams on campus are surrounded by riparian hardwood forest and wetlands as described above, as well as vernal pools. The extents and boundaries of streams, wetlands and vernal pools were delineated in 2022 and a vernal pool assessment completed in 2021. The vernal pools identified in 2021 were assessed using the Maine State Vernal Pool Assessment Forms and confirmed by Maine DEP to be Non-Significant Vernal Pools as they lacked the physical and biological characteristics necessary to meet significance criteria.

Under the Maine DEP Natural Resources Protection Act: Chapter 310, Wetlands and Waterbodies Protection Rules, wetlands located within 25-feet of a river, stream, or brook are considered Wetlands of Special Significance. As identified in a 2022 wetland delineation of the campus, many of the wetlands located on-site may be considered Wetlands of Special Significance as they are located within 25-feet of Capisic Brook. UNE recognizes the ecological role the campus natural resources provide such as groundwater recharge, increased flood capacity, downstream erosion and pollution control, and beneficial wildlife habitat.

Capisic Brook Watershed

The Capisic Brook watershed covers approximately 1,418 acres within the cities of Portland and Westbrook. The East Branch of Capisic Brook which flows through part of the UNE campus is within the East Tributary subarea of the Capisic Brook Watershed. Approximately 31% of the watershed is covered by impervious surface. Maine DEP has designated Capisic Brook as an urban impaired stream under Chapter 502 of the Maine Stormwater Management Rules. Capisic Brook is listed as Category 4a, with an approved Total Maximum Daily Load (TMDL) in place. The stream is designated a Class C water, meaning it is intended to meet the state's minimum environmental goals for water quality. The City of Portland identified Capisic Brook as its highest priority watershed and has outlined a number of provisions to address water quality in the watershed as outlined in the Capisic Brook Watershed Management Plan, developed and adopted by the City of Portland in December of 2012. The Plan outlines the status and restoration needs of the watershed and establishes provisions and goals for improving water quality in Capisic Brook.



Capisic Brook has two existing DEP Sample Locations including one near the recently constructed Connector Road (see **Figure 4.3**). Sample results from 2003 were used to develop the Watershed Management Plan and showed that the upstream station on the UNE campus had a healthy macroinvertebrate community, good water quality, low concentration of bacteria, and good instream habitat quality. The downstream station results showed a degraded macroinvertebrate community, impaired water quality, elevated concentrations of bacteria, and impaired instream habitat quality. Variation in water quality at these two stations is attributed to differences in land use and prevalence of impervious surface downstream (south) of campus. The Capisic Brook Watershed Management Plan acknowledges the need for implementation measures to improve water quality within the watershed. Maine DEP has five goals for Capisic Brook including: improvement of instream habitat quality; restoration of natural hydrology; reduction of toxics, nutrients, bacteria, and elevated water temperature in runoff; and improvement of dissolved oxygen levels. UNE remains committed to the protection of the watershed and the stream on campus.

Figure 4.3 Maine DEP Water Quality Sampling Locations

All proposed campus development projects will review potential aquatic resource and watershed impacts and avoid to the extent practicable and feasible, significant impacts to resources in project design and implementation. Proposed projects will submit project plans and designs to the City of Portland for municipal review, per the City's Land Use Code. As the campus is located within the Capisic Brook Watershed, UNE development projects are subject to comply with the Urban Impaired Stream (UIS) Standard of Chapter 500 of the Maine DEP Stormwater Management Rule. All natural resources on campus are protected by the Maine Natural Resource Protection Act (NRPA) which requires permitting/notification of all projects located in, on, or over natural resources or that are located adjacent to natural resources. All proposed projects will avoid and/or minimize impacts to natural resources to the maximum extent practicable and when impacts to areas adjacent to natural resources may not feasibly be avoided, projects will comply with NRPA permitting and mitigation requirements.

Floodplains

The FEMA National Flood Hazard Layer for Portland is currently under review and an updated flood map is approved as of June 20, 2024. One area of Minimal Flood Hazard (500-year floodplain) and one area of High Risk (100-yeard Floodplain) are identified within the proposed IOZ. The area of High Risk is mapped on the western-most portion of the proposed IOZ and continues off-site to the southwest, following the Capisic Brook (see **Figure 4.4**).

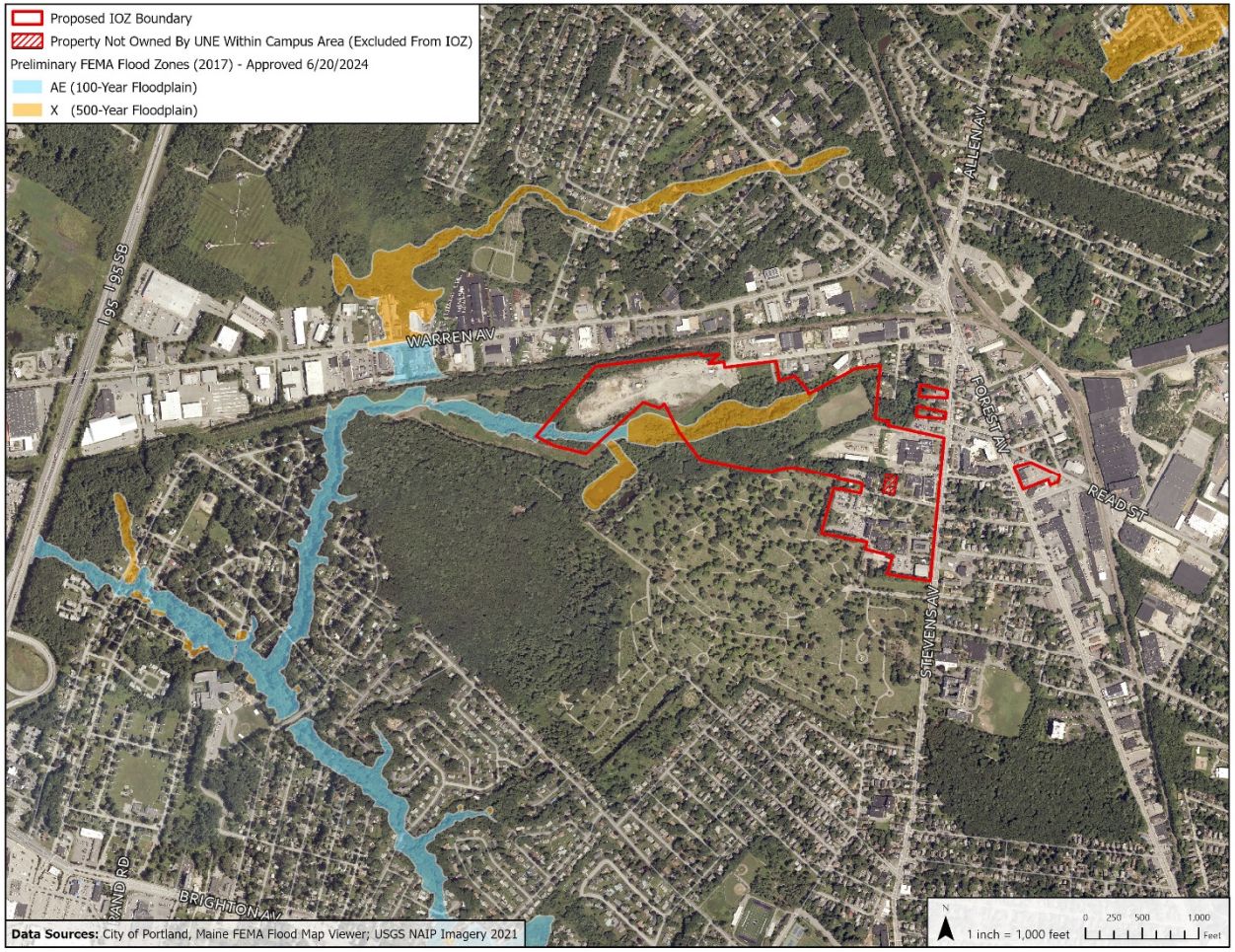


Figure 4.4 FEMA Flood Hazard Map

Proposed Future Development and the Environment

Future development will not impact existing streams on campus and minimum setbacks will be maintained for all future projects. In cases where development cannot reasonably avoid these setbacks, consultation with the City of Portland and Maine DEP will be conducted to determine potential permitting or mitigation requirements. Additionally, none of the proposed projects includes direct or indirect impacts to freshwater wetlands or potential open waters and no impacts to wetlands within the FEMA designated 100-year flood plain are included in the campus master plan. No areas of significant wildlife habitat on or directly adjacent to campus are identified in the Maine Environmental Review Tool. With each project, Best Management Practices (BMPs) will be utilized to prevent offsite impacts to natural resources: additionally, nature-based solutions such as rain gardens, bioswales, landscaping with native plants and nest boxes for birds and bats will be considered to improve post-development conditions. Resources and guidance developed by Maine Audubon, Maine DEP, and Maine Department of Inland Fisheries and Wildlife will be referenced for effective design that will benefit wildlife and support the ecosystem services of the campus open spaces.

Athletic Facility (Campus Master Plan Identifier: F1)

The development of the athletic facility will not have impacts to nearby natural resources (see **Figure 4.5**). The facility is proposed in an existing impervious surface lot near the UNE Intermodal Transportation Facility (ITF).

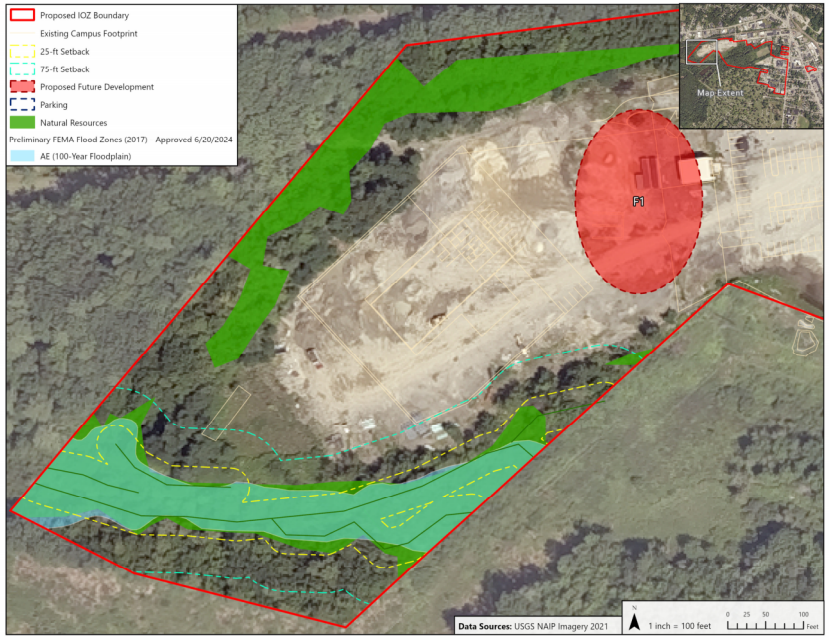


Figure 4.5 Proposed Athletic Facility (F1) Development and Adjacent Natural Resources

Residence Hall (Campus Master Plan Identifier: H1)

The Residence Hall and associated parking (see **Figure 4.6**) are proposed for development on the existing Gulliver's Field and have been planned to minimize natural resource impacts, however some impacts may be unavoidable. In cases where development cannot reasonably avoid these setbacks, consultation with the City of Portland and Maine DEP will be conducted to determine potential permitting or mitigation requirements.

Gulliver's Field is a mowed, turf grass soccer and athletic field currently used for informal recreation with low vegetative species diversity and low wildlife value but is adjacent to mixed hardwood forest and forested and shrub wetlands as described in the Ecological Communities section of this chapter. These adjacent forested habitats may provide habitat a variety of eastern warblers, ruffed grouse, the American woodcock, red and gray foxes, microtones, and mustelids and serve as stopover locations for spring and fall migratory passerine bird species.

No impacts or tree-clearing activities are proposed in the Campus Master Plan within the open space areas on campus; forested areas will remain unchanged and provide valuable wildlife habitat and open space.

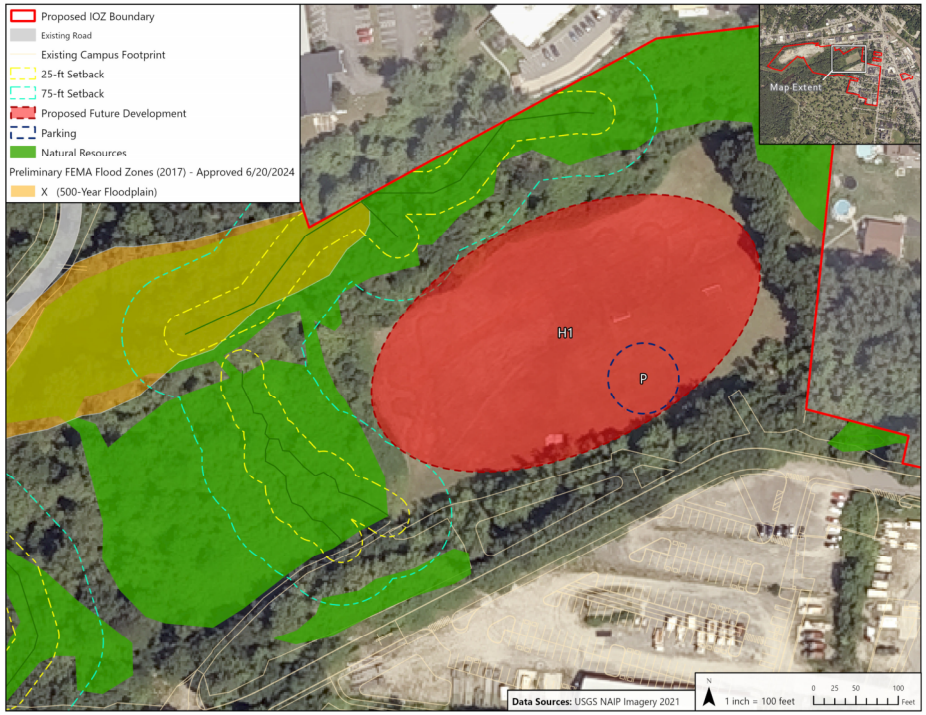


Figure 4.6 Proposed Residence Hall Development and Adjacent Natural Resources

Academic Building (Campus Master Plan Identifier: A2)

The proposed Academic Building will be built on an existing parking lot on the southwest side of campus (see **Figure 4.7**). No significant tree-clearing and no direct or indirect impacts to natural resources is proposed for this project.



Figure 4.7 Proposed Academic Building Development and Adjacent Natural Resources

Natural Resources Protection

UNE, in development of this IDP, has sited the proposed campus improvements in locations that avoid conflict with natural resources being contained to existing disturbed areas and maintaining open space (see **Figure 4.8**). Through thoughtful siting, impacts to the undeveloped and natural areas of the campus are avoided or minimized to the greatest extent practicable and overall contribute to the health of Capisic Brook by maintaining the stream's riparian zone, which provides canopy cover, flood protection, stabilizes soils, filters pollutants, and provides habitat for native wildlife. As previously stated, UNE is partnering with Portland Trails with the goal of providing more opportunities for the community to access Portland's open space and natural areas. UNE students and staff participate annually in coastal and river cleanup efforts and are part of a research team leading the effort to restore the American Chestnut tree, a keystone species of eastern U.S. forests, including Maine. In addition, UNE received funding approval to undertake a cleanup of the Campus Pond of accumulated debris, demonstrating the university's commitment to environmental stewardship.

With all campus improvements, consideration of the site's natural characteristics including soils, hydrology, slope, and vegetation as well as its proximity to wetlands, aquatic resources, and habitats will be evaluated, and impacts avoided or minimized to the greatest extent practicable and adhering to all related state and federal permitting requirements.

Specific to the Capisic Brook watershed, UNE understands its importance and will meet City and State stormwater management requirements for quality and quantity and consistent with earlier work on campus. The specific measures utilized to meet the regulatory requirements related to stormwater runoff will be determined during the site plan review process for each proposed facility. Items in the BMP toolbox include revegetation of currently impervious and de-vegetated areas, infiltration of stormwater where soil conditions permit, and under-drained soil filters. UNE will manage stormwater on-site before considering connections to the City's enclosed stormwater system. Further detail on stormwater management is provided in Chapter 5, "Infrastructure Plan."

As stated above, UNE is committed to including design elements that foster environmental stewardship and promote the health of ecosystems and the Capisic Brook Watershed. Incorporating wildlife habitat design into the project planning process will ensure that with each new project, additional greenspace and/or habitat is created. All proposed campus development projects will review potential aquatic resource and watershed impacts and avoid to the extent practicable and feasible, significant impacts to resources in project design and implementation. Proposed projects will submit project plans and designs to the City of Portland for municipal review and plans are subject to comply with the Urban Impaired Stream (UIS) Standard of Chapter 500 of the Maine DEP Stormwater Management Rule and NRPA permit requirements.

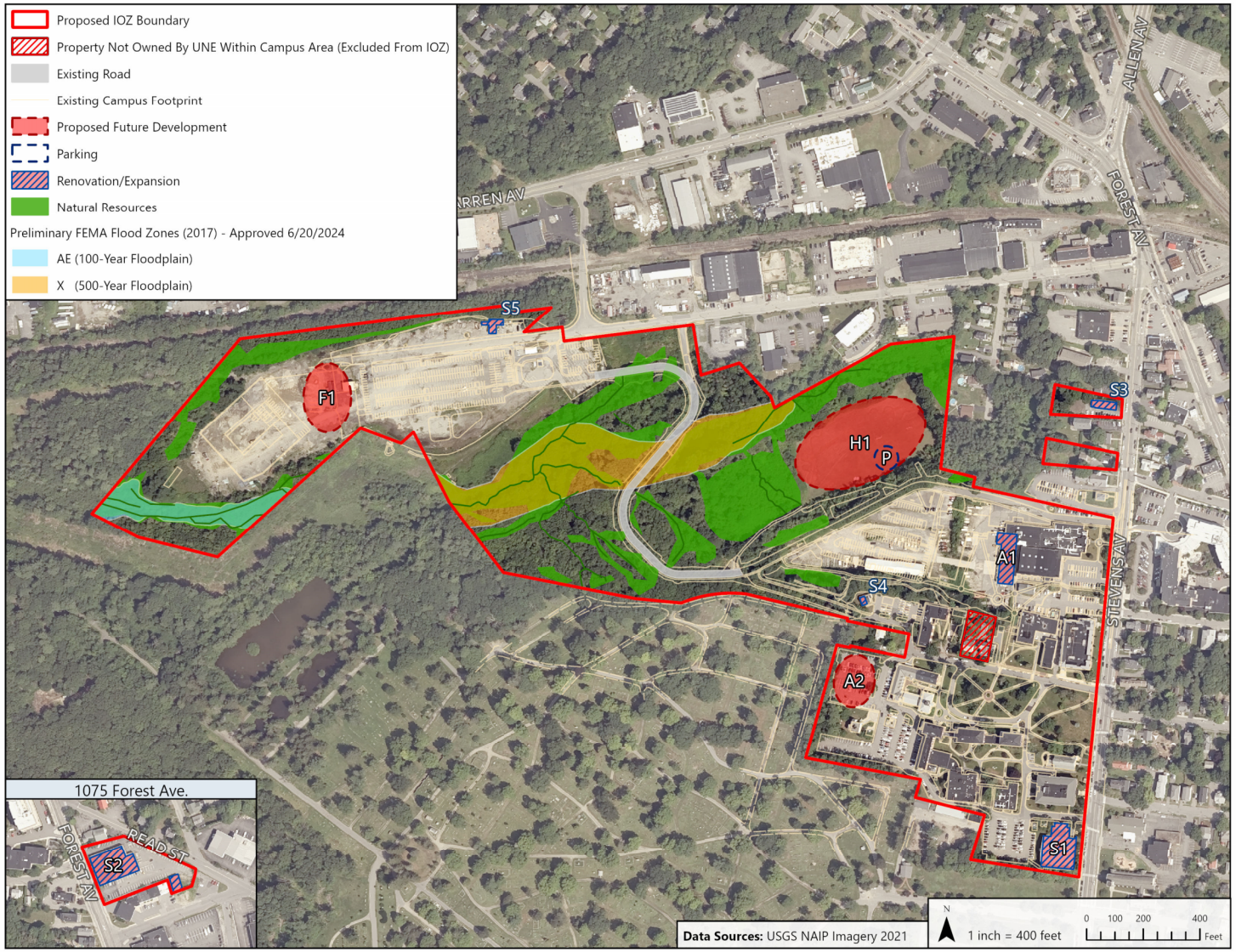


Figure 4.8 Natural Resources and Campus Master Plan

Operational Sustainability

Environmental stewardship is a core value of the University. UNE has been named one of the nation's most environmentally responsible colleges for seven consecutive years, according to the Princeton Review. In 2024, UNE was named in the Princeton Review's top 50 of the nation's most eco-friendly colleges. All new construction is conducted to the highest standards of sustainability, and all renovations are conducted with an eye toward improving environmental impacts. Each year, UNE invests in additional sustainable energy products (e.g., solar panels). As part of long-term plans for the campus, UNE expects to maintain, and where possible, broaden initiatives on its sustainable operation strategies.

Energy Conservation

UNE's Sustainability Office has been conducting greenhouse gas (GHG) emission inventories since 2008. The university's Carbon Monitoring Task Force has been charged with "making recommendations on energy demand, procurement, production, renewable technology implementation, emissions reductions and conservation." UNE voluntarily became a signatory to the Carbon Commitment in 2008 and as part of this commitment, created the university's Climate Action Plan (CAP) in 2010, which was subsequently updated in 2017. The UNE CAP has set an aggressive carbon neutral goal for 2040. The 2017 CAP update includes goals for GHG reductions and activities to help achieve those goals, including energy efficiency and renewable energy projects, building design and development standards (see Chapter 6), waste reduction strategies, alternative transportation initiatives (see Chapter 3), sustainability criteria integration into contracts, offset purchases, community-based marketing strategies aimed at sustainable behavior adoption for individuals, and integration of climate change and sustainability education across the curriculum.

The University's Energy Subcommittee regularly reviews operational efficiencies and monitors energy consumption internally through its direct digital controls and utility statements. Fiscal year 2023 usage for the campus was as follows: 4,668,514.67 kWh of electricity, 1,964.9 gallons of #2 heating oil, 2,146.6 gallons of propane, and 278,523.13 cubic feet (CCF) of natural gas burned in the campus' central steam plant and natural gas condensing boilers.

If the university realizes the full potential of development identified in the Campus Master Plan, the potential future usage of electricity and natural gas may initially be higher assuming similar operational conditions. However, with UNE's commitment to carbon neutrality, and advances in building technology, the actual consumption may be significantly less. UNE is unaware of capacity issues in these existing distribution systems and anticipates use of these systems to supply the future development. UNE will request capacity to serve letters from Central Maine Power (CMP) and Unitil for new projects during each site plan review process.

As detailed in the UNE Climate Action Plan, UNE has previously partnered with ConEdison Solutions to investigate a comprehensive energy efficiency program, and is now working with B2Q Associates to update it. The potential sustainable energy use opportunities being considered include further LED retrofits, solar thermal, solar electric, and boiler plant upgrades with potential fuel switching. Building automation controls and window replacements for the campus are currently in progress. UNE has also developed a purchasing policy for energy consuming appliances and equipment to guide future campus purchases that do more to consider life-cycle costs. UNE will also undertake a lighting audit and retrofit, considering life-cycle costs when deciding what fixtures to install or replace.

Waste Management

Appropriate disposal of waste is a priority of the Sustainability and Environmental Health and Safety (EHS) Department at UNE. The EHS Department believes that "all faculty, professional staff, administration, students, and patrons are entitled to a safe and healthy campus." To this end, UNE commits resources to remove recognized hazards, provide education and training, provide appropriate personal protective equipment, and holds everyone accountable and responsible for good health and safety practices. For all university activities, UNE implements and maintains the University's Environmental Health and Safety Manual (revised August 2019), which houses the campuses environmental health and safety policies and procedures in accordance with federal and state regulations and also maintains the campuses Chemical Hygiene Plan (revised May 2022). These policies and procedures are continuously reviewed to ensure that UNE is meeting the goal of providing a safe and healthy campus community.

Annual Waste Audit

UNE partners with its contracted waste hauler to conduct annual waste audits of all municipal solid waste (MSW) dumpsters and single-sort recycling containers on campus. The annual waste audit spans three weeks in October, is weight-based, and is reported through the annual GHG emissions inventory on a fiscal year basis. For the fiscal year 2023, the campus disposed of an estimated 60 tons of MSW, and an additional estimated 7 tons of mixed single-sort recycling and cardboard were separated for recycling.

Recycling

UNE encourages students, faculty, and staff to engage in recycling and waste reduction throughout campus operations. Single-sort recycling stations are available in all academic and business buildings and include a three-bin, color coded system: blue for returnable bottles and cans, green for single-sort recycling, and gray for trash. The green, single-sort recycling bins allow for the co-mingling of paper, plastics labeled #1-7, metal, and glass. Returnable bottles and cans are separated from the single-sort stream for the purpose of supporting the recycling program, as the funds collected help to purchase bins, labels, signs, and educational materials aimed at waste minimization. In fiscal year 2022, UNE categorized its recycled waste and found 3% cardboard, 4% returnables (or redeemables), 12% metal, and 16% single-sort materials.

Additionally, campus recycling includes batteries, fluorescent light bulbs, computers, and electronics through the universal waste program. Books and journals are either recycled through the single sort program or donated to Better World Books for literacy programs. Waste cooking oil is collected by Maine Standard Biofuels and incorporated into their Bioheat product. Ink and toner cartridges are recycled through our office supply contractor. Facilities staff recycle used motor oil, scrap metal, tires, pallets, and captured refrigerants as well. Unneeded, lightly used furniture is offered to other non-profits or municipalities.

Composting

Food waste, such as kitchen preparation food scraps, compostable utensils and dinnerware, and post-meal food scraps are collected from UNE's Nor'easter Café dining facility. Compost is collected by Garbage to Garden and brought to Benson Farm in Gorham for composting. In fiscal year 2023 over 3,222 gallons of food waste was composted from campus. The Green Office certification program also encourages individual offices to participate in the program, and the Communications Department, Library, and College of Graduate and Professional Studies have collection locations

for food waste in their kitchenette areas that are routinely collected by office staff and consolidated with the dining service waste for composting by Garbage to Garden.

Hazardous Waste

UNE is registered as a Small Quantity Generator (SQG) as defined by Chapter 851 of Maine DEP's hazardous waste regulations. The campus generates less than 220 pounds of hazardous waste a month and generates less than 1 pound of acute hazardous waste per month and does not accumulate more than 1 pound of acute hazardous waste at any one time. The hazardous waste generated on campus is gradually generated in small amounts in the research and academic laboratories. UNE does not anticipate increased hazardous waste generation and the future relocation of the Maine Army National Guard Vehicle Maintenance Facility will reduce the need to store hazardous materials on campus. All hazardous waste is appropriately labelled, stored, shipped, and managed in accordance with the Maine DEP hazardous waste regulations per Chapters 850-852, 857, and 875. The EHS Department oversees the management of hazardous waste and ensures the appropriate process documentation of all hazardous waste generated at the facility from generation to disposal.

Biomedical Waste

UNE is registered with DEP as a large quantity biomedical waste generator (a facility that generates 50 pounds or more of biomedical waste per month). Two types of biomedical waste are generated at UNE. The first is generated from academic and research labs and consists mostly of solid cultures of media, disposable culture containers and sharps. The second is generated by medical services and consists of blood-soaked material, personal protective equipment and other potentially infectious material. All biomedical waste is generated, managed, and disposed of in accordance with the regulations set forth by the DEP in Chapter 900, the Biomedical Waste Management Rules. Laboratory managers are responsible for the generation and packaging of biomedical waste while EHS oversees the program from generation, storage, transportation, and ultimate disposal. EHS maintains all paperwork associated with the transportation and disposal of biomedical waste. UNE has a biomedical waste management plan for the campus; the plan includes a description of the biomedical waste generated, packaging and handling procedures, training requirements, spill containment and clean up procedures, and contact information for persons responsible for biomedical waste management at the university.

Sustainable Landscaping

As stated above, there are two gardens on the campus of significance regarding sustainability - the Medicinal Herbal Garden and the Community Garden. UNE is committed to including design elements that foster environmental stewardship and promote the health of ecosystems and the Capisic Brook Watershed such as bird-safe window design, stabilizing construction disturbance areas with native seed mixes and revegetation utilizing native plants, in particular as buffers between development and natural areas; utilizing best management practices for stormwater retention and infiltration; limiting tree clearing; and removing existing trash and debris from aquatic resources. Incorporating wildlife habitat design into the project planning process will ensure that with each new project, additional greenspace and habitat is created.

Noise Generation

UNE's campus generates noise at low levels that are consistent with and generally not disruptive to the neighborhood. Measured sound levels are below the Noise Standards within the City's' Land Use Ordinance. Some periods of increased noise generation are anticipated during project construction and are addressed in Chapter 7 – Neighborhood Engagement.

5. INFRASTRUCTURE PLAN

Infrastructure Planning

Sustainable and resilient infrastructure is essential for the continued operation of UNE's existing campus as well as planned development. With the projected future demand realized through the Campus Master Plan, sufficient capacity to serve would be ensured. **Figure 5-1** illustrates existing City sanitary sewer and stormwater infrastructure within and surrounding the campus.

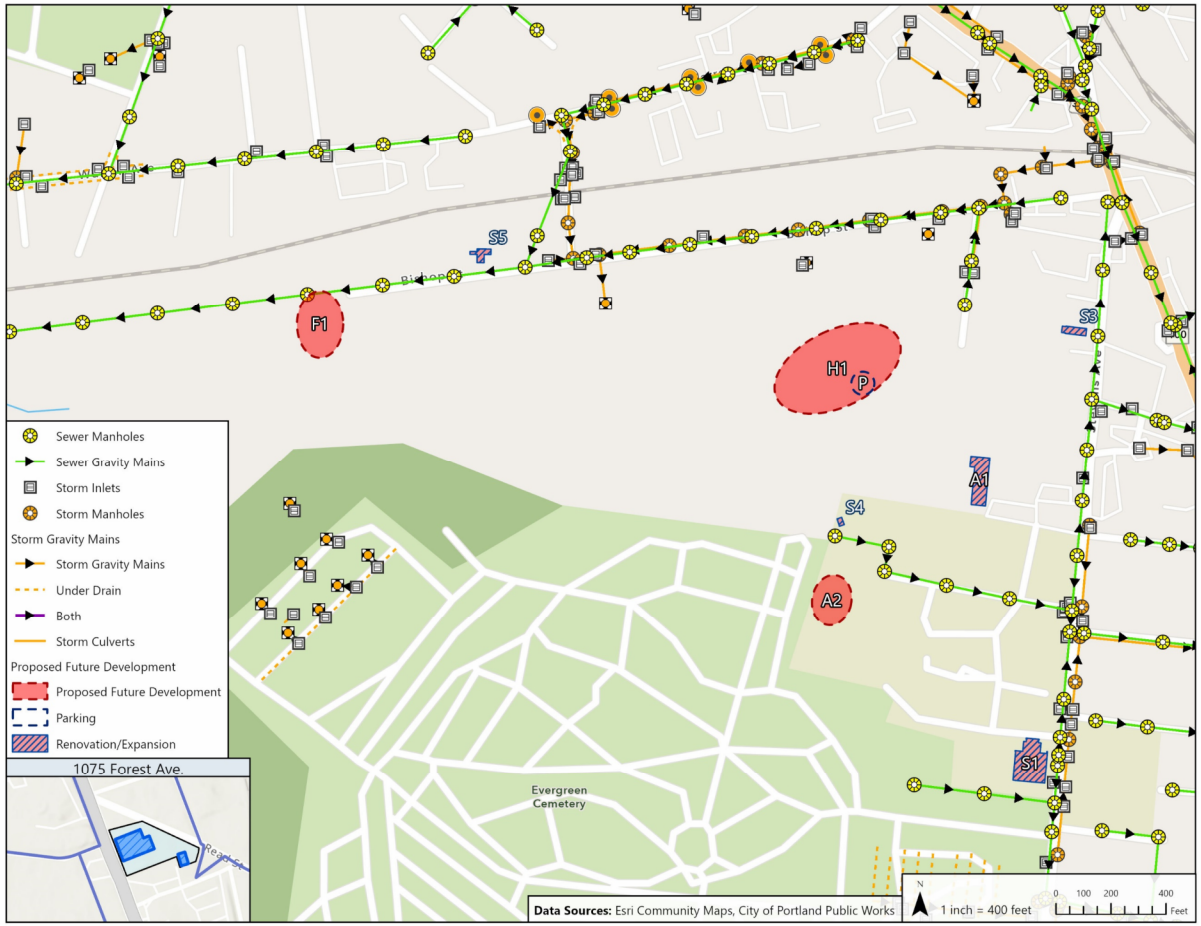


Figure 5.1 Existing Stormwater Infrastructure and Campus Master Plan

Stormwater Management

Existing Stormwater Infrastructure

Existing stormwater management systems on campus mainly utilize on-site stormwater quality and quantity BMPs including infiltration systems, with the secondary means being conveyance to the Stevens Avenue and Bishop Street combined sewer system. The value and importance of reducing stormwater runoff is reflected in UNE's recent development projects as evident in the design of the UNE Intermodal Transportation Facility, which reduced impervious surfaces by approximately 2.3 acres and utilized infiltration systems to minimize flow to the combined sewer. With the northwestern portion of the campus within the Capisic Brook Watershed, an urban impaired stream classified by Maine DEP, UNE seeks to actively contribute to the health of the watershed through the implementation of low impact development strategies.

The Bishop Street combined sewer has a Combined Sewer Overflow (CSO) located to the west of the UNE campus, which serves as a relief point during high-flow conditions. In low-flow conditions, combined sewer flows to a pump station located off of Congress Street, which sends flow to the East End Wastewater Treatment Plant. UNE understands the importance of reducing and minimizing flows to this combined system to help reduce the potential for overflows. The Stevens Avenue combined sewer is routed to Back Cove, where it is ultimately conveyed to the East End Wastewater Treatment Plant.

Future Stormwater Flows

UNE will continue to make efforts to minimize the impact of its future development stormwater runoff through the continued and expanded use of infiltration systems. All projects at UNE will be designed in compliance with the State and City standards. Wherever possible, UNE intends to manage stormwater on site to reduce flows to the City's combined system and consistent with its past, UNE will meet or exceed local and state regulatory requirements.

The University also has an active Spill Prevention Control and Countermeasure Plan and Stormwater Pollution Prevention Plans, further assisting them with regulatory compliance.

Utility Demand and Capacity

Water

Water services are supplied by Portland Water District (PWD). The two water mains that serve the campus include a 12" water main in Stevens Avenue and a 12" water main in Bishop Street. Fire protection services include hydrants that are located along Warren Avenue, Forest Avenue, Bishop Street and Stevens Avenue. UNE strives to limit water consumption through various means including low flow fixtures. Water usage in fiscal year 2023 was 13,741.4 gallons per day (GPD).

Ability to serve letters have been provided by PWD for two current projects (as of the preparation of this Plan) including the Department of Campus Services Maintenance Facility building and the COM building. Based on correspondence with PWD, UNE does not anticipate any issues with capacity

of the existing water distribution systems to support the university's Master Plan and will provide ability to serve letters from PWD as part of future Site Plan Reviews.

Wastewater

Wastewater from UNE is discharged to a combined sewer system in College Street and Stevens Avenue. With a conservative assumption that no water is exported (used for drinking water as an example) and assuming wastewater discharge is equivalent to water usage, in the fiscal year 2023 wastewater discharge was 13,741 GPD. Future planned development is expected to increase wastewater discharge. All future projects will provide an ability to serve letter from the Department of Public Works as part of Site Plan Review. UNE also participates in the City's Fats, Oils, and Grease (FOG) Program, to responsibly dispose of these biproducts; maintenance of these systems is performed regularly to ensure they are operating effectively and not discharging to the City's sewer system.

Electricity

Central Maine Power currently provides electric power to the campus. As discussed in Section 4 Environmental Plan, fiscal year 2023 usage for the campus was: 4,668,514.67 kWh of electricity. UNE will request capacity to serve letters from Central Maine Power (CMP) during each site plan review process but does not anticipate any electrical capacity issues in the future.

Telephone & Data

UNE is currently serviced for their communications services by Consolidated Communications and plans to continue to work with this provider in the future. Additionally, UNE internet is serviced by Consolidated Communications and Spectrum and plans to work with these providers in the future. UNE does not anticipate any capacity issues or disruptions in the future.

Natural Gas and Heating Fuels

Unitil currently provides natural gas service to the campus. Natural gas services are located within Bishop Street and Stevens Avenue. Natural gas services required for future buildings will be coordinated with Unitil during the site plan approval process. Fiscal year 2023 usage for the campus was 278,523.13 cubic feet (CCF) of natural gas burned in the campus' central steam plant and natural gas condensing boilers. Two new 4" service lines have been installed to supply natural gas to future projects including F1 (Athletic Facility) from Bishop Street, and H1 (Residence Hall) from Stevens Avenue. The remaining planned projects will not require upgrades to existing natural gas services. If determined to be needed, gas service for future projects will be evaluated during site plan review. With UNE's commitment to carbon neutrality, and advances in building technology, future natural gas consumption will be limited to the greatest extent possible during the development of the Campus Master Plan.

Further, as discussed in Section 4 Environmental Plan, fiscal year 2023 usage for the campus included 1,964.9 gallons of #2 heating oil, and 2,146.6 gallons of propane. UNE does not anticipate any capacity issues securing heating fuels in the future.

Public Safety

The well-being of UNE's students and faculty is the top priority of UNE. This goes hand in hand with safety and security on campus. UNE has security officers that provide 24/7 patrol and dispatch coverage of the campus. These services are essential for crime prevention and emergency response. In addition to on campus security, UNE uses Rave Mobile Safety, an emergency notification service, which provides faculty, professional staff, and students with timely information and instructions during emergencies.



6. DESIGN

UNE recognizes that the success of future development relies on structured design guidelines, review, and accountability. UNE is committed to maintaining its existing building stock, including those within the Westbrook College Historic District. Where feasible, UNE will renovate its existing buildings to create internal efficiencies and provide for continued and cutting-edge learning excellence, while respecting the campus' historic character. Where necessary, UNE will develop new buildings in accordance with the Campus Master Plan. UNE has committed to assessing the applicability and feasibility of the construction of new buildings to State of Maine Energy Stretch Code (IECC 2021), which meets and, in some places, exceeds Leadership in Energy and Environmental Design (LEED) Silver standards. The University also aims to design and build structures that are at significantly more energy efficient than comparable building stock, verified with third-party energy modeling. Building systems will be evaluated for life-cycle costs and take into account life-cycle fuel consumption and initial capital investment. This assessment informs the decision-making process for future development. New construction will also adhere to considering sustainability and energy efficiency in the Request for Qualifications (RFQ) process and will continue to integrate best practice design into all new projects. Each individual project will work within the planning framework and goals that set out to minimize its adverse impact on the campus, the environment, and the community.

Development Design Impact Considerations

UNE's campus includes one of the twelve locally designated historic districts in the City of Portland, and a nationally registered district, which is the Westbook College District and its contributing buildings of Alumni Hall, Hersey Hall, Goddard Hall, the Abplanalp Library and the internal common or College Green. The proposed campus development looks to balance the campus' history and neighborhood context with UNE's programmatic needs. Predominant design characteristics of the historic property and resources (i.e., materiality, scale, orientation, etc..) are considered to establish a baseline for informing design principles. The design focuses on minimizing environmental impact while creating a cohesive campus with sensible and historically sensitive buildings and inviting open spaces. Within this framework, UNE aims to preserve the historic character of the existing campus and find opportunities for modernization and set the tone for the future of UNE and its commitment to the modern delivery of healthcare. The campus development will be planned to complement and enhance the community by respecting architectural character, minimizing visual and physical burdens, and creating enhanced open space accessible to all. Building siting will focus on campus optimization and minimizing impacts on neighbors through the use of buffers, landscaping, and architectural design. As much as possible the development will seek to create more compact circulation, limit new shadows and wind, and minimize the visual impacts from the surrounding neighborhood. Existing buffers will be maintained, as much as possible, to maintain the current visual character of the campus. Similarly, no new campus entrances are planned, which might adversely increase or change the existing public ways. The campus frontage is anticipated to remain the same with the Campus Master Plan.

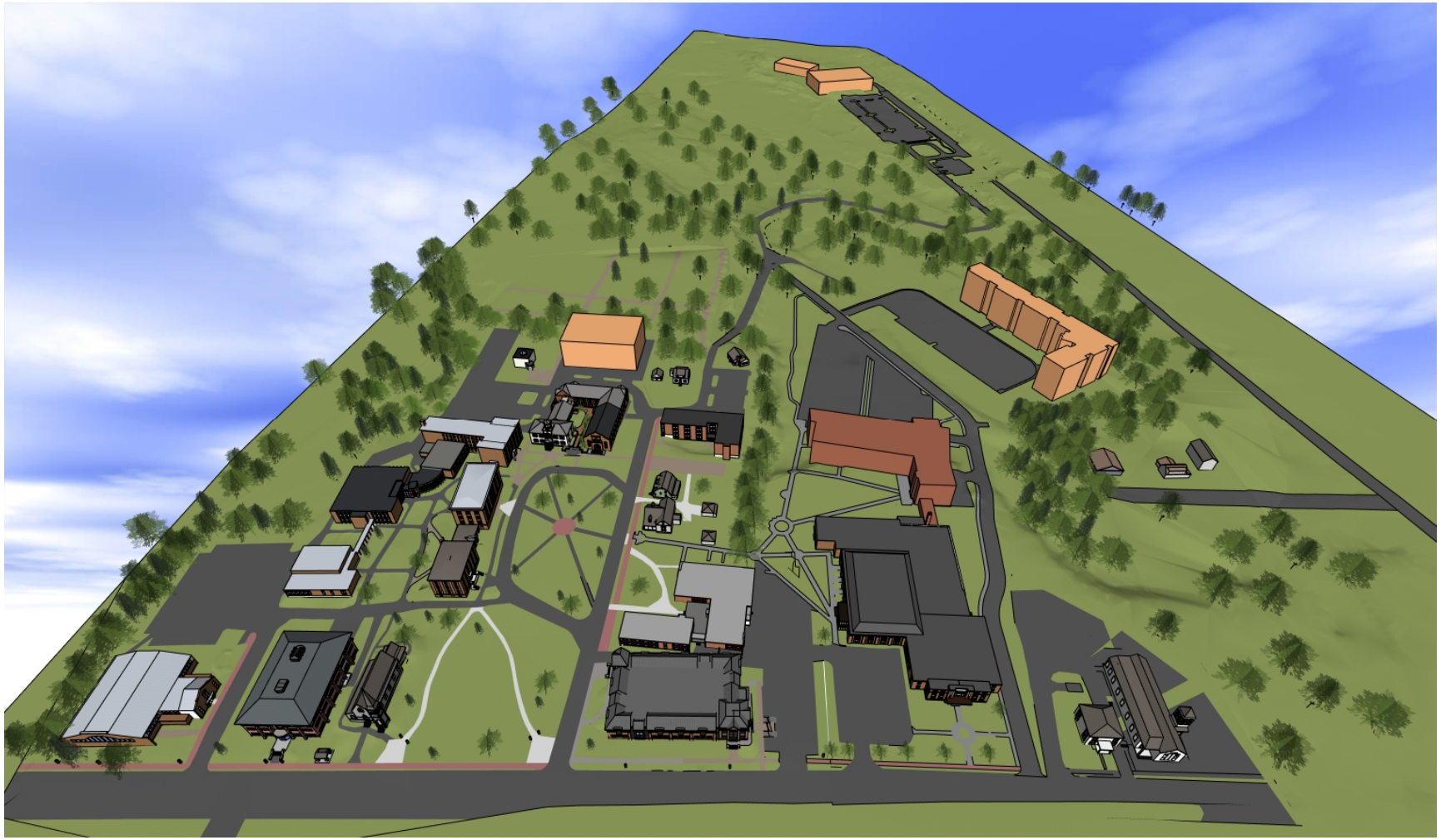


Figure 6.1 Proposed Development in 3D - Overview

Neighborhood Integration

The neighborhood design standards establish a framework for a visually and architecturally integrated campus development and ensure that the campus is safe, environmentally sensitive, and minimizes adverse impacts on and off the campus. With respect to how the potential campus interfaces with the neighborhood, these design standards address the scale and massing of buildings, appropriate materials and colors, rooflines, locations of building entrances, building linkages, architectural detailing, adjacent open spaces, campus circulation and similar features.



Figure 6.2 Proposed Development in 3D - View from Stevens Avenue

Historic Preservation and Impact on Future Designs

The Westbrook College Historic District encompasses the historic core of the campus and is bounded on the east by Stevens Avenue, and on the north by College Avenue. The surrounding context and history set the tone for the campus character and future development integration. UNE is committed to respecting and celebrating historic preservation and maintaining the overall legacy of the neighborhood. UNE has successfully

designed, permitted, and renovated several historic facilities on campus. To date, Goddard Hall, Hersey Hall, and Alumni Hall have been revitalized through full historical renovations permitting through the Historic Preservation Commission. The exterior of these facilities has been maintained and restored to their original grandeur and color. All work done to Ludcke Hall, Proctor Hall and the Abplanalp Library has been done with an effort to preserve the historical nature of these facilities and has also been permitted through the Historic Preservation Commission. UNE's renovation of Alumni Hall was recognized with Maine Preservation's 2016 Honor Award as an outstanding example of historic preservation.

The Westbrook College Historic District building characteristics include a range of late 1800s and early 1900s architectural styles including Gothic Revival, Italianate style, and Colonial Revival. Creating an intimate scale and romanticism focus with earthy materials and sophisticated aesthetics. These styles have provided guidance on the design characteristics of recently completed buildings such as the School of Pharmacy and College of Dental Medicine building located directly on Stevens Avenue. Brick blends, sizing of windows and doors, building proportions and roof edge details allow newer buildings to seamlessly blend with those within the historic district and surrounding community.

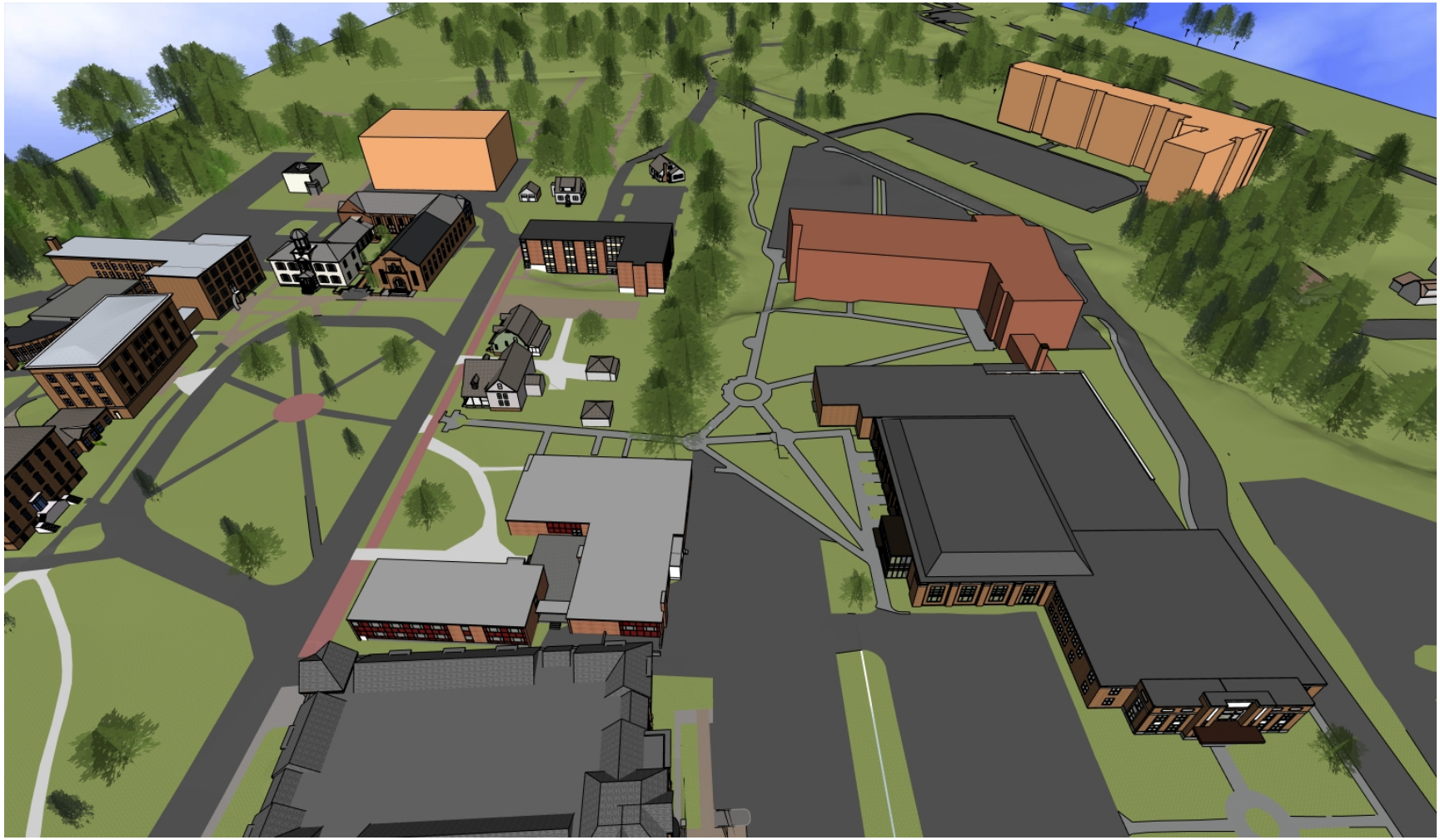


Figure 6.3 Proposed Development in 3D - Birds-eye View from Stevens Avenue

Sustainability and Resiliency

UNE has a commitment to its community and natural surroundings. Campus development will further improve UNE's status as a resilient campus that provides a responsiveness to the planet and inspire the next generation of environment stewards. Buildings will be situated and oriented to take advantage of passive solar energy, natural light, air, and views. New buildings will take a low impact development approach to manage stormwater

runoff and emphasize conservation and use of on-site natural features to protect water quality. The use of high efficiency building envelopes and mechanical systems will reduce the energy necessary to operate the building, further increasing resilience and protecting against unanticipated events. Universities are a vital partner to the communities they serve, and UNE will ensure the campus is part of an overall community solution to sustainability and resiliency.

Maximum Heights

UNE uses a multi-pronged methodology to determine the appropriate height profile for potential future development within the IOZ boundary to ensure an appropriate scale, while maximizing the utilization of space and minimizing impacts to the environment and surrounding neighborhood. As shown in **Table 2.3**, heights and square footages have been identified that reflects UNE's campus modernization needs. The development proposed in the Campus Master Plan would be allowed in the proposed Institutional Overlay Zone, including allowances of up to 85 feet in the area of the proposed Residence Hall (H1), Athletic Facility (F1), and Bishop Street (S5) renovation/expansion and up to 65 feet elsewhere on the campus, with the exception of areas located adjacent to residential and open space zones, where there would be a 25 foot wide transition zone that would allow for building heights of up to 50 feet (see **Figure 6.4**).



Figure 6.4 Proposed Maximum Heights

These heights were determined using context-sensitive best practices, similar to those used to develop height zones for UNE's Biddeford campus. The approach includes enabling larger buildings within the campus core while providing height transitions and expanded setbacks to better align with the scale of the residential and historic neighborhoods along the campus' edge and takes advantage of the campus' natural topography to minimize perceived height. The resulting height profiles are the basis of the maximum heights in the Regulatory Framework.

Transition Zones

UNE has identified transition zones along the edges of the IOZ boundary to allow for an appropriate relationship to the surrounding context and create a consistent scale of development. **Figure 6.4** depicts a 25-foot-wide transition zone around the interior perimeter of the contiguous campus with a maximum height in that transition zone of 50-feet. A 25-foot step-back is provided proximate to abutting residential uses with a 65-foot maximum height.

Safety & Environment

UNE is committed to maintaining a safe environment for all users in and around its campus. The Campus Safety and Security Department monitors the campuses through in-person patrols and CCTV cameras and provides response to any situation that may arise, around the clock, every day of the year. UNE recognizes that environmental design can play a large role in creating a safe place. To this end, UNE has focused on providing a clean and aesthetically pleasing campus environment that is designed with vandal-resistant materials and is providing clear and properly sized signs in safe locations to ensure safe wayfinding. Paths from transit stops, bike storage areas, and parking areas to main pedestrian entrances are well-lit with clear sight lines. Street-level elevations and landscaping areas are designed to minimize potential hideouts and blind spots. Call boxes with blue lights are distributed across campus and are easily identifiable as well as the installation CCTV monitors in more remote areas provide additional safety measures. An Important element is the adequate lighting levels on walkways, parking lots and roadways as well as encouraging activating spaces to encourage many eyes and people. UNE's Campus Safety and Security Department provides a Clery Report every year that summarizes the past year's offenses and crime statistics on each of its campuses. Over the last 3 years there have been no events reported related to issues stemming from Crime Prevention Through Environmental Design (CPTED) deficiencies on the campus. The University feels that active CPTED during the planning of projects has contributed to low crime statistics.

Design Guidelines

School integrity, academic achievement, and productive student lifestyle is reflected in the institution's physical building and campuses. To ensure that this character is intentional and consistent across UNE's Portland campus, the following Architectural Design Guidelines have been established. These guidelines will preserve and enhance the image of the University's quality, beauty, durability, and history.

UNE has developed a Master Plan (see **Figure 2.1**) and guidelines to enhance its campuses and help it fulfill its greatest potential. The Master Plan identifies the future programmatic needs and generally locates future building based on connectivity, height strategies, and sustainability approaches. Where possible buildings are clustered close together to encourage dense development while reinforcing active outdoor spaces, creating functional linkages with surrounding facilities. The Architectural Design Guidelines are to be used in conjunction with the Master Plan for consistency on the

Portland campus and provide an overarching framework while still allowing flexibility in individual building design. The Architectural Design Guidelines provide direction for future development in the IOZ around the visual identity, building location, mass, and consistent use of materials.

Architectural Design Guidelines

The Architectural Design Guidelines were developed to address the following requirements and needs of UNE. These guidelines are intended to provide general guidance and direction and are not intended to supersede any local, state, or federal codes. It is the architect's responsibility to comply with all applicable codes.

1. Cohesive Campus

The overall composition and experience of the campus will be considered for cohesive identity.

2. Building Design

Building façade materials will be of high quality, durable to the weather, and contribute to an attractive campus experience.

3. Building Entrances

Building entrances will include prominent facades and be oriented toward pedestrian-oriented activity areas, including parking areas, to facilitate safe and barrier free access.

4. Lighting

New or renovated buildings should have adequate exterior lighting to ensure that entrances and surrounding areas are safe. All new exterior lighting will be selected to provide lighting levels that meet the safety criteria of the Illuminating Engineers Society of North America, IESNA. Consideration will be given to limit light trespass and glare into neighboring properties through the use of cutoff fixtures at the edge of campus, resulting in less light spillover into the surrounding community.

5. Outdoor Spaces

Building designs should strive to include a variety of open spaces and activities ranging from small intimate courtyards for contemplative study to open lawn areas for informal recreation and outdoor classes. Where applicable, provision should be made during the programming and conceptual design of new facilities to provide opportunities for outdoor use of open space as part of the site and for integration within the larger open space/conservation network.

6. Mitigation of Impacts

Buildings and site development will endeavor to minimize potential negative impacts related to shadows, wind, noise, heat, glare, lighting, contaminants, and the environment.

Visual Identity

The historic nature of the buildings located within the Westbrook College Historic District provides the underlying baseline for the visual identity of new proposed buildings. In addition to creating a consistent historic language, universal design elements will be considered. Universal Design is the design and composition of an environment so that it can be accessed, understood, and utilized to the greatest extent possible by all people regardless of their age, gender, or ability. All new buildings will be in accordance with ADA requirements. The University is committed to making its spaces accessible to the public. The University employs a comprehensive and consistent interior and exterior signage system on campus to establish a unified visual identity. This aids in the cohesiveness of the campus and creates a familiar visual style for information. All signs comply with ADA guidelines.

Building Location

The Master Plan identifies potential building sites and open spaces. This framework provides guidance to ensure a cohesive campus and that the University's goals are being met. The Architectural Design Guidelines will reinforce the University's Master Plan while providing further direction on site elements. Access for emergency and maintenance vehicles, ADA issues, the relationship of new facilities with respect to existing campus elements, and the surrounding natural environment must be considered and maintained with each new building or renovation/expansion. In addition to new connections, new buildings and renovations/expansions must consider existing building relationships to ensure campus functionality and space activation are enhanced and not negatively impacted. Each new project will need to include pedestrian pathways and thoughtful, placemaking design to reinforce the Master Plan's vision.

Massing

The shape and size of each potential building is a balance of programmatic needs, site constraints, and appropriateness based on the historic context and University's goals. Human scale, pedestrian orientation and circulation, entrances and relationship to open space are key elements to consider. The perceived proportions of both individual and the collective buildings need to consider visual connections and sight lines. Deliberate efforts need to be made to avoid adverse impacts on surrounding neighborhood context. The Architectural Design Guidelines provide human scale strategies to deploy to any new building or addition.

Building Materials and Systems

Material selection is critical for maintaining the overall aesthetic vision while ensuring performance standards are met. The American Society for Testing and Materials (ASTM) is recognized as the industry standard for establishing the performance requirements for various building materials. Adhering to ASTM standards for design criteria, material performance, and construction will provide quality control levels while eliminating untested or unproven materials, products, and systems from consideration on future projects. Materials selection will consider long-term maintenance and life cycle costs. Life Cycle Costing (LCC) is a process used to select the most appropriate and durable material based upon the owner's ability to initially purchase it, evaluate the materials' longevity, and its expected maintenance costs. LCC systems principally address mechanical, electrical, and plumbing; however, can also include materials associated with the aesthetic character of a project as well. Analysis of architectural, civil, and structural

materials tends to be a balance of vendor reputation, past performance, environmental factors, and maintenance resources. The University's life cycle expectations are based on a 40-year building life. In addition, materials shall be considered on their physical make up and performance to ensure no materials that contain harmful substances or release volatile organic compounds are being used. The University considers WELL Building Design and U.S. Green Building Council (USGBC) design features in its projects. WELL, is a performance-based system for measuring, certifying, and monitoring features of the built environment. No asbestos containing materials, lead, PCBs, or mercury will be allowed in construction. UNE will strive to eliminate the release of volatile organic compounds to the extent practicable. Energy-efficient design will be incorporated into the design of each new project. The University has adopted the Maine Energy Code and whenever feasible, new, and renovated buildings will be designed with approaches targeting energy conservation and energy efficiency. UNE uses the IECC or USGBC LEED Silver rating for its energy efficiency and sustainability baseline. UNE is also a signatory of the Carbon Commitment and is striving for carbon neutrality.

7. NEIGHBORHOOD ENGAGEMENT

Being a good neighbor and having meaningful engagement with the community is critical to UNE's success. UNE makes every effort to being a respectful and understanding partner to its adjacent communities. An open exchange of information, ideas and feedback allows for vetted decision making and ensures everyone benefits from future plans and growth while minimizing adverse impacts. This engagement foundation allows the community to flourish and address concerns together. UNE ensures their partnership and communication goes above and beyond standard outreach. Informing abutters within a 1,000-foot radius, going beyond the 500-foot radius requirement, UNE is committed to including as many community members as possible in the IOZ process and Campus Planning.

Ongoing Community Engagement

UNE understands that its vision and growth is dependent on the overall success of the entire community, and this begins with open communication and collaborative engagement. UNE is committed to building and maintaining trust by clearly and consistently engaging its neighbors on both the institution's core mission and neighborhood concerns. The surrounding community is a diverse section of the city with many perspectives and goals. The campus is an important component that acts as a transition between commercial and industrial businesses in the Forest Avenue, Morrill's Corner and Warren Avenue corridors and the residential neighborhoods of Deering Center, Stevens Avenue and Mayfield Street. UNE values its role with both the local residential communities and the area businesses and strives to be fully supportive of the health and vitality of its neighbors. Over the years, UNE has established an honest and reliable communications, such as with the Deering Center Neighborhood Association, and UNE is committed to maintaining an open dialog with all of its neighbors, to resolve disputes quickly and fairly, and to ensure that its growth not only provides a robust, highly educated future workforce, but that also enhances the neighborhood's unique diversity, economy and livability. To do this, UNE proposes the following ongoing community engagement initiatives to ensure the surrounding neighbors are kept informed of UNE's future development plans and to gather any feedback from the public related to projects or operations on the UNE campus.

1. Develop a comprehensive Construction Management Plan utilizing the City of Portland's template to provide information on maintaining normal campus operations, providing continual public safety, and minimizing impacts to areas surrounding the campus during project construction. More information on the Construction Management Plan is below in this chapter.
2. Provide high level monthly project updates for all current/active projects on the Campus Planning page of UNE's web page (www.une.edu/campus/campus-planning). This web page will be accessible to the public.
3. Create a dedicated email address (uneprojects@une.edu) to allow neighbors to forward questions, concerns, or feedback directly to UNE's Planning Department and project team members. These emails will be answered in a timely fashion by the people directly involved in the construction activities. This email will also be utilized to send out specific project updates and potential impacts to its neighbors on current projects. Email updates will be sent out to neighbors who request to be included on the updates.
4. Continue to attend regularly scheduled local community neighborhood association meetings, like the Deering Center Neighborhood Association (DCNA), to present and review future development plans and receive ideas and feedback.

UNE's community reach is broad and deep in Portland, Cumberland County, across the State, and the region, with particular benefits to health care services, student and faculty volunteer initiatives for the marginalized and underserved, and educational benefits for residents. UNE is Maine's largest

private university and the state's largest health care professional educator. UNE is also one of the region's major employers and ranks in the top quartile of Maine workplaces for the size of its workforce. Given this broad impact and influence it is important for UNE to have ongoing community engagement and align with all stakeholders.

UNE partners with external community focused associations that can help coordinate outreach and amplify messaging. These groups include the Deering Center Neighborhood Association, Friends of Evergreen, Portland Trails, etc. A neighborhood meeting was held on June 13, 2024, to provide the neighborhood with background information on the IOZ process and to garner feedback on UNE's Campus Master Plan. A second neighborhood meeting was held on July 2, 2024, at 6pm in the same location and approximately 6 members of the Deering Center Neighborhood Association and Portland Trails were in attendance. A third neighborhood meeting will be held during initial City Planning Staff review of this IDP and accompanying Regulatory Framework to hear feedback on the IDP.

A Community Advisory Group will be created for the purpose of sharing information on project development, planning, and seeking input. To the extent practicable, the group will be comprised of representatives of interested groups such as the Deering Center Neighborhood, parks and trails, bicycle/pedestrian, public transit, and the business community.

Property Management Framework

UNE directly oversees the maintenance and care of its facilities. This includes Safety and Security, grounds and building maintenance. Should operational issues arise, neighbors are encouraged to reach out to inform UNE of their concerns. The UNE phone line is answered 24/7 and persons can report concerns directly at any time. UNE has an on-call roster of technicians available to respond to emergencies in the evenings, overnight or on weekends or holidays.

UNE does not inspect or approve any off-campus housing and only provides an off-campus housing list as a convenience to students and landlords/rental agencies. UNE operates under the assumption that landlords/rental agencies conduct business within the guidelines of the law and all contractual agreements are between students and the landlords or agents. Any property issues of non-university properties would be dealt with through the appropriate resources. UNE provides an Off-Campus Housing Disclaimer that outlines its general approach.

Property Acquisition and Disposition Communications

UNE has established strategies for assuring communication pertaining to property acquisition and disposition in surrounding neighborhoods. This includes alerting abutting properties of the transition of ownership and providing the appropriate contact information should it be required.

Student Service Learning and Volunteerism

Student learning and volunteerism aligns and integrates academics with the needs of the community. This learning strategy integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civil responsibility, and strengthen communities. Community engagement is a core component of all UNE health professions programs and Student Service Learning and Volunteerism is a key commitment of the university. Through structured service learning and volunteer opportunities, UNE students play an active role in promoting health,

with an emphasis on serving Portland's vulnerable citizens. More than 700 health professions students annually provide hundreds of hours to non-profits across the city, often in interdisciplinary team-based groups that maximize the impact to community members. Benefits of UNE's Student Service Learning and Volunteerism includes culture competency, professional skill development, real-world application, and an opportunity to give back to the local community.

Service to the City and Region

UNE students and staff volunteer and donate generously to the local communities. They provide thousands of hours of service annually. Some examples include:

Health Care

UNE educates approximately 2,500 health professions students annually, nearly all of whom advance their clinical knowledge and skills by completing student practicums with health care affiliates in Portland, across Maine, and throughout New England. UNE has well established, long term academic and clinical partnerships with over 65 organizations in Portland alone, including major health systems, retail pharmacies, elder care facilities, agencies supporting disadvantaged residents, physical therapy businesses, and the Portland School System, among many others.

- Hundreds of UNE health care students provide thousands of hours to nonprofits in southern Maine, including the City of Portland, annually.
- In 2023 there were nearly 20,000 visits to one of UNE's Portland-based community outpatient health clinics, offering reduced cost care:
    - Dental Hygiene Clinic 2,540 (Over 11,400 visits in last 4 years)
    - OT/PT Lab and Rehab Clinic 1,135 (Over 4,700 visits in last 4 years)
    - Oral Health Center 16,701 (Over 139,000 visits in the last 10 years)
- Allied Health Professions Students provide many hours of service at a number of Portland clinical sites.
- Dental students have annual rotations at Greater Portland Health
- Physical Therapy students provide services in 21 clinical locations in Portland.
- Applied Exercise students provide services in 6 clinical locations in Portland, including Portland High School
- Dental Hygiene students provide service in 3 clinical locations in Portland including St. Brigid's School
- Dental Hygiene students provide service at Portland Women, Infants & Children (WIC) sites, with 130 outpatient visits in 2023.
- Public Health, Social Work, and Nutrition students provide services at 13 clinical locations in Portland.
- Athletic Training students provide services for Deering and Portland High Schools
- Nurse Anesthesiologist students provide services for patients at Maine Medical Center and Mercy Hospital
- Occupational Therapy students provide services at 8 clinical sites in Portland including STRIVE, Long Creek Youth Development Center, and the Boys and Girls Club
- Physical Therapy students provide services at 11 clinical sites in Portland.
- Hundreds of UNE Nursing students provide a range of services at Portland health care providers and public health centers.
- The Cedars Portland senior living community has engaged the CDM to serve as a dental home for its residents.
- UNE COM supports many trainings for Portland-based surgeons, physicians, and EMTs.

- In 2024, 9 COM students were chosen for Maine Medical's Residency Program.
- In 2024, 60 COM students completed clinical rotations at Portland health care centers (majority Maine Medical Center and Northern Light Mercy)

Public Health

UNE's Center for Excellence in Public Health (CEPH) provides education and service to the community and administers the Maine Area Health Education Center (AHEC). Portland and the surrounding communities are partners and recipients of these services.

- CEPH implements the State of Maine's SNAP-Ed program. Since 2012, the City of Portland's Public Health Division Nutrition Educators have provided Maine SNAP-Ed programming including direct education and policy and systems and environmental change interventions for eligible participants in the Portland community.
- Between 2016 and 2022, CEPH oversaw statewide substance use prevention efforts on behalf of the Maine Center for Disease Control and Prevention (CDC). The City of Portland was one of CEPH's subcontractors and implemented substance use prevention interventions in Portland.
- Between 2018 and 2020, in collaboration with UNE COM, CEPH oversaw a federally funded Primary Care Training and Enhancement Champions grant, through which a physician from GPH participated in a 2-year fellowship to improve services for people with opioid use disorder.
- Between 2020 and 2022, in collaboration with GPH and the Portland-based Maine Access Immigrant Network, CEPH evaluated a federally funded project on behalf of the Maine CDC to address health disparities in diabetes and HIV among Black and African immigrants, refugees, and asylum-seeking individuals in Cumberland County.
- Maine AHEC Network engages University of New England health profession students in community-based learning experiences with underserved communities in Portland. Maine AHEC Network coordinates these events in collaboration with community partners and provides training for students in advance of their participation. Examples since 2018 include:
    - School-based Oral Health Care: Partner with local schools to have students participate in delivering oral health education, and in some cases apply dental varnish for school students (2018–Present)
    - Portland Needle Exchange: Partnership with Portland Public Health's Free Clinic where students provided support at the Portland Needle Exchange (2018-Present)
    - School-based Vision and Hearing Screenings: Partner with local schools for students to assist with vision and hearing screenings (2018–Present)
    - Cumberland County Jail Corrections Officer Wellness Program: Partner with Cumberland County Jail for students to provide wellness education to corrections officers (2019-2020)
    - Greater Portland Health Support Group for Refugees and Immigrants: Partner with Greater Portland Health for students to assist with a Support Group for Refugee and Immigrants (2019)
    - Preble Street Volunteering: Students volunteered to assist at the Preble Street shelter (2018-2019)

- Partnered with Portland Public Health's Screening Priority Urgent Referral (SPUR) Clinic screenings for newly arrived refugees and asylees at Portland Public Health (PPH). The program rolled out this spring, with:
    - 14 Scholar and Non-Scholar student participants, with a combined 21 student visits (some chose to visit multiple times)
    - Students worked with precepting health professionals at the SPUR clinic, participating in health history taking and physical exams, point of care testing, intake and resource referral, health promotion and education.
- Maine AHEC Network Youth Healthcare Workforce Diversity Program
    - Since 2017 Maine AHEC Network has partnered with Portland high schools and the local Ethnic Community-Based Organization Maine Access Immigrant Network to provide health career exploration learning opportunities for New Mainer students. A total of 167 Portland high school New Mainer students has participated in the program since it began in 2017.

Service Learning and Community Outreach

Community engagement is a core component of all UNE health profession programs. Through structured service learning and volunteer opportunities, UNE students play an active role in promoting health, with an emphasis on serving Portland's vulnerable citizens. More than 700 health professions students annually provide hundreds of hours to non-profits across the city.

- Meals for Maine 2023 Contributions (September 2023)
    - 23,290 nonperishable, shelf stable meals distributed to:
        - Preble Street Resource Center: 13,260 meals donated.
        - Sacred Heart Food Pantry: 2,690 meals donated.
        - Milestone Recovery: 2,040 meals donated.
        - Maine Access Immigrant Network: 1,630 meals donated.
        - City of Portland: 1,630 meals donated.
        - South Portland Library: 2,040 meals donated.
        - More than 28,000 additional meals were distributed to other areas in Cumberland County and beyond.
    - Meals for Maine 2024 will double its impact with 100,000 meals delivered across the state, with a focus on Portland and Biddeford
- Cumberland County Jail (CCJ)
    - Hundreds of harm reduction kits have been assembled by students and given to residents in need upon release from incarceration.
    - Wellness kits and programming have been delivered to correction officers (COs) at CCJ to promote healthy living for individuals in these high stress positions.
    - In fall 2024, weekly wellness programming will return to residents after a 4-year hiatus due to COVID. Jail administration and Armour Health have requested that UNE re-implement this long-standing program that earned UNE a Cumberland County Sherriff's Office Certificate of Appreciation in 2018.
- Barron Center
    - Nearly 100 UNE students have participated in the "Dinner with Friends" program which pairs students with residents to share a meal and special events together.

- Boys and Girls Clubs of Greater Portland:
  - More than 25 UNE students volunteer as mentors at the clubs each semester.
  - Even more students have delivered special event programming for club members such as health fairs and pizza parties.
  - Hundreds of pounds of granola bars, pasta and tomato sauce have been donated by the UNE community to help address food insecurity among club members.
- Milestone Recovery:
  - Hundreds of students have shadowed the HOME team, learning about the collaborative effort to address the needs of Portland's unhoused community.
  - Hundreds of sandwiches have been made by UNE students and delivered around Portland in collaboration with the HOME team.
  - Student clubs and organizations have gathered hundreds of dollars' worth of supplies to meet the needs of Milestone's "wish list," as well as collected donations to fill backpacks for delivery around Portland by the HOME team.
- Deering High School & Casco Bay High School:
  - UNE students have regularly delivered programming, mentorship, and special events for students, including a Career Exploration Day and STEM Expo exhibits.
- Maine Department of Corrections:
  - Students have assembled more than 8,000 harm reduction kits for distribution to individuals state-wide, including community correction offices in Portland. As part of the kits, UNE students write notes of encouragement and hope which have been found to be incredibly meaningful to recipients.
- UNE College of Dental Medicine (CDM) Community Service:
  - Second-year dental students visit Goodwill LifeWorks Deaf Services and Goodwill Neuro Rehab Clinic to provide oral health education and activities to their patients.
  - Third-year dental students visit the Glickman Lauder Center of Excellence in Autism and Developmental Disorders once a month to provide oral health education and desensitization activities for the children at the Center.
  - Health Fair at the Greater Portland Immigration Welcome Center.
  - CDM participates in the Juneteenth Community Health Fair.
  - CDM is one of several locations across the state participating in a program to provide care to veterans through the Maine Veterans' Dental Network (MVDN). Any veteran who is not 100% service-connected to the Veterans Administration, does not have dental insurance, and cannot afford to pay for dental care out of pocket can register for the program.
- Hundreds of UNE students have volunteered countless hours for Portland based Partners for World Health.
- Students in UNE's Reproductive Health Leadership program collected donations to assemble menstruation care kits for Sacred Heart Pantry when funding for these critically needed products ran out.
- COM provides medical services for the Maine Marathon.
- UNE is recipient of a grant to support training of Sexual Assault Nurse Examiners (SANE):
- Training Forensic Nurses, law enforcement, and EMS in Portland.
- ME Council of Elder Abuse Prevention Summit training.

- UNE's Center for Excellence in Aging and Health offers continuing education opportunities to 730 Legacy Scholars annually – 143 of those scholars live in Portland.

Economy

UNE serves over 970 students on the Portland Campus alone. UNE brings students from Maine, New England, and increasingly from across the country and the world to Portland to live, study, and work. Many students elect to stay in Maine following graduation, including in Portland. The University is a top local employer, and it spends significantly to support local businesses. UNE faculty, professional staff, and students volunteer thousands of hours annually, providing *pro bono* services in the City. UNE researchers are tackling some of the most pressing issues facing the City and region, developing solutions with tangible impacts.

Many UNE students live in Portland and surrounding communities. They spend money to support local businesses and institutions. UNE also attracts thousands of visitors every year to Portland. These visitors spend money on lodging, food, and other services in the community.

- In 2023, 979 students attended classes on the Portland campus, and 372 reported a Portland home address.
- An additional 400 students will join the Portland campus when the new UNE COM facility opens Summer 2025.
- Approximately 30% of students are from Maine (including Portland and the surrounding area), and 70% of students come from outside of Maine (bringing "new" dollars to the community and region).
- A 2024 economic impact study found that student and visitor spending accounts for $51.9 million in revenue for Maine businesses annually.

UNE is a major employer in Portland, Cumberland County, and the state of Maine, with many employees living in Portland and the surrounding areas. These residents pay property taxes and rent or mortgages. They support local businesses and services. Their children attend local schools. The following data exclude student employee numbers.

- UNE is the 15th largest employer in Cumberland County.
- UNE employs 1,890 people in Maine - over 560 employees work on the Portland campus.
- An estimated 150 additional employees will join the Portland campus when the new UNE COM facility opens Summer 2025.
- 177 UNE employees live in the City of Portland.
- UNE provides excellent employment opportunities with competitive salaries and benefit packages.
- UNE pays over $17.6 million per year in salaries and benefits to employees living in Portland.
- UNE spends over $143 million annually in operational expenses, $55.4 million of which buys goods and services from Maine businesses, the vast majority of which are located in southern Maine.

Construction Management Principles

UNE has identified the construction management principles that will be implemented to minimize impacts to its surrounding neighborhoods from noise, vibrations, ground movement, truck traffic, dust control and other construction related factors. UNE will strive to schedule and undertake

construction operations in a way that will minimize, to the extent feasible, the disturbance to the public and occupants of buildings in the adjacent area.

Communication Initiatives

UNE has established a communication method to connect with its adjacent neighbors, the City of Portland, and construction teams. To facilitate direct interaction, UNE employs a dedicated email address where neighbors can submit questions or express concerns. UNE staff responsible for future projects promptly address these emails. Additionally, UNE proactively sends monthly updates to interested neighbors, covering project status and important alerts related to activities that might impact nearby roadways, create dust, vibration, or noise, and affect traffic around the campus. These updates are also accessible on the UNE website's Campus Planning page at une.edu. Furthermore, UNE actively engages with adjacent neighborhood associations, such as the Deering Center Neighborhood Association (DCNA), by participating in regularly scheduled meetings to discuss ongoing or upcoming projects.

Construction Schedule

UNE commits to delivering estimated master project schedules at the outset of any significant construction project it undertakes in the future. Throughout the construction period, regular updates to these schedules will occur, reflecting any adjustments to dates. These updates will be tailored based on the project's assessed impact on the surrounding neighborhoods and areas. UNE will relay these updates through the communication initiatives mentioned earlier.

Construction Management Plan

As part of the planning process and before beginning any major construction project, UNE will create a comprehensive Logistics and Safety Plan. This plan will be shared with neighboring communities and the City with objectives to ensure the continuity of normal campus operations, enhance public safety, and minimize disruptions in the areas surrounding the campus. UNE will adopt the City's Construction Management Plan template to develop its own Construction Management Plan, which will accompany each future project's Site Plan application.

Project Work Hours

Construction Management Plans submitted for each future project will outline the project's work hours, carefully established to minimize the impact on surrounding areas and neighbors, while ensuring efficient completion of the project work. UNE will adhere to the City's code of ordinances, which regulates work hours.

Public Safety and Access

Safety is of utmost concern for UNE, and it will be thoroughly reviewed and integrated into its Construction Management Plans. During construction, pedestrian walkways and vehicular access routes will be clearly marked with appropriate signage and diligently maintained. Safety fencing and lockable gates will be deployed to separate construction zones from public spaces. Access to these fenced-off areas will be restricted to authorized

construction personnel, delivery staff, and members of the construction project team. UNE's campus houses a Safety and Security Department, which will oversee safety and access to these construction zones outside of work hours.

Construction Noise

UNE is dedicated to minimizing construction noise impacts on the surrounding areas. Construction projects inherently generate noise due to necessary tasks throughout their duration. UNE, along with its construction project team members, will proactively notify neighbors of any abnormal noise-creating activities, such as blasting or pile driving, through the updates process the university has established.

Construction Traffic and Parking

Construction Truck Routes and Volume – UNE and its construction project team will establish construction vehicle access routes to and from construction zones, prioritizing distance from residential and other sensitive areas. Construction vehicles will directly enter the fenced construction areas, avoiding queues on public roadways. This will be achieved by managing the frequency and volume of deliveries throughout the construction timeline. Clear markings and signage will guide construction traffic strategically to minimize noise, reduce conflicts with on and off campus users, and limit the spread of dust and dirt. Specific details for each future project will be outlined in the Construction Management Plans submitted for each project.

Construction Staging Areas – Construction staging areas for material and equipment delivered to the project sites will be located within the fenced construction zones for each project, ensuring they are positioned as far away as possible from residential and other sensitive areas.

Construction Personnel Parking – Jobsite personnel will be instructed to park either within the fenced construction zones for each project or remotely in UNE's Bishop Street parking lot. The construction project team and its subcontractors will actively promote the use of public transportation by workers to minimize the impact on the surrounding area.

Construction Air Quality

To mitigate dust issues and minimize impacts on the local environment from its project sites, UNE and its project team will implement several strictly enforced measures. These measures include using wetting agents to control airborne dust from construction access drives and construction zones, covering soil stockpiles as needed, ensuring that transport trucks use covers while moving materials that generate dust, and periodically sweeping and cleaning the construction zones.

City of Portland Construction Management Plan General Template

Attachment A is the standardized City of Portland template that will be used for each future project to establish a clear and concise plan and open lines of communications with the City and its neighbors.

Construction Management Plan
General Template
[Applicant and Project Name]

Construction Management Plans shall depict the overall planning, coordination, and control of a construction site, including phases as applicable, from beginning to completion. The City's goal for a construction management plan is to support a safe construction site and protect the public safety, accessibility (including preserving accessible pedestrian, bicycle, and vehicular modes of transport throughout the city), and welfare during construction. In addition, the construction management plan shall minimize construction impacts in their duration and magnitude to the surrounding area and develop an effective communication process for resolving concerns and conflicts.

The Construction Management Plan will be submitted as part of the Site Plan Review and it shall address the construction logistics for a project. The Construction Management Plan shall include the following submissions:

1) a construction management site plan;
2) a construction schedule (time frame); and
3) a written narrative addressing the categories below.

A. Construction Management Principles

The following narrative provides an overview of the construction management principles that the [Applicant and Contractor] has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

B. Development Review of Construction Management Plan

[Applicant and Contractor] shall submit a construction management plan that provides a comprehensive logistics and safety program for the construction project, which will be reviewed and approved as part of the site plan review process. Minimizing impacts to areas surrounding the building/construction site will be primary considerations in the process.

The Planning Authority and the Department of Public Works have the right to 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. Such a condition may involve a delay in commencement of construction, if necessary.

The following details define the intended approach to the successful management of the project construction and the construction management plan will address the general conditions contained below.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, [Applicant and Contractor] shall meet all of the 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, include

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 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.
2. **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.
3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

[Applicant and Contractor] will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses, nearby construction sites, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The final construction management plan shall provide for the following:

1. Contact Person and contact information for the [applicant and contractor] and who is available 24 hours
2. Construction Signage posted on the site with Contact Information for Contractor
3. Describe any additional communication strategies
4. All construction site signage is temporary and shall be removed at project completion.

E. Construction Schedule

1. The contractor shall submit a schedule or time line for the construction project, including any Phasing.
2. Hours of Construction. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit (Attachment 1) and Section 25-129. Noise, dust and debris (Attachment 2).
3. Extended Hours or Night Work: Pursuant to Section 17-18, this section not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
4. Material Deliveries: Schedule and designated location for delivery of materials and boxed goods.

F. Security & Public Safety

1. The Construction Management Plan will depict all proposed fencing or other barriers and access gates (with knox locking devices) with the intent of separating pedestrian and vehicle circulation from the construction site.

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. An overall construction of 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 rom 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. Any proposed temporary security lighting shall be shown on CMP 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 is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles 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 water 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. Projects are required to submit a satisfactory 'maintenance of traffic" (MOT) plan prior to any site plan, subdivision, or street opening permit approval. MOT plans may be required for projects that have impacts on local streets.

   Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public through or along the construction work zone. On a case-by-case basis, applicants may be allowed to close a street and/or detour a mode of traffic when absolutely necessary

for safety. MOT plans shall employ the appropriate techniques and devices as called for n 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 are an obstruction to bicycles or pedestrians.
- In some situations, flaggers may be required.
- Police details may be required at lighted intersections and may be requested by the City's transportation engineer or his designee.

All existing modes of travel in 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 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 of 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 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

The final Construction Management Plan will address maintaining the site in a safe condition and will include the following:

1. Regular trash and debris removal
2. Street cleaning and damage controls
3. Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).
4. Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris Attachment 2).
5. Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.

6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.
    1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
    2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or sight lines with the piles of snow.
    3) Clear all walks & ramps with the work zone
    4) Sand or Salt as needed
    5) Clear all basin or drainage to help snow melt
    6) This would include Monday-Friday Sat/Sunday/Holidays

I. Erosion Control and Preservation of Trees

1. The [contractor] shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan 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 significant storm events, and maintain any installed temporary or permanent stormwater management systems in 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 or the U.S. Environmental Protection Agency upon request.
2. The [contractor] shall maintain all tree and landscaping preservation measures as depicted on the landscaping plan (Exhibit) within the area of construction.
3. The storage of materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Construction Management Plan shall depict location of the material staging areas, the location on onsite temporary construction trailers, the location on onsite truck delivery holding areas, the location onsite truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. An open storage areas shall be shown on the plan.
2. Delivery Truck Holding Areas On-Site: The delivery holding area shall be shown on the plan and shall not be blocked during construction. 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 the trucks until they can be unloaded. Once at the site all vehicles well be brought within the fence line and will make every attempt to avoid queueing on public streets.
3. Delivery Truck Holding Areas Off-Site: In the event that adequate on-site area for holding of trucks is not available, an off-site marshalling area will be utilized for trucking. The designated off-site location will be identified in the construction management plan.

K. Parking During Construction

1. Construction Parking: Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided. The parking arrangements shall be included in the construction management plan.

2. Parking: Where existing facilities are remaining in operation during construction, the construction management plan shall identify how the parking for employees and others shall be managed.
3. Truck Routes and Volumes: The Construction Management Plan shall address the designated truck routes and expected truck volumes.

L. Dewatering Plans

A basic dewatering plan for any construction work is required. 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.

For construction work that will require frequent dewatering of groundwater from site, a dewatering plan must be prepared 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

For construction work that will take place over a long period (e.g. 12 months or more), involve major demolition/ deep excavation/ piling and/or special construction techniques, or are located near sensitive uses (e.g. medical care facilities, schools), the Construction Management Plan should provide details and demonstrate that all appropriate special measures have been taken to avoid, minimize, or possibly compensate for potential impacts. This may include taking baseline measurements before construction, such as arranging to photograph the foundations of nearby properties upon consent of the owners, in order to assess any future impacts of vibration, noise, etc.

REGULATORY FRAMEWORK

8.5.8 The University of New England Institutional Overlay Zone Regulatory Framework

A. Applicability: All development proposed by the University of New England (UNE) within the boundary of the Institutional Overlay Zone (IOZ) shall be consistent with the approved Institutional Development Plan (IDP), consistent with the Comprehensive Plan, and meet applicable standards of the Land Use Code, unless such standards are superseded by the following Regulatory Framework. This Regulatory Framework shall govern future development by UNE within the IOZ unless amended by the Portland City Council upon formal application of UNE. The UNE IOZ shall have the boundaries depicted in Figure 8-H, and shall include the properties listed in Table 8-G.

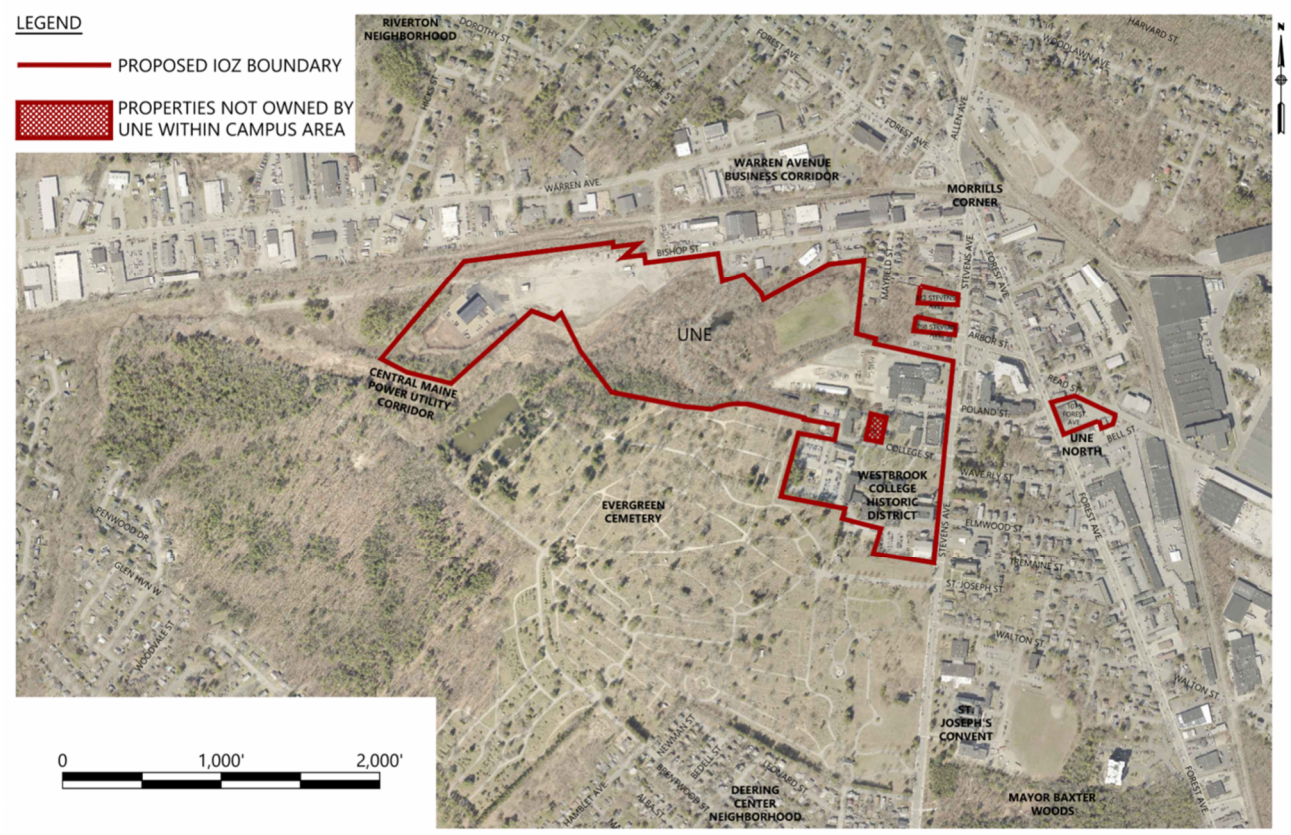


Figure 8-H: UNE Institutional Overlay Zone Boundary

Table 8-G: List of Properties Included in the UNE IOZ					
Chart	**Block**	**Lot**	**Address**	**Acreage**	**Ownership**
144	A	005	684 Stevens Avenue	0.141	UNE
144	A	006	684 Stevens Avenue	0.275	UNE
144	A	007	684 Stevens Avenue	0.371	UNE
144	A	008	684 Stevens Avenue	0.256	UNE
144	A	009	684 Stevens Avenue	0.586	UNE
145	A	001	706 Stevens Avenue	0.450	UNE
145	A	003	710 Stevens Avenue	0.165	UNE
145	A	006	714 Stevens Avenue	9.231	UNE
145	A	007	710 Stevens Avenue	0.025	UNE
145	A	008	710 Stevens Avenue	0.006	UNE
145	A	009	714 Stevens Avenue	0.036	UNE
145	A	010	714 Stevens Avenue	0.356	UNE
145	B	001	1 College Street	0.338	UNE
145	B	002	1 College Street	0.207	UNE
145	B	006	31 College Street	0.134	UNE
145	B	009	41 College Street	0.200	UNE
145	B	010	51 College Street	0.383	UNE
145	B	011	63 College Street	0.076	UNE
145	B	012	63 College Street	0.114	UNE
145	B	013	63 College Street	0.048	UNE
145	B	014	83 College Street	0.366	UNE
145	B	018	772 Stevens Avenue	8.603	UNE
145	B	022	798 Stevens Avenue	0.438	UNE
145	B	027	83 College Street	3.137	UNE
145	B	029	79 College Street	0.258	UNE
145	B	042	1 College Street	0.162	UNE
145	B	046	1 College Street	0.138	UNE
146	F	005	32 Bell Street	0.106	UNE
147	F	006	1075 Forest Avenue	1.159	UNE
281	A	003	0 Bishop Street	10.555	UNE
290	A	003	83 College Street	1.771	UNE
291	A	001	0 Bishop Street	8.394	UNE
291	A	005	83 College Street	17.972	UNE
291	A	007	83 College Street	0.459	UNE
293	C	005	83 College Street	1.574	UNE

B. Updates and Amendments.

1. It is intended that the IDP will be updated on a regular basis to ensure that the data is current and that the document remains accurate. Accordingly, UNE shall file monitoring reports every five (5) years with the Planning Authority and shall include a summary of progress on IDP implementation and progress towards targets established in UNE's Transportation Demand Management Plan (TDM), and of acquisitions and divestment since the date of IDP approval. At the time of the submission of the monitoring report, UNE shall identify any updates to the IDP which may result from updated master planning, changes in baseline

information, or changes in the adjacent neighborhoods which affect UNE, to allow the IDP to remain current. Updates and minor amendments not described in Sub-section 2 and 3 below shall be reviewed administratively by the Planning Authority.

2. Minor amendments that impact phasing of the development or change the approach to parking, transportation, neighborhood engagement, or design shall be reviewed by the Planning Board for consistency with the objectives of the IDP. In addition to consistency with the objectives of the IDP, review of phasing and development program amendments shall focus on integration with the campus and impacts on transportation or infrastructure. This review may occur simultaneously with the site plan review of an anticipated project.

3. Major amendments shall be reviewed by the Planning Board and are required under the following circumstances:
a. A change to the IOZ boundary or Regulatory Framework is required;
b. The IDP is no longer representative of the institutional mission or approach to community as a result of redevelopment in the area or City upgrades to neighborhood planning (such as, but not limited to, roadway changes, infrastructure upgrades, community design,); or,
c. Development proposed by UNE is inconsistent with the Campus Master Plan, Transportation Plan intent, Design Plan intent, or Environment and Infrastructure plan intent identified in the IDP.

4. Proposed amendments to the IOZ boundary or regulatory framework must also be adopted by the City Council subject to the provisions of the Land Use Code.

C. Uses. The UNE Campus will encompass a variety of uses to support the academic programs on the campus. In addition to the uses permitted in the underlying zone, the uses in Table 8-H shall also be permitted as a matter of right in all buildings that are located within the IOZ. In recognition that the UNE Campus contains undergraduate and graduate-level programming, ground floor retail, restaurant, or comparable community-oriented uses that provide services to local residents, students, faculty and staff may be provided. Such uses are expressly permitted whether ancillary to or supporting the educational institution, and shall be open and welcoming to the general public in addition to students, faculty, staff, or visitors of UNE.

Table 8-H: Permitted Uses
Laboratory and Research Facilities
Off-Street Parking
Intermodal Transportation Facilities

D. Dimensional requirements.

1. Applicability
   All principal buildings and structures located within the IOZ shall be subject to the dimensional requirements of the underlying zone, except where modified by the provisions of this Section.

   For the purposes of this IOZ, “lot” is defined as the combination of the contiguous lots under UNE ownership, including land separated by a public or private right-of-way. The “lot” boundary is as shown in Figure 8-H. Side and rear setbacks shall not be required between buildings on contiguous lots owned by UNE on the condition that such contiguous lots shall be considered merged and shall not be separately conveyed unless required setbacks in the underlying zones are provided.

Table 8-I: Dimensional Requirements	
Building Height (max.)	Maximum building heights for new principal buildings in the IOZ shall be governed by the UNE IOZ Height Map (Figure 8-I)

2. Transition Zones

The UNE campus abuts residential zones to the north and across Stevens Avenue to the east. As shown on the UNE IOZ Height Map, transition zones extend twenty-five feet from the lot boundary. Within transition zones, the maximum building height shall be fifty feet.



Figure 8-I: Height Overlay Map

E. Transportation.

1. Transportation Demand Management (TDM)

a. At the time of the first site plan review following IDP approval, UNE shall submit a campus-wide TDM Plan substantially in accordance with those TDM objectives and strategies identified in the approved IDP. The TDM Plan will be updated with each subsequent application for site plan approval to allow for progressive and responsive implementation over time.

b. The TDM Plan shall be designed to provide transportation choice with the goal of reducing parking demand and single-occupancy vehicle trips to and from UNE by students, faculty, staff, and visitors.

c. The TDM Plan shall establish parking, mode share, and trip reduction targets associated with each phase of development, as well as a data collection plan.

d. The TDM Plan shall include parameters to encourage trip reduction and to ensure pedestrian, vehicular, bicycle, and public transit access and safety.

e. Annual monitoring reports will be submitted for the TDM Plan. TDM monitoring reports shall include a summary of progress towards targets established in the TDM Plan. If deficiencies are identified, they will be resolved in accordance with the site plan approval.

2. Parking.

Parking requirements in the IOZ shall be established at the time of site plan review based on a parking study that includes a campus-wide analysis of demand and supply. Parking studies shall integrate parking and trip reduction achievements and data contained in the TDM Plan. Parking requirements shall be determined in accordance with the requirements in the Land Use Code in effect at the time of site plan review and shall be sufficient to alleviate parking pressure on surrounding neighborhoods.

F. Environment.

1. All proposed campus development projects shall avoid to the extent practicable and feasible, significant impacts to wetlands and aquatic resources. Development shall comply with the Urban Impaired Stream (UIS) Standard of Chapter 500 of the Maine DEP Stormwater Management Rules, as applicable.

2. All new buildings and parking facilities shall be set back a minimum of 75 feet from the normal high-water line of existing streams. Notwithstanding this requirement, the Planning Board may approve a reduction of the setback requirement for a new building to the least amount necessary to achieve the goals of the development and minimize overall impacts, provided that the setback is not reduced to less than 40 feet.

3. Development in significant wildlife habitats (as defined by the Maine Department of Environmental Protection) will be minimized to the maximum extent practicable and shall comply with all applicable local, state and federal permitting requirements in effect at the time.

G. Mitigation measures.

1. Site plan impacts to off-premise infrastructure shall be mitigated in a manner proportionate to those impacts. Mitigation may include financial or in-kind contributions to existing or planned City projects focused on mitigating the impacts of the development. Mitigation contribution shall be determined based on the City's standard procedure in effect at the time of site plan review.

2. Impacts to natural resources shall be mitigated in accordance with local, state and federal permitting standards in effect at the time.

H. Design.

1. Introduction and intent.

New development in the IOZ shall adhere to the following design guidelines and the site plan standards of the City of Portland. All new development shall be designed to create a visual connection with the goal of achieving a cohesive campus appearance with a strong identity and sense of place. These standards are intended to regulate future development on the UNE campus to ensure that new development is sensitive to adjacent neighborhoods while allowing UNE to maintain a thriving academic institution in Portland.

2. Standards

a. Cohesive campus

The overall composition and experience of the campus will be considered for cohesive identity.

b. Building design

Building facade materials will be of high quality, durable to the weather, and contribute to an attractive campus experience.

c. Building entrances

Building entrances will include prominent facades and be oriented toward pedestrian-oriented activity areas, including parking areas, to facilitate safe and barrier free access.

d. Lighting

New or renovated buildings should have adequate exterior lighting to ensure that entrances and surrounding areas are safe. All new exterior lighting will be selected to provide lighting levels that meet the safety criteria of the Illuminating Engineers Society of North America, IESNA. Consideration will be given to limit light trespass and glare into neighboring properties through the use of cutoff fixtures at the edge of campus, resulting in less light spillover into the surrounding community.

e. Outdoor Spaces

Building designs should strive to include a variety of open spaces and activities ranging from small intimate courtyards for contemplative study to open lawn areas for informal recreation and outdoor classes. Where applicable, provision should be made during the programming and conceptual design of new facilities to provide opportunities for outdoor use of open space as part of the site and for integration within the larger open space/conservation network.

f. Mitigation of impacts

Buildings and site development will endeavor to minimize potential negative impacts related to shadows, wind, noise, heat, glare, lighting, contaminants, and the environment.

3. Signage. Signs shall comply with the requirements of Article 20, except as modified below:

a. Signs shall be designed in accordance with a signage plan pursuant to signage standards promulgated by the university, providing for a unified and ADA compliant campus-wide system for identification, orientation, and regulatory signage.

b. A unified campus-wide signage plan shall be submitted for review and approval by the Planning Authority. Any update to such plan due to a change in name, text or logo shall not require amendment to the IDP.

c. Banners are allowed as follows:

i. Generic banners containing the logo and colors of the university, used for decorative purposes.

ii. Banners used for advertising university events, which can be displayed for a maximum of four weeks prior to and one week following the event.

I. Neighborhood integration.

1. Neighborhood Engagement

a. For the purpose of keeping surrounding residential areas appraised of its future development plans, and to address any neighborhood issues related to the operations of the UNE campus, UNE shall adhere to the ongoing neighborhood engagement principles identified in the IDP.

b. Ongoing community engagement shall be conducted, including the continuation of posting project updates on UNE's Campus Planning web page and the creation of a dedicated email address for neighbor communications with UNE's Planning Department.

c. A Community Advisory Group shall be created for the purpose of sharing information on project development, planning, and seeking input. To the extent practicable, the group shall be comprised of representatives of interested groups such as the Deering Center Neighborhood, parks and trails, bicycle/pedestrian, public transit, and the business community.

d. A designated community contact shall be engaged to be the point of contact for providing information to the neighborhood and receiving feedback.

2. Construction Management

At the time of site plan review, UNE shall submit a Construction Management Plan substantially in accordance with the construction management principles identified in the Institutional Development Plan for review and approval by the Planning Authority.

FIGURE 1.4 - UNE CAMPUS SITE NEIGHBORHOOD CONTEXT: PROPOSED ZONING

Att. F

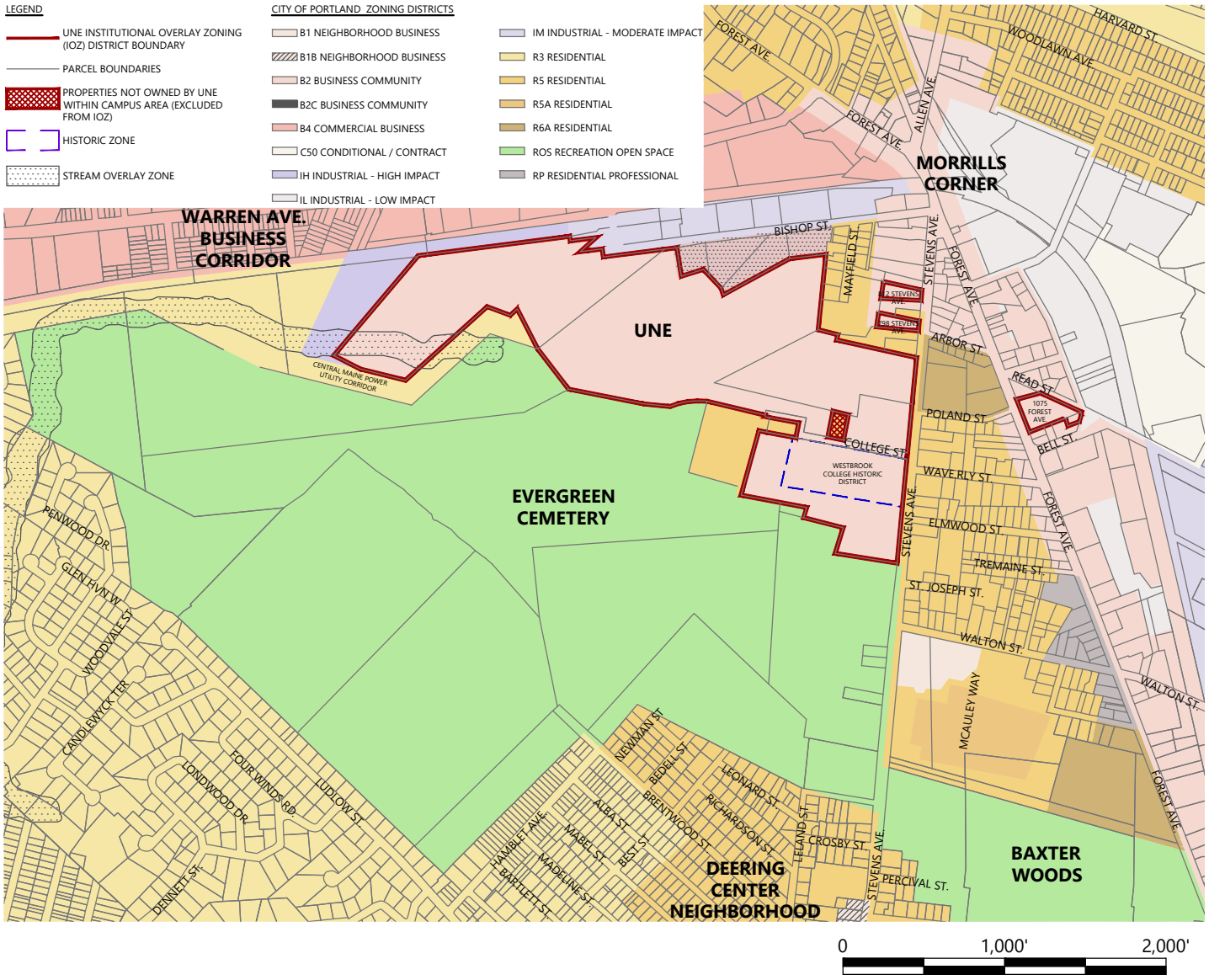
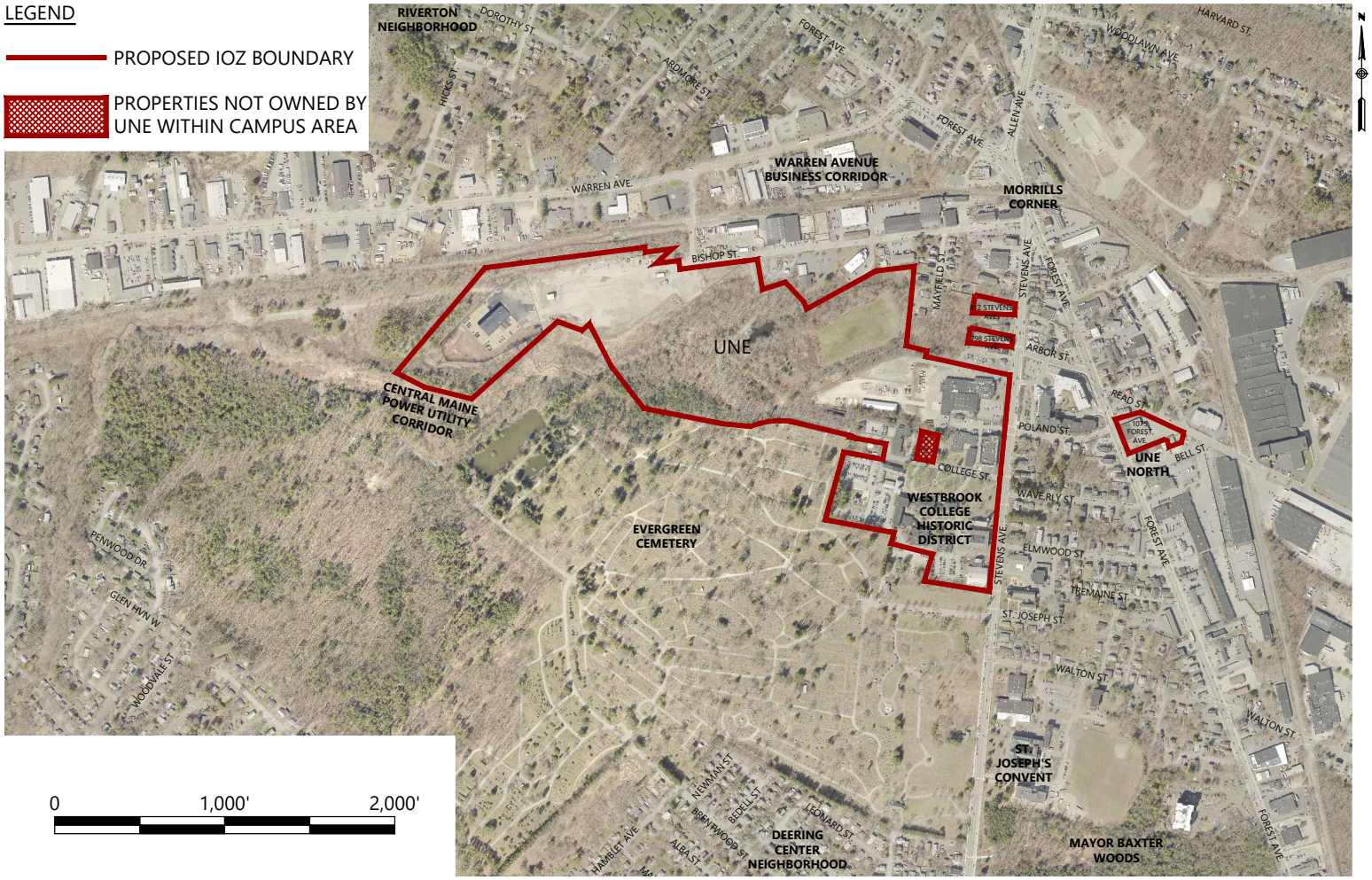


FIGURE 1.1 - UNE CAMPUS SITE & NEIGHBORHOOD CONTEXT MAP

Att. G



12 Mountfort Street
Portland, Maine 04101
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

Att. H

Via Electronic Mail

October 9, 2024

Natasha Kypfer, Senior Planner
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101
nkypfer@portlandmaine.gov

Re: UNE Institutional Overlay Zone Application (ZN-003059-2024)
Neighborhood Meeting #1

Dear Natasha:

I, Megan Gatto, consultant for the University of New England (UNE), hereby certify that a Neighborhood Meeting was held on Thursday, June 13, 2024, at the UNE Portland Campus, 716 Stevens Avenue, in the Hannaford Lecture Hall, Room 109, at the College of Pharmacy, for the Institutional Overlay Zone proposed for the UNE Portland Campus (address: 716 Stevens Avenue).

I also certify that on June 3, 2024, notices were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes owners within 1,000 feet of the proposed Institutional Overlay Zone.

2. Residents on the "interested parties" list.

Sincerely,

Woodard & Curran, Inc.

Megan Gatto

Megan Gatto, AICP
Project Manager

Attachments:
1. Copy of the notice sent
2. Sign-in sheets
3. Presented material (PowerPoint Presentation)
4. Meeting Minutes

12 Mountfort Street
Portland, Maine 04101
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

June 3, 2024

Dear Neighbor:

On behalf of the University of New England (Applicant), please join us at a neighborhood meeting to discuss our plans for the Portland Campus Overlay Zone located at 716 Stevens Avenue in Portland, Maine.

The City of Portland has implemented an Institutional Overlay Zone (IOZ) ordinance that "provides a regulatory mechanism available to the city's four major medical and higher education campuses where an improved regulatory structure is needed to facilitate a consistent, predictable, and clear growth management process." This applies to the University of New England. This process will ultimately simplify the campus planning and regulatory permitting process in the future as the University grows. UNE has initiated the necessary work to coordinate with the City of Portland and apply for this Institutional Zone change.

This neighborhood meeting will provide an overview of the IOZ process and gather our neighbors' input on the growth of the campus, in advance of our Application to the City.

Neighborhood Meeting

Meeting Location: University of New England – Portland Campus, 716 Stevens Avenue, Hannaford Lecture Hall, Room 109, College of Pharmacy, Portland, ME

Meeting Date: Thursday, June 13, 2024

Meeting Time: 6:00-7:00 PM

The City of Portland's Land Use Code requires that property owners within 500 feet of the proposed development and residents on the City's "interested parties list" be invited to participate in a neighborhood meeting. In an effort to be more inclusive, UNE has extended beyond the 500-foot requirement to include property owners within 1,000 feet of the Portland Campus. Your contact information has been provided to us by the City of Portland as part of these lists. A sign-in sheet will be circulated at the meeting, and minutes of the meetings will be taken. Both the sign-in sheets and minutes will be submitted to the Planning Authority for inclusion in the project's Institutional Overlay Zone (IOZ) application to City Planning, which includes an Institutional Development Plan and Regulatory Framework.

If you have any questions, please contact me at +1 (781) 613-0168 or via email at megan.gatto@woodardcurran.com

Sincerely,

WOODARD & CURRAN, INC.

Megan Gatto

Megan Gatto, AICP
Project Manager

On behalf of the University of New England (UNE) - Portland Campus

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.

12 Mountfort Street
Portland, Maine 04101
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T 800.426.4262
T 207.774.2112
F 207.774.6635

Woodard & Curran

Neighborhood Meeting Sign-In Sheet

DATE: **June 13, 2024**

RE: UNE Portland Campus – Institutional Overlay Zone (IOZ) Neighborhood Meeting Sign-In Sheet

---

Dear Neighbors,

Thank you for attending tonight's public Neighborhood Meeting at the University of New England – Portland Campus, 716 Stevens Avenue, Hannaford Lecture Hall, Room 109, College of Pharmacy, Portland, ME for the proposed rezoning of the UNE Portland Campus. Please sign in below.

Thank you,

UNE IOZ Project Team

Name	Email
Susan Small	SSmall2@maine.rr.com
FRAN GIRARD	fran girard 380@ gmail.com
Katherine Kilcullen	ccec@maine.rr.com
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Kate Sykes	Ksykes@portlandmaine.gov

Woodard & Curran

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UNIVERSITY OF NEW ENGLAND
INNOVATION FOR A HEALTHIER PLANET

Woodard & Curran

BERNSTEIN SHUR

Sewall
The evolution of expertise

University of New England – Portland Campus

Institutional Overlay Zone (IOZ)

Alan Thibeault, Vice President for University Operations



UNIVERSITY OF NEW ENGLAND

INNOVATION FOR A HEALTHIER PLANET

Agenda

Welcome

Overview of UNE (*Portland Campus History + Programming*)

Regulatory Process – *(Institutional Overlay Zone)*

Campus Master Plan

Public Involvement Opportunities

Comments and Questions

UNE Portland Campus: History

- Founded in 1830
- Portland Campus located at 716 Stevens Avenue
- UNE is a private university with a comprehensive health education mission that includes medicine, pharmacy, dental medicine, nursing, and allied health professionals.



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UNE Portland Campus: Programming

The UNE Portland Campus is primarily a graduate campus, focused on educating health professionals, and is currently home to four of the University's premier Colleges: the Westbrook College of Health Professions, the College of Dental Medicine, the College of Graduate and Professional Studies and the School of Pharmacy.



Programs:

- Dental Medicine
- Dental Hygiene
- Nursing
- Nurse Anesthesia
- Occupational Therapy
- Pharmacy
- Physical Therapy
- Physician Assistant
- Health, Wellness, and Occupational Studies



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Recent Activities at UNE Portland



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COM Building Rendering



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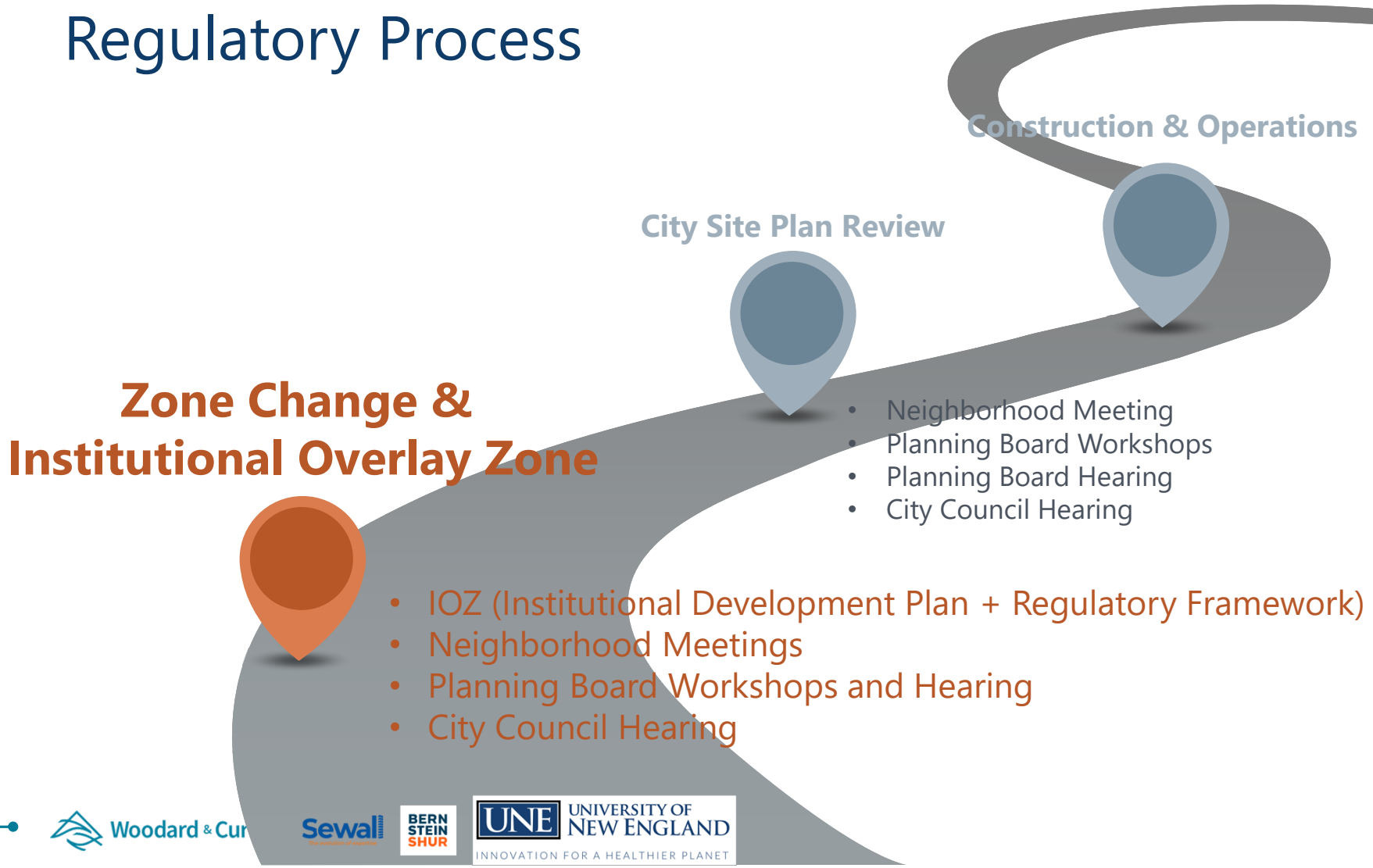
Regulatory Process



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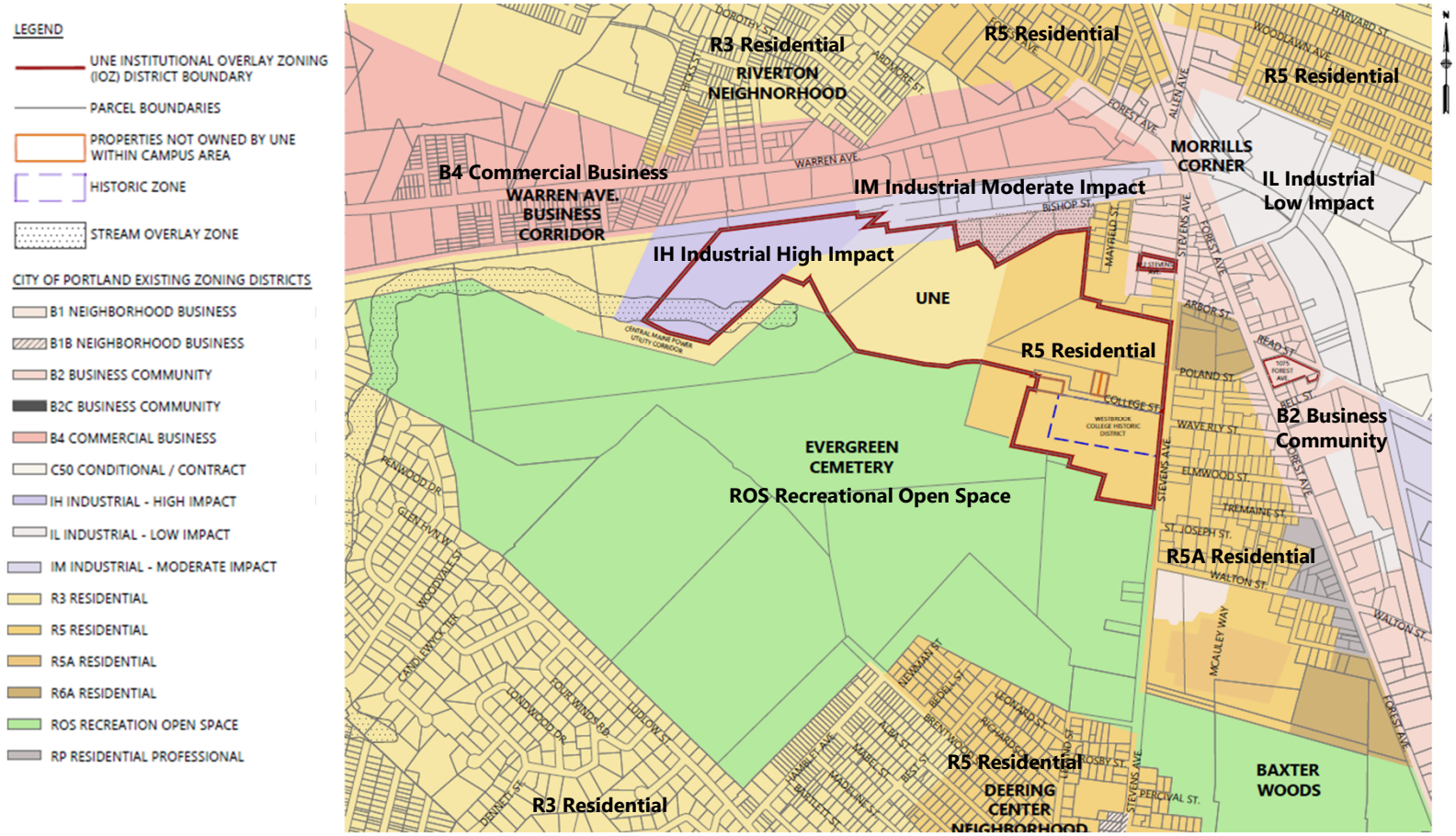
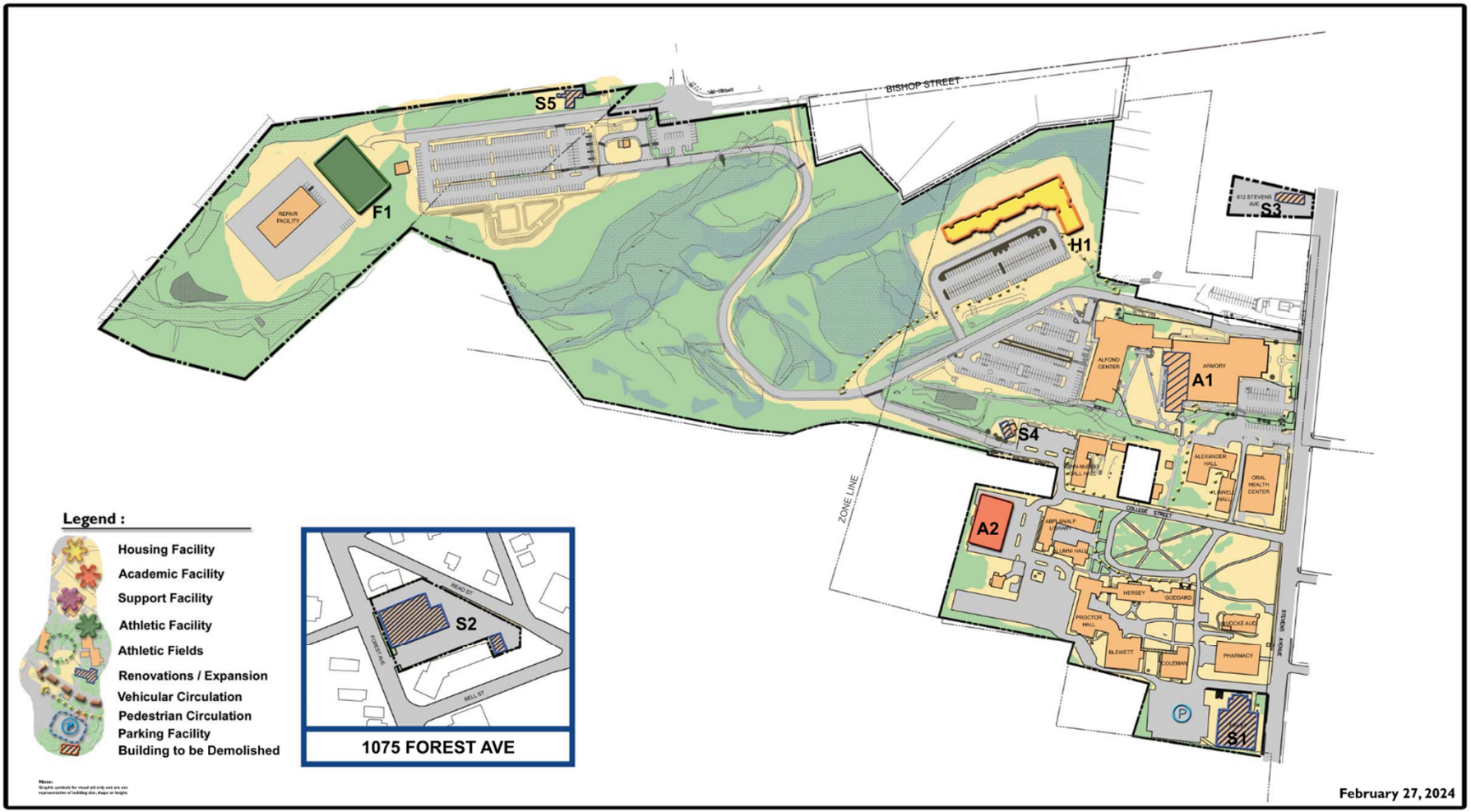
Existing Zoning





University of New England Portland Campus

Campus Master Plan

Five Year Plan

Site Design Associates

Civil Engineering & Land Planning

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10+ Year Development Plan

	Student Population
Fall 2025	1,400
Fall 2028	1,600
Fall 2033	1,750

Priority 1: Short-Term Development Plan (0-5 years)				
Campus Master Plan Identifier	Project	Use Category	Total Square Footage	Estimated Occupancy
H1	Residence Hall	Housing	175,000	350 beds
A1	Innovation Hall Renovation/Expansion	Academic	24,000	2 offices
S3	812 Stevens Ave. Renovation/Expansion	Support	10,000	6 offices
Priority 2: Medium-Term Development Plan (5-10 years)				
Campus Master Plan Identifier	Project	Use Category	Total Square Footage	Estimated Occupancy
S2	UNE North/1075 Forest Ave. Renovation/Expansion	Support	60,000	10 offices
S4	79 College Street Renovation/Expansion	Support	2,500	2 offices
S5	Bishop Street Renovation/Expansion	Support	2,000	N/A
Priority 3: Long-Term Development Plan (10+ years)				
Campus Master Plan Identifier	Project	Use Category	Total Square Footage	Estimated Occupancy
A2	Academic Building	Academic	60,000	20 offices
F1	Athletic Facility	Athletic	65,000	12 offices

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INNOVATION FOR A HEALTHIER PLANET

Public Involvement Opportunities - IOZ

- Pre-Submission Neighborhood Meeting – **WE ARE HERE**
- Post-Submission Neighborhood Meeting – Summer/Fall
- Public Hearings as part of the Regulatory Process
  - Planning Board Workshops
  - Planning Board Hearing
  - City Council Hearing
- Continued Public Engagement

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Communications

- Current/active project monthly updates on Campus Planning webpage (www.une.edu/campus/campus-planning).
- Email questions/concerns/feedback directly to UNE's Planning Department (uneprojects@une.edu).
- Deering Center Neighborhood Association (DCNA), to present and review future development plans and receive ideas/feedback.

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INNOVATION FOR A HEALTHIER PLANET

Open Forum

We are here to listen and answer questions.

UNE

- Your input is important to us
- Second Neighborhood Meeting in summer/fall
- Visit our website at for updates
  - http://www.une.edu/campus/campus-planning
- Email with questions, concerns, or feedback directly to UNE's Planning Department and project team members.
  - uneprojects@une.edu



Thank you!

Woodard & Curran Sewall BERN STEIN SHUR UNE UNIVERSITY OF NEW ENGLAND INNOVATION FOR A HEALTHIER PLANET

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NEIGHBORHOOD MEETING MINUTES

University of New England – Portland Campus Rezoning – Neighborhood Meeting #1

PROJECT:
University of New England (UNE)
Portland Campus Rezoning

MEETING DATE: 06/13/2024

LOCATION:
University of New England - Portland Campus, 716 Stevens Avenue, Hannaford Lecture Hall, Room 109, College of Pharmacy, Portland, ME

ISSUED DATE: 10/09/2024

ATTENDEES:

Presenters/Representatives
Alan Thibeault – UNE
Jim Irwin - UNE
Mary Costigan – Bernstein Shur
Diane Morabito - Sewall
Barry Sheff – Woodard & Curran (W&C)
Megan Gatto – Woodard & Curran (W&C)

Public
Susan Small
Fran Girard
Katherine Kilcullen
Christopher Nelson
Kate Sykes
Jerry Hankinson
Mona Oates
Haig Tifrakjian
Scott Dalton
Brenda Boothby
Carleton Winslow
Sean Hagan
Anna Bullett

Total recorded attendance was 13.

In person began at 6:00 p.m.

Project Presentation & Content

- Welcome and Introductions provided by Alan Thibeault, UNE
- Project Background presentation provided by Alan Thibeault, UNE and Mary Costigan, Bernstein Shur
  - Overview of UNE (Portland Campus History + Programming)
  - Regulatory Process (Institutional Overlay Zone)
  - Campus Master Plan
  - Public Involvement Opportunities
  - Comments and Questions

Record of Feedback

Throughout and following the project presentation, there was a question-and-answer period with attendees. The following topics were discussed:

- Questions and discussion about zoning, property acquisitions, and tax concerns
    - Representatives clarified that the proposed IOZ only applies to UNE property as currently held and will not apply to property acquired thereafter, without revisions to the IOZ necessitating Planning Board and City Council approval.
    - Participant asked what the Roux did for underlying zoning; representatives responded the change was from I-M to B5.
    - Participant asked if IOZ application was submitted to City; representatives confirmed it has not submitted an application and will use the information gained tonight to revise the draft before it is submitted.
    - Participant asked if the City is considering an adjacent zone change; representative responded they were not aware of that.
    - Participant asked about whether UNE makes payment in lieu of taxes (PILOT) to the City; representatives responded that they did not, and as a non-profit were not required to. However, UNE provides significant services to the greater community, including the low-cost dental clinics on campus.
    - Participant asked about whether PILOT could be a condition of IOZ approval; representatives responded they felt that would be an unusual condition.
    - Concerns were raised about City tax increases from future UNE property acquisitions.
- Questions and discussion about UNE's future plans for campus expansion
    - Participant asked what additional properties UNE is considering in the long term; representatives responded that one homeowner on Stevens Avenue has approached the University to sell their property, and that the University is considering this offer.
- Questions and discussion about traffic and parking
    - Concerns were raised about parking along Stevens Avenue.
    - Participant asked how UNE communicates with students on encouraging use of the Bishop Street remote lot; respondents reiterated communication with students is constant to increase usage of the remote parking lot.
    - Participant asked is UNE contemplating a parking garage in the future; representatives responded that structured parking is not envisioned on campus, as the city has confirmed that the current parking capacity is adequate to meet the University's needs.
    - Participant asked about shuttle usage; representatives responded that METRO use is down since COVID however the University still offers free bus passes to all faculty, staff and students, and encourages usage to reduce single occupancy vehicle trips.
    - Concerns were raised about on-street parking impacts; representatives expressed understanding and reiterated the Bishop Street remote parking and other parking on campus is intended to alleviate on-street parking, but student habits are a challenge to change, especially when pubic parking is readily

available closer to the buildings, then the students, faculty and staff will use it. UNE will continue to support any revisions to public parking the City makes.
    - Representatives clarified the size of the Bishop Street parking lot and usage: There are approximately 350 spaces with 100 cars parked at any given time.
    - Participant inquired about COM building parking needs; representatives explained that parking was a Site Plan review consideration with the City's Planning Board and that there is adequate parking supply available on campus. In fact, during its review the Planning Board suggested UNE has too much parking on site.
    - Participant asked is the City studying traffic at Morrill's Corner; representatives explained they were not aware of any ongoing City traffic studies.
- Questions and discussion about Westbrook Historic District
    - Concerns were raised regarding impacts to historic district; representatives expressed no intention to change the historic district.
- Questions and discussion about Campus Master Plan
    - Representatives clarified there would be height and dimensional limits to campus master plan, which will enable the University to meet campus program needs.
    - Representatives responded to a specific question regarding the location of Bishop Street remote parking versus proposed housing, and the intent to keep housing closer to the academic buildings on campus.
- Questions and discussion about zoning restriction changes and adjacent lot zoning
    - Concerns were raised regarding noise and light impacts; representatives reassured they had no intention of seeking changes from existing City Ordinances for noise or light trespass, and actually utilizes its own lighting standards to limit the impacts as well.
    - There was a discussion about noise and light restrictions in various city zones, for example: noise standards in B-2 zoning districts versus R-zone standards; representatives reassured these standards were City-wide and the proposed IOZ would not seek to modify those.
    - Concerns were raised regarding off-campus Waste Management truck collections before 7am.
- Questions and discussion about environmental impacts
    - Concerns were raised regarding impervious area, including Gulliver's field on Mayfield Street and climate impacts; representatives explained their overarching approach to protecting natural resources and UNE goal to Carbon Neutrality by 2040 and its commitment to its Climate Action Plan, most recently updated in 2017. UNE has a long, successful track record designing and constructing facilities in sensitive environmental locations, and is confident that this could be achieved on Gulliver's Field as well.
    - Participant asked what wildlife studies have been done; representatives explained that all studies associated with prior Site Plan approvals are public record and available through the City.
    - A concern was raised about a nearby well or individual spring and the water level; representatives shared the COM building stormwater design was reviewed and approved by the City Planning Board and had a lack of awareness of the particular issue raised and did not believe they were related, but

promised to make inquiries into this issue so it could be adequately considered in any future design.
    - A concern was raised about impacts to migratory birds, in particular the American Woodcock, resulting from development; representatives reiterated that all studies associated with prior Site Plan approvals are public record and available through the City.
    - A concern was raised about construction impacts to Mayfield with planned housing (H1) building; representatives offered assurance that City Site Plan and MaineDEP Site Law standards have always and will continue to be met when proposing future projects.
- Questions and discussion about housing
    - Participant asked If anyone looked at land behind Bruno's for housing; representatives responded that UNE has not looked at that land.
    - Positive comment shared about student tenants in the area.
    - Concerns were raised about the height of housing - too tall; representatives explained the intent of increased height to reduce footprints and impervious area and maintain open space on campus.
    - Participant asked can you develop multiple buildings or move housing to Bishop Street and parking to Gulliver field; representatives reiterated their intent to locate housing proximate to academic buildings, and that multiple buildings would have greater potential impact
- Questions and discussion about maximum growth potential
    - Participant asked about student population size and program sizes; representatives responded with current campus demographics.
- Questions and discussion about neighborhood traffic
    - Concerns were raised about traffic at Morrill's Corner; representative expressed understanding and shared a benefit of the Bishop Street parking lot and private connector road is to remove students, staff, and faculty from the intersection. This access road would also afford public cyclists access without going through Morrill's Corner.
- Questions and discussion about meeting noticing
    - Some attendees asked for earlier public notice.
    - One commenter noted that the meeting room was hard to find.

Attendees requested a copy of the Master Plan be provided to them. A follow up email was promised to be sent to all attendees with email addresses on the attendance sheet, which would include the Master Plan.

List of Plans, Documents or Drawings Shared

The following information was shared via the PowerPoint presentation given at the meeting, with the presentation attached for reference:

- Regulatory Process and project timeline
- Campus Master Plan
- Work completed to date
- Website for campus project updates
- Email for follow up questions and concerns.

Meeting Close

- The meeting closed at approximately 7:15 and the project team thanked attendees and noted that a second Neighborhood Meeting would be held in the summer/fall 2024 and those in attendance will receive an email notice as well as another mailed notice.

To:	Chair Brandon Mazer & Members of the Planning Board
From:	Eric Freeman
Date:	November 5, 2024
Re:	197 Oxford Street
Project ID:	PL-002885-2024
CBL:	CBL 026 B018
Meeting Date:	November 12, 2024.

I. INTRODUCTION

Reveler Development and Avesta Housing have submitted a Joint Phased Major Site Plan application. This application proposes the redevelopment of several parcels located entirely within the R-6 zone in the Bayside neighborhood into 96 total residential units. The first phase will consist of 48 units, to be developed by Avesta Housing, and will include 28 "Housing First" units as well as 20 workforce units at 197 Oxford Street. The second and third phases will consist of 48 market-rate rental units, with 24 units being located in Phase II at 50 Cedar Street, and an additional 24 units being located in Phase III at 158 Lancaster Street.

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 and is considered a phased site plan as defined in Article 14.9.1 of the City of Portland's Land Use Code. Additionally, this application is required to meet the City of Portland's inclusionary zoning requirements outlined in Section 18.2 of the City's Land Use Code.

The Planning and Urban Development Department mailed 176 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the November 5, 2024 edition of the Portland Press Herald.

Applicant: Reveler Development, Avesta Housing
Applicant Representatives: Acorn Engineering, Ryan Senatore Architecture, CWS Architecture.

REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan	Section 14.6
Inclusionary Zoning	Section 18.2
R-6 Design Review Standards	City of Portland Design Manual (k)

June 25, 2024 Workshop

The Planning Board held a workshop for this application on June 25, 2024. Board discussion focused primarily on:

- Continuity of phasing and cohesiveness of site.
Board members asked the applicant to consider additional improvements to connect the three phases of the application and create a more cohesive development site.

The applicant has committed to fully reconstructing sidewalks on Cedar Street to connect all three phases.

- Usage of density bonus
The Board questioned the applicant's proposed use of the City's affordable housing density bonus, particularly for phases two and three of the development, which are not proposed as affordable projects, and which directly make use of affordable units in phase one to satisfy their inclusionary zoning requirement.

The applicant has since reduced the scale of the third phase from 51 to 24 units and is no longer seeking to utilize a density bonus for the second or third phase.

Figure 1: Overall Site Plan



Review	*Applicable Standards*
Site Plan	Section 14.6
Inclusionary Zoning	Section 18.2
R-6 Design Review Standards	City of Portland Design Manual (k)

Project Data	
Existing Zoning	R-6
Property Size	15,224 SF (Phase I) 23,250 SF (Phase II) 17,748 SF (Phase III)
Existing Use	Vacant Oxford Street shelter buildings (Phase I) Surface parking (Phases 2 & 3)
Proposed Development Program	Three-phase Site Plan with 48 affordable housing units and 48 market-rate units.

Waver Requests	Applicable Standards
1. Landscape Preservation	**Land Use Code Article 14.6.2** *All development subject to zoning setbacks shall preserve a minimum of 30% of existing trees 10 inches DBH or greater within the required setback area unless trees are non-native invasive species, as identified in the landscaping and landscape preservation standards of the Technical Manual, or are deemed unsalvageable by the Portland City Arborist or their designee.*
2. Drive Aisle Width.	**Technical Manual Section 1.10.3** *Minimum two-way drive aisle width is 24 feet for right-angle parking. The applicant is requesting a 22-foot drive aisle width.*
3. Electric Vehicle Charging	**Technical Manual Section 1.14** *New structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces (rounded down to the nearest whole number). An additional 50% of spaces must be made EV-ready, meaning that they are served by sufficient conduit and electrical service to allow for future installation of electric vehicle supply equipment at every space.*

II. EXISTING CONDITIONS AND SURROUNDING AREA

The subject properties are located in the Bayside neighborhood, within the R-6 zone. All three phases are bordered by Oxford, Chestnut, Cedar and Lancaster streets, and are intersected by Hall Court, a private right-of-way. The surrounding neighborhood consists of a wide variety of land uses and housing types, ranging from single-family homes to larger multifamily buildings. The site is bordered by commercial uses along Lancaster Street. The Bayside Community Garden is located along Chestnut St. between phases I and III of this application.

This phased site plan application exists in close proximity to the Bayside Master Development Plan (MDP)

(PL-002315-2022) which was approved by the Planning Board in 2023. The first phase of the Bayside MDP, 89 Elm Street (PL-002403-2023), directly abuts phase II of this site plan application and was approved by the Planning Board on October 24, 2023.

The phase I site is bordered by Oxford, Chestnut and Cedar Streets. The site currently features two vacant structures, previously occupied by the Oxford Street Shelter. These buildings would be demolished as part of Phase I. There was formerly a community garden at the corner of Oxford and Chestnut Streets, which is no longer in use.

The phase II site is located at the southwest corner of Cedar and Lancaster streets. The site is currently used as surface parking. A portion of the lot had been occupied by a single-family home until it was demolished in 2019.

The phase III property is located at the southwest corner of Chestnut and Lancaster Streets. The site is currently used as surface parking.

All three sites abut or are located in close proximity to Cedar Street and Hall Court. City Staff have noted the poor condition of sidewalks and road surface along Cedar Street. and have identified that the applicant will be responsible for improvements along the entirety of Cedar Street as part of the holistic redevelopment proposed for abutting blocks.



Figure 2: The existing site

III. PROPOSED DEVELOPMENT

The proposed phased site plan development consists of three distinct parcels located at 197 Oxford Street (Phase I) 50 Cedar Street (Phase II) and 158 Lancaster Street (Phase III), which are either connected by public rights-of-way or by land owned by the applicant.

PHASE I – 197 Oxford Street

Phase I involves the demolition of two existing vacant buildings formerly occupied by the Oxford Street Shelter and the construction of a five-story, 48-unit affordable housing building. The proposed building will be developed by Avesta Housing and would consist of 20 traditional workforce housing units and 28 "Housing First" units, with associated on-site services and staff. The building would be divided internally between traditional workforce housing units and "Housing First" units, and would function as two separate buildings, with the traditional workforce housing units located on the eastern side of the building, and "Housing First" units on the western side. Each portion of the building will have its own independent stairwells and elevators.

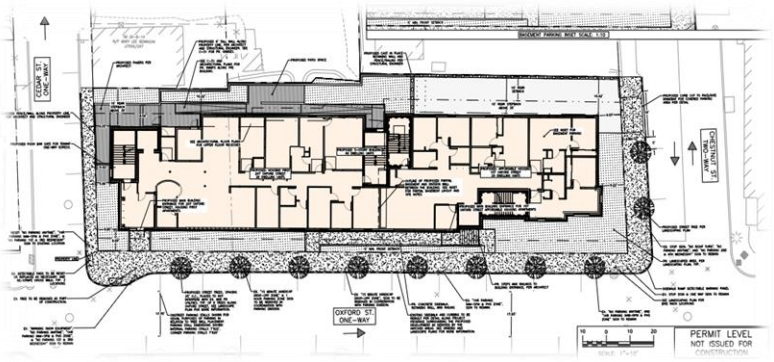

Figure 3: Phase I Site Plan

Within the Housing First portion of the building, all staff offices and supportive services for the residents would be located on the ground floor. The ground floor will also feature a community kitchen, open seating areas, a shared laundry room and staff conference space. The upper floors will include 28 Housing First units, with each unit functioning as a studio apartment.



Figure 4: Phase I Rendering as seen from the corner of Chestnut and Oxford Street

The workforce housing portion of the building will feature a mixture of 20 studio and 1-bedroom units, with shared laundry and amenity space, with a community kitchen located on the ground floor.

Phase I will include five parking stalls located at the basement level, which would be accessed from a new curb cut on Chestnut Street. These parking spaces would be used by on-site staff and service providers for Housing-First services. The building would have two primary entrances located along Oxford Street. The eastern portion of the building will articulate back away from Oxford Street to create a landscaped area at the corner of Oxford and Chestnut Streets.

Phase I would involve the reconstruction of approximately 220 feet of sidewalk along Oxford Street, 70 feet of sidewalk reconstruction along Chestnut Street and 160 feet of new sidewalk on Cedar Street. All sidewalks would be rebuilt with concrete pavers and granite curbing. Phase I would also involve the planting of 10 new street trees along Oxford and Chestnut Streets. The applicant has requested a waiver of Article 14.6.2 for this phase in order to remove several trees greater than 10" DBH (diameter at breast height), along the rear property line, which are in poor condition and causing damage to an existing

retaining wall.

The applicant is proposing to connect Phase I to the existing 12-inch water main on Oxford Street with four 2-inch connection points and a single 6-inch fire service connection going to each portion of the building. This building will also connect to the existing 18-inch combined sewer on Oxford Street. Additionally, the covered parking area will include an oil-water separator.

PHASE II – 50 Cedar Street

Phase II involves the construction of a three-story, 24-unit market-rate residential building located at 50 Cedar Street. The site is currently undeveloped and is used as surface parking and grassed open space. The property had been occupied by a single-family home until 2019. The proposed building will include 18 one-bedroom units and six studio units and will feature multiple entryways on both Cedar and Lancaster Streets. Units facing Lancaster Street will feature "Juliet balconies".



Figure 5 & 6: Phase 2 Site Plan and perspective

Phase II involves the reconstruction of approximately 40 feet of sidewalk reconstruction along Lancaster Street using brick and granite curbing, and 300 feet of sidewalk reconstruction on Cedar Street using concrete pavers. A new curb extension will be installed at the corner of Lancaster and Cedar St.

Phase II will include three off-street parking stalls accessed via a narrow driveway and 9-foot drive aisle connected to Cedar Street. One of these parking stalls will be ADA-accessible. These parking stalls would be utilized by on-site tenants. There is bicycle parking available within the building and additional bike storage provided within the adjacent 89 Elm Street building. Trash and waste facilities are also located within the adjacent 89 Elm Street property.

Phase II proposes over 1,000 SF of new impervious surface. Stormwater treatment will be accomplished using Storm-filter cartridges, that would discharge into a proposed R-Tank subsurface detention system. The outfall would tie into the previously engineered and approved 89 Elm Street drainage system, which ultimately drains to the upstream end of the combined sewer extension on Lancaster Street.

PHASE III – 158 Lancaster Street

Phase III involves the construction of a three-story, 24-unit market-rate residential building located on the corner of Chestnut and Lancaster Street. The Phase III building is proposed to be nearly identical in scale and design to the second phase at 50 Cedar Street. The site is currently undeveloped and is used as surface parking with small amounts of landscaping. The existing surface parking lot is bordered by a retaining wall, which will remain as part of this application.

The proposed building will include 16 one-bedroom units and eight studio units. The building's primary entrance will be located on Lancaster Street. The ground floor will feature a lobby, mail room and trash room. The first floor will also include a bike storage room with space for up to 20 bicycles.
Phase III will include 13 off-street angled parking spaces, accessed via an existing curb cut on Lancaster Street. Similar to Phase II, these parking spaces would be utilized by off-site parking tenants.
Phase III involves the reconstruction of approximately 220 feet of sidewalk along Lancaster St. and 115 feet along Chestnut Street between Lancaster St. and Hall Ct. All sidewalk reconstruction will utilize concrete pavers and granite curbing. A total of eight new street trees will be planted along Lancaster and Chestnut Streets. Three new trees will be planted to help buffer the subject property from an abutting multifamily building.

There are currently eight trees at 10" DBH or larger exist on site. The project proposes to maintain 3 of these trees on-site while planting eight new street trees

Phase III would connect to the existing 18-inch sewer main on Chestnut Street. Phase III will not create more than 1,000 SF of new impervious area and therefore no treatment is proposed as part of this phase. As part of the previously approved Bayside MDP, the water main on Lancaster Street will be upgraded to a 12-inch ductile iron main. Phases 2 and 3 will connect to this new 12-inch main.



Figure 7: Perspective rendering of Phase 3 seen from the corner of Chestnut and Lancaster Streets

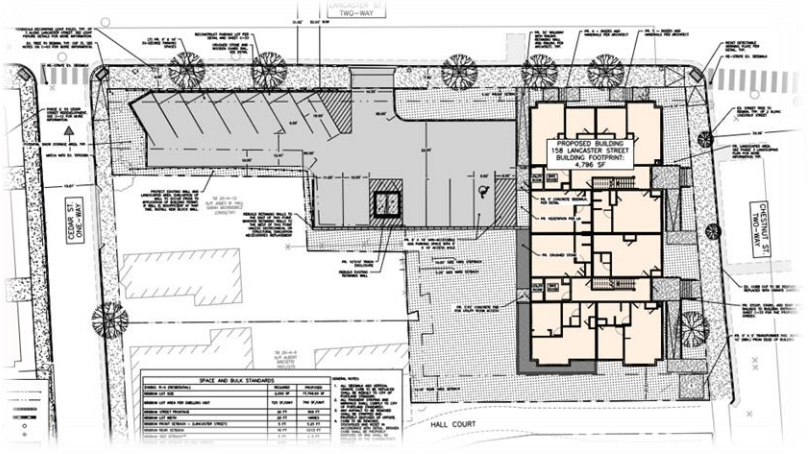

Figure 8: Phase 3 Site Plan

IV. RIGHT, TITLE, & INTEREST

The Co-Applicants of this phased application are Reveler Development and Avesta Housing Development Corporation d/b/a Avesta Oxford Street LP. Reveler Development manages all entities who own the parcels under this application. Avesta has an option agreement with Reveler to purchase the 197 – 203 Oxford Street lot (Phase I)

Phase 1: 197 Oxford Street (39779/239), and 31 Cedar Street (39779/241) are both owned by 197 OXFORD STREET LLC.

Phase II: 50 Cedar Street (39779/246), and 89 Elm Street (39779/236) are both owned by 89 ELM STREET LLC.

Phase III: 158 Lancaster Street (39779/223), which is owned by WBP COMMERCIAL LLC

Full Right, Title and Interest documentation, including Deeds and Option Agreements for all three phases are included as attachment C.

V. FINANCIAL & TECHNICAL CAPACITY

The applicant intends to submit this application to MaineHousing this fall, for consideration for a 9% allocation award for Low Income Housing Tax Credits (LIHTC). The tax credits would generate equity to help fund the proposed redevelopment. The applicant has provided letters of financial capacity from Bangor Savings Bank and Bar Harbor Bank & Trust demonstrating that Avesta Housing and Reveler have the financial capacity to build and maintain the application as proposed. Full financial capacity documentation is included as attachment G

Reveler Development has completed several development projects within the City including 82 and 52 Hanover St and 132 Marginal Way – The Linden. Reveler has demonstrated experience in building and maintaining multifamily rental properties. Avesta Housing is Northern New England's largest affordable housing developer, with experience building and managing dozens of affordable housing properties across Maine and New Hampshire.

CWS Architecture + Interior Design has extensive experience in residential development in Portland and has been the Architect of Record on many residential projects including 58 Boyd Street and Huston Commons. Acorn Engineering and Ryan Senatore Architecture have demonstrated capacity and experience working on commercial and residential projects of a similar scale throughout Maine and New England. Full technical capacity documentation is included as attachment H

VI. ZONING ANALYSIS

All three phases lie within the Residential-6 (R-6) zone. Relevant sections of the R-6 purpose statements include:

- **R-6:** *To set aside areas on the peninsula for housing characterized primarily by multi-family dwellings at a high density providing a wide range of housing for differing types of households;...*

PHASE I -197 Oxford St.	Required	Proposed
Lot Size	2,000 SF	15,224 SF
Area Per Dwelling Unit	290 SF / Unit with 2.5x base density bonus (Table 18-C)	317 SF / Unit
Maximum Height (ft)	55 ft.	54.9 ft.
Front Yard Minimum	5 ft	8 ft
Rear Setback	10 ft.	10.2 ft.
Side Setback	5 ft	7 ft
Stepback	15 ft.	15 ft. (rear)
Lot Coverage	60%	60%
Landscaped Open Space	20%	20%
Off-street parking spaces	None (with exemption applied)	5

Planning staff have requested that the applicant provide additional information regarding average grade and lot coverage calculations for Phase I to confirm that the building is in full conformance with dimensional standards of the R-6 zone. .

PHASE II – 50 Cedar St.	Required	Proposed
Lot Size	2,000 SF	23,250 SF
Area Per Dwelling Unit	725 SF / Unit	1,092 / Unit
Maximum Height (ft)	55 ft.	35 ft.
Rear Setback	10 ft.	21.5 ft.
Side Setback	5 ft.	12.5 ft.
Lot Coverage	60%	21%
Landscaped Open Space	20%	20%
Off-street parking spaces	20	3 with additional off-site

Planning Staff have requested the applicant provide additional information regarding open space calculations for Phase II.

PHASE III – 158 Lancaster St.	Required	Proposed
Lot Size	2,000 SF	17, 748 SF
Area Per Dwelling Unit	725 SF / Unit	740 SF / Unit
Maximum Height (ft)	55 ft.	51.2 ft.
Rear Setback	10 ft.	13.1 ft.
Side Setback	5 ft.	13.7 ft.
Stepback	15 ft.	15 ft. (rear)
Lot Coverage	60%	29%
Landscaped Open Space	20%	34%
Off-Street parking spaces	20	13 with additional off-site

Inclusionary Zoning

New residential projects totaling 10 or more residential units are subject to the City's Inclusionary Zoning (IZ) requirements, which require that 25% of new units be workforce housing units, affordable to households earning 80% of the Area Median Income (AMI). The applicant is seeking to satisfy the IZ requirements for Phases 2 and 3 by using the IZ off-site provisions as outlined in the City's *Inclusionary Zoning Implementation Guidelines for Developers of Rental Housing (*Attachment S3), with the 20 affordable units proposed at 197 Oxford Street to be considered 'workforce units' for the 48 market rate units proposed as part of phases 2 and 3. As currently proposed Phase 1 of this application is exempt from IZ standards per Article 18.2.3.B.

The City's inclusionary zoning requirements allow the workforce units requirement to be met by providing units on-site, off-site, or through financial contributions to the City's Jill C. Duson Housing Trust Fund. In the case of off-site workforce housing the IZ Implementation Guidelines state:

"A Developer may choose to satisfy the Workforce Unit requirements by providing these units off- site through the construction of new units, the restriction of existing market rate units, or the conversion of non-residential uses."

The *Definitions and Regulations for Developers of IZ Units* defines developer as "*the owner of the project."* Owner is defined as "*all legal and equitable owners (including, but not limited to, any person, persons, firm, partnership, association, joint venture, corporation, or any public or private entity or entities or the owner's agent) of a building or project during the term of the permit and any heir, successor, or assign of any person holding an ownership interest in the project or building."* To satisfy the IZ off-site requirements at 197 Oxford Street, Reveler will need to demonstrate how their proposed partnership with Avesta complies with the definition of owner. If Reveler is able to demonstrate that the project is consistent with the definitions of "owner" and "developer" for satisfying the off-site IZ provisions then the owner would be required to record a Workforce Housing Agreement in the chain of title for each property that outlines the terms of affordability, as well as unit amenities, to ensure that amenities are comparable to the market-rate units.

Additionally, as part of fulfilling their intent to use units at 197 Oxford Street to meet the workforce housing requirements, the Applicant will have to:

- Demonstrate how the units are comparable in quality and size to the market-rate units constructed in the market rate projects

- Execute affordable housing agreements as part of the deeds for 197 Oxford Street and each of the market rate sites.

VII. 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.

1. Transportation Standards (Section 14.6.1

A. Impact on surrounding street systems

This application proposes to rebuild and upgrade sidewalks along the frontages of all three phases. Additionally, the applicant intends to fully reconstruct sidewalk on both sides of Cedar Street. There are no changes proposed to traffic patterns or on-street parking as part of this Site Plan application.

As part of the approved Traffic Movement Permit (TMP) of the Bayside Master Development Plan, Reveler Development will be required to study the possibility of converting Oxford Street to two-way traffic, upon the of the completion of the abutting 89 Elm Street project. The applicant has met with City Staff to discuss how phase 1 of this application has been designed to accommodate potential future changes in traffic patterns along Oxford Street.

Phase II of this application falls within the geographic scope of the previously approved Bayside Traffic Movement Permit. Phases I and III are not included within the scope of the Bayside TMP and do not require their own Traffic Movement Permit. Given the scale and anticipated trip generation from Phase II, a TMP amendment will not be required.

This application involves three significant multifamily projects which all have frontage along Cedar Street. Given the generally poor condition of sidewalks and road surface along Cedar Street, the applicant will be responsible for street, sidewalk, and other improvements within the right-of-way.

B. Access and circulation

The applicant proposes to reconstruct sidewalks along the frontages of all three phases using concrete pavers and granite curbing. Additionally, the applicant proposed to reconstruct sidewalk along both sides of Cedar Street using concrete pavers. Sidewalks will be rebuilt to city standards and will be constructed in phases.

Internal walkways are proposed for each phase and will connect to the existing sidewalks along Cedar Street, Chestnut Street and Lancaster Street.



Figure 9: Scope and phasing of sidewalk improvements

C. Public transit access

This standard is not applicable to this application because the proposed project is not located directly on an existing public transit route.

D. Parking

Each phase of this application involves a limited amount of dedicated off-street parking.

Phase I: Includes five basement-level parking spaces that would be accessed via a new curb cut and driveway off of Chestnut Street. These spaces would be utilized by Housing First Staff. No additional on-site parking is provided for the residents of Phase I. According to the applicant, if tenants wish to pursue dedicated off-site parking, there is capacity within the Cumberland Avenue parking garage which is owned by Co-Applicant, Reveler Development.

Phase II: Includes three off-street parking spaces accessed from Cedar Street.

Phase III: Includes 13 angled off-street parking spaces accessed via Lancaster Street.

The applicant intends to offer off-site parking for all 48 market-rate units in the nearby Cumberland Avenue Garage on an as-requested basis. Reveler Development owns this garage and included supply calculations as part of the previously approved Master Development Plan in 2023

A minimum of 39 bicycle spaces are required for the proposed 96 residential units, following the ratio (2 bike spaces/ 5 units) provided in Table 19-A of the Land Use Code. Phases 1 and 3 include dedicated bike storage rooms which meet this standard. For Phase II the applicant is proposing to utilize the enclosed bike storage area at 89 Elm Street.

Additionally, new structured and surface parking lots of five or more spaces are required to include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces. An additional 50% of spaces must be made EV-ready. Phase I of this Site Plan application is requesting a waiver from the EV requirement for their 5 parking spaces. Based upon the amount of new parking being created for phases II and III, these phases are not required to provide any EV infrastructure.

A full parking analysis has been provided by the applicant and is included as attachment S

E. Transportation demand management (TDM)
This application does not require a TDM plan, However, the applicant has provided a traffic analysis (Attachment T).
The applicant may utilize the transit-proximate exemption following the completion of an approved TDM plan.

Staff is requesting further information in order to make a finding on this standard.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features
All three parcels associated with this phased site plan are urban infill lots. There are no known significant natural features on any of the three parcels.

B. Landscape preservation

Phase I: Several mature trees are located along the rear of the property line. Due to the location and poor condition of the trees, as well as their impact to a nearby retaining wall, the applicant has requested a waiver of Article 14.6.2 related to tree preservation. Planning Staff are supportive of this waiver request.

Phase II: No trees or significant landscaping features are being removed

Phase III: Eight trees of 10" DBH or greater exist on site. The project will maintain three of those trees which meets landscape preservation standards.

C. Site landscaping and buffers
One shade tree or planting are required per every 30 linear feet along all the property frontages, per the City of Portland Technical Manual standards. Where the replacement of trees onsite is not feasible, the applicant intends to contribute the proportionate cost of the replacement trees to the

City of Portland Tree Fund. In total, the applicant will plant 23 new trees between the three phases of this application. Per section 4.6.1 of the Technical Manual, the applicant is required to provide a minimum of one street tree per residential unit along public rights-of-way. The applicant intends to contribute to the tree fund to compensate for the remaining 73 required trees.

Additional site landscaping and plantings will be provided for each phase. Proposed plantings include grassed open space and vegetated buffers with native plantings between buildings and public sidewalks. The applicant has provided detailed landscaping plans included as attachments 12, 13 and 14

Staff consider this standard to be met.



Figure 10: Perspective view of the phased site plan application and 89 Elm Street

D. Water quality/storm water management/erosion control

The project is required to provide for stormwater management in accordance with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management. The Applicant has submitted a stormwater management report and grading and drainage plans for each phase to indicate erosion and sedimentation control measures and stormwater treatment for the proposed development.

The Applicant has evaluated the requirements for stormwater treatment for each phase of this application. Phases I and III both involve the creation of greater than 1,000 square feet of new impervious surface, and therefore both of these phases are subject to the City's stormwater management requirements. In Phase III, the amount of impervious surface would be reduced beyond what is there currently, and so this phase would be exempt from stormwater quality and quantity management. Subsurface stormfilter systems have been provided for Phases I and II

The applicant has submitted a full stormwater management plan demonstrating compliance with Section 5 of the Technical manual and Maine DEP chapter 500 standards for all phases of this application.

Phase I: Treatment will be accomplished using Storm-filter cartridges, which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch across the entire roof area as well as some ancillary impervious ground surfaces, which is a larger volume than the new sewer flows created by the project. The stormwater will outlet into the combined 18-inch sewer within Chestnut Street.

Phase II: Treatment will be accomplished using Storm-filter cartridges which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch of rainfall across the site's impervious area, which exceeds the new sewer flows. The outfall will tie into the previously engineered and approved 89 Elm drainage system which ultimately drains to the upstream end of the combined sewer extension that has been designed as part of the Bayside MDP

Phase III: The project will not create more than 1,000 SF of new impervious area and therefore no treatment is proposed. The site will detain the new sewer flows because its volume exceeds an inch across the site's impervious area.

The stormwater detention will be provided by an R-tank system and treatment will be via a Stormfilter BMP.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans

This Phased Site Plan is adjacent to the previously approved Bayside Master Plan, and proposes infill development in an area accessible to services and public transit supporting many of the City's goals of complete neighborhood and sustainable development patterns.

B. Availability and capacity of public utilities

All three phases will be served via underground electrical service. New Utility providers have been contacted for their ability to serve the proposed project. The applicant has requested ability to serve letters from Central Maine Power and Portland Water district

All three phases will be served by connection to the public sewer system within Chestnut Street and Cedar Street, The proposed stormwater management systems have been designed to meet the City standards as well as the applicable standards outlined in Chapter 500.

Phases II and III will rely on the completion of the planned separated sewer system extension along

Lancaster Street. Further coordination with the Department of Public Works will be required.

Phases I and III propose internal trash storage for tenants. While Phase II will share its solid waste with the adjacent 89 Elm project outside in a privately, screened enclosure. Given each of the residential developments proposes 20 or more units within the building, trash collection and disposal will be coordinated by the property/landowner of each site with a private hauler.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

All three phases meet relevant zoning and dimensional standards and are similar in scale to surrounding buildings. Staff have requested that the applicant provide additional screening to reduce the visual impact of rooftop impertinences.

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Staff are requesting additional materials to make a determination on this standard.

B. Shadows

No adverse shadow impacts are anticipated with this application.

Staff consider this standard to be met.

C. Snow and ice loading

None of the proposed buildings are anticipated to create snow or ice loading impacts on abutting properties or rights-of-way. The applicant has detailed snow storage locations on included plans.

Staff consider this standard to be met.

D. View corridors

None of the three phases of this application are within a protected view corridor.

E. Historic resources

Not applicable. No portion of this Phased Site Plan is within 100 feet of a historic district and no historic resources are impacted by this application.

F. Exterior lighting

The proposed development includes full cutoff / dark sky compliant light fixtures to minimize light spillover. The applicant has designed light fixtures to avoid impact to abutting residential properties as much as possible. Shielding will be implemented when necessary. No architectural or specialty lighting is proposed. Street lighting has been proposed in accordance with the City Technical Manual and is to include the required peninsula decorative lighting when along Lancaster Street. A full photometric plan has been included as attachment N

Staff consider this standard to be met.

G. Noise and vibration

HVAC, air handling units, and other necessary equipment will be installed on building rooftops.

Given the location of the buildings the placement of HVAC, generators and other equipment is not anticipated to interfere with abutting residential properties.

Staff consider this standard to be met.

H. Signage and wayfinding

No wayfinding signage is proposed as part of this application.

I. Zoning-related design standards

All three phases were reviewed under the Land Use Code section 14.6.4.I.e for multi-family residential development and shall also comply with the following development standards under the Land Use Code section 8.1.4 for R6 zone.

The Design Review focused on:

1. **Massing and design of Phase I** –
   Staff have encouraged the applicant to make changes to the stair tower portions of the Phase I building to create a more cohesive visual facade. Staff have also encouraged the applicant to consider shift the massing of the eastern portion of the building closer to the corner of Oxford and Chestnut Streets.

2. **Access and connectivity for Phases II and III** –
   Staff have requested that the applicant provide additional connectivity between proposed parking areas and the ground floor corridors of the first and second phase buildings. This may potentially involve internal reconfiguration of bicycle storage and utility rooms.

3. **Layout and site design of Phase III.**
   The applicant has been encouraged to explore shifting the orientation of Phase III by approximately 90 degrees to allow greater building frontage along Lancaster Street. Staff have also suggested that the applicant consider relocating the 13-space parking away from Lancaster Street and utilizing the remainder of the Lancaster Street frontage for open space. This could involve shifting the proposed parking to a new location accessed via Chestnut Street.

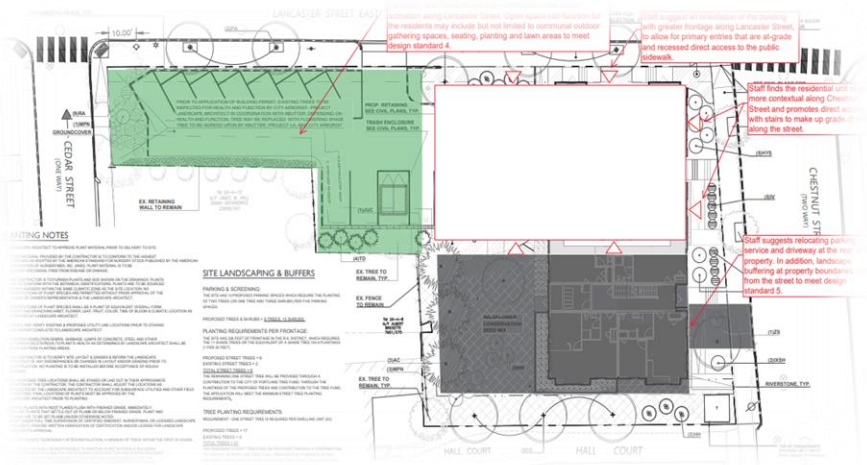


Figure 11: Suggested alternative site configuration for Phase III

Full design review materials can be found as attachment S1 and S2

VIII. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held a neighborhood meeting on May 16, 2024 at 5:30 PM. The in-person meeting was held in the community room at 409 Cumberland Avenue. 17 members of the public were in attendance. Public comment centered on:

- Construction timing in relation to the abutting 89 Elm Street project.
- Parking for all phases
- Density calculations
- Operations and management of the Housing First units.
- The condition of streets and sidewalks
- Public safety
- Building design and open space

A full sign-in sheet and meeting minutes are included as attachment V

IX. NEXT STEPS

Staff will continue to review resubmitted plans and documents to ensure the proposed project complies with all applicable standards, and specifically:

1. Address any outstanding Staff comments
2. Address additional comments from the Planning Board.
3. Prepare final plan submission.
4. Schedule and hold planning board public hearing

X. ATTACHMENTS

Report Attachments

S1. Design Review Memo (11.4.2024)
S2. Design Review Memo (6.21.2024)
S3. Site Plan Worksheet (10.29.2024)

Applicants Submittal

A. Cover Letter
B. Major Site Plan Checklist
C. Right, Title Interest
D.1 Zoning Analysis - Phase 1
D.2 Zoning Analysis - Phase 2
D.3 Zoning Analysis - Phase 3
D.4 Zoning Analysis - Density Overview
E. Easements
F. Waivers
G. Financial Capacity

H. Technical Capacity
I. Conformity with Land Use Ordinance
J. Stormwater Management Report
K. Erosion & Sedimentation Control Report
L. Fire Department Letter - Phase 1
L.2 Fire Department Letter - Phase 2
L.3 Fire Department Letter - Phase 3
M. Wastewater Capacity
M.1 Wastewater Capacity Form - Phase 1
M.2 Wastewater Capacity Form - Phase 2
M.3 Wastewater Capacity Form - Phase 3
N. Lighting
O. Architectural Narrative
P. Utility Narrative
Q. Construction Management Plan
R. Solid Waste Disposal
S. Parking Analysis
T. Traffic Analysis
U. Pre-App Neighborhood Meeting Documentation
V. Neighborhood Meeting #2 Documentation
W. Open Space Narrative
Y. Comment Response Letter

Plans

1. COVER SHEET AND LEGEND
2. GENERAL NOTES
3. TOPOGRAPHIC SURVEY
4. PH1 - CONSTRUCTION MANAGEMENT PLAN
5. PH2 - CONSTRUCTION MANAGEMENT PLAN
6. PH3 - CONSTRUCTION MANAGEMENT PLAN
7. OVERALL SITE PLAN
8. PH1 - SITE PLAN
9. PH2 - SITE PLAN
10. PH3 - SITE PLAN
11. PH1 - LANDSCAPE HARDSCAPE AND MATERIALS PLAN
12. PH1 - LANDSCAPE PLANTING PLAN
13. PH2 - LANDSCAPE PLANTING PLAN
14. PH3 - LANDSCAPE PLANTING PLAN
15. PH1 - UTILITY PLAN
16. PH2 - UTILITY PLAN
17. PH3 - UTILITY PLAN
18. PH1 - GRADING AND DRAINAGE PLAN
19. PH2 - GRADING AND DRAINAGE PLAN
20. PH3 - GRADING AND DRAINAGE PLAN
21. SITE DETAILS - 1

22. SITE DETAILS - 2
23. UTILITY DETAILS - 1
24. UTILITY DETAILS - 2
25. DRAINAGE DETAILS - 1
26. DRAINAGE DETAILS - 2
27. EROSION & SEDIMENTATION CONTROL DETAILS
28. PH1 - LANDSCAPE DETAILS
29. PH2 & PH3 - LANDSCAPE DETAILS
40. PH1 - A1.00 BASEMENT PARKING LEVEL PLAN
41. PH1 - A1.10 FIRST FLOOR PLAN
42. PH1 - A1.20 SECOND FLOOR PLAN
43. PH1 - A1.30 THIRD FLOOR PLAN
44. PH1 - A1.40 FOURTH FLOOR PLAN
45. PH1 - A1.50 FIFTH FLOOR PLAN
46. PH1 - A3.01 NORTH ELEVATION PLAN
47. PH1 - A3.02 EAST ELEVATION PLAN
48. PH1 - A3.03 WEST ELEVATION PLAN
49. PH1 - A3.04 SOUTH ELEVATION PLAN
50. PH2 - A1-1 FIRST FLOOR PLAN
51. PH2 - A1-2 SECOND FLOOR PLAN
52. PH2 - A1-3 THIRD FLOOR PLAN
53. PH2 - A2-0 WEST ELEVATION PLAN
54. PH2 - A2-1 NORTH ELEVATION PLAN
55. PH2 - A2-2 EAST ELEVATION PLAN
56. PH2 - A2-3 SOUTH ELEVATION PLAN
57. PH2 - PERSPECTIVE 1 PLAN
58. PH2 - PERSPECTIVE 2 PLAN
59. PH2 - PERSPECTIVE 3 PLAN
60. PH2 - PERSPECTIVE 4 PLAN
61. PH2 - PERSPECTIVE 5 PLAN
62. PH2 - PERSPECTIVE 6 PLAN
63. PH2 - PERSPECTIVE 7 PLAN
64. PH2 - P8 PERSPECTIVE 8 PLAN
65. PH2 - P9 PERSPECTIVE 9 PLAN
66. PH3 - A1-1 FIRST FLOOR PLAN
67. PH3 - A1-2 SECOND FLOOR PLAN
68. PH3 - A1-3 THIRD FLOOR PLAN
71. PH3 - A2-0 WEST ELEVATION PLAN
72. PH3 - A2-1 NORTH ELEVATION PLAN
73. PH3 - A2-2 EAST ELEVATION PLAN
74. PH3 - A2-3 SOUTH ELEVATION PLAN
75. PH3 - PERSPECTIVE 1 PLAN
76. PH3 - PERSPECTIVE 2 PLAN
77. PH3 - PERSPECTIVE 3 PLAN
78. PH3 - PERSPECTIVE 4 PLAN
79. PH3 - PERSPECTIVE 5 PLAN

80. PH3 - PERSPECTIVE 6 PLAN
83. Overall JSPA Open Space & Tree Summary Plan
84. Overall JSPA Plan View
85. Overall JSPA Site Map
86. Overall JSPA Sidewalk Improvements Plan
87. PH2 - OPEN SPACE EXHIBIT
88. PH3 - OPEN SPACE EXHIBIT
90. PH1 - A1.60 ROOF PLAN
91. PH1 - Rendering Oxford and Chestnut Street View
92. PH1 - Rendering Oxford and Cedar Street View
99. MDP & JSPA OVERALL PLAN
100. PH3 - Turning Template

Design Review
Planning and Urban Development Department

City of portland

Subject:	197 Oxford Street, 50 Cedar Street, 158 Lancaster Street – Phased site plan
Zone:	R-6
Date of Review:	Wednesday, October 23, 2024
Reviewer(s):	Eric Freeman (Planner), Zach Powell (Senior Planner), Sean King (Urban Designer)
Project ID:	PL-002885-2024

I. DESIGN REVIEW CRITERIA

The proposed phased site plan development is subject to the site design standards, Land Use Code section 14.6.4(I) Design standards. The property sites are located in the R-6 residential zone with property sizes that exceed 10,000 square feet to not require strict compliance with the R-6 infill development principles and standards under the City's Design Manual, Section (k) and contained in Appendix 7.

The proposed multi-family developments are subject to the multi-family design standards from the City's Design Manual, Section (l) to consist of three phases, herein known as:

- Phase 1: 197 Oxford Street for 48 residential units
- Phase 2: 50 Cedar Street for 24 residential units
- Phase 3: 158 Lancaster Street for 24 residential units.

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

*(i) Two-family, special needs independent living units, **multiple-family,** lodging houses, bed and breakfasts and emergency shelters.*

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 built context of the surrounding area contains a variety of building types, architectural styles, and a mix of uses that vary in height and proximity to the street typically found throughout Portland's Bayside neighborhood. The north side of Chestnut Street includes a larger 7-story multi-family building with flat roof. The south side includes an existing 2.5-story residential building with open gable roof style. Cedar Street includes a mix of smaller-scale residential structures with a mix of roof types including, box gable, intersecting/overlaid hip, and open gable. Buildings tend to have a masonry base, predominantly brick, with clapboard siding. Along Oxford Street includes a mix of building typologies including Unity Village, a community of 33 townhouse style, 3-story apartment buildings, with pitched roofs, brick base and clapboard siding with balconies on the second floor. Adjacent R-7, B-3 & B-7 zoning districts are within close proximity to the proposed project. The existing buildings within the surrounding context are located close to the street with direct access to building entries from public sidewalks.

The proposed phased site plan varies in architectural style and generally deviates from the surrounding residential neighborhood due to the larger lot size and large building footprint to accommodate the proposed high density of residential units. The proposed buildings include flat roofs to maximize structure height. Flat roofs are common for multi-family buildings in the neighborhood and throughout the city.

Phase 1 – 197 Oxford Street: The applicant has resubmitted plans with revisions to the building design that further articulate the façade at the ground level facing the street with a consistent storefront window pattern and canopies that identify the primary entries that Staff finds appropriate to the surrounding context. In addition, the revised building design includes paneling above the storefront windows to distinguish a more cohesive composition with the ground level communal interior spaces from the residential units at the upper floors.

The applicant has resubmitted plans that further articulate the upper stories facing the street with material and trim detailing that express the window arrangement as bay projections that Staff finds appropriate to provide façade variation. Staff recommends greater articulation associated with the residential units, in particular a more pronounced cornice above the horizontal siding.

In addition, Staff has concerns about the large expanses of blank façade at the ground level that face the street. The applicant is requested to provide further justification for the revised building design, in particular the vestibule wall facing Cedar Street, Mechanical Room wall projection facing Oxford Street, and the Basement level wall that wraps the corner of Oxford and Chestnut Street.

Staff recommends the applicant include greater articulation to minimize these blank facades or an alternative (e.g. vine system screening, tall-layered landscaping or artwork) that reduce the visual presence along the ground level.

Phase 2 – 50 Cedar Street: Staff finds the building design provides massing variation and mitigates the existing grade along Cedar Street appropriately with the location of multiple entries that are recessed and articulated with an overhead canopy. The proposed design does not provide direct resident access from the parking lot through the rear of the building, which requires residents using mobility devices to walk a longer distance without a pedestrian facility to access the building from the designated ADA-accessible space. Staff recommends that the applicant identify an ADA-accessible entry at the rear of the building that consolidates and/or provides an alternative location for either the utility or bike room for residents to access an interior corridor from the parking lot. he building.

Phase 3 – 158 Lancaster Street: The applicant has resubmitted plans for a building design Staff finds the building design provides massing variation and mitigates the existing grade along Chestnut Street appropriately with the location of multiple entries that are recessed and articulated with an overhead canopy. The proposed design does not provide direct resident access from the parking lot through the rear of the building, which requires residents using mobility devices to walk a longer distance without a pedestrian facility to access the building from the designated ADA-accessible space. Staff recommends that the applicant identify an ADA-accessible entry at the rear of the building that consolidates and/or provides an alternative location for either the utility or bike room for residents to access an interior corridor from the parking lot. he building.

2. *The proposed development shall respect the existing relationship of buildings to public streets.*

Staff comment: The prevailing surrounding context includes buildings within close proximity to the street, to allow direct access to building entries directly from the public sidewalk. The arrangement of smaller properties and existing structures at different finished floor elevations allows for individual structures to mitigate changes in grade along sloped public streets.

Phase 1 – 197 Oxford Street: The applicant has resubmitted plans to adjust the building location, with Staff continuing to recommend a stronger proximity at the corner of Oxford and Chestnut Streets. Staff encourages the residential units fronting Oxford Street be located closer to the street and to explore an alternative transformer location at the Basement parking level. Staff has provided a markup for the applicant's consideration in an effort to create a more cohesive building design that projects the facades associated with the residential units to diminish or setback the fiber cement paneled facades where the elevator and stairwells are located.

Phase 2 – 50 Cedar Street: Staff finds the proposed building placement promotes street activation along Lancaster Street and Cedar Street that is appropriate to the surrounding neighborhood context. Staff continues to recommend a reorientation the proposed entry stoops and railings along the Lancaster Street building frontage to include recessed entries and stairs that are perpendicular to the street. Staff requests that the applicant explore a finish floor elevation to reduces the amount of ramp and stair transition from the public sidewalk. As envisioned in the approved 196 Lancaster Street MDP, Lancaster Street is proposed as a neighborhood main street with Staff recommendation to create a more conducive street-level entry along Lancaster Street that contributes to the future streetscape design.

Phase 3 – 158 Lancaster Street: Staff finds the building placement along Lancaster Street encourages street activation and direct access to the primary building entry. Staff suggest an orientation of the building with greater frontage along Lancaster Street, to allow for primary entries that are at-grade and recessed direct access to the public sidewalk. Staff finds the residential unit stoops more contextual along Chestnut Street and promotes direct access with stairs to make up grade change along the street. Furthermore, the Applicant is requested to identify the pole-mounted transformer on the plans as an alternative to the pad mounted transformer, as suggested in their response letter based on the reduction of units.

3. *Open space on the site for all … multiple-family development shall be integrated into the development site.*

Staff comment: The applicant has resubmitted plans and an open space narrative that begin to respond to the accessibility and the function of open space throughout the phased site plans. In general, Staff finds the open space is partially met by the perimeter plantings proposed at each building phase. However, in regards to the total amount of units proposed, Staff finds that access to private and shared open space is limited and only successfully captured within the balcony units of Phase 2 and Phase 3 and the pollinator garden of Phase 3. Staff recommends that the applicant provide an accessible route and entry from the rear parking area with direct access for residents of Phase 2 and Phase 3.

Phase 1 – 197 Oxford Street: The Applicant has indicated new street trees along Oxford Street, Chestnut Street & Cedar Street under the City's Technical Manual, Section 4 standards, along with walkways, courtyards and planting areas at the rear of the property. Staff does not support the proposed seeded lawn areas due to maintenance and viability concerns and lack of contextuality with the surrounding neighborhood.

Phase 2 – 50 Cedar Street: The Applicant has indicated new street trees along Lancaster Street and Cedar Street under the City's Technical Manual, Section 4 standards, along with minimal perimeter building planting areas. The applicant has resubmitted plans that remove the lawn areas adjacent to the public sidewalk for shrub plantings that Staff finds appropriate based on the surrounding context. Staff suggests open space programming at the corner of Lancaster and Cedar Street that contributes to the street activation along Lancaster Street. Open space can function for the residents may include but not limited to communal outdoor gathering spaces, seating, planting and lawn areas. The applicant may consider the addition of balconies to provide private open space for residents.

Phase 3 – 158 Lancaster Street: The Applicant has indicated new street trees along Lancaster Street and Chestnut Street under the City's Technical Manual, Section 4 standards, along with landscape buffering around the perimeter of the property and lawn area for communal gathering at the rear of the property. The applicant has resubmitted plans that remove the lawn areas adjacent to the public sidewalk for shrub plantings that Staff finds appropriate based on the surrounding context. Staff suggests open space programming at the rear of the property given the proposed twenty-four residential units. Open space can function for the residents may include but not limited to communal outdoor gathering spaces, seating, planting and lawn areas.

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: Staff finds the proposed phased site plan buildings provide ample windows and sufficient storage within each residential unit to meet this design standard. The applicant has resubmitted plans with a revised fenestration pattern at the ground level and upper floors that Staff finds appropriate to the surrounding context.

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

Staff comment:

Phase 1 – 197 Oxford Street: The applicant has resubmitted plans to propose a six-foot six-inch height retaining wall with a four-foot tall mounted fence. Staff requests the applicant illustrate this proposed condition from the abutting property at 72 Chestnut Street with rendered views from the public sidewalk. In addition, the applicant is requested to provide specifications for the fencing for each building phase.

Phase 2 – 50 Cedar Street: The applicant has included landscape buffering and fencing around to sufficiently screen abutting properties, Staff request that applicant provide specifications for the fencing for each building phase.

Phase 3 – 158 Lancaster Street: Staff suggests relocating parking, service and driveway at the rear of the property. In addition, landscape buffering at property boundaries and from the street.

The applicant has included landscape buffering and fencing around to sufficiently screen abutting properties, Staff request that applicant provide specifications for the fencing for each building phase.

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

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

PLANTING NOTES

1. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
2. PLANT MATERIAL PROVIDED BY THE CONTRACTOR IS TO CONFORM TO THE HIGHEST STANDARD AS ADOPTED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (ANSI). PLANT MATERIAL IS TO BE HEALTHY SPECIMENS, FREE FROM DISEASE OR DAMAGE.
3. THE CONTRACTOR IS TO FURNISH PLANTS AND SOD SHOWN ON THE DRAWINGS. PLANTS ARE TO CONFORM WITH THE BOTANICAL IDENTIFICATIONS. PLANTS ARE TO BE SOURCED FROM A NURSERY WITHIN THE SAME CLIMATIC ZONE AS THE SITE LOCATION. NO SUBSTITUTIONS OF PLANT SPECIES ARE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE & THE LANDSCAPE ARCHITECT.
4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, TIME OF BLOOM & CLIMATIC LOCATION AS APPROVED BY LANDSCAPE ARCHITECT.
5. LOCATE AND VERIFY EXISTING & PROPOSED UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM PLANTING AREAS.
7. THE CONTRACTOR IS TO VERIFY SITE LAYOUT & GRADES & INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR CHANGES IN LAYOUT AND/OR GRADING PRIOR TO CONSTRUCTION. NO PLANTING IS TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
9. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE. PLANT AND STAKES ARE TO BE SET PLUMB UNLESS OTHERWISE NOTED. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
10. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
11. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN PLANT MATERIALS INCLUDING SODSEED AREAS IN A HEALTHY STATE DURING CONSTRUCTION AND DURING REQUIRED WARRANTY PERIODS. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
12. REPAIR DAMAGE DUE TO LANDSCAPE INSTALLATION OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK.
13. SOAK ALL PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION.
14. A LIST OF PLANTS INCLUDING BOTANICAL NAMES, SIZES, AND SPACING ARE SHOWN ON THE DRAWINGS. QUANTITIES ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE AND ARE TO BE VERIFIED. IN THE EVENT THAT QUANTITIES OR OMISSIONS OCCUR THE PLAN DRAWINGS ARE TO BE FOLLOWED.
15. IRRIGATION: A TEMPORARY UNDERGROUND DRIP AND SPRINKLER IRRIGATION SYSTEM IS TO BE PROVIDED FOR ALL PLANT MATERIAL AND SOD OR SEEDED AREAS.
16. DISTURBED SITE AREAS ARE TO BE DRESSED WITH 6" MIN. OF AMENDED TOPSOIL FOR LAWNS AND 12" MIN. FOR PLANT BEDS. TOPSOIL FOR SEEDED AND/OR SEEDED AREAS IS TO BE TWO PARTS SHARP SAND, ONE PART LOAM AND ONE PART ORGANIC COMPOST.
17. PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 5' DIA.
18. TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
19. ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

PLANTING SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
DECIDUOUS TREES - 50 Cedar Street						
MI	*Malus 'Ivory Spear'*	Ivory Spear Crabapple	1	1.75-2" cal	as shown	
LS	*Liquidambar styraciflua 'Slender Silhouette'*	Slender Silh Sweet Gum	6	2.75-3" cal	as shown	Seedless variety only
QP	*Quercus palustris*	Pin Oak	2	2.5-3" cal	as shown	
DECIDUOUS SHRUBS						
HH	*Hypericum 'Hidcote'*	St. John's Wort	5	24"-36" ht.	36" O.C.	
IV	*Itea virginica*	Little Henry Sweetspire	18	24"-36" ht.	36" O.C.	
LB	*Lindera Benzoin*	Spice Bush	1	24"-36" ht.	36" O.C.	
EVERGREEN SHRUBS						
IXSH	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	10	30"-36" ht.	60" O.C.	
PERENNIAL						
AMH	*Amsonia hubrichtii*	Thread-leafed Bluestar	tbd	tbd	36" O.C.	
ABB	*Astilbe 'Bressingham Beauty'*	Bressingham Beauty Astilbe	tbd	tbd	18" O.C.	
COM	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis	tbd	tbd	18" O.C.	
GRC	*Geranium x 'Rozanne'*	Rozanne Cranesbill	tbd	tbd	24" O.C.	
HAH	*Hemerocallis 'Heavenly Angel Ice'*	Heavenly Angel Ice Daylily	tbd	tbd	24" O.C.	
HEC	*Heuchera 'Caramel'*	Caramel Coral Bells	tbd	tbd	18" O.C.	
RFA	*Rudbeckia fulgida 'American Gold Rush'*	Gold Rush Black-Eyed Susan	tbd	tbd	24" O.C.	
SMH	*Salvia 'May Night'*	May Night Salvia	tbd	tbd	24" O.C.	
GRASSES, VINES & GROUND COVERS						
AG	*Allium gladiator*	Ornamental Onion	tbd	Bulb	12" O.C.	
AU	*Arctostaphylos uva-ursi*	Bearberry	tbd	1" ht.	36" OC.	
PVS	*Panicum virgatum 'Shenandoah'*	Shenandoah Switchgrass	tbd	#2	24" O.C.	
SS	*Schizachyrum scoparium*	Little Bluestem	tbd	#2	18" O.C.	
DECIDUOUS TREES - Cedar Street Sidewalk Improvements Sheet L2						
ZS	*Zelkova Serrata*	City Sprite Zelkova	3	2.75-3" cal	as shown	

SITE SOIL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF STOCKPILE AREAS FOR STRIPPED TOPSOIL AND PLANTING SOIL PRODUCTS. CONTRACTOR SHALL ENSURE AREA IS PROTECTED AND CONTAMINATION OR DISTURBANCE OF STORED PRODUCTS IS NOT ALLOWED.
2. CONTRACTOR SHALL ENSURE SUBGRADE IS SCARIFIED PRIOR TO INSTALLING PLANTING SOIL AND BLEND WITH INITIAL LIFT OR PLACEMENT OF PROPOSED PLANTING SOIL.
3. COORDINATE PLACEMENT OF PLANTING SOIL WITH OTHER WORK, ESPECIALLY UTILITIES. PLACEMENT SHOULD OCCUR AFTER INSTALLATION OF ALL HARDSCAPE IMPROVEMENTS, IRRIGATION SYSTEM, UTILITIES, ETC. AND BEFORE INSTALLATION OF PLANTS.
4. SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

SITE LANDSCAPING & BUFFERS

PARKING & SCREENING:
THE SITE HAS 3 PROPOSED PARKING SPACES WHICH REQUIRE THE PLANTING OF TWO TREES (OR ONE TREE AND THREE SHRUBS) PER FIVE PARKING SPACES.

PROPOSED TREES & SHRUBS = 2 TREES, 6 SHRUBS.

PLANTING REQUIREMENTS PER FRONTAGE:
THE SITE HAS 270 FEET OF FRONTAGE IN THE R-6 DISTRICT, WHICH REQUIRES 9 SHADE TREES OR THE EQUIVALENT OF A SHADE TREE VIA 6 PLANTINGS (1 PER 30 FEET)

PROPOSED STREET TREES = 8
EXISTING TREES=1
TOTAL STREET TREES = 9

TREE PLANTING REQUIRE
REQUIREMENT - ONE STREET TREE

PROPOSED TREES (SITE) = 10

PROPOSED TREES IN COORDINATION WITH 89 ELM STREET DEVELOPMENT = 16 (SEE SHEET L2)

PROPOSED TREES CEDAR SIDEWALK IMPROVEMENTS = 2*

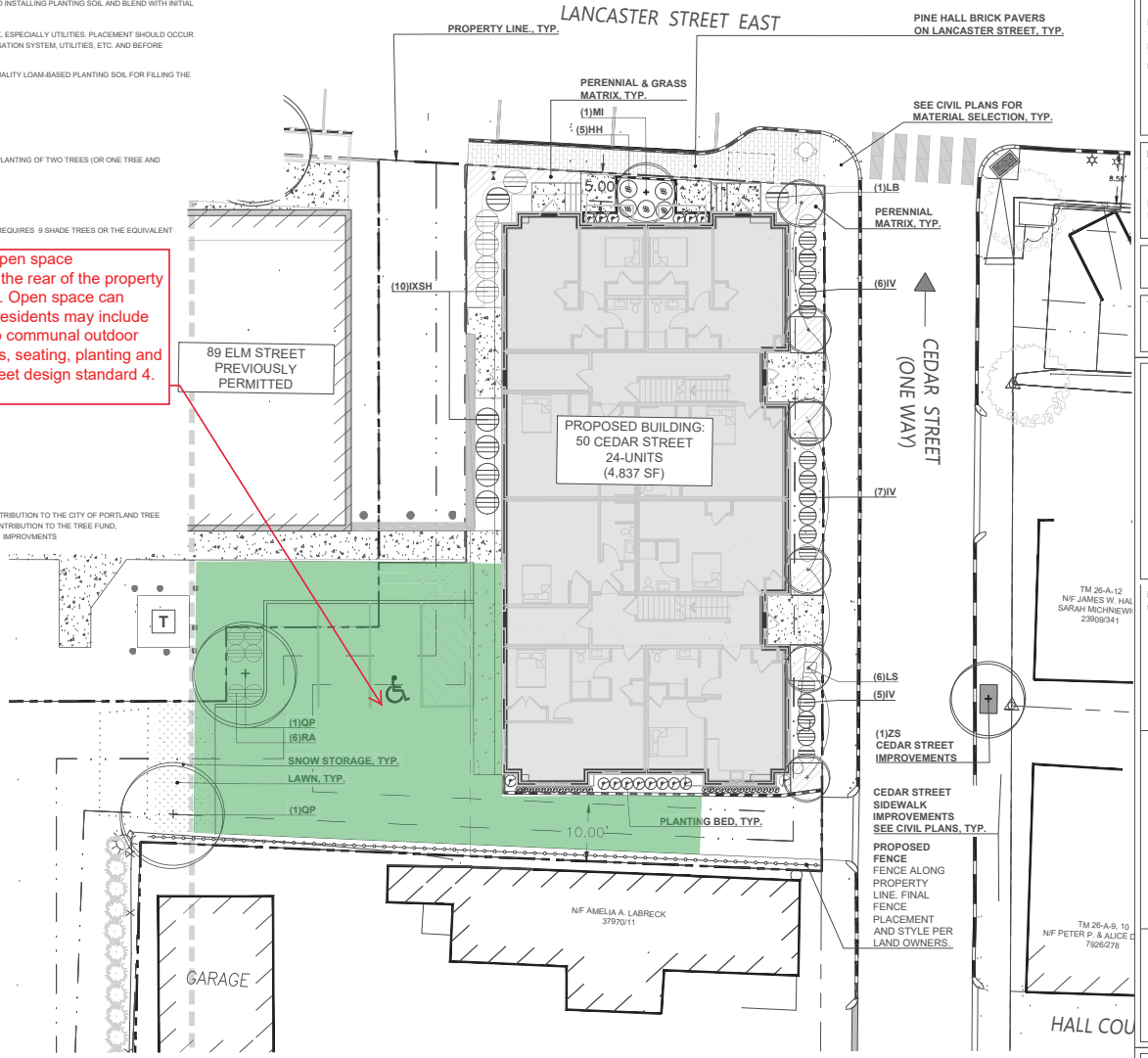
EXISTING TREES = 1

TOTAL PROPOSED TREES = 29*

TOTAL REQUIRED - 24

THE REMAINING STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND,
* PROPOSED TOTAL INCLUDES CEDAR STREET SIDEWALK IMPROVMENTS

Staff suggests open space programming at the rear of the property for the residents. Open space can function for the residents may include but not limited to communal outdoor gathering spaces, seating, planting and lawn areas to meet design standard 4.



PLANTING LEGEND

EXISTING TREE
PROPOSED SHRUB
PERENNIAL MATRIX
PROPOSED DECIDUOUS TREE
PROPOSED PERENNIAL BEDS

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:
REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:
Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 17, 2023

Issued For:
PERMITTING DOCUMENTS

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Title:
PLANTING PLAN

50 Cedar Street
PHASE 2
Portland ME 04103

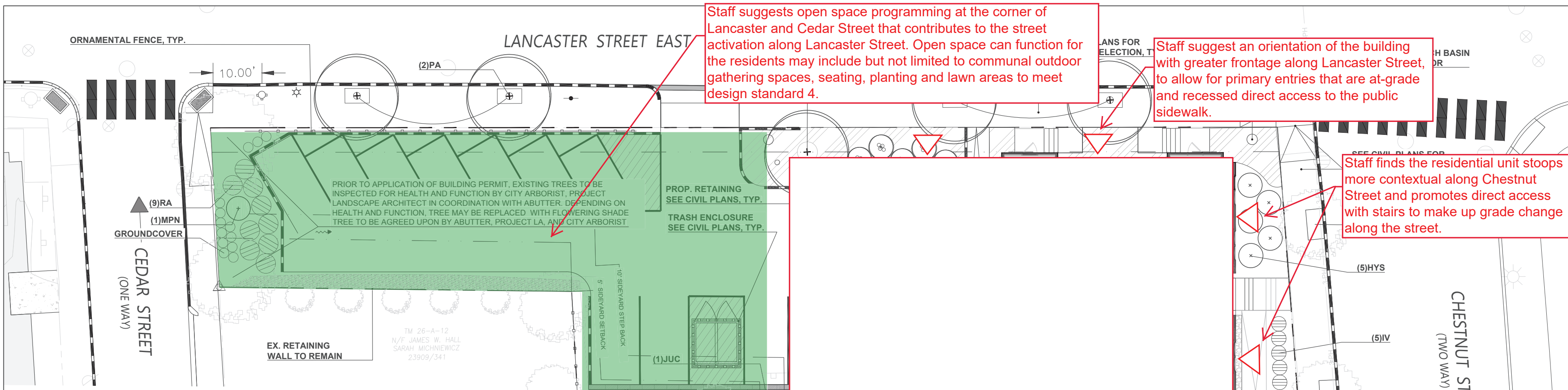
Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024

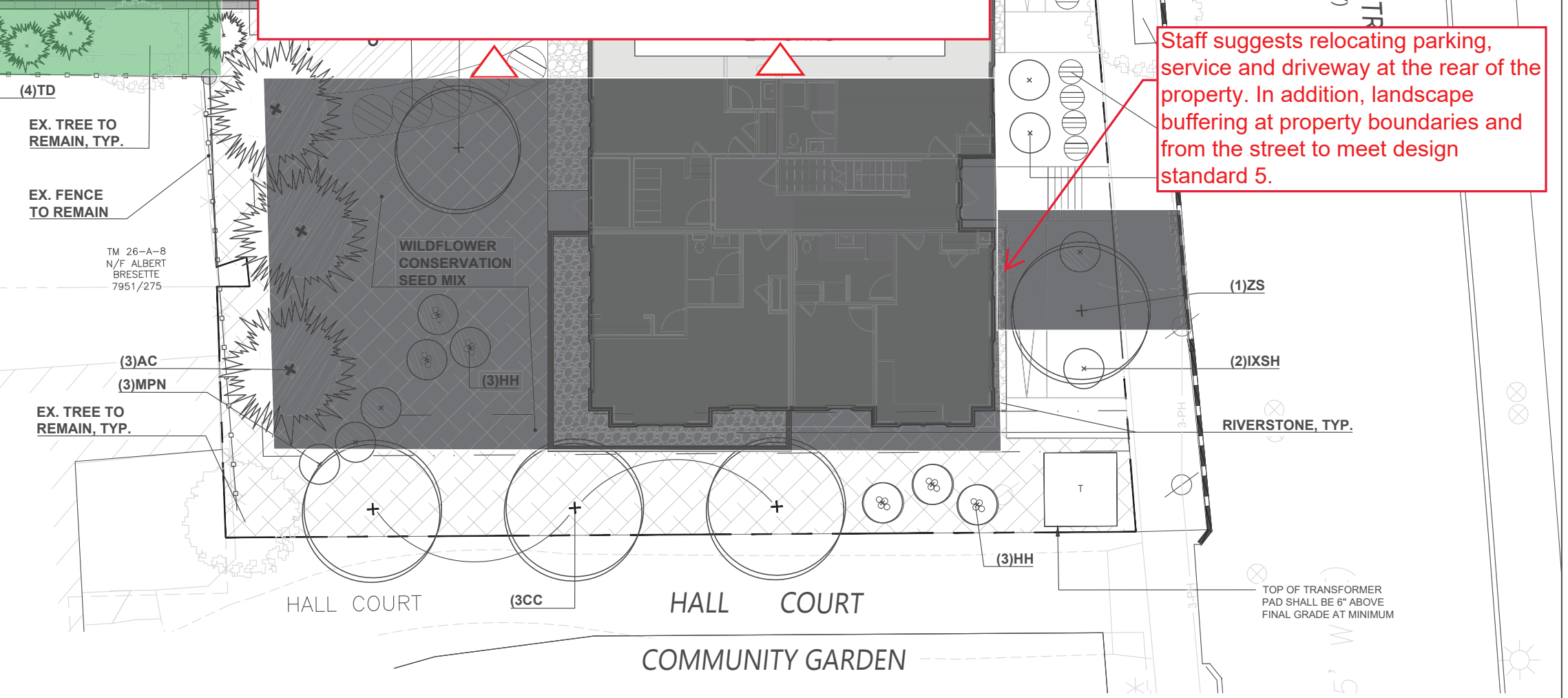
North:

Sheet No.:
L1

Scale: 1" = 20'-0"
0 10 20 40

C:\Users\DRY\OneDrive\Documents\Druska\DRY LA Projects\50 Cedar - 188 Lancaster\CAD\50 Cedar Street sketch Plan Submission REV 1 09.30.2024.dwg by DRY 09/30/2024





PLANTING NOTES

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17. PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 5' DIA.
18. TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
19. ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

SITE SOIL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF STOCKPILE AREAS FOR STRIPPED TOPSOIL AND PLANTING SOIL PRODUCTS. CONTRACTOR SHALL ENSURE AREA IS PROTECTED AND CONTAMINATION OR DISTURBANCE OF STORED PRODUCTS IS NOT ALLOWED.
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4. SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

SITE LANDSCAPING & BUFFERS

PARKING & SCREENING:

THE SITE HAS 13 PROPOSED PARKING SPACES WHICH REQUIRE THE PLANTING OF TWO TREES (OR ONE TREE AND THREE SHRUBS) PER FIVE PARKING SPACES.

PROPOSED TREES & SHRUBS = 9 TREES, 15 SHRUBS.

PLANTING REQUIREMENTS PER FRONTAGE:

THE SITE HAS 336 FEET OF FRONTAGE IN THE R-6 DISTRICT, WHICH REQUIRES THE 11 SHADE TREES OR THE EQUIVALENT OF A SHADE TREE VIA 6 PLANTINGS (1 PER 30 FEET)

PROPOSED STREET TREES = 6
EXISTING STREET TREES = 2
TOTAL STREET TREES = 8

THE REMAINING ONE STREET TREE WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.

TREE PLANTING REQUIREMENTS:

REQUIREMENT - ONE STREET TREE IS REQUIRED PER DWELLING UNIT (24).

PROPOSED TREES = 17
EXISTING TREES = 6
TOTAL TREES = 22

THE REMAINING STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.

PLANTING SCHEDULE

DECIDUOUS TREES

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
CC	*Cercis canadensis*	Eatern Redbud	4	2.5-3" cal	as shown
PA	*Prunus 'accolade'*	Accolade Cherry	3	2.5-3" cal	as shown
ZS	*Zelkova Serrata*	City Sprite Zelkova	3	2.5-3" cal	as shown

EVERGREEN TREES

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
AC	*Abies concolor*	White Fir	3	8-10'	as shown
TD	*Thuja occidentalis "Degroots Spire"*	Degroot's Spire Arborvitae	4	#7 CONT.	as shown

DECIDUOUS SHRUBS

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
HH	*Hypericum 'Hidcote'*	St. John's Wort	11	24"-36" ht.	48" O.C.
HYS	*Hydrangea quercifolia 'Snow Queen'*	Snow Queen Oakleaf Hydrangea	5	24"-36" ht.	60" O.C.
IV	*Itea virginica*	Little Henry Sweetspire	7	24"-36" ht.	36" O.C.
MPN	*Myrica pensylvanica*	Northern Bayberry	4	24"-30" ht.	60" O.C.
RA	*Rhus aromatica*	Lo-gro Sumac	14	24"-30" ht.	48" O.C.

EVERGREEN SHRUBS

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
IXSH	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	4	30"-36" ht.	48" O.C.
JUC	*Juniperus conferta 'Emerald Sea*	Emerald Sea Shore Juniper	1	18"-24" ht.	48" O.C.

PERENNIAL MATRIX

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
AMH	*Amsonia hubrichtii*	Thread-leafed Bluestar	tbd	tbd	36" O.C.
ABB	*Astilbe 'Bressingham Beauty'*	Bressingham Beauty Astilbe	tbd	tbd	18" O.C.
COM	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis	tbd	tbd	18" O.C.
GRC	*Geranium x 'Rozanne'*	Rozanne Cranesbill	tbd	tbd	24" O.C.
HAH	*Hemeocallis 'Heavenly Angel Ice'*	Heavenly Angel Ice Daylilly	tbd	tbd	24" O.C.
HEC	*Heuchera 'Caramel'*	Caramel Coral Bells	tbd	tbd	18" O.C.
RFA	*Rudbeckia fulgida 'American Gold Rush'*	Gold Rush Black-Eyed Susan	tbd	tbd	24" O.C.
SMM	*Salvia 'May Night'*	May Night Salvia	tbd	tbd	24" O.C.
PVS	*Panicum virgatum 'Shenandoah'*	Shenandoah Switchgrass	tbd	tbd	24" O.C.
SS	*Schizachryum scoparium*	Little Bluestem	tbd	tbd	18" O.C.

PLANTING LEGEND

- EXISTING TREE
- PROPOSED DECIDUOUS TREE
- PROPOSED SHRUB
- PROPOSED EVERGREEN TREE
- PERENNIAL MATRIX
- WILDFLOWER SEED MIX

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:
REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:
Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 16, 2024

Issued For:
PERMITTING DOCUMENTS

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Title: PLANTING PLAN

158 Lancaster Street
PHASE 3
Portland ME 04103

Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024

North:

Sheet No.: L3

Scale: 1" = 10'-0"

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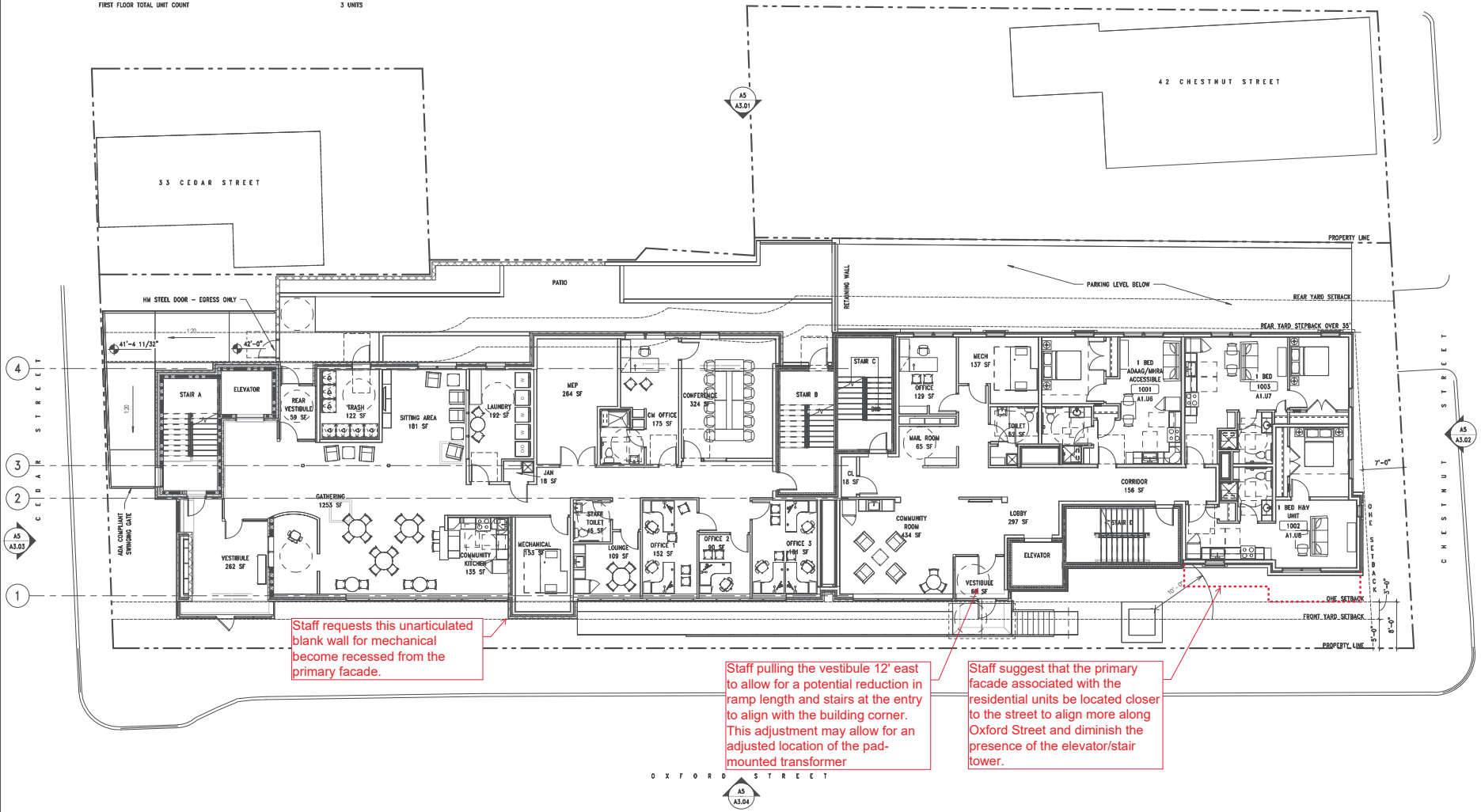
FIRST FLOOR SQ FT CALCULATIONS

FIRST FLOOR GROSS TOTAL	8,904 SQ FT (5,016 SF H-1 + 3,888 SF AH)

FIRST FLOOR UNIT COUNTS

0 BEDROOM	0 UNITS (0 H-1 + 0 AH)
1 BEDROOM	3 UNITS (0 H-1 + 3 AH)
FIRST FLOOR TOTAL UNIT COUNT	3 UNITS



Staff requests this unarticulated blank wall for mechanical become recessed from the primary facade.

Staff pulling the vestibule 12' east to allow for a potential reduction in ramp length and stairs at the entry to align with the building corner. This adjustment may allow for an adjusted location of the pad-mounted transformer

Staff suggest that the primary facade associated with the residential units be located closer to the street to align more along Oxford Street and diminish the presence of the elevator/stair tower.

A5 01 FIRST FLOOR
SCALE: 1/8" = 1'-0"

C:\Users\BenReed\Documents\23039_Avesta Oxford St_R23_CENTRAL_breedRCBFW.rvt

CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
CWS ARCHITECTURE + INTERIOR DESIGN
244 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, ME 04074
207.774.4441
CWSARCH.COM

OWNER
AVESTA
OWNER ADDRESS

PROJECT
AVESTA OXFORD
PROJECT ADDRESS

DRAWING
FIRST FLOOR PLAN
CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER
A1.10

SCALE: 1/8" = 1'-0"
DATE: 2024 | 09 | 26

MUNICIPAL SUBMISSION No. 2

Design Review
Planning and Urban Development Department

City of portland

Subject: 197 Oxford Street, 50 Cedar Street, 158 Lancaster Street – Phased site plan
Zone: R-6
Date of Review: Friday, June 21, 2024
Reviewer(s): Eric Freeman (Planner), Zach Powell (Senior Planner), Sean King (Urban Designer)
Project ID: PL-002885-2024

I. DESIGN REVIEW CRITERIA

The proposed phased site plan development is subject to the site design standards, Land Use Code section 14.6.4(I) Design standards. The proposed multi-family development is subject to the multi-family design standards from the City of Portland Design Manual, Section (I) to consist of three phases, herein known as:

- Phase 1: 197 Oxford Street for 48 residential units
- Phase 2: 50 Cedar Street for 24 residential units
- Phase 3: 158 Lancaster Street for 51 residential units.

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

*(i) Two-family, special needs independent living units, **multiple-family,** lodging houses, bed and breakfasts and emergency shelters.*

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 built context of the surrounding area contains a variety of building types, architectural styles, and a mix of uses that vary in height and proximity to the street typically found throughout Portland's Bayside neighborhood. The north side of Chestnut Street includes a larger 7-story multi-family building with flat roof. The south side includes an existing 2.5-story residential building with open gable roof style. Cedar Street includes a mix of smaller-scale residential structures with a mix of roof types including, box gable, intersecting/overlaid hip, and open gable. Buildings tend to have a masonry base, predominantly brick, with clapboard siding. Along Oxford Street includes a mix of building typologies including Unity Village, a community of 33 townhouse style, 3-story apartment buildings, with pitched roofs, brick base and clapboard siding with balconies on the second floor. Adjacent R-7, B-3 & B-7 zoning districts are within close proximity to the proposed project. The existing buildings within the surrounding context are located close to the street with direct access to building entries from public sidewalks.

The proposed phased site plan varies in architectural style and generally deviates from the surrounding residential neighborhood due to the larger lot size and large building footprint to accommodate the proposed high density of residential units. The proposed buildings include flat roofs to maximize structure height. Flat roofs are common for multi-family buildings in the neighborhood and throughout the city.

Phase 1 – 197 Oxford Street: Does not meet the standard. Staff finds the building design is horizontally oriented along the Oxford Street façade with several large expanses of blank façade, including lack of street presence along Oxford Street. The base of the building is not in keeping with the surrounding character and as currently design detracts from the current rhythm and contextuality of the neighborhood. Additionally, window proportions are not appropriate for the scale of project and there is minimal fenestration along the buildings Oxford and Chestnut street facades.

The applicant should consider additional façade variation at the upper floors, including projecting bays or inset bays, window fenestration, balconies, and architectural detailing to express the roofline termination and potential delineation of floors with external materials. The scale of the building is not in context to the surrounding character and the minimal articulation adds to the buildings scale and imposing presence on nearby buildings. The building design begins to establish a roof-line datum along Oxford Street, however, Staff recommends a clear termination of the roofline and a continuation of the roofline to extend to Chestnut Street. The Applicant may consider stepping the Affordable Housing building foundation down to create a stronger relationship at the corner of Oxford Street and Chestnut Street.

The ground floor is not compatible to the surrounding neighborhood context and detracts from the street life. Further the current design limits any opportunity to enhance the street presence as other buildings in the neighborhood provide. The building is currently designed in a more institutional manner as opposed to residential and will result in a negative experience for pedestrians. The applicant will need to revisit the design of the building particularly the ground floor to better complement and enhance the neighborhood.

Staff is also acknowledging that the applicant did not provide renderings for the Phase I building and that some perspectives were included within the neighborhood meeting attachment as opposed to being included with other renderings. Staff is requesting that the Applicant provide proposed exterior materials and renderings of the first phase building to better inform the design review.

Phase 2 – 50 Cedar Street: Staff finds the building design provides massing variation and mitigates the existing grade along Cedar Street appropriately with the location of multiple entries that are recessed and articulated with an overhead canopy.

Phase 3 – 158 Lancaster Street: Staff finds the building height is within the 55-foot maximum as indicated in the Bayside Height Overlay Map. Staff finds the façade materials and variation along the street-facing facades to be appropriate to provide window projections. Staff recommends a stronger relationship to the Lancaster Street and Chestnut Street corner and suggests moving the building closer to Chestnut Street. The Applicant is requested to explore expanding the building along Lancaster Street and adding a garage door to allow for parking at the rear of the property or within the building footprint as structured parking.

2. *The proposed development shall respect the existing relationship of buildings to public streets.*

Staff comment: The prevailing surrounding context includes buildings within close proximity to the street, to allow direct access to building entries directly from the public sidewalk. The arrangement of smaller properties and existing structures at different finished floor elevations allows for individual structures to mitigate changes in grade along sloped public streets.

Phase 1 – 197 Oxford Street: Standard not met. Staff finds that the proposed building location does not relate to the existing neighborhood context with buildings located directly or within close proximity to the street. In particular, residential structures on smaller lots in the R-6 residential zone are located either at or within a few feet of the public right-of-way and mixed-use buildings on larger lots in the B-3 and B-7 zones are located at or within a few feet of the public right-of-way. Furthermore, the ground floor of the building has a negative presence on the street with limited fenestration and interaction for the length of an entire block.

Staff recommends the building placement adjust to be within closer proximity to Chestnut Street and suggests a street-facing articulated building entry for the proposed Affordable Housing building within closer proximity to the Oxford Street and Chestnut Street corner. Relocation of this building entry may allow for the removal of the ramp and stair element proposed along Oxford Street and further locate the building towards Oxford Street to reduce the proposed front setback. The Applicant should consider relocation of the proposed Affordable Housing lobby towards the corner and Stair 4 to the Chestnut Street façade to allow for additional window fenestrations along Oxford Street.

Phase 2 – 50 Cedar Street: Staff finds the proposed building placement promotes street activation along Lancaster Street and Cedar Street that is appropriate to the surrounding neighborhood context. Staff recommends that the Applicant reorient the proposed entry stoops and railings along the Lancaster Street building frontage and adjust the stoops for a more recessed entry with railings perpendicular to the street.

Phase 3 – 158 Lancaster Street: Staff finds the building placement along Lancaster Street encourages street activation and direct access to the primary building entry. Staff recommends the building placement move to align with Chestnut Street to respond to the existing structures located directly at or within close proximity to the street. Furthermore, the Applicant is requested to find an alternative location for the transformer proposed at Chestnut Street.

3. *Open space on the site for all … multiple-family development shall be integrated into the development site.*

Staff comment: Staff requests that the Applicant provide a written narrative to identify the proposed open space for the proposed three-phased site plan, with a description to provide access for people with limited mobility. Staff will need to evaluate shared open space, communal open space per property and/or private open for residential units to meet this design standard. Open space functions may include, but not limited to buffers and screening, yard space, play areas, and planting around the perimeter of the proposed building, in addition to communal or private open space within the building footprint (such as roof-level terraces or balconies incorporated within the building façade).

Phase 1 – 197 Oxford Street: The Applicant has indicated new street trees along Oxford Street, Chestnut Street & Cedar Street under the City's Technical Manual, Section 4 standards, along with walkways, courtyards and planting areas at the rear of the property. Staff recommends a building location closer to the street along Oxford Street and Chestnut Street to reduce the lawn areas proposed along the front property adjacent to the public sidewalk and relocate the transformer at the corner that Staff finds is not contextually appropriate. Staff recommends greater activation along the street with pedestrian amenities such as seating, building entry articulations and planting areas for screening around the building.

Phase 2 – 50 Cedar Street: The Applicant has indicated new street trees along Lancaster Street and Cedar Street under the City's Technical Manual, Section 4 standards, along with minimal perimeter building planting areas. Staff recommends the Applicant replace the lawn areas along the property frontages for shrub planting material as a more contextually appropriate landscape buffer adjacent to the public sidewalk. In addition, the Applicant is requested to consider additional open space for communal use, either within the building footprint or as a shared driveway (also known as paseo or woonerf) at the paved areas leading into the parking area at the rear of the property.

Phase 3 – 158 Lancaster Street: The Applicant has indicated new street trees along Lancaster Street and Chestnut Street under the City's Technical Manual, Section 4 standards, along with landscape buffering around the perimeter of the property and lawn area for communal gathering at the rear of the property. Staff recommends the Applicant replace the lawn areas along the property frontages for shrub planting material as a more contextually appropriate landscape buffer adjacent to the public sidewalk. Along with Staff's comments design standard *1. The exterior design of the proposed structure* in this design review memo, the Applicant is requested create greater activation at the Lancaster Street and Chestnut Street corner. The current surface parking area as proposed along Lancaster Street is not conducive for an activated street and Staff recommends the Applicant consider an open space element that would for more communal use.

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: Staff finds the proposed phased site plan buildings provide ample windows and sufficient storage within each residential unit to meet this design standard. The proportions for windows at 197 Oxford Street are not appropriate for the scale of building proposed and should be revisited.

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

Staff comment: Staff finds the Phase 1 – 197 Oxford Street development parking is located in a garage and requests additional information for the proposed retaining wall at the rear of the property to evaluate proper screening for vehicles from the adjacent property at 72 Chestnut Street.

Staff finds the Phase 2 – 50 Cedar Street development parking is located appropriately within the site with the driveway screened by a fence to properly screen the adjacent property at 44 Cedar Street.

Staff finds the Phase 3 – 158 Lancaster Street development parking is not appropriately arranged and landscaped to properly screen vehicles from Lancaster Street. Staff recommends:

- a reduction in surface parking area;
- moving the building closer to Chestnut Street;
- expanding the building along Lancaster Street; and
- adding a garage door to allow for parking at the rear of the property or within the building footprint as structured parking.

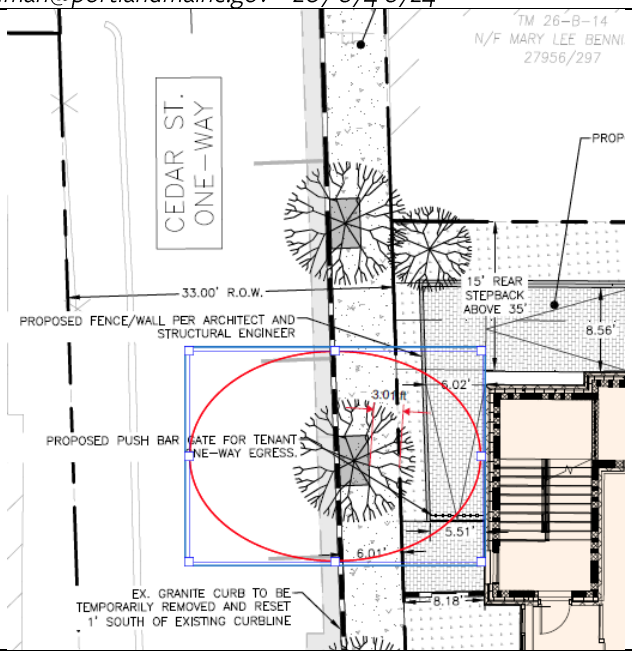
6. *Two-family or multi-family dwellings shall not be converted to lodging houses unless all units in the building have been vacant for at least one (1) year prior to the date conversion is sought or unless the individual multiple-family units are less than one thousand (1,000) square feet in size. In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

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

Site Plan Review Standards (Sec. 14.6)

Transportation Standards (Sec. 14.6.1)

Standard	*Discussion*	*Finding*
Impact on Surrounding Street Systems	Overview: Phase I is bordered by Oxford, Chestnut and Cedar Streets Phase II is located at the southwest corner of Cedar and Lancaster Streets Phase III is located at the southwest corner of Chestnut and Lancaster streets All three phases share frontages along Cedar Street and Hall Court, A private RoW. The applicant proposes to install a curb extension at the intersection of Oxford and Boyd Streets. The curb extension would extend approximately 20 feet along Boyd Street, removing one on-street parking space. Updates Requested • The applicant shall provide all back up calculations for their trip generation methodology.	Not Met
Access and Circulation	Overview: The applicant proposes to reconstruct sidewalks along the frontages of all three phases using concrete pavers and granite curbing. Additionally, the applicant proposed to reconstruct sidewalk along both sides of Cedar Street using concrete pavers. Sidewalks will be rebuilt to city standards and will be constructed in phases. Internal walkways are proposed for each phase and will connect to the existing sidewalks along Cedar Street, Chestnut Street and Lancaster Street. Updates Requested • Provide site plan dimensions for proposed work along Cedar Street • Minimum of 4' clearance between tree wells and edge of sidewalk. Along Cedar Street only 3' is being provided. Look at shifting the curb line on both sides of Cedar 1' to maintain 20' road width while also allowing for appropriate clearance for street trees and sidewalk clearance. The tree grate does not satisfy the 4' accessible walking path requirement.	



Parking

Overview:

Each phase of this application involves a limited amount of dedicated off-street parking.

Phase I: Includes five basement-level parking spaces accessed via a new curb cut on Chestnut Street. These spaces would be utilized by Housing First Staff. No additional on-site parking is provided for the residents of Phase I. if tenants wish to pursue dedicated off-site parking, there is capacity within the Cumberland Avenue parking garage, which is owned by Co-Applicant, Reveler Development.

Phase II: Includes three off-street parking spaces accessed from Cedar Street.
Phase III: Includes 13 angled off-street parking spaces accessed via an existing curb cut on Lancaster Street.

The applicant intends to provide off-site parking for all 48 market-rate units in the nearby Cumberland Avenue Garage on an as-requested basis.
Reveler Development owns this garage and included supply calculations as part of the previously approved Master Development Plan in 2023

Updates Requested

- The applicant shall provide information demonstrating adequate parking supply will be provided in the garage.
- Phase I site plan shall include the parking aisle width
- Turning templates shall be provided for the Second and third phase. For the third phase, turning templates should be provided for the westernmost angled space.

Transportation Demand Management (TDM)	Overview: The applicant has not provided a TDM plan. Updates Requested • None	Met
Environmental Quality Standards (Sec. 14.6.2)		
Standard	*Discussion*	*Finding*
Preservation of Significant Natural Features and Landscape Preservation	Overview: There are no significant natural features located in the vicinity of this project Updates Requested • None	Met
Site Landscaping and Buffers	Overview: **Phase I:** Several mature trees are located along the rear of the property line. The applicant has requested a waiver of Article 14.6.2 related to tree preservation. **Phase II:** No trees or significant landscaping features are being removed **Phase III:** Eight trees of 10" DBH or greater exist on site. The project will maintain three of those trees which meets landscape preservation standards. Within the R6 zone, one shade tree or plantings are required per every 30 linear feet along all the property frontages, per the City of Portland Technical Manual standards. Where the replacement of trees onsite is not feasible, the applicant intends to contribute the proportionate cost of the replacement trees to the City of Portland Tree Fund. In total, the applicant will plant 23 new trees between the three phases of this application. Updates Requested Phase I: • The applicant should demonstrate how the 20% open space is being determined. Phase II: • The applicant should provide a narrative for the three off-street parking spaces. Staff would be supportive of removing these spaces in favor of the creation of private open space for residents. • The applicant should demonstrate how the 20% open space is being determined.	Not Met
Water Quality, Stormwater Management and Erosion Control	Overview: Phase I: Treatment will be accomplished using Storm-filter cartridges, which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch across the entire roof area as well as some ancillary impervious ground surfaces, which is a larger volume than the new sewer flows created by the project. The stormwater will outlet into the combined 18-inch sewer within Chestnut Street.	Not Met

	Phase II: Treatment will be accomplished using Storm-filter cartridges which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch of rainfall across the site's impervious area, which exceeds the new sewer flows. The outfall will tie into the previously engineered and approved 89 Elm drainage system which ultimately drains to the upstream end of the MS4 extension that has been designed as part of the Bayside MDP **Phase III:** The project will not create more than 1,000 SF of new impervious area and therefore no treatment is proposed. The site will detain the new sewer flows because its volume exceeds an inch across the site's impervious area. The stormwater detention will be provided by an R-tank system and treatment will be via a Stormfilter BMP. Updates Requested • The Applicant is still waiting for confirmation of utility ability to serve. It is also noted that most utility service locations are noted as approximate pending coordination with various utilities.	

Public Infrastructure and Community Safety Standards (Sec. 14.6.3)		
Standard	*Discussion*	*Finding*
Consistency with City Master Plans	Overview: There are no City Master Plans applicable to this application Updates Requested: • None	Met
Public Safety and Fire Prevention	Overview: A life safety plan was included with this submittal. Updates Requested • None	Met
Public Utilities	Overview: All three phases will be served via underground electrical conduits. New Utility providers have been contacted for their ability to serve the proposed project. The applicant has requested ability to serve letters from Central Maine Power and Portland Water district All three phases will be served by connection to the public sewer system within Chestnut Street and Cedar Street, furthermore, intercepted by the Lancaster Street Combined Sewer. The proposed stormwater management systems have been designed to meet the City standards as well as the applicable standards outlined in Chapter 500. Updates Requested **Phase I :** It appears that the catch basin at the corner of Chestnut street can be installed with a new headstone since it is outside the 7' tip down zone. Please	Not Met

	revise the note on sheet C-31 to reflect this. **Phase II :** Notes clarifying and describing the proposed easement with 89 Elm Street should be added to the site plan or Utility plan so it can be easily referenced in the future. **Phase III :** It appears there is enough room to install a 7' foot tip without having to remove the existing City CB headstone at the corner of Lancaster Street and Chestnut Street.	
Site Design Standards (Sec. 14.6.4)		
Standard	*Discussion*	*Finding*
Massing, Ventilation and Wind Impact	Overview: All three phases meet relevant zoning and dimensional standards and are similar in scale to surrounding buildings.	Not Met
	Updates Requested • The applicant shall provide average grade calculations and methodologies for Phase I • The applicant shall provide calculations used to determine lot coverage and landscaped open space for Phase I **Phase II:** The applicant should provide screening for rooftop utilities **Phase III:** The applicant should provide screening for rooftop utilities	
	Updates Requested • None	
Design Standards	Overview: See attached design review	Met
	Updates Requested • See design review.	

ACORN ENGINEERING, INC.

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

April 9, 2024

Subject: Phased Oxford Street Redevelopment
Joint Major Site Plan Application

Matt:

On behalf of Reveler Development and Avesta Housing Development Corporation d/b/a Avesta Oxford Street LP, Acorn Engineering is pleased to submit the accompanying package of submission materials for a Joint Major Site Plan Application. The Application proposes the phased redevelopment of 123 new residential units across several underutilized parcels within downtown Portland. As Co-Applicants, Reveler and Avesta intend to construct this project in three phases consisting of:

- Phase 1: 197 Oxford Street: 48 Affordable and "Housing Fist" Residential Units (Avesta)
- Phase 2: 50 Cedar Street: 24 Market Rate Residential Units (Reveler)
- Phase 3: 158 Lancaster Street: 51 Market Rate Residential Units (Reveler)

Located entirely within the R-6 Zoning District, the project area consists of 1.58 acres of contiguous property owned by Reveler. The project proposes to redevelop approximately 0.96 acres as part of this application. Given 48 of the 123 units will be restricted as affordable, the project intends to utilize the density bonuses described in the City of Portland Land Use Code, section 18.2. The project also intends to comply with the off-site provisions within the Inclusionary Zoning Implementation Guidelines for Developers of Rental Housing. Please refer to Section D. of the application for more information on density and affordability bonuses.

We are excited to submit this application which proposes much-needed housing in lieu of existing parking lots and vacant, uninhabitable buildings. The joint application provides a variety of housing options, while taking a unified approach to the overall project design and planning. Taking ques from the adjacent Bayside Master Development Plan approved in 2023, the proposal aims to enhance the streetscape through public improvements including a water main replacement in Lancaster Street, the planting of a multitude of street trees, and other enhancements such as bike racks and decorative lighting. All three phases will provide on-site stormwater detention while rebuilding their respective frontages, totaling over 900 linear feet of reconstructed sidewalk.

As permitted under Section 18.2.2 of the Land Use Code, in addition to the reduction in fees for affordable housing projects, we are requesting the review is performed in an expedited manner at both the Staff and Planning Board levels.

The Co-Applicants 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 me.

Sincerely,

Sam Lebel

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

The following documents and drawings will be uploaded onto the City's electronic submission site per the procedure outlined in the application:

Documents:

- Section A: Cover Letter
- Section B: Major Site Plan Application & Checklist
- Section C: Right, Title, Interest
- Section D: Zoning Assessment
- Section E: Easements
- Section F: Waiver Table
- Section F: Waiver Table
- Section G: Financial Capacity
- Section H: Technical Capacity
- Section I: Conformity with Land Use Ordinance
- Section J: Stormwater Management Report
- Section K: Erosion & Sedimentation Control Report
- Section L: Public Safety & Fire Prevention Letter
- Section M: Wastewater Capacity Letter
- Section N: Lighting
- Section O: Architectural Design Narrative
- Section P: Utility Cover
- Section Q: Construction Management Plan
- Section R: Solid Waste
- Section S: Parking Analysis
- Section T: Traffic Analysis
- Section U: Pre-App Neighborhood Meeting Documentation

Drawings:

- Civil Site Plan Set
- Architectural Plan Sets

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

C. Right, Title, Interest

The Co-Applicants of this phased application are Reveler Development and Avesta Housing Development Corporation d/b/a Avesta Oxford Street LP.

Reveler Development manages all entities who own the parcels under this application. Avesta has an option agreement with Reveler to purchase the 197 – 203 Oxford Street lot (Phase I).

Please see the attached Deeds and Option Agreement for the three phases of development.

- Phase 1: 197 Oxford Street (39779/239), and 31 Cedar Street (39779/241) are both owned by 197 OXFORD STREET LLC.
- Phase 2: 50 Cedar Street (39779/246), and 89 Elm Street (39779/236) are both owned by 89 ELM STREET LLC.
- Phase 3: 158 Lancaster Street (39779/223), which is owned by WBP COMMERCIAL LLC.
- Option Agreement between Reveler and Avesta

PHASE 1 - 197 OXFORD STREET DEED

Doc#: 51979 Bk:39779 Ps: 239

MAINE REAL ESTATE TAX PAID

DLN:_____

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE III, LLC,** a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **197 OXFORD STREET LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said Bayside III, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:

BAYSIDE III, LLC

By _____
Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside III, LLC.

_____
Attorney at Law/Notary Public

_____
Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

Doc#: 51979 Bk:39779 Pg: 240

EXHIBIT A
(Legal Description, Parcel 1)

A CERTAIN PARCEL OF LAND, TOGETHER WITH THE IMPROVEMENTS THEREON, SITUATED ON THE NORTHWESTERLY SIDE OF OXFORD STREET IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE, AND SHOWN AS PARCEL 1 ON ALTA/ACSM LAND TITLE SURVEY ON CEDAR STREET, CHESTNUT STREET, ELM STREET AND OXFORD STREET, PORTLAND, MAINE FOR BAYSIDE III, LLC BY OWEN HASKELL, INC., DATED JANUARY 24, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY Of DEEDS IN PLAN BOOK 200, PAGE 42 (THE "PLAN'), BOUNDED AND DESCRIBED AS FOLLOWS:

THENCE S 48° 37' 47" W ALONG THE SIDELINE OF OXFORD STREET 167.19 FEET;

THENCE N 43° 29' 51" W 67.00 FEET;

THENCE N 48° 37' 47" E 35.54 FEET;

THENCE N 00° 14' 40" E 2.72 FEET;

THENCE N 52° 33' 00" E 18.73 FEET;

THENCE N 41° 16' 13" W 3.10 FEET;

THENCE N 49° 06' 44" E 109.65 FEET TO THE SOUTHWESTERLY SIDELINE OF CHESTNUT STREET;

THENCE S 44° 38' 26" E 70.00 FEET TO THE POINT OF BEGINNING.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING A PORTION OF THE PREMISES CONVEYED TO BAYSIDE III, LLC BY QUITCLAIM DEED FROM OCTOBER CORPORATION, DATED JANUARY 26, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 15298, PAGE 193.

Received
Recorded Register of Deeds
Oct 13,2022 02:32:29P
Cumberland County
Jessica M. Spaulding

PHASE 1 - 197 OXFORD STREET
DEED

Doc#: 51980 Bk:39779 Pg: 241

DLN:_____

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE IV, LLC**, a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **197 OXFORD STREET LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

MAINE REAL ESTATE TAX PAID

IN WITNESS WHEREOF, the said Bayside IV, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:

BAYSIDE IV, LLC

By_____
Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside IV, LLC.

_____
Attorney at Law/Notary Public

_____
Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

Doc#: 51980 Bk:39779 Pg: 242

EXHIBIT A
(Legal Description, Parcel 4)

A CERTAIN PARCEL OF LAND, TOGETHER WITH THE IMPROVEMENTS THEREON, SITUATED ON THE NORTHWESTERLY SIDE OF OXFORD STREET, AND THE NORTHEASTERLY SIDE OF CEDAR STREET IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND STATE OF MAINE AND SHOWN AS PARCEL 4 ON ALTA/ACSM LAND TITLE SURVEY ON CEDAR STREET, LANCASTER STREET EAST, CHESTNUT STREET AND OXFORD STREET, PORTLAND, MAINE FOR BAYSIDE IV, LLC BY OWEN HASKELL. INC., DATED JANUARY 24, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 200, PAGE 43 (THE PLAN), BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHWESTERLY SIDELINE OF OXFORD STREET AND THE NORTHEASTERLY SIDELINE OF CEDAR STREET;

THENCE N 43° 29' 51" W ALONG THE SIDELINE OF CEDAR STREET 64.50 FEET;
THENCE N 48° 37' 47" E 57.00 FEET;
THENCE S 43° 29' 51" E 64.50 FEET TO THE NORTHWESTERLY SIDELINE OF OXFORD STREET;
THENCE S 48° 37' 47" W ALONG SAID SIDELINE 57.00 FEET TO THE POINT OF BEGINNING.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING THE LAND DESCRIBED AS PARCEL 4 IN DEED FROM OCTOBER CORPORATION TO BAYSIDE IV, LLC DATED JANUARY 26, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 15298, PAGE 242.

PHASE 1 - 197 OXFORD STREET DEED

Doc#: 51980 Bk:39779 Pg: 243

EXHIBIT A
(Legal Description, Parcel 3)

A CERTAIN PARCEL OF LAND, TOGETHER WITH THE IMPROVEMENTS THEREON. SITUATED ON THE SOUTHWESTERLY SIDE OF CHESTNUT STREET AND THE SOUTHEASTERLY SIDE OF HALL'S COURT, SO CALLED, IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE AND SHOWN AS PARCEL 3 ON ALTA/ACSM LAND TITLE SURVEY ON CEDAR STREET, LANCASTER STREET EAST, CHESTNUT STREET AND OXFORD STREET, PORTLAND, MAINE FOR BAYSIDE IV, LLC BY OWEN HASKELL, INC., DATED JANUARY 24, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 200, PAGE 43 (THE PLAN), BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE SOUTHWESTERLY SIDELINE OF CHESTNUT STREET AND THE SOUTHEASTERLY SIDELINE OF HALL'S COURT;

THENCE S 44° 38' 26" E ALONG THE SIDELINE OF CHESTNUT STREET 78.04 FEET;
THENCE S 49° 06' 44" W 108.67 FEET;
THENCE S 43° 14' 05" E 39.95 FEET;
THENCE S 41°16' 13" E 3.10 FEET;
THENCE S 52° 33' 00" W 18.73 FEET;
THENCE S 00°14' 40" W 2.72 FEET;
THENCE S 48° 37' 47" W 35.54 FEET;
THENCE N 43° 29' 51" W 33.00 FEET;
THENCE S 48° 37' 47" W 57.00 FEET TO THE NORTHEASTERLY SIDELINE OF CEDAR STREET;
THENCE N 43° 29' 51" W ALONG SAID SIDELINE 23.00 FEET;
THENCE N 48°37' 47" E 113.42 FEET;
THENCE N 43° 14' 05' W 58.51 FEET TO THE SOUTHEASTERLY SIDELINE OF HALL'S COURT;
THENCE ALONG SAID SIDELINE THE FOLLOWING COURSES AND DISTANCES:
N 33° 50' 09" E 19.40 FEET;
N 42° 14' 19" E 19.88 FEET;
N 49° 19' 48" E 68.00 FEET TO THE POINT OF BEGINNING.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING THE LAND DESCRIBED AS PARCEL 3 IN DEED FROM OCTOBER CORPORATION TO BAYSIDE IV, LLC DATED JANUARY 26, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 15298, PAGE 242.

Received
Recorded Register of Deeds
Oct 13,2022 02:33:19P
Cumberland County
Jessica M. Spaulding

PHASE 2 - 50 CEDAR STREET DEED

Doc#: 51982 Bk:39779 Pg: 246

DLN:_____

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE IV, LLC,** a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **89 ELM STREET LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

MAINE REAL ESTATE TAX PAID

IN WITNESS WHEREOF, the said Bayside IV, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:

BAYSIDE IV, LLC

By _____
Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside IV, LLC.

_____
Attorney at Law/Notary Public

_____
Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

Doc#: 51982 Bk:39779 Pg: 247

EXHIBIT A
(Legal Description, Parcel 5- 50 Cedar Street)

A CERTAIN LOT OR PARCEL OF LAND WITH ALL THE BUILDINGS THEREON, SITUATED ON THE SOUTHWESTERLY SIDE OF CEDAR STREET, IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND AND STATE OF MAINE, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A STAKE ON THE LINE OF SAID STREET DISTANT TWO HUNDRED FORTY-FOUR AND FOUR TENTHS (244.4) FEET NORTHWESTERLY FROM OXFORD STREET AT THE NORTHERLY CORNER OF LAND SOLD BY THE ADMINISTRATOR OF WILLIAM WEBB'S ESTATE TO JOSIAH M. HASKELL AND RUNNING THENCE NORTHWESTERLY BY SAID CEDAR STREET FORTY (40) FEET TO A STAKE;

THENCE SOUTHWESTERLY ON A LINE PARALLEL WITH THE NORTHWESTERLY SIDE OF SAID HASKELL'S LAND ONE HUNDRED SEVENTEEN (117) FEET, MORE OR LESS, TO THE SOUTHWESTERLY SIDELINE OF LAND OF WHICH THE SAID WEBB DIED SEIZED;

THENCE SOUTHEASTERLY BY SAID SOUTHWESTERLY SIDELINE OF SAID WEBB'S LAND TO MOST WESTERLY CORNER OF SAID HASKELL'S LOT;

THENCE NORTHEASTERLY BY SAID HASKELL'S LAND ONE HUNDRED SEVENTEEN (117) FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

BEING THE SAME PREMISES CONVEYED BY DEED DATED NOVEMBER 16, 2018 FROM 50 CEDAR STREET, LLC, TO BAYSIDE IV, LLC, AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 35293, PAGE 77, AND BY DEED RECORDED IN SAID REGISTRY AT BOOK 35293, PAGE 78.

Received
Recorded Register of Deeds
Oct 13,2022 02:35:36P
Cumberland County
Jessica M. Spaulding

PHASE 2 - 50 CEDAR STREET DEED

Doc#: 51978 Bk:39779 Ps: 236

MAINE REAL ESTATE TAX PAID

DLN:_____

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE II, LLC,** a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **89 ELM STREET LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said Bayside II, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:

BAYSIDE II, LLC

By _____
Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside II, LLC.

_____
Attorney at Law/Notary Public

_____
Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

Doc#: 51978 Bk:39779 Pg: 237

EXHIBIT A
(Legal Description, Parcel 2)

A CERTAIN LOT OR PARCEL OF LAND, WITH THE IMPROVEMENTS THEREON SITUATED ON THE NORTHEASTERLY SIDELINE OF ELM STREET, THE SOUTHEASTERLY SIDELINE OF LANCASTER STREET EAST AND THE SOUTHWESTERLY SIDELINE OF CEDAR STREET AND IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND AND STATE OF MAINE AS SHOWN ON A PLAN TITLED "LAND DIVISION PLAN BAYSIDE II, LLC" MADE FOR RECORD OWNER BAYSIDE II, LLC BY OWEN HASKELL, INC. DATED SEPTEMBER 14, 2022, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE POINT OF INTERSECTION OF THE SOUTHEASTERLY SIDELINE OF LANCASTER STREET EAST AND THE NORTHEASTERLY SIDELINE OF ELM STREET;

THENCE, N 49° 39' 27" E ALONG SAID SIDELINE OF LANCASTER STREET EAST 210.57 FEET TO THE SOUTHWESTERLY SIDELINE OF CEDAR STREET;

THENCE, S 43° 29' 51" E ALONG SAID SIDELINE OF CEDAR STREET 40.00 FEET TO THE NORTHEASTERLY CORNER OF LAND NOW OR FORMERLY OF BAYSIDE IV, LLC AS DESCRIBED IN DEED BOOK 35293, PAGE 78;

THENCE, THE FOLLOWING COURSES AND DISTANCES ALONG SAID BAYSIDE IV, LLC LAND:

S 49° 39' 26" W A DISTANCE OF 117.00 FEET;

S 42° 13' 00" E A DISTANCE OF 39.96 FEET;

N 49° 39' 26" E A DISTANCE OF 117.89 FEET TO THE SOUTHWESTERLY SIDELINE OF SAID CEDAR STREET;

THENCE, S 43° 29' 51" E ALONG THE SIDELINE OF CEDAR STREET 39.34 FEET TO THE NORTHERLY CORNER OF LAND NOW OR FORMERLY OF AMELIA A. LABRECK AS DESCRIBED IN DEED BOOK 37970, PAGE 11;

THENCE, BY THE FOLLOWING COURSES AND DISTANCES ALONG SAID LABRECK LAND:

S 48° 42' 12" W A DISTANCE OF 118.73 FEET;
S 42° 13' 00" E A DISTANCE OF 40.00 FEET;

Doc#: 51978 Bk:39779 Pg: 238

N 48° 41' 30" E A DISTANCE OF 119.62 FEET TO THE SIDELINE OF SAID CEDAR STREET;

THENCE, S 43° 29' 51" E ALONG THE SIDELINE OF CEDAR STREET 80.62 FEET TO THE NORTHERLY CORNER OF LAND NOW OR FORMERLY OF DAVID B. NOWLIN AS DESCRIBED IN DEED BOOK 25148, PAGE 336;

THENCE, S 48° 41' 30" W ALONG SAID NOWLIN LAND 63.30 FEET;

THENCE, THE FOLLOWING COURSES AND DISTANCES THROUGH THE LAND OF THE GRANTOR:

S 49°53'31" W A DISTANCE OF 55.81 FEET;

N 43°54'25" W A DISTANCE OF 31.26 FEET;

S 46°08'15" W A DISTANCE OF 90.10 FEET TO THE NORTHEASTERLY SIDELINE OF SAID ELM STREET;

THENCE, N 43°45'13" W ALONG THE SIDELINE OF ELM STREET 215.15 FEET TO THE POINT OF BEGINNING, CONTAINING 38,462 S.F. OR 0.88 ACRES, MORE OR LESS.

BEARINGS ARE REFERENCED TO CITY GRID.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING A PORTION OF THE LAND DESCRIBED AS PARCEL 2 CONVEYED TO BAYSIDE II, LLC BY QUITCLAIM DEED OF OCTOBER CORPORATION, DATED JANUARY 26, 2000 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 15298, PAGE 144.

Received
Recorded Register of Deeds
Oct 13,2022 02:30:55P
Cumberland County
Jessica M. Spaulding

PHASE 3 - 158 LANCASTER STREET DEED

Doc#: 51973 Bk:39779 Pg: 223

MAINE REAL ESTATE TAX PAID

DLN:_____

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE II, LLC,** a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **WBP COMMERCIAL LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said Bayside II, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:

BAYSIDE II, LLC

By _____
Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside II, LLC.

_____
Attorney at Law/Notary Public

_____
Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

Doc#: 51973 Bk:39779 Pg: 224

EXHIBIT A
(Legal Description, Parcel 1)

A CERTAIN LOT OR PARCEL OF LAND, WITH THE IMPROVEMENTS THEREON, SITUATED IN THE BLOCK BOUNDED BY ELM, KENNEBEC, CHESTNUT AND LANCASTER STREETS, IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND AND STATE OF MAINE AND SHOWN AS PARCEL 1 ON ALTA/ACSM LAND TITLE SURVEY ON KENNEBEC STREET, LANCASTER STREET EAST, ELM STREET, CEDAR STREET AND OXFORD STREET, PORTLAND, MAINE MADE FOR BAYSIDE II, LLC BY OWEN HASKELL, INC., DATED JANUARY 24, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 200, PAGE 41 (THE PLAN), BEING BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION MARKING THE NORTHWESTERLY SIDE OF LANCASTER STREET AND THE NORTHEASTERLY SIDE OF ELM STREET;

THENCE, BY THE NORTHEASTERLY SIDE OF ELM STREET N 43° 46' 33" W, A DISTANCE OF 158.86' TO AN ANGLE IN SAID STREET;

THENCE, N 40° 53' 33" W, A DISTANCE OF 31.49' TO THE SOUTHEASTERLY SIDE OF KENNEBEC STREET, MARKING A NON-TANGENT POINT ON A CURVE, IN SAID STREET;

THENCE, NORTHEASTERLY BY THE SOUTHEASTERLY SIDE OF SAID KENNEBEC STREET AND BY A CURVE TO THE LEFT WHOSE RADIUS IS 695.00', AN ARC DISTANCE OF 210.01', TO A POINT OF TANGENCY;

THENCE CONTINUING BY SAID KENNEBEC STREET N 48° 56' 54' E, A DISTANCE OF 251.30', TO THE SOUTHWESTERLY SIDE OF SAID CHESTNUT STREET;

THENCE BY THE SOUTHWESTERLY SIDE OF SAID CHESTNUT STREET S 44° 38' 26" E, A DISTANCE OF 164.71' TO THE NORTHWESTERLY SIDE OF SAID LANCASTER STREET;

THENCE BY THE NORTHWESTERLY SIDE OF SAID LANCASTER STREET S 49° 39' 27" W, A DISTANCE OF 461.02', TO THE POINT OF BEGINNING.

THE PROPERTY IS SUBJECT TO A NOTICE OF ABANDONED UNDERGROUND OIL STORAGE FACIUTY OR TANK NOTICE, DATED APRIL 6, 2011 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 28629, PAGE 238.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING THE SAME LAND DESCRIBED AS PARCEL 1 CONVEYED TO BAYSIDE II, LLC BY QUITCLAIM

Doc#: 51973 Bk:39779 Pg: 225

DEED OF OCTOBER CORPORATION, DATED JANUARY 26, 2000 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 15298, PAGE 144.

Doc#: 51973 Bk:39779 Pg: 226

EXHIBIT A
(Legal Description, Parcel 3)

A CERTAIN PARCEL OF LAND, WITH THE OF IMPROVEMENTS THEREON SITUATED ON THE SOUTHEASTERLY SIDE OF LANCASTER STREET, IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE AND SHOWN AS PARCEL 3 ON ALTA/ACSM LAND TITLE SURVEY ON KENNEBEC STREET, LANCASTER STREET EAST, ELM STREET, CEDAR STREET AND OXFORD STREET, PORTLAND, MAINE MADE FOR BAYSIDE II, LLC BY OWEN HASKELL, INC., DATED JANUARY 24, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 200, PAGE 41 (THE PLAN), BEING BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE SOUTHEASTERLY SIDELINE OF LANCASTER STREET AND THE SOUTHWESTERLY SIDELINE OF CHESTNUT STREET;

THENCE S 44° 38' 26" E ALONG THE SIDELINE OF CHESTNUT STREET 88.08 FEET;
THENCE S 49° 39' 27" W 107.40;
THENCE N 45° 57' 49" W 3.67 FEET;
THENCE S 31° 29' 21" W 4.67 FEET;
THENCE N 43° 29' 51" W 23.77 FEET;
THENCE S 49° 39' 27" W 35.69 FEET;
THENCE N 43° 29' 51" W 28.00 FEET;
THENCE S 49° 39' 27" W 72.00 FEET TO THE NORTHEASTERLY SIDELINE OF CEDAR STREET;
THENCE N 43° 29' 51" W ALONG SAID SIDELINE 34.00 FEET TO THE SOUTHEASTERLY SIDELINE OF LANCASTER STREET;
THENCE N 49° 39' 27" E ALONG SAID SIDELINE 218.00 FEET TO THE POINT OF BEGINNING.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING THE SAME LAND DESCRIBED AS PARCEL 3 CONVEYED TO BAYSIDE II, LLC BY QUITCLAIM DEED OF OCTOBER CORPORATION, DATED JANUARY 26, 2000 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 15298, PAGE 144.

Received
Recorded Register of Deeds
Oct 13,2022 02:22:36P
Cumberland County
Jessica M. Spaulding

OPTION AGREEMENT

THIS OPTION AGREEMENT (the "Agreement") made and entered into as of the 26th day of July, 2023 (the "Effective Date"), by and between **197 OXFORD STREET LLC**, a Maine limited liability company with a place of business in Portland, Maine and mailing address of c/o Port Property Management, Inc., 82 Hanover Street, Suite 5, Portland, Maine 04101 ("Grantor"), and **AVESTA HOUSING DEVELOPMENT CORPORATION**, a Maine nonprofit corporation with a place of business in Portland, Maine and mailing address of 307 Cumberland Avenue, Portland, Maine 04101 (the "Grantee").

WITNESSETH:

In consideration of Ten Thousand Dollars ($10,000.00) (the "Initial Option Consideration"), the receipt of which is hereby acknowledged by Grantor, Grantor and Grantee hereby agree as follows:

1. Grant of Option. Grantor hereby grants to Grantee, its successors and assigns, the exclusive and irrevocable option (the "Option") to acquire the following five certain lots or parcels of land, with the buildings and improvements thereon (except with respect to those lots noted as vacant land and as otherwise described in Sections 4(e)(ii) and 4(h)), located in Portland, Maine and described as follows: (a) 0 Chestnut Street (vacant land), 203 Oxford Street, 193 Oxford Street (vacant land), 197 Oxford Street, all as more particularly described in a deed to Grantor recorded in the Cumberland County Registry of Deeds in Book 39779, Page 239, and (b) 31 Cedar Street, as more particularly described in the first Exhibit A (labeled as Parcel 4) in a deed to Grantor recorded in said Registry in Book 39799, Page 241, including a total of approximately 15,419 square feet of land, together with all appurtenant rights and easements (collectively the "Property"). The Property is shown on the plan attached hereto as Exhibit A.

2. Expiration; Extension. The initial term of this Option shall expire on July 26th, 2024, at midnight, Maine time unless exercised by that date and time in accordance with the terms and conditions of this Agreement. Grantee shall have the right to extend said initial term of this Option for one additional period of one (1) year by providing written notice to Grantor, prior to the expiration date of said initial term, with an additional payment of $10,000.00 (the "Additional Option Consideration", and together with the Initial Option Consideration, the "Option Consideration").

The Option Consideration shall be non-refundable, except as follows: (i) if during the first one hundred twenty (120) days of the initial term of this Option (the "Initial 120-day Period") Grantee sends written notice to Grantor of Grantee's dissatisfaction, in Grantee's sole discretion, with either the title to the Property or the environmental condition of the Property, or any part thereof, Grantor shall refund promptly the Option Consideration to Grantee and this Agreement shall thereupon terminate and all rights and obligations of the parties shall cease. Grantee shall not be obliged to terminate this Agreement due to there being mortgages or other liens on the title to the Property, such matters being the obligation of Grantor to remove prior to closing; and (ii) as otherwise set forth specifically in this Agreement.

3. Notice of Exercise; Failure to Exercise. This Option may be exercised only by Grantee giving written notice of election to exercise to Grantor by Fed Ex, or similar overnight express mail, prepaid, to Grantor at the address set forth at the beginning of this Agreement, or to such other address as Grantor may designate to Grantee in writing. Said notice shall be deemed to have been duly given when delivered to a Fed Ex (or similar overnight delivery service) courier or office at the time indicated on the proof of delivery. In the event that Grantee fails to exercise the Option granted in this Agreement within the time specified in Section 2 above, the Initial Option Consideration, and the Additional Option Consideration, if paid, shall be retained by Grantor, and thereafter neither Grantor nor Grantee shall have any further rights or claims against the other.

4. Exercise. In the event that Grantee exercises the Option granted in this Agreement to purchase the Property as provided herein, the following provisions shall be applicable:

(a) Purchase Price. Subject to any adjustments and prorations hereinafter described, the total purchase price (the "Purchase Price") for the Property shall be the sum of X, payable at closing by wire transfer. The Initial Option Consideration, and the Additional Option Consideration, if paid, shall in all instances be credited against the Purchase Price at closing.

(b) Title to the Property; Covenant Against Further Encumbrances. Grantor shall convey the Property to Grantee at the closing in fee simple with good and marketable title, free and clear of liens and encumbrances, other than those that are acceptable to Grantee. In the event that Grantee determines upon examining title to the Property that there have arisen since the title research conducted by Grantee during the Initial 120-day Period, Grantor shall be given a reasonable period of time after notice from Grantee, not to exceed forty-five (45) days, in which to remedy any such title defects. In the event that said defects cannot be corrected or remedied within said time period, then the Initial Option Consideration and the Additional Option Consideration, if applicable, shall be returned to Grantee and this Agreement shall terminate. Grantee may, however, elect to close notwithstanding such defects as may exist. Grantor and Grantee understand and agree that any mortgages and liens on the Property shall not be considered title defects provided that the same shall be discharged at or prior to the closing at Grantor's expense. Grantor agrees that it will not further encumber or permit to be encumbered the Property by any liens, mortgages, attachments, covenants, restrictions or easements after the Effective Date.

(c) Closing. The closing under this Agreement shall take place not later than sixty (60) days after this Option is exercised (the "Closing Date") at 10:00 AM, local time, at Grantee's counsel's office, or at such other time and place as Grantor and Grantee shall mutually agree upon in writing. At the closing, Grantor shall execute a Quitclaim Deed with Covenant to the Property (the "Deed"), underground storage tank certification, a title insurance affidavit regarding mechanic's liens and persons in possession and such other affidavits, documents and instruments as Grantee shall reasonably request and that are customary in commercial real estate transactions in Maine, provided, however, under no circumstances shall Grantor be obligated to

execute and deliver a so-called "no survey" affidavit. If requested, Grantor agrees that the Deed shall also include a conveyance of the Property using a new survey description resulting from Grantor's boundary survey but such conveyance shall not include any covenants.

(d) Risk of Loss. At all times during the term of this Agreement, all risk of loss to the Property prior to the closing shall be on Grantor.

(e) Adjustments.

(i) Real property taxes shall be prorated as of the Closing Date based on the latest available tax bill. Grantee shall pay the cost to record the deed and any financing documents executed by Grantee. The parties shall share equally the Maine transfer tax according to law. Grantor shall be responsible for all costs associated with the Property through the Closing Date, and Grantee shall be responsible for all such costs after the Closing Date.

(ii) The parties agree to the provisions set forth in the Joint Site Plan Application Agreement dated on or about the date hereof by and between Grantor and Grantee (the "JSPAA") and agree that it is deemed to be a part of this Agreement.

(f) Default; Remedies. In the event that Grantee exercises its option but fails to close hereunder for a reason other than the default of Grantor, Grantor's sole remedy shall be to retain the Option Consideration as full and complete liquidated damages in lieu of any other legal or equitable remedy, whereupon this Agreement will terminate and neither party will be under any further obligation hereunder. In the event Grantor defaults under this Agreement, Grantee shall have available all remedies at law and in equity, including, without limitation, the right of specific performance or, in the alternative, the right to seek a complete refund of the Option Consideration.

(g) Possession. Grantor shall deliver the Property to Grantee at closing free and clear of all leases, tenancies and occupancies by any person.

(h) Removal of Gardens. Grantor shall remove all gardens from the Property, including without limitation, all box gardens, wood, plants, weeds, soil and any related materials and equipment.

(i) Conditions Precedent. Grantee's obligation to purchase the Property is subject to Grantee's full and complete satisfaction with all of the following:

(i) Grantee's receipt of a satisfactory appraisal which supports the Purchase Price in its sole discretion.

(ii) Grantee's receipt of binding written commitments from institutional lenders and/or investors which commit to finance Grantee's acquisition of the Property. Grantee agrees to exercise diligent efforts to secure such financing. Grantee shall have until the Closing Date to obtain such financing, and Grantee's obligation to purchase the

Property shall be contingent on Grantee's obtaining such financing on terms and in amounts satisfactory to Grantee in Grantee's sole discretion.

(iii) Other than with respect to the removal of the gardens and buildings, if applicable, there shall have been no material adverse change in the condition of the Property, occurring after the conclusion of Grantee's inspections under Section 5 below, and the Property shall be substantially in the same condition at the Closing Date as it was at the time of the inspections, reasonable wear and tear excepted. By the Closing Date, Grantee shall have removed all gardens and buildings, if applicable, from the Property in accordance with this Agreement.

(iv) Title to the Property shall be good and marketable, and the same shall be conveyed to the Grantee free and clear of all liens, claims and encumbrances except as provided in Section 4(b) above.

(v) Grantee shall have received all necessary federal, state and municipal permits and approvals (including all zoning approvals) required in connection with Grantee's intended use of the Property.

(vi) Grantee shall have received approval for the transactions described in this Agreement from its governing authorities.

(vii) By the end of the Inspection Period, Grantee shall be satisfied with all its due diligence inquiries and tests of the Property as set forth in Section 5 below.

Prior to the expiration of the Inspection Period, if any of the conditions described above are not satisfied, Grantor may terminate this Agreement in writing, whereupon the Initial Option Consideration shall promptly be returned to Grantee by the Grantor, and neither party shall have any further obligation hereunder. After the expiration of the Inspection Period, if the conditions described in subsections (i), (ii), (v), (vi) and (vii) are not satisfied by the Closing Date, Grantee shall have the option of terminating this Agreement in writing, whereupon the Option Consideration shall be retained by the Grantor, and neither party shall have any further obligation hereunder, and if the conditions described in subsections (iii) and (iv) are not satisfied by the Closing Date, Grantee shall have the option of terminating this Agreement in writing, whereupon the Option Consideration shall promptly be refunded to Grantee by the Grantor, and neither party shall have any further obligation hereunder.

i. Brokers. The parties represent to each other that neither has had any dealings with any real estate broker in connection with this transaction. The parties shall indemnify, defend and hold harmless one another from and against any breach of the foregoing representation.

5. Inspection. For a period of one hundred eighty days (180) from the Effective Date (the "Inspection Period"), at all times upon reasonable prior notice, Grantee and any prospective lender or investor of Grantee's shall have the right to enter the Property and perform, at Grantee's expense, any and all inspections (including without limitation environmental site

assessments), tests, surveys or other due diligence inquiries with respect to the Property as Grantee deems necessary or appropriate. Grantee agrees to return the Property as nearly as possible to its original condition after any of such tests and inspections and, prior to completing such inspections, Grantee shall provide Grantor with evidence of insurance for any parties, including Grantee's contractors, who are conducting said inspections on the Property, which insurance must be acceptable to Grantor, in its reasonable discretion. In the event Grantee is not satisfied for any reason by the results of such due diligence inspections, Grantee shall have the option of terminating this Agreement by written notice to Grantor, prior to the expiration of the Inspection Period. Without limiting the generality of the foregoing and notwithstanding anything to the contrary elsewhere in this Agreement, this Agreement and Grantee's purchase of the Property are subject to a determination by Maine State Housing Authority as to the desirability of the Property for Grantee's intended use as a result of the completion of the environmental review process required by the United States Department of Housing and Urban Development, and if such determination is unsatisfactory, Grantee may terminate this Agreement at any time, including after the end of the Inspection Period, whereupon the Option Consideration shall promptly be refunded to Grantee.

6. Recording of Option. Grantor and Grantee agree that this Option shall not be recorded. Grantor agrees upon request of Grantee to execute and tender for recording a memorandum summarizing the terms of this Agreement (except the Purchase Price).

7. Notices. Except as provided in Section 3 above, all notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, registered or certified, return receipt requested, addressed to the recipient at the addresses set forth at the beginning of this Agreement. Either party may change its address for purposes of this Section by giving the other party notice of the new address in the manner described herein.

8. Assignment. Grantee may not assign this Agreement without the express written consent of Grantor, which may be withheld in Grantor's sole discretion. Except as otherwise set forth herein any purported or attempted assignment or delegation, without obtaining Grantor's prior written consent shall be void and of no effect and shall constitute a default pursuant to the terms herein. Notwithstanding anything to the contrary contained elsewhere in this Agreement, Grantee named herein shall have the one-time right to assign this Agreement prior to the Closing Date to a Controlled Affiliate (hereinafter defined) without the consent of Grantor. "Controlled Affiliate" shall mean any entity which is Controlled by Grantee as of the date of the assignment and the Closing Date. "Control" or "Controlled by" means the power and authority to direct the business and affairs of the assignee by reason of the ownership of a majority of the beneficial interests in such assignee, by contract or otherwise. Any such assignment shall be conditioned upon Grantee delivering to Grantor an executed copy of the assignment and assumption agreement wherein the assignee assumes all of the obligations of the Grantee named herein and proof reasonably satisfactory to Grantor that the assignee constitutes a Controlled Affiliate. This Agreement is solely for the benefit of Grantor and Grantee; there are no third party beneficiaries hereof. Any assignment of this Agreement in violation of the foregoing provisions shall be null

and void. Notwithstanding any permitted assignment or transfer of Grantee's rights and obligations under this Agreement, Grantee shall in all cases remain liable for all of Grantee's obligations under this Agreement. Grantee's breach of this Section shall be a material default under this Agreement, which shall entitle Grantor to all rights and remedies available to it pursuant to this Agreement.

9. Miscellaneous. Time is of the essence hereof. This Agreement and the JSPAA constitute the entire agreement between Grantor and Grantee; there are no agreements or understandings between the parties except as set forth herein and in the JSPAA, and all prior agreements and understandings are superseded by this Agreement and the JSPAA. This Agreement will inure to the benefit of and bind the respective successors and assigns of Grantor and Grantee. As used in this Agreement, the singular number shall include the plural, the plural the singular, and the use of one gender shall be deemed applicable to all genders. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same agreement. This Agreement shall be governed by and construed in accordance with the laws of Maine. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

IN WITNESS WHEREOF, Grantor and Grantee have executed this Option Agreement as of the date first above written.

WITNESS:

Kimberly A. Gilpatrick

197 OXFORD STREET LLC, Grantor
By: Tom Watson & Co., LLC, its Manager

By:
Name: John Laliberte
Its: Vice President

AVESTA HOUSING DEVELOPMENT CORPORATION, Grantee

By:
Name: Rebecca Hatfield
Its: President

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

197 Oxford St
(Phase I)

ZONING ANALYSIS Relevant Zone(s) R6 - Residential

All Projects:

	Required	Proposed
Lot Size	2,000 SF	15,224
Area Per Dwelling Unit	290 SF*	317*
Minimum Street Frontage	20 FT	359 FT
Front Yard Minimum	5 FT	8 FT
Front Yard Maximum	N/A	
Rear Yard	10 FT	10.2 FT
Yard Right	NONE	9.2 FT
Yard Left	NONE	5.9 FT
Side Street Setback	NONE	SEE ABOVE
Step Back	15 FT	15 FT (Rear)
Maximum Lot Coverage	60%	60%
Minimum Lot Coverage	N/A	
Maximum Height	55 FT	54.93 FT
Open Space	20%	20%
Maximum Impervious Area	80%	80%
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	TBD	5
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		

*See Density Bonus Table and Attachment

Planned Residential Unit Developments (PRUD) Requirements

Not Applicable

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
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	2.5x	52 UNITS	48 UNITS
Height	NA		
Setback Reduction	NA		
Recreation Space	NA		
Maximum Accessory Building Length	NA		
Minimum Setbacks	NA		
Minimum Building Separation	NA		
Minimum Open Space	NA		
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

50 Cedar St
(Phase II)

ZONING ANALYSIS Relevant Zone(s) R6 - Residential

All Projects:

	Required	Proposed
Lot Size	2,000 SF	23,250 SF
Area Per Dwelling Unit	725 SF/UNIT	1,092/UNIT
Minimum Street Frontage	20 FT	197 FT
Front Yard Minimum	5 FT	5.51 FT
Front Yard Maximum	N/A	
Rear Yard	10 FT	21.46 FT
Yard Right (North)	None	> 5'
Yard Left (South)	5'	12.54'
Side Street Setback	NONE	5'
Step Back	NONE	N/A
Maximum Lot Coverage	60%	21%
Minimum Lot Coverage	N/A	
Maximum Height	55 FT	< 35 FT
Open Space	20%	21%
Maximum Impervious Area	80%	80%
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	38	Provided Off Si
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

Not Applicable

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
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	NA		
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

158 Lancaster St (Phase 3)

ZONING ANALYSIS Relevant Zone(s) R6 - Residential

All Projects:

	Required	Proposed
Lot Size	2,000 SF	17,748.60 SF
Area Per Dwelling Unit	725 SF/UNIT	740 SF/UNIT
Minimum Street Frontage	20 FT	369 FT
Front Yard Minimum	5 FT	5.25 FT
Front Yard Maximum	N/A	
Rear Yard	10 FT	13.13 FT
Yard Right (West)	5'	> 5'
Yard Left (East)	NONE	9.14'
Side Street Setback	NONE	> 5'
Step Back	15'	> 15' (rear)
Maximum Lot Coverage	60%	29%
Minimum Lot Coverage	N/A	
Maximum Height	55 FT	34.79 FT
Open Space	20%	35%
Maximum Impervious Area	80%	65%
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	37	13 ONSITE *
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		

*REMAINING PARKING PROVIDED OFFSITE

Planned Residential Unit Developments (PRUD) Requirements

Not Applicable

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
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	NA		
Height	NA		
Setback Reduction	NA		
Recreation Space	NA		
Maximum Accessory Building Length	NA		
Minimum Setbacks	NA		
Minimum Building Separation	NA		
Minimum Open Space	NA		
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Density Overview – Phased Joint Site Plan

The following breakdown of land area and density bonus utilization is as follows:

Phase I Land Area = 15,224 SF

Base Density: 15,224 / 725 = 21

Affordable Bonus: 2.5 x 21 = 52.5 allowable units. 48 affordable units proposed.

Phase 2 Land Area = 23,250 SF

Base Density: 23,250 / 725 = 32 allowable units. 24 market rate units proposed

Phase 3 Land Area = 17,749 SF

Base Density: 17,749 / 725 = 24.5 allowable units. 24 market rate units proposed.

Overall: 48 IZ / 96 total units = 50% IZ.

E. Easements

Existing Easements:

Existing easement information as provided on the plan titled "Topographic Survey" prepared and identified by Owen Haskell for Bush-Watson on February 17, 2023 and most recently revised on March 29, 2023.

- CMP/NET&T easement associated with Book/Page 4811/70 in the Cumberland County of Deeds.

This easement is anticipated to be extinguished as part of the previously approved 89 Elm project and/or the proposed Phase 2 50 Cedar project as part of this Application.

Proposed Easements:

- **Phase 1 – 197 Oxford Street:**
  - There are no proposed easements at the time of filing this Application.
- **Phase 2 – 50 Cedar Street:**
  - The project, under common ownership with the abutting and previously approved 89 Elm development, will provide a reciprocal access, utility, and maintenance easement within the shared drive aisle and solid waste enclosure area.
- **Phase 3 – 158 Lancaster Street:**
  - There are no proposed easements at the time of filing this Application.

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.
Figure I-27	The drive aisle width is 24 feet	Requesting waiver to decrease the width to 22'.	Typical of previous residential projects on tight sites, 22' is a functional width especially for low-volume, familiar users.
LUC 14.6.2.B.3	All development subject to zoning setbacks shall preserve a minimum of 30% of existing trees 10 inches DBH or greater within the required setback area.	Several 10" trees existing along the rear property line and near the Chestnut/Oxford intersection. Their removal will be required to facilitate the building and reconstruction of the failing retaining wall along the rear property line.	The project is not feasible without removal of these trees. The trees in the rear do not appear to be in good health, and the apple trees near the intersection are small and not of high value.

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 Section 1.14	"New structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces (rounded down to the nearest whole number). An additional 50% of spaces must be made EV-ready,"	An EV Charger is not proposed to be installed at the time of construction due to fire risk under habitable building space; however, the project team is proposing to install conduit and pull wire to allow for the ability to energize and install a charger in the future should the battery technology improve and become safer with respect to fire hazards.	As electric vehicles become more common, knowledge continues to increase about how they react under fire conditions. The concern is if an EV is parked in a parking structure or parking beneath the building overhang even if there is a sprinkler system in place would this being inviting a potential severe fire event where there seems to be no current ability to extinguish an EV fire quickly. One contributing factor is a process called "thermal runway" which occurs when the heat within a battery is greater than the heat that can dissipate to the ambient surroundings. Batteries can overheat while recharging or occur if a cell fails while the vehicle is being operated, including being parked. This type of failure produces oxygen and gases that are toxic with the potential to be flammable. Vehicle batteries are essentially bundles of these cells inside of a plastic container, the failing of one can trigger the same in neighboring cells. This will lead to an intense fire or if modern plastic is involved, perhaps an explosion. The Applicant is not interested in installing EV chargers given the lack of parking and the life safety concerns noted above.
....	....	....	

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.
··· Figure I-27	The drive aisle width is 24 feet	Requesting waiver to decrease the width to 22.83'	Typical of previous residential projects on tight sites, a dimension as low as 22' is a functional width especially for low-volume, familiar users.
....	....	....	....

F. Waivers: Phase 3 - 158 Lancaster Street

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.
¨ Figure I-27	¨ The drive aisle width is 24 feet	Requesting waiver to decrease the width to 22'.	Typical of previous residential projects on tight sites, 22' is a functional width especially for low-volume, familiar users.
....	....	....	....

G. Financial Capacity

Please find attached the status of good standing from the Secretary of State and letters from the Co-Applicants' banks.

March 28, 2024

City of Portland
389 Congress Street
Portland, ME 04101

RE: 197 Oxford Street

To Whom It May Concern:

On behalf of Bangor Savings Bank, I am pleased to provide this letter in support of Avesta Housing for the development of a 48-unit, affordable housing project to be located at 197 Oxford Street in Portland, Maine. Bangor Savings Bank has worked with Avesta Housing on multiple projects of a similar nature. Based on our prior experience working with the organization, we believe that the applicant has the ability to finance the proposed project costs. In addition, they possess the management skill and development expertise to successfully complete the proposed project.

While this letter of support is not a commitment to lend, Bangor Savings Bank would welcome the opportunity to be a resource for project financing. Please feel free to call me at 541-2707 with any questions.

Sincerely,

Shawn McKenna
Vice President
Commercial Banking

BAR HARBOR
BANK & TRUST

April 2, 2024

Planning Board
City of Portland
389 Congress Street
Portland, ME 04101

RE: Reveler LLC - 75 unit phased development in the Bayside area of Portland, Maine

To Whom It May Concern:

I am pleased to provide this financial capacity letter in support of Reveler LLC, manager of 197 Oxford Street LLC, WBP Commercial LLC, and 89 Elm LLC. Based on my longstanding relationship with Reveler, it is my opinion that the development group has the financial resources, technical expertise and management capability to complete the above referenced project.

If you should need further information or clarification please contact me at (207) 771-1217.

Sincerely,

Joe Delano
Senior Vice President



Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Wed Mar 27 2024 13:45:00. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
AVESTA OXFORD STREET LP	202400012LP	LIMITED PARTNERSHIP	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
02/12/2024	N/A	MAINE

Other Names **(A=Assumed ; F=Former)**

NONE

Principal Home Office Address

Physical	Mailing

Clerk/Registered Agent

Physical	Mailing
REBECCA HATFIELD 307 CUMBERLAND AVE PORTLAND, ME 04101	REBECCA HATFIELD 307 CUMBERLAND AVE PORTLAND, ME 04101



Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Wed Mar 27 2024 13:49:35. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
REVELER LLC	20062993DC	LIMITED LIABILITY COMPANY	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
04/11/2006	N/A	MAINE

Other Names	(A=Assumed ; F=Former)
REVELER DEVELOPMENT	A
TOM WATSON & CO., LLC	F

Principal Home Office Address

Physical	Mailing

Clerk/Registered Agent

Physical	Mailing
WILLIAM H LEETE ONE CANAL PLAZA PORTLAND, ME 04101	WILLIAM H LEETE PERKINS THOMPSON, P.A. P.O. BOX 426 PORTLAND, ME 04112-0426

H. Technical Capacity

Reveler Development, Previously Tom Watson & Co., has completed several development projects within the City including 82 and 52 Hanover St and 132 Marginal Way – The Linden.

Avesta Housing is Northern New England's largest affordable housing developer, having completed dozens of affordable projects across Maine and New Hampshire. Most recently, developments include Porter Station (200 Valley Street), Village Commons in Scarborough, and the West End Apartments in South Portland.

Acorn Engineering, Inc. has successfully permitted and provided civil/site engineering for a multitude of constructed major site plans across the City including Munjoy Heights, 89 Anderson Street, the Hiawatha, 52 Hanover, and Porter Station.

CWS Architecture + Interior Design has extensive experience in residential development in Portland and has been the Architect of Record on many residential projects, some of which include Wessex Woods, 58 Boyd Street, Huston Commons, and 409 Cumberland.

Ryan Senatore Architecture also has extensive experience in residential development, including leading projects at Munjoy Heights, 89 Anderson, the Hiawatha, Porter Station, and Hammond House.

Overall, the design team brings decades of experience and demonstrated success in designing, managing, permitting, and overseeing the construction of high-quality residential properties.

I. Conformity with Land Use Ordinance

Att. I

OVERVIEW

The proposed joint major site plan application proposed a total of 123 dwelling units to be distributed over the development of three parcels, depicted as phases 1-3 below.

- Phase 1: 197 Oxford Street: 48 Affordable and "Housing Fist" Residential Units (Avesta)
- Phase 2: 50 Cedar Street Redevelopment: 24 Market Rate Residential Units (Reveler)
- Phase 3: 158 Lancaster Street: 24 Market Rate Residential Units (Reveler)

Each project phase has been designed to conform to the applicable City standards where possible, as well as improve upon existing non-conformities.

The following narrative demonstrates the proposed projects compliance with the site plan standards of the City of Portland's Land Use Ordinance, outlined in Chapter 14, Section 6 (14.6.1-4). In addition, the site has been designed to comply with the City's Technical and Design Manual, as referenced in the land use code.

14.6.1 Transportation Standards

A. Impact on Surrounding Street Systems:

a. The project is not anticipated to create any significant hazard to safety on the surrounding street network nor any adjacent properties. The sites are bordered by Chestnut Street, Lancaster Street, Cedar Street and Oxford Street. Please see Section T of this application for the Traffic Analysis Narrative.

b. According to the City of Portland Federal Street Classification map, the site is located along Cedar Street, Oxford Street, Chestnut, and Lancaster Street which are all considered local roads. The development does not intend to substantially increase congestion on the surrounding streets.

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 are proposed and will connect to the existing sidewalks along Cedar Street, Chestnut Street and Lancaster Street. Each phase of the project will provide a newly constructed sidewalk along the property frontage, as shown on each respective Site Plan; C-11 (Ph-1), C-12 (Ph-

2), and C-13 (Ph-3).

c. Points of access and egress have been located to avoid conflicts with turning movements and traffic flows. Site access has been modeled utilizing AutoCAD 2020 Vehicle Tracking software to confirm vehicular circulation for each site and the proposed use.

d. Not applicable

2) Loading and Servicing:

Regular service trucks are not anticipated to occur as part of any of the proposed developments, given all buildings are to be solely residential. As all 3 of the proposed redevelopment sites are located along corner lots, it can be expected that delivery services will predominantly utilize the public street frontages, as is customary for these types of services.

3) Curbs and Sidewalks:

a. Each of the development sites propose to replace the existing curbing and sidewalks along all frontages, and are to be installed in accordance with the City's Technical Manual. Please refer to the overall site plan which includes all offsite improvements associated with each phase of the project.

b. There are existing sidewalks along all abutting Streets. 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) The proposed redevelopment sites are located along Oxford Street, Cedar Street, Lancaster Street and Chestnut Street, all classified as local urban roadways. Currently the Greater Portland METRO Local Route 8 service runs through Lancaster Street, with a bus stop along the Lancaster and Chestnut Street intersection. Additionally, the METRO Pulse Station on Elm Street is close to all 3 sites. Given the proximity to the existing transit system, the development does not propose any new transit shelters.

2) Not applicable.

3) Not applicable.

D. Parking:

1) Vehicular Parking:

    a. The parking is anticipated to be provided by a mix of on-site parking, as well as availability in the Cumberland Ave parking garage within a quarter mile of the project. Please See Section S, of this application for the Overall parking analysis.

    b. A TDM is not proposed for this project.

    c. Not applicable

    d. All phases propose a drive aisle less than 24', which has been requested as a waiver in Section F.

2) Location and Required Number of Bicycle Parking Spaces:

    a. A minimum of 39 bicycle spaces are required for the proposed 96 residential units, following the ratio (2 bike spaces/ 5 units) provided in Table 19-A of the Land Use Code. Please refer to each Phases Site Plan, Landscape plan, and Architectural Floor Plans for more information on proposed bike storage locations. Signage is to be provided in accordance with the Technical Manual.

    b. Not applicable.

3) Snow Storage:

    a. Please refer to each phases site plan for the proposed locations designated for snow storage. The Owner will be responsible for managing snow at their discretion and/or coordinating snow removal from the site when necessary.

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

4) Electric Vehicle (EV) charging

    a. Section 1 of the Technical Manual states; "New structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces. An additional 50% of spaces must be made EV-ready.". Please see Section S of this application for the Parking Analysis which outlines the existing, proposed, and improved parking areas on each site.

    Phase I is requesting a waiver from the EV requirement for their 5 parking spaces due to covered parking which poses a fire risk. They have committed to providing conduit and pull wire for future adaptability should the technology improve such that there is a lower fire risk to the residences above the covered parking.

    Phase II only has 4 parking spaces and does not trigger this requirement.

Phase III is replacing the existing parking spaces and is not creating a new structured or surface parking lot.

E. Transportation Demand Management (TDM):

1) A Transportation Demand Management (TDM) plan was not prepared for this application. Please see the Parking and Traffic Analysis narrative for more information.

2) Not applicable.

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 sites have been designed to limit disturbance to existing vegetation where feasible, particularly along the larger parcel, Phase 3. Please see the attached plans with references to existing vegetation to remain and be protected on the 158 Lancaster Street lot where the opportunity exists.

2) Please refer to the Landscaping plan, details, as well as the erosion control report for more information regarding proposed implementation measures to preserve the existing vegetation that is to remain from construction impacts. These construction-level details will progress and the project progresses.

3) Phase 1: A waiver has been requested due to number of 10" trees along the rear property line causing a failing retaining wall onto the neighbor's property.

Phase 2: No trees are being removed.

Phase 3: 8 trees at 10" DBH or larger exist on site. The project proposes to maintain 3 of them which meets the standard (37.5%)

4) See above and Section F.

5) Where the replacement of trees onsite is not feasible, the applicant intends to contribute the proportionate cost of the replacement trees to the City of Portland Tree Fund.

C. Site Landscaping and Buffers

1) Within the R6 zone, one shade tree or plantings is required per every 30 linear feet along all the property frontages, per the City of Portland Technical Manual standards. Please refer to the Landscaping plans for more information on the proposed quantity, spacing, and species.

2) Buffers

a. Solid waste storage is provided within the proposed buildings in Phase 1. The Phase 2 solid waste is shared with 89 Elm and will be screened by a cedar enclosure. The phase 3 solid waste will be adjacent to the parking lot and screened be a cedar enclosure.

b. Not applicable

c. Buffers are proposed within each project site where possible.

3) Parking Landscaping

a. The project features minimal surface parking; however, shade trees have been provided adjacent to the parking where feasible.

b. Not applicable.

c. Not applicable.

4) Street Trees

a. The proposed redevelopment project proposes street trees along the property frontages in the greatest number feasible. Please refer to the landscape plans for more information on placement and quantity.

b. Where the replacement of trees onsite is not feasible, the applicant intends to contribute the proportionate cost of the replacement trees to the City of Portland Tree Fund. It should also be noted that structural soil measures or granite planters are proposed for certain street trees to help improve their growing mediums.

D. Water Quality, Stormwater Management and Erosion Control:

1. All developments have been designed to minimize the total impervious area while

meeting the project goals, in combination with providing Stormwater Management best practices measures to reduce stormwater runoff generated from the site and minimize the overall contribution into the City's system. Please see each site's Grading and Drainage plan in combination with the Section J of this application, the Stormwater Management Report.

a. The site drainage will not be directed to flow or create ponding 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. The site was designed to reduce the volume and rate of runoff generated from the sites.

c. 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.

d. In coordination with DPW, the project anticipates detaining the larger of 1" times each Site's impervious area, or the proposed net new sewer flows created by the project.

2. Each Redevelopment site has been designed to comply with the Stormwater Management standards within the city technical manual.

3. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The development proposes adequate and sanitary disposal of sewage in accordance with Section 2 of the Technical Manual. The project will be serviced by a public wastewater system.

14.6.3 Public Infrastructure and Community Safety Standards

A. Consistency with City Master Plans:

1. The project has been designed to be consistent with the City's Master plans, Zoning Ordinance, Design Manual, and off-site infrastructure.

2. Please refer to each respective phased site plan which includes the necessary improvements to all connections to off premise public infrastructure.

B. Public Safety and Fire Prevention:

1. Public Safety Design

a. The site has been designed to enhance the security of the public and private areas on site to reduce the potential for crime.

b. Each site has been designed to provide appropriate controlled access points for the future building tenants.

c. All areas will promote natural surveillance and access control.

2. Emergency and fire vehicle access is provided on three (3) sides of each building within the public frontage. In addition, the site has potential ambulance access through the access drive aisles provided from Chestnut Street (PH-1), Cedar Street (PH-2), and Lancaster Street (PH-3).

C . Public Utilities

1. Requests for Ability to Serve letters have been sent to the respective companies. Coordination is ongoing and responses are forthcoming.

2. The electrical services to each building will be provided underground.

3. The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual. Please see the Stormwater Management Report in Section J of this application. Further coordination with DPW is anticipated to confirm the proposed infrastructure and connections.

4. The project will be served by connection to the public sewer system within Chestnut Street and Cedar Street, furthermore, intercepted by the Lancaster Street Combined Sewer. The proposed stormwater management systems have been designed to meet the City standards as well as the applicable standards outlined in Chapter 500.

5. Given each of the residential developments proposes 20 or more units within the building, trash collection and disposal will be coordinated by the property/landowner of each site with a private hauler. Please see the respective site plans for the proposed location of trash storage.

16.4.4 Site Design Standards

A. Massing, Ventilation and Wind Impact:

a. Please refer to Section O, Architectural Design Narrative for more information on the building massing and ventilation systems. The project will not result in health or safety problems, devaluation to neighboring properties, or direct exhaust towards neighbors.

B. Shadows:

The project vicinity does not include any existing publicly accessible open space.

Therefore, according to the technical manual, a shadow study is not required, although a shadow study was provided for the 197 Oxford building at the request of the neighbors at the pre-application neighborhood meeting.

C. Snow and Ice Loading:

The structure will not distribute snow and ice onto adjacent properties. All of the building roofs are to be designed to collect rainfall runoff onto the roof and route to the proposed stormwater infrastructure systems as proposed by phase.

D. View Corridors:

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 the site.

F. Exterior Lighting:

a. Site Lighting.

   i. Exterior lighting will be designed to meet the requirements set forth in the Technical Manual and not to negatively impact the abutting properties.

   ii. Lighting has been designed to not adversely impact the abutting residential properties. Shielding shall be implemented when necessary. Please refer to the Photometric Plans for more information.

b. Architectural and Specialty Lighting.

   i. No architectural and Specialty lighting is proposed, at this time.

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

c. Street lighting has been proposed in accordance with the City Technical Manual and is to include the required peninsula decorative lighting when along Lancaster Street. The remaining site lighting will be accomplished

through wall pack units along the proposed building entryways, in combination with existing street lighting along the abutting streets.

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 and their mechanical engineer.

H. Signage and Wayfinding:

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

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

    b) Signage will complement the subject building and its immediate context.

    c) Signage will not adversely affect visibility at intersections.

    d) Signage will be facing downward to avoid glare and light spillover to towards the sky.

    e) Signs will not 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. Signage will not adversely affect visibility at intersection on or off the site.

I. Design Standards.

a. The Architect has designed the project to meet the standards set forth in the R6 Residential zoning standards, as well as the City of Portland Design Manual. Please refer to the Architectural Plans and narratives for each building.

Att. J

J. STORMWATER MANAGEMENT REPORT

Phased Oxford Street Redevelopment

Prepared For:

Avesta Housing & Reveler Development
Joint Site Plan Application

Prepared By:

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



April 2024
Rev. September 2024

INTRODUCTION

Acorn Engineering, Inc. has been retained by Avesta Housing and Reveler Development, to provide civil engineering services for the Phased Oxford Street Redevelopment, Joint Major Site Plan Application. The contiguous parcels encapsulating the re-development project include 197 Oxford Street, 50 Cedar Street, 158 Lancaster Street, and 78 Chestnut Street in Portland, Maine. The joint application referenced the lots above as Phase 1, Phase 2, and Phase 3, respectively. Please note there are no modifications proposed at 78 Chestnut Street, at this time.

The overall site area consists of 1.58 acres of contiguous land, of which 0.96 acres are to be redeveloped as part of this proposed project. The development project proposes 3 residential buildings throughout Phases 1, 2, and 3, to provide 96 Residential Units to the Bayside area. Please see *Table 1* below which provides an overview of the existing parcels area and proposed redeveloped area.

This stormwater analysis was prepared to demonstrate the effects of the proposed development on both the quantity and quality of stormwater runoff. The purpose of this report is to demonstrate the project's compliance with the City of Portland Stormwater Management Standards. The following narrative provides an outline of each of the project phase's compliance with the applicable standards set forth within the City of Portland City Code and Technical Manual as outlined below, in addition to the applicable requirements set forth by Maine DEP within Chapter 500.

- 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.
  - Section 2 – Portland Sanitary Sewer and Storm Drain Design Standards
- City of Portland Code of Ordinances:
  - Chapter 32 – Post-Construction Stormwater Management
  - Chapter 24 – Sewers

TABLE 1: OVERVIEW OF PROPOSED RE-DEVELOPED AREA BY PROJECT PHASE:

	PARCEL AREA (AC):	RE DEVELOPED AREA (AC):
197 OXFORD STREET:	0.35	0.35
50 CEDAR STREET:	0.53	0.22
158 LANCASTER STREET:	0.41	0.39
78 CHESTNUT STREET:	0.29	0
TOTAL AREA:	**1.58**	**0.96**

EXISTING CONDITIONS

The project parcels are bordered by Lancaster Street, Cedar Street, Oxford Street, and Chestnut Street, and are all located within the Residential R-6 Zoning District and the Bayside Height Overlay Zoning District.

It is our understanding that there are no natural resources on site and that the development is not within an urban impaired stream watershed and appears that no formal stormwater treatment or detention presently resides onsite, unless otherwise noted as on Phase 2. Existing topography and onsite soils information was obtained from the Topographic Survey plan prepared by Owen Haskell Inc., dated February 17th, 2023.

- **Phase 1 – 197 Oxford Street:**

Phase 1, the 197 Oxford Street parcel consists of approximately 0.35 acres of land and is currently occupied by 2 existing, now vacant buildings to be demolished and transformed into a 5-story building with 48 affordable residential units, to be owned and managed by Avesta Housing. The project will reside at Map, Book Lot: 26-B-018, whose lot line will be adjusted to encompass the entire development area of 0.35-acres. Currently the parcels are addressed as 31 Cedar Street and 197 Oxford Street, 26-B-012 & 26-B-018, which will be merged into one parcel whose area will remain outside the building footprint.

The site is currently occupied by 2 existing, now vacant buildings (total footprint of approximately 5,553 square feet). Please note it is our understanding that demolition of the existing retrofitted storage container structures which have since been removed since receiving our survey (footprint of approximately 517 square-feet.) In addition, the site is occupied with nearly 4,118 square feet of impervious cover over the lot, consisting of disconnected impervious patio area along the Cedar Street side. and a community garden located on the Chestnut Street side. The remainder of the site consists of a mix of mulched and grassed area within the existing community garden. The site topography consists of slopes ranging up to 17% within the garden area. Elevations across the site range from 27' at the Chestnut Street Corner of the site, to elevation 42' across the parcel at the Cedar and Oxford Street intersection. The Cedar Street, Oxford Street, and Chestnut Street sidewalks consist of slopes ranging up to 9% along the property frontage.

- **Phase 2 – 50 Cedar Street:**

Phase 2, the 50 Cedar Street parcel consists of approximately 0.53 acres of land occupied by surface parking lots to be transformed into a 3-story building with 24 market rate residential units, to be owned and managed by Reveler Development. The project will reside at Map, Book Lot: 33-H-009, whose lot line was recently adjusted due to a separate project application, previously approved, and under common ownership.

As part of the recently approved application at the adjoining property at (33-H-006-001), stormwater runoff and site improvements on the 50 Cedar Street parcel were incorporated within the proposed stormwater system on the 89 Elm Street parcel. As part of this application, we have outlined the drainage area boundaries for the 50 Cedar Street parcel

and included the HydroCAD stormwater model approved with storing runoff from 50 Cedar Street. As the 89 Elm Street application is not yet under construction, should the 50 Cedar Street redevelopment project be constructed prior to 89 Elm Street, modifications for stormwater runoff generated from the 50 Cedar Street site intend to be sufficient for the runoff drainage area leading to the subsurface storage system, as demonstrated in this report and highlighted in the Attached HydroCAD Report and pre and post re-development maps for Phase 2 - 50 Cedar Street Re-Development Project. In other words, each project is able to stand on its own as a complying site/project whether or not both buildings are constructed or not.

Currently the site consists of 16,480 sf surface parking lots. The site topography consists of slopes ranging up to approximately 9% within the drive aisle proposed for 89 Elm Street, with slopes ranging up to 50% within the existing grassed area. Elevations on site range from 17.80' at the Lancaster and Cedar Street intersection to elevation 40' across the parcel where the uphill parking lot ties into Cedar Street. Currently the Cedar Street and Lancaster Street sidewalks consist of slopes ranging up to 12.5% along the property frontage.

- **Phase 3 – 158 Lancaster Street:**

Phase 3, the 158 Lancaster Street parcel consists of approximately 0.41- acres of land occupied by an existing surface parking lot and community garden. The project proposes to redevelop the site to provide a 3-Story Building with 24 dwelling units, to be owned and managed by Reveler. The project will reside at Map, Book Lot: 26-A-001.

Currently the site consists of a 12,620 sf surface parking lot with a community garden on the Southeast side of the property. The site topography consists of slopes ranging up to approximately 8% within the existing parking area and up to 50% along the property line and within the garden area. Elevations across the site range from 11.50' at the Lancaster and Chestnut Street intersection to elevation 22' near the rear property line along Halls Court. Currently the Cedar Street, Lancaster Street, and Chestnut Street sidewalks consist of slopes ranging up to 20% along the property frontage.

The overall redevelopment project will result in a reduction of non-roof impervious area by 9,836 square-feet, as provided in *Table 2* below.

TABLE 2 – REDUCTION OF PRE AND POST RE-DEVELOPMENT NON-ROOF IMPERVIOUS AREA

	NON-ROOF IMPERVIOUS AREA:		
PHASE:	**EXISTING (SF):**	**PROPOSED (SF):**	**REDUCTION:**
Phase 1 - 197 Oxford Street:	4,117.96	3,248.90	-869.06
Phase 2 - 50 Cedar Street:	16,479.74	13,702.09	-2,777.65
Phase 3 - 158 Lancaster Street:	12,620.11	6,430.15	-6,189.96
Totals:	**33,217.81**	**21,637.11**	**-9,836.67**

Given the existing building use and impervious cover, the existing sanitary sewer and surface stormwater runoff flows were included as part of this analysis to provide a better comparison of how the proposed development will impact the City's Combined Sewer System. See below for more information on the existing and proposed site drainage conditions for each phase of the development.

PROPOSED DEVELOPMENT

The proposed development intends to transform the existing parcels to provide 3 residential buildings and 96 residential units to the Bayside community.

- Phase 1 proposes a 5-story building with 48 affordable dwelling units.
- Phase 2 proposes a 3-story building with 24 market rate units.
- Phase 3 proposes a 5-story building with 24 market rate units.

The site proposes modifications to redirect stormwater runoff generated from the site to be contained and detained within the parcels by utilizing subsurface stormwater storage systems onsite. Each project phase will feature interconnecting sidewalks and pavement for a driveway accessed from the adjacent streets.

Table 3 below provides a comparison of the existing and proposed impervious area. Collectively the overall project will produce a total of 41,874 square-feet of impervious cover over the three development sites. As demonstrated in the table above, 21,637 square-feet of non-roof impervious area is anticipated post redevelopment of all 3 phases. Please note that none of the individual project phases will generate more than 5,000 square feet of new redeveloped non-roof impervious area, as seen below.

Table 3 – Total Impervious Area by Phase

PHASE:	EXISTING IMPERVIOUS AREA (SF):	TOTAL PROPOSED IMPERVIOUS AREA (SF):
Phase 1 - 197 Oxford Street:	9,982	11,970
Phase 2 - 50 Cedar Street:	16,480	18,553
Phase 3 - 158 Lancaster Street:	12,620	11,351
Totals (sf):	**39,082**	**41,874**

Overall, the project sites are currently draining Northwest, towards the Combined Sewer System within Lancaster Street. It is our understanding that there is an existing 18" Combined Sewer within Chestnut Street and Cedar Street, along with a 48" double brick Combined Sewer within Lancaster Street.

As part of the recently approved West Bayside Master Development Plan (MDP), Phase 1A – 89 Elm Street, it was proposed to extend the City's MS4 System from Preble Street to the frontage of 89 Elm Street, the adjoining property of 50 Cedar Street. As the proposed

extension is still under discussion and review with DPW and PWD, the 50 Cedar Street re-development site intends to tie into the proposed MS4 extension at the upstream end, as described further in this report and depicted on the plans.

All developments intend to be served by the Portland Water District, CMP, Spectrum, Consolidated Communications, and municipal sewer and storm systems. Utility mains and services are under coordination with each respective utility company. The project team will coordinate the project details further with the Department of Public Works team, to ensure proposed connections and verify the existing systems capacity, as necessary.

As the site is not located within an urban impaired stream, nor will it create one or more acre of impervious area, the project is exempt from the treatment requirements as outlined in Chapter 500.

Please note that each project phase will provide stormwater management systems and infrastructure on each site to account for the stormwater runoff generated by site. None of the sites will create more than 5,000 SF of non-roof redeveloped area; however, Phase 1 and Phase 2 will create more than 1,000 SF of new impervious area, and therefore those two phases have included stormwater treatment in tandem with the detention systems.

GENERAL STANDARDS – WATER QUALITY

The following narrative intends to meet the applicable Basic, General, and Flooding standards in Section 5 of the City of Portland Technical Manual. Please refer to the erosion and sedimentation control report for the site's compliance with the Basic Standards outlined in Chapter 500.

Treatment on both sites (Ph-1 & Ph-2) are proposed for the equivalent water quality volume to treat approximately a quarter and half of the roof area on both of the proposed buildings, respectively, which would exceed treatment of 95% of the new impervious area on site.

The following section outlines the phased projects compliance with Section 5 of the City's Technical Manual for Redevelopment Projects.

Treatment of stormwater is accomplished by utilizing Subsurface Storm filter Vault systems on Phases 1 and 2. *Table 4* below provides an overview of the redevelopment project required treatment area in addition to the proposed treatment measures on site. Given Phase 3 results in a reduction in impervious area, no treatment is required, or proposed onsite.

TABLE 4 - WATER QUALITY TREATMENT AREA

	REQUIRED TREATMENT AREA*	PROPOSED TREATMENT AREA
PHASE 1 – 197 OXFORD STREET	1,889 SF	2,438 SF
PHASE 2 – 50 CEDAR STREET	1,969 SF	2,419 SF

TOTAL:	**3,858 SF**	**4,857 SF**
***Required Treatment Area based on 95% of new impervious area**		

All treatment BMP's proposed for the development sites intend to utilize Stormfilter cartridges as a filter and have been designed to meet the requirements of the General Standards (Section 4.B) of the Chapter 500 by CONTECH Engineered Solutions LLC, Approved by the Maine DEP March 13th, 2015, last revised February 24th, 2023.

The StormFilter system proposed will provide further storage and release of a water quality volume through R-Tank subsurface chamber system. The StormFilters are proposed to provide treatment generated from the roof area. As it is not anticipated that oils and grease will be entering the StormFilter Cartridges the CONTECH provides various options of filter media for the targeted pollutant removal. Please refer to the Post Development Watershed Map for Phases 1 and 2 in Attachment B and the Civil Grading and Drainage Plans for more information on the proposed area to be treated.

In accordance with Contech's Stormfilter guidelines, each stormfilter vault system has been designed to treat the required Water Quality Volume and bypass the larger storm flows.

Treatment Area

Based on the approval letter by the MDEP when utilizing 18" cartridges it is recommended to use 34 cartridges per acre of impervious being treated. The project proposes to treat 0.11 acres of impervious surface within the Storm Filter Cartridges. See *Table 5* below:

Table 5 – StormFilter Cartridge Sizing

	1-Year Peak Flow (cfs)	Area to be treated (acres):	Required Cartridges	Provided Cartridges
Phase 1 - Storm Filter Cartridges:	0.06	0.056	2	2
Phase 2 – Storm Filter Cartridges:	0.06	0.056	2	2
Overall		0.11	4	4
*StormFilter Vault sized with 18" Cartridges				

Per the MDEP StormFilter approval letter the system was sized to treat 90% of the average annual runoff volume.

As represented in *Table 6*, the site is in accordance with Chapter 500, General Standard rules and the MDEP approval letter for StormFilter treatment.

FLOODING STANDARDS – WATER QUANTITY

The proposed development anticipates connecting into the City's combined sewer system within Chestnut Street, further combining into the Lancaster Street Combined Sewer. The stormwater flows for a 24 hour - 1" rainfall storm over the entire redeveloped area, were computed to analyze each of the proposed on-site storage systems.

As part of the stormwater analysis, the existing sewer flows generated from the current building were analyzed. The analysis included a review of the existing water meter data (assumed to be equivalent to sewer discharge) for the existing buildings on 197 Oxford Street compared to the proposed sewer flows.

Table 6 below provides a comparison of the new sewer flows that the proposed development will add to the system as well as the runoff volume based on 1" of rainfall over the impervious area.

Detention on site is accomplished utilizing R-Tank subsurface chambers. The subsurface chamber systems have been sized to provide a storage volume for 1" of rainfall over the impervious area draining to the system. Table 6 below provides an overview of the stormwater detention provided on each site. The system was sized to meet the City's request and to drain between 24 to 48 hours.

Table 6: Required Detention Volume

	Phase 1 - 197 Oxford Street:	**Phase 2 – 50 Cedar Street:**	**Phase 3 – 158 Lancaster Street:**
1" of rainfall over the redeveloped impervious area:	998 CF	643 CF	913 CF
Projected 24 hour daily sanitary flows:	770 CF (Net New: 340 CF)	385 CF	385 CF
R-Tank Storage Provided onsite:	**1,015 CF**	**660 CF**	**1,015 CF**

R-Tank Subsurface Stormwater Detention Systems

Each development site proposes a subsurface stormwater detention system utilizing the R-Tank System by Ferguson Waterworks, formerly manufactured by ACF Environmental.

The proposed subsurface storage systems will be utilizing double stacked R-tanks modules with various layouts to achieve the required/ proposed storage volume. Each of the systems' storage volume was measured by the available area within the R-Tank System and stone area from the bottom of the stone on the system to the invert of the overflow pipes out. Each system has been designed with a series of overflow pipes set below the top of the tanks, and underdrains set within the stone below the tanks to ensure the system can store the required volume and drain out between 24 to 48 hours after a storm.

The overflow pipes from the R-Tanks were set at the top of the system to ensure maximum storage is provided within the system prior to entering the overflow pipes. Each of the systems will utilize a series of wye connections and header pipes to relay the systems overflow from the R-Tank into a header pipe, to facilitate a single overflow pipe out of the R-Tank system, into the downstream stormwater infrastructure and furthermore into the City's Combined Sewer.

Each of the 4" underdrains from the R-Tank systems are intended to have a cap placed on the outfall pipe within the downstream F-Basin, with an orifice drilled into the cap eccentrically. The PVC cap can be easily inspected, removed, or replaced, if necessary, as accessed from a manhole.

The City has requested the outflow for a 1" storm event be equal to 0.1 CFS per acre of watershed area draining to the detention systems. To meet this request, the proposed orifice sizes on each system range from a 1" to 1.5" diameter. It should be noted that the R tank system is utilizing a 1" orifice for, which is typically the lowest diameter orifice that's considered best practice. Diameters lower than this size are less resilient to clogging from debris and therefore may inadvertently short circuit the system.

Please refer to the Grading and Drainage plans for Phases 1-3 and Civil Drainage Details Sheet 2 for more information on the R-Tank system proposed on each site.

Pre and Post Development Subcatchments:

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.

Curve Number (CN)

Within the pre-development model, the vegetated areas were generally considered fair or poor grass conditions due to the interrupted growth and lack of maintenance or robust plantings.

The post development landscaped areas were given a good rating for new landscaped or loam/seeded areas and fair rating for the vegetated areas to remain. Refer to the attached pre and post development maps provides a visual representation of the land covers from the pre and post conditions.

Pre and Post Development Calculations:

Each of the proposed project phases were 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, Inc. to round to the nearest whole number. However, due to the small size of the project sites, the stormwater runoff was rounded to the nearest tenth of a cubic feet per second (cfs).

- **Phase 1 - 197 Oxford Street:**

The pre and post redevelopment surface runoff conditions maintained the same three general points of interest: Cedar Street, Oxford Street, and Chestnut Street. As the proposed development intends to tie into the Chestnut Street Combined sewer, the overall drainage point analyzed for the project was considered to be the Lancaster Street Combined Sewer which intercepts the Combined sewers within Cedar and Chestnut Street.

Table 7 below provides the pre and post development flows modeled in HydroCAD from Phase 1 of the proposed redevelopment project.

Table 7 – 197 OXFORD STREET:
Comparison of Peak Flows for 197 Oxford Street at POI #99

Drainage Area	2-Year Storm Event (cfs)		10-Year Storm Event (cfs)		25-Year Storm Event (cfs)	
	Pre	Post	Pre	Post	Pre	Post
POI #99*	0.7	0.5	1.2	1.2	1.6	1.6

*POI #99 is represented in the Post Development HydroCAD and is located at the Chestnut St. and Lancaster St. intersection and is the primary drainage point for the development for both pre and post conditions.

- **Phase 2 – 50 Cedar Street:**

Given the parcel layout on 50 Cedar Street the catchments areas analyzed for the pre and post redevelopment conditions were divided into two catchments with various subcatchments within them.

Table 8 below provides the pre and post development flows modeled in HydroCAD from Phase 2 of the proposed redevelopment project.

Table 8 – 50 CEDAR STREET:
Comparison of Peak Flows for 197 Oxford Street at POI #99

Drainage Area	2-Year Storm Event (cfs)		10-Year Storm Event (cfs)		25-Year Storm Event (cfs)	
	Pre	Post	Pre	Post	Pre	Post
POI #99*	0.9	0.4	1.4	1.4	1.9	1.8

*POI #99 is represents Lancaster Street within the Post Development HydroCAD.

- **Phase 3 – 158 Lancaster Street:**

The pre and post site conditions will maintain the same overall drainage point being the Lancaster Street Combined Sewer. Currently the 158 Lancaster Street site is occupied by a surface parking lot with surface runoff sheeting towards Lancaster and Chestnut Street. Post development conditions proposed a subsurface R-Tank detention system on site which intends to collect and store flow generated from Subcatchment 1. The remainder of the site area is proposed to be captured through various F-Basins and field inlets. This area will then be combined with the discharge from the R-Tanks and further routed to the existing sewer manhole on the Chestnut Street combined sewer.

Table 9 below provides the pre and post development flows modeled in HydroCAD from Phase 3 of the proposed redevelopment project.

Table 9 – 158 LANCASTER STREET:
Comparison of Peak Flows for 197 Oxford Street at POI #99

Drainage Area	2-Year Storm Event (cfs)		10-Year Storm Event (cfs)		25-Year Storm Event (cfs)	
	Pre	Post	Pre	Post	Pre	Post
POI #99*	0.8	0.4	1.4	1.1	1.9	1.5

*POI #99 is represented in the Post Development HydroCAD and is located at the Chestnut St. and Lancaster St. intersection and is the primary drainage point for the development for both pre and post conditions.

As shown in Tables 7-9, the project proposes to maintain or reduce the peak flows from each Phased Site. 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 has been derived from the following resources:

- Soil Conservation Service Medium Intensity Soil Survey for York County

The site consists of soils within hydrological groups A, which have been inputted into HydroCAD accordingly. In accordance with Maine Best Management Practices (BMP). The USDA soil report has been submitted as part of this submission.

CONCLUSION

This narrative was prepared to demonstrate how the proposed development was designed to meet the City of Portland Stormwater requirements.

The site was designed with the intent to minimize the total area of impervious surface on the site and overall reducing both the volume and rate of runoff leaving the site. This was accomplished by providing an R-Tank subsurface stormwater storage system on each site to collect and detain stormwater runoff draining to each system to meet the water quantity standards. As demonstrated in this report, Stormwater quality is achieved through the use of subsurface Storm Filter cartridges on Phases 1 and 2 to treat approximately 25% and 50% of the proposed roof area, respectively.

Overall, the development will be reducing the flow rate leaving the parcel and into the City's combined sewer system from the pre to post development conditions. This is achieved through the use of subsurface storage systems to detain runoff onsite prior to discharging into the public system.

Please find the following attachments for more information on the stormwater analysis in addition to the proposed construction and maintenance plan for the development.

STORMWATER REPORT ATTACHMENTS:

- Attachment A.1: Pre-Development Watershed Map – Phase 1: 197 Oxford Street
- Attachment A.2: Pre-Development Watershed Map – Phase 2: 50 Cedar Street
- Attachment A.3: Pre-Development Watershed Map – Phase 3: 158 Lancaster Street

- Attachment B.1: Post-Development Watershed Map – Phase 1: 197 Oxford Street
- Attachment B.2: Post-Development Watershed Map – Phase 2: 50 Cedar Street
- Attachment B.3: Post-Development Watershed Map – Phase 3: 158 Lancaster Street

- Attachment C:.1 HydroCAD Calculations – Phase 1: 197 Oxford Street
- Attachment C:.2 HydroCAD Calculations – Phase 2: 50 Cedar Street
- Attachment C.3: HydroCAD Calculations – Phase 3: 158 Lancaster Street

- Attachment D: Soil Survey

SECTION J

STORMWATER MANAGMENT REPORT

Attachment A: Pre Development Watershed Map

PHASE 1 - 197 OXFORD STREET

SUBCATCHMENT LEGEND:

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

1 — POND

FLOW PATH ARROWS

HATCH LEGEND:

EXISTING IMPERVIOUS AREA:

EXISTING NON-ROOF IMPERVIOUS AREA:

EXISTING GREEN/ LANDSCAPED SPACE:

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

POI #99: LANCASTER STREET COMBINED SEWER

POI #2: CEDAR STREET COMBINED SEWER

POI #1: CHESTNUT STREET COMBINED SEWER

TM 26-B-2,3
N/F ALBERT BRESETTE

TM 26-B-14
N/F MARY LEE BENNISON
27956/297

TM 26-B-7
N/F FRANK E. DIDONATO
DONNA E. COX
24885/320

CEDAR ST.
ONE-WAY

CHESTNUT ST.
TWO-WAY

OXFORD ST.
ONE-WAY

S2

S1.2

S1.1

P1

PROPERTY LINE

SCALE: 1"=10'

PRELIMINARY
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/11/24

DRAWING NAME: PHASE 1 – PRE-DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

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

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SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
16506
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
PRE

SECTION J

STORMWATER MANAGMENT REPORT

Attachment A: Pre Development Watershed Map

PHASE 2 - 50 CEDAR STREET

POI #99: LANCASTER STREET COMBINED SEWER

S1.3

S2.3

S1.1

S2.1

S2.2

AREA NOT ACCOUNTED FOR IN 50 CEDAR STREET ANALYSIS, GIVEN AREA WAS ACCOUNTED FOR WITHIN THE 89 ELM STREET R-TANK

WBP COMMERCIAL LLC
39773/225

TM 26-A-12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

WBP COMMERCIAL LLC
39779/221

TM 26-A-9,10
N/F PETER P. & ALICE D. AMES
7926/278

TM 26-A-8
N/F ALBERT BRESETTE
7951/275

N/F AMELIA A. LABRECK
37970/11

HALL COURT

TM 26-B-1
N/F ROBERT HYDE
27470/68

TM 26-B-2,3
N/F ALBERT BRESETTE

197 OXFORD STREET LLC
39779/243

TM 26-B-7
N/F FRANK E. DIDONATO
DONNA E. COX
24885/320

TM 26-B-14
N/F MARY LEE BENNISON
27956/297

TM 33-H-16,17
N/F DAVID B. NOWLIN
25148/336

ELM STREET LLC
39779/234
4,879 S.F. ±
.34 ACRES ±

GUARDRAIL

197 OXFORD STREET LLC
39779/241
3,674 S.F. ±
0.08 ACRES ±

TEMP. BUILDINGS

GABEZO

CONC.

CONC. STEPS

2-1/2 STORY WOOD FRAME

PORCH w/OVERHANG

1 STORY BRICK

THRESH= 38.80

PORCH

PLANTERS

CONC.

GM

THRESH=38.80

CHAIN LINK FENCE

197 OXFORD STREET LLC
39779/239
11,550 S.F. ±
0.265 ACRES ±

SUBCATCHMENT LEGEND:

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

1 — POND

FLOW PATH ARROWS

LEGEND:

EXISTING IMPERVIOUS AREAS:

EXISTING GREEN/ LANDSCAPED SPACE:

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

20 0 20 40

SCALE: 1" = 20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24

DRAWING NAME: PHASE 2- PRE DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 2 -PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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ACORN ENGINEERING, INC.
70 FORE RIVER PARKWAY, SUITE 104
PO BOX 3477, PORTLAND, ME 04104
(207) 775-2655

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JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

DRAWING NO.
PRE

SECTION J

STORMWATER MANAGMENT REPORT

Attachment A: Pre Development Watershed Map

PHASE 3 - 158 LANCASTER STREET

LANCASTER ST.
TWO-WAY

FEEDER LINE

FEEDER LINE

POI #99: LANCASTER STREET
COMBINED SEWER

POI #1: CHESTNUT STREET
COMBINED SEWER

CHESTNUT ST.
TWO-WAY

CEDAR ST.
ONE-WAY

HALL COURT

TM 26-A-12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26-A-8
N/F ALBERT
BRESETTE
7951/275

S1

SUBCATCHMENT LEGEND:

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

1 — POND

FLOW PATH ARROWS

LEGEND:

EXISTING IMPERVIOUS AREAS:

EXISTING GREEN/ LANDSCAPED SPACE:

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT SITE PLAN APPLICATION	SJL	4/10/24

DRAWING NAME: PHASE 3: PRE DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 3 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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(207) 775-2655

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SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

DRAWING NO.
PRE

SECTION J

STORMWATER MANAGMENT REPORT

Attachment B: Post Development Watershed Map

PHASE 1 - 197 OXFORD STREET

SUBCATCHMENT LEGEND:

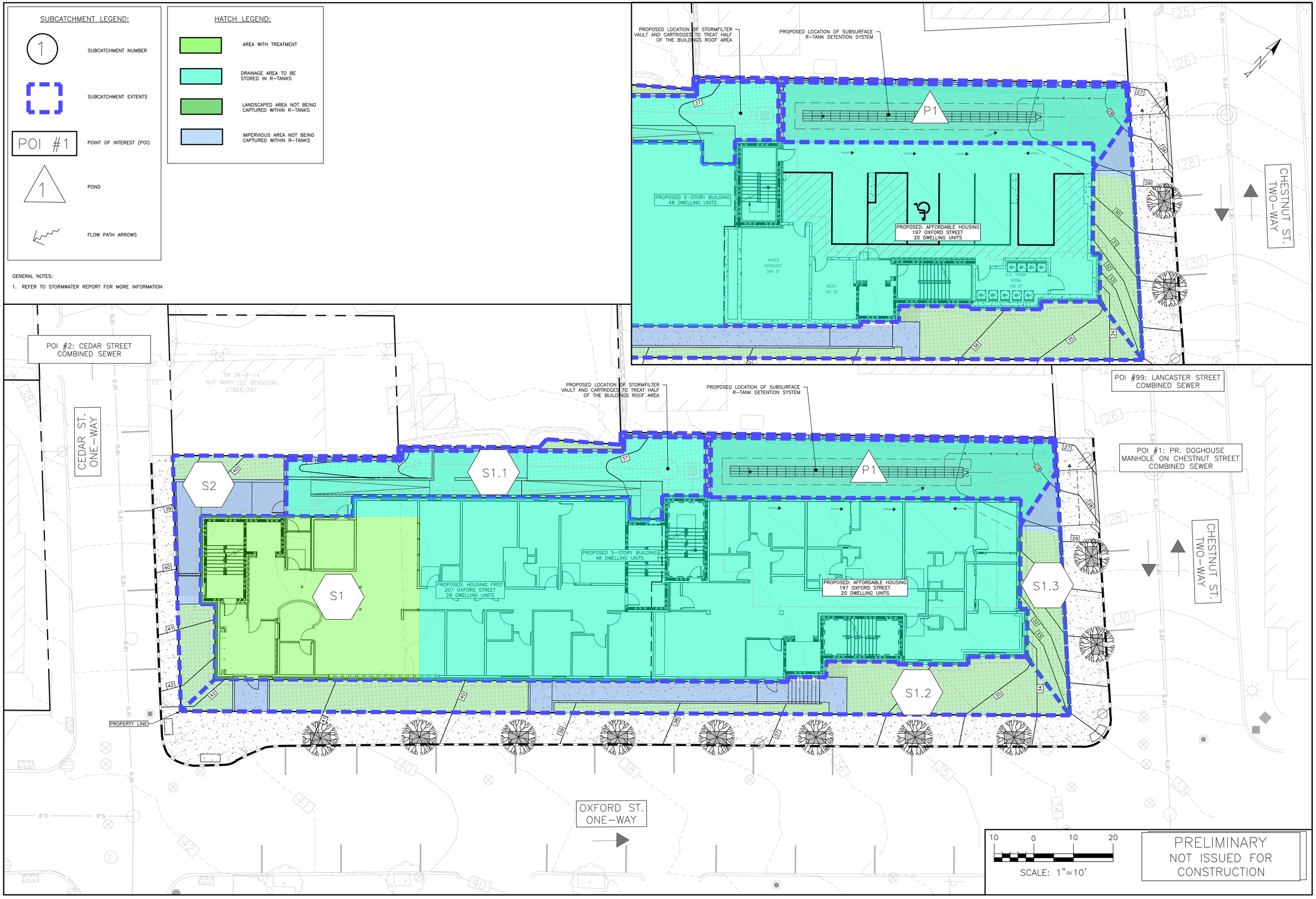
- 1 — SUBCATCHMENT NUMBER
- SUBCATCHMENT EXTENTS
- POI #1 — POINT OF INTEREST (POI)
- 1 — POND
- FLOW PATH ARROWS

HATCH LEGEND:

- AREA WITH TREATMENT
- DRAINAGE AREA TO BE STORED IN R-TANKS
- LANDSCAPED AREA NOT BEING CAPTURED WITHIN R-TANKS
- IMPERVIOUS AREA NOT BEING CAPTURED WITHIN R-TANKS

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION



ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/11/24

DRAWING NAME: POST RE-DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

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

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CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
16506
LICENSED PROFESSIONAL ENGINEER

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SECTION J

STORMWATER MANAGMENT REPORT

Attachment B: Post Development Watershed Map

PHASE 2 - 50 CEDAR STREET

LANCASTER STREET
TWO-WAY

POI #99: LANCASTER STREET
COMBINED SEWER

ELM STREET
ONE-WAY

CEDAR STREET
ONE-WAY

S2.3

S1.3

PROPOSED BUILDING:
50 CEDAR STREET
24-UNITS
(4,837 SF)

S1

PR. R-TANK SUBSURFACE
STORMWATER DETENTION SYSTEM

P1

PR. SUBSURFACE STORMFILTER
MANHOLE TO TREAT 50% OF
THE PR. BUILDINGS ROOF AREA

S1.1

S2.1

S2.2

AREA NOT ACCOUNTED FOR
IN 50 CEDAR STREET
ANALYSIS, GIVEN AREA WAS
ACCOUNTED FOR WITHIN THE
89 ELM STREET R-TANK

OHE / T / C

TM 26-B-7
N/F FRANK E. DIDONATO
DONNA E. COX
24885/320

197 OXFORD STREET LLC
39779/241
3,674 S.F. ±
0.08 ACRES ±

197 OXFORD STREET LLC
39779/239
11,550 S.F. ±
0.265 ACRES ±

TEMP. BUILDINGS
GABEZO
2-1/2 STORY WOOD FRAME
PORCH w/OVERHANG
CONC. STEPS
1 STORY BRICK
PORCH
THRESH= 38.80
CONC
GM
PLANTERS
CHAIN LINK FENCE
GUARDRAIL
GAS

SUBCATCHMENT LEGEND:

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

1 — POND

FLOW PATH ARROWS

HATCH LEGEND:

AREA WITH TREATMENT

DRAINAGE AREA TO BE STORED IN R-TANKS

LANDSCAPED AREA NOT BEING CAPTURED WITHIN R-TANKS

IMPERVIOUS AREA NOT BEING CAPTURED WITHIN R-TANKS

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

20 0 20 40

SCALE: 1" = 20'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24

DRAWING NAME: PHASE 2 – POST DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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70 CENTER STREET, ORRINGTON, MAINE 04104
PO BOX 337 (207) 775-2655

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CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
16506
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
POST

SECTION J

STORMWATER MANAGMENT REPORT

Attachment B: Post Development Watershed Map

PHASE 3 - 158 LANCASTER STREET

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 HEIGHT CALCULATION:

AVERAGE GRADE:
(13.25'+14.41'+11.69'+17.00'+22.00'+16.50')/6 = 15.81'

ROOF HEIGHT: 67.10'

BUILDING HEIGHT: 51.29'

LANCASTER ST.
TWO-WAY

POI #99: LANCASTER STREET
COMBINED SEWER

POI #1: PR. DOGHOUSE
MANHOLE ON CHESTNUT STREET
COMBINED SEWER

EX. SMH RIM: 11.20'
INV. IN: 5.02' (18")
INV. IN: 5.82' (8")
INV. IN: 5.62' (6")
INV. OUT: 4.92' (18")

APPROX. LOCATION OF EX. 18" COMBINED SEWER, SLOPE OF SEWER VARIES ALONG CHESTNUT STREET. SLOPE FROM EX. MH TO PR. DOGHOUSE MH = 1.25% BASED ON DPW "CHESTNUT STREET SEWER" PLAN, SHEET 467, DATED 2/1959

APPROX. LOCATION OF PROPOSED 6' DOGHOUSE MANHOLE TO ACCEPT SANITARY AND STORM FLOWS FROM 158 LANCASTER STREET. PR. 6" PVC SEWER LATERAL TO MATCH SPRINGLINE OF EXISTING 18" SEWER MAIN WITH INSERTA-TEE. STORM DRAIN INVERT TO BE SET 18" HIGHER THAN SEWER INVERT. CONTRACTOR TO TEST PIT AND CONFIRM INVERT OF EX. SEWER AND CONFIRM WITH CIVIL ENGINEER PRIOR TO CONSTRUCTION.
RIM: 12.00'
12" INV. IN: 7.62' (STORM DRAIN)
18" APPROX. INV. OF EX. MAIN: 5.37'
6" INV. IN: 6.25' (SEWER)

PR. R-TANK SUBSURFACE
STORMWATER DETENTION SYSTEM

PROPOSED BUILDING
158 LANCASTER STREET
BUILDING FOOTPRINT: 4,920 SF

S1.1 S1 S1.2 S2 P1

CEDAR ST.
ONE-WAY

CHESTNUT ST.
TWO-WAY

HALL COURT

10.00'

SUBCATCHMENT LEGEND:

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

1 — POND

FLOW PATH ARROWS

LEGEND:

PROPOSED AREA TO BE STORED IN R-TANK SUBSURFACE DETENTION SYSTEM:

PROPOSED GREEN/LANDSCAPED SPACE TO BE STORED IN R-TANKS:

PROPOSED IMPERVIOUS AREAS:

PROPOSED GREEN/ LANDSCAPED SPACE:

GENERAL NOTES:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	9/30/24

DRAWING NAME: PHASE 3: POST DEVELOPMENT WATERSHED MAP

PROJECT NAME: PHASE 3 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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

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1212_AE_CIVIL

JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

DRAWING NO.
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SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: HydroCAD Calculations

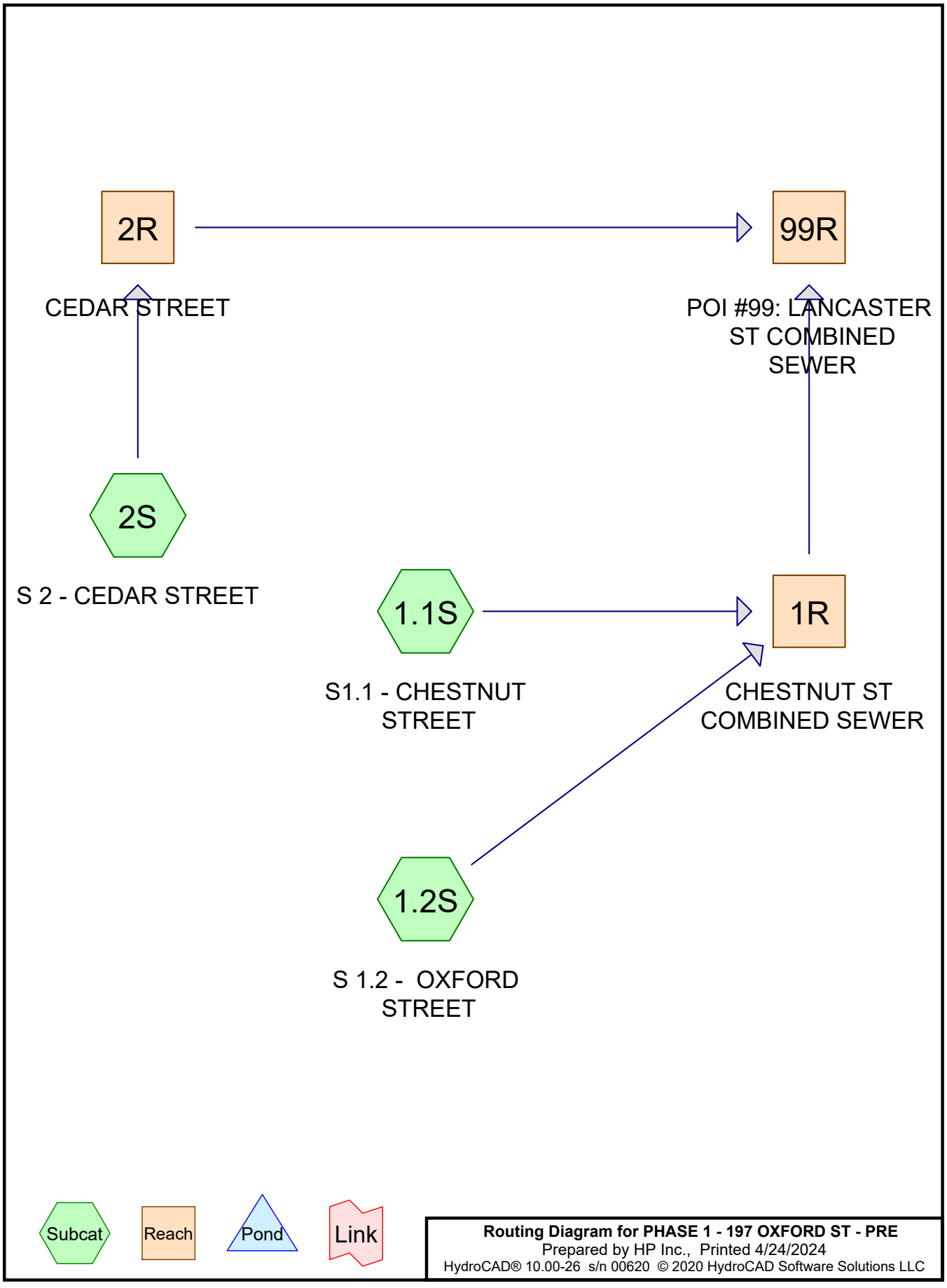
PHASE 1 - 197 OXFORD STREET

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Pre Development HydroCAD

PHASE 1 - 197 OXFORD STREET



Routing Diagram for PHASE 1 - 197 OXFORD ST - PRE
Prepared by HP Inc., Printed 4/24/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.121	68	<50% Grass cover, Poor, HSG A (1.1S, 2S)
0.016	48	Brush, Poor, HSG A (1.1S)
0.059	96	Gravel surface, HSG A (1.2S, 2S)
0.135	98	Roof (1.1S, 1.2S, 2S)
0.020	98	Unconnected pavement, HSG A (1.1S, 1.2S, 2S)
0.350	**85**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.216	HSG A	1.1S, 1.2S, 2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.135	Other	1.1S, 1.2S, 2S
0.350		**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
0.121	0.000	0.000	0.000	0.000	0.121	<50% Grass cover, Poor	1.1S, 2S
0.016	0.000	0.000	0.000	0.000	0.016	Brush, Poor	1.1S
0.059	0.000	0.000	0.000	0.000	0.059	Gravel surface	1.2S, 2S
0.000	0.000	0.000	0.000	0.135	0.135	Roof	1.1S, 1.2S, 2S
0.020	0.000	0.000	0.000	0.000	0.020	Unconnected pavement	1.1S, 1.2S, 2S
0.216	**0.000**	**0.000**	**0.000**	**0.135**	**0.350**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S1.1 - CHESTNUT Runoff Area=7,971 sf 36.57% Impervious Runoff Depth=1.14"
Tc=6.0 min CN=77 Runoff=0.24 cfs 0.017 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=5,013 sf 69.14% Impervious Runoff Depth=2.76"
Tc=6.0 min CN=97 Runoff=0.34 cfs 0.026 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=2,269 sf 15.16% Impervious Runoff Depth=1.67"
Tc=6.0 min CN=85 Runoff=0.10 cfs 0.007 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=0.58 cfs 0.044 af
Outflow=0.58 cfs 0.044 af

Reach 2R: CEDAR STREET Inflow=0.10 cfs 0.007 af
Outflow=0.10 cfs 0.007 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=0.68 cfs 0.051 af
Outflow=0.68 cfs 0.051 af

Total Runoff Area = 0.350 ac Runoff Volume = 0.051 af Average Runoff Depth = 1.75"
55.91% Pervious = 0.196 ac 44.09% Impervious = 0.154 ac

Summary for Subcatchment 1.1S: S1.1 - CHESTNUT STREET

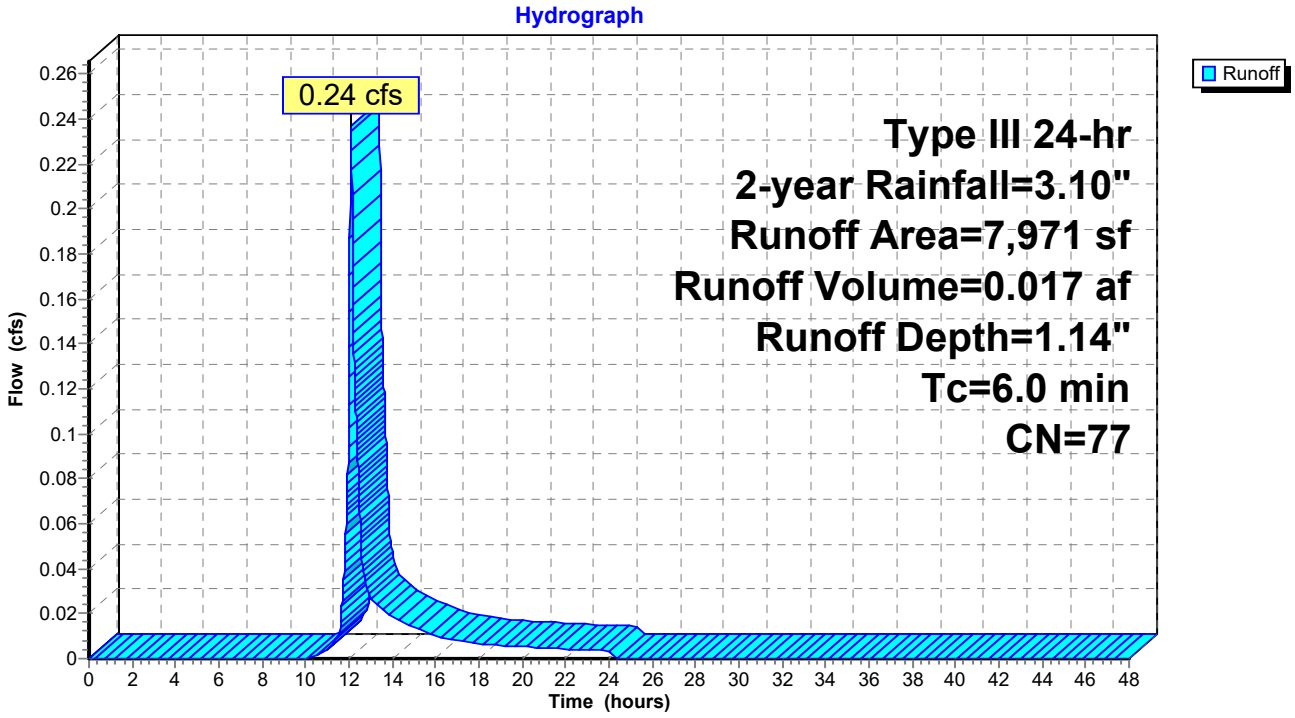
Runoff = 0.24 cfs @ 12.09 hrs, Volume= 0.017 af, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	2,308	98	Roof
	607	98	Unconnected pavement, HSG A
	1,344	68	<50% Grass cover, Poor, HSG A
	690	48	Brush, Poor, HSG A
	3,022	68	<50% Grass cover, Poor, HSG A
	7,971	77	Weighted Average
	5,056		63.43% Pervious Area
	2,915		36.57% Impervious Area
	607		20.82% Unconnected

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

Subcatchment 1.1S: S1.1 - CHESTNUT STREET



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

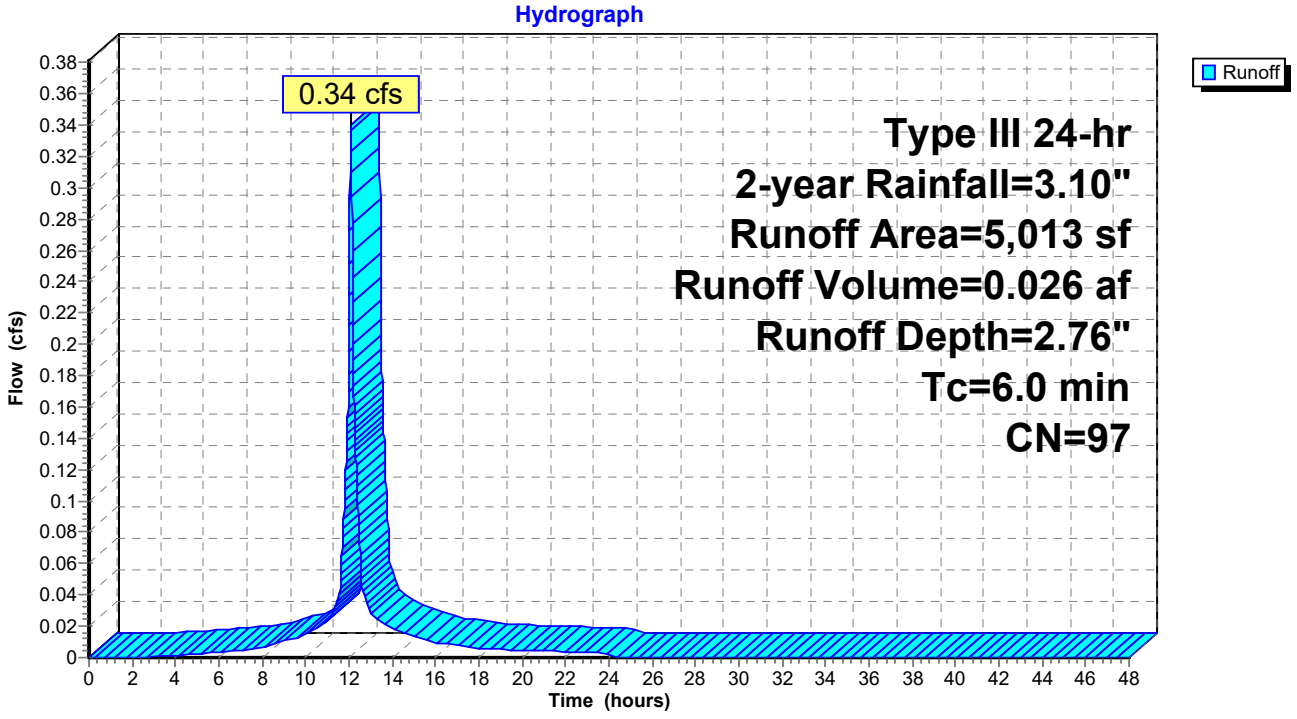
Runoff = 0.34 cfs @ 12.08 hrs, Volume= 0.026 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	3,244	98	Roof
	222	98	Unconnected pavement, HSG A
	1,547	96	Gravel surface, HSG A
	5,013	97	Weighted Average
	1,547		30.86% Pervious Area
	3,466		69.14% Impervious Area
	222		6.41% Unconnected

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

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 2S: S 2 - CEDAR STREET

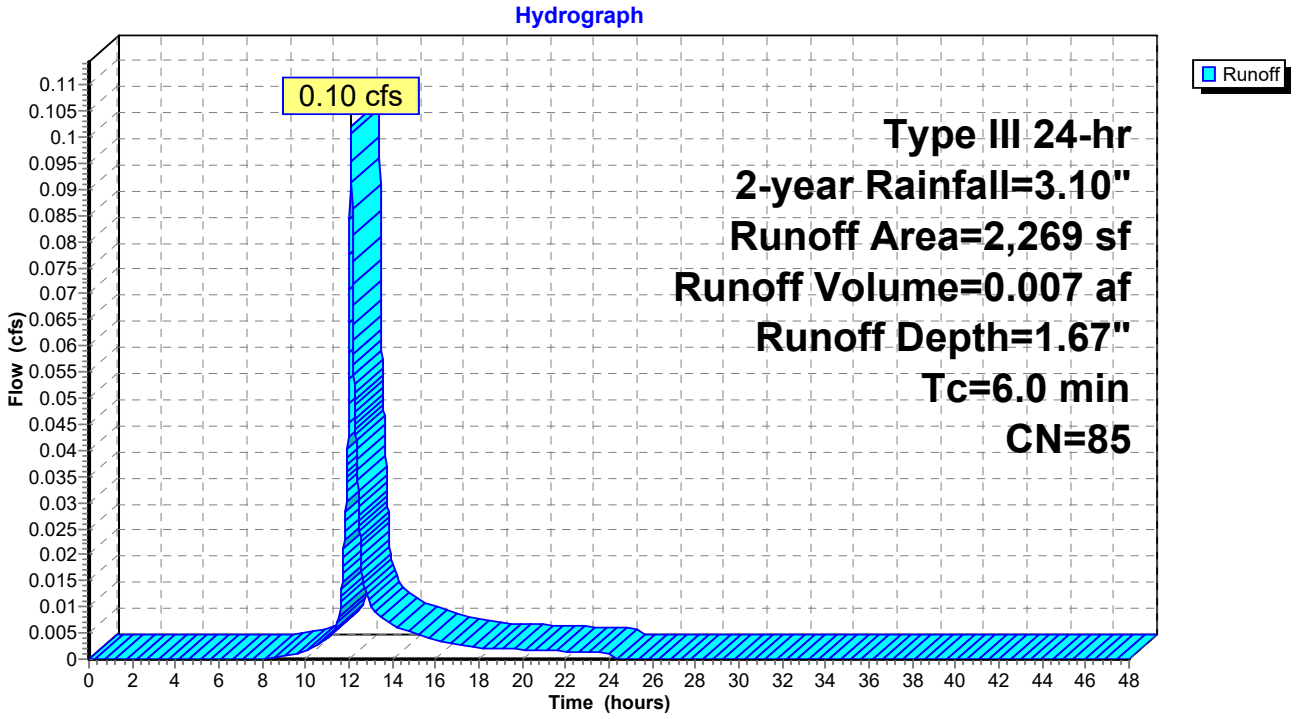
Runoff = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Depth= 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	311	98	Roof
	33	98	Unconnected pavement, HSG A
	904	68	<50% Grass cover, Poor, HSG A
	1,021	96	Gravel surface, HSG A
	2,269	85	Weighted Average
	1,925		84.84% Pervious Area
	344		15.16% Impervious Area
	33		9.59% Unconnected

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

Subcatchment 2S: S 2 - CEDAR STREET

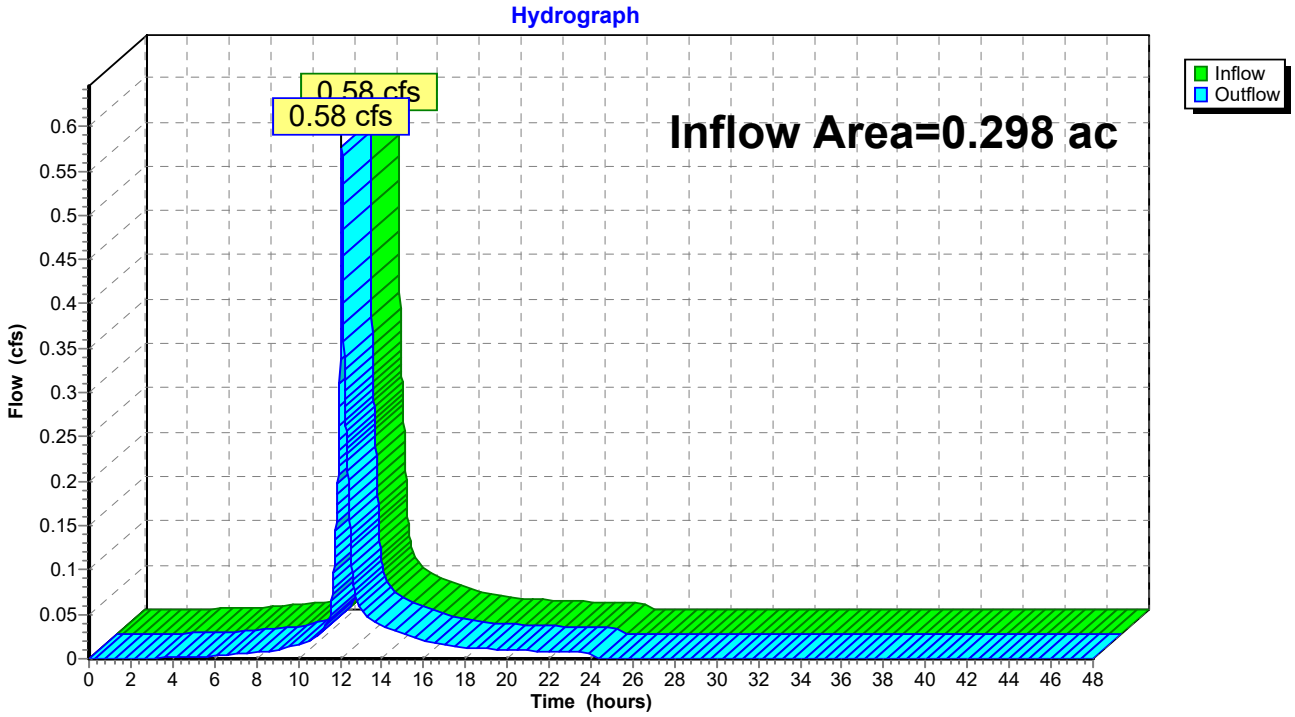


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.298 ac, 49.15% Impervious, Inflow Depth = 1.77" for 2-year event
Inflow = 0.58 cfs @ 12.09 hrs, Volume= 0.044 af
Outflow = 0.58 cfs @ 12.09 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

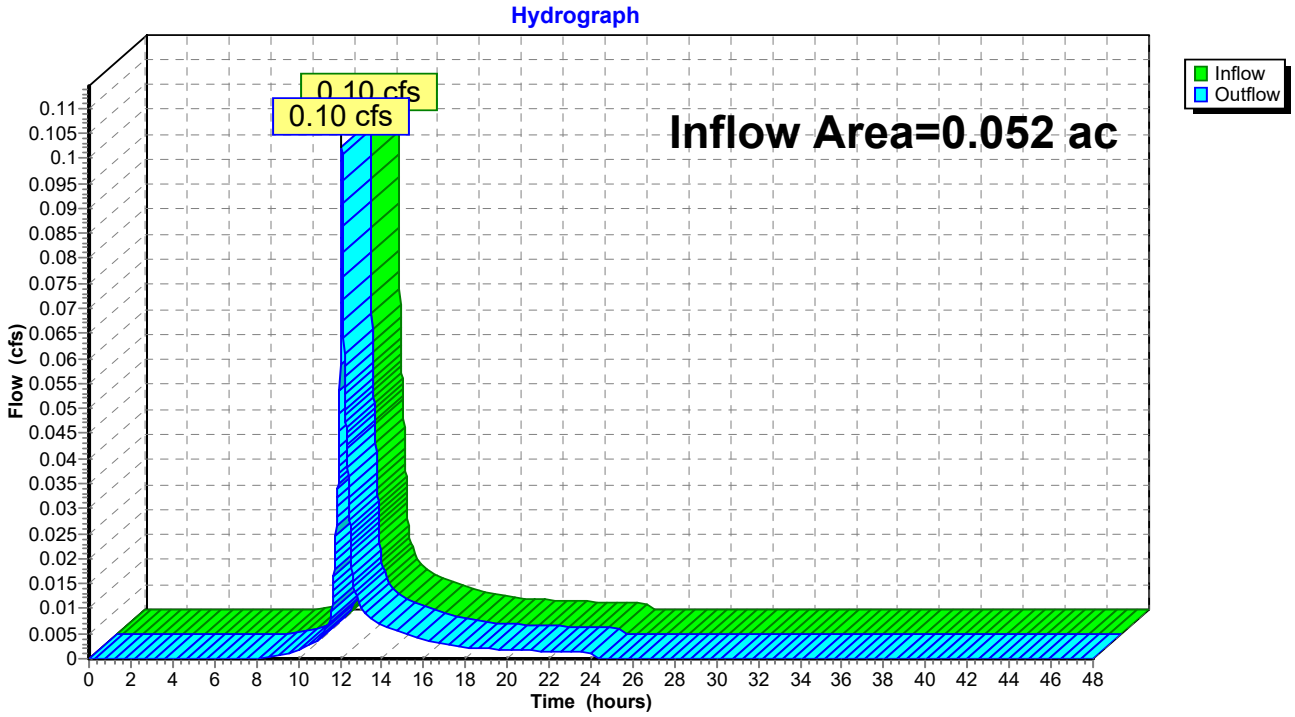


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.052 ac, 15.16% Impervious, Inflow Depth = 1.67" for 2-year event
Inflow = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af
Outflow = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET

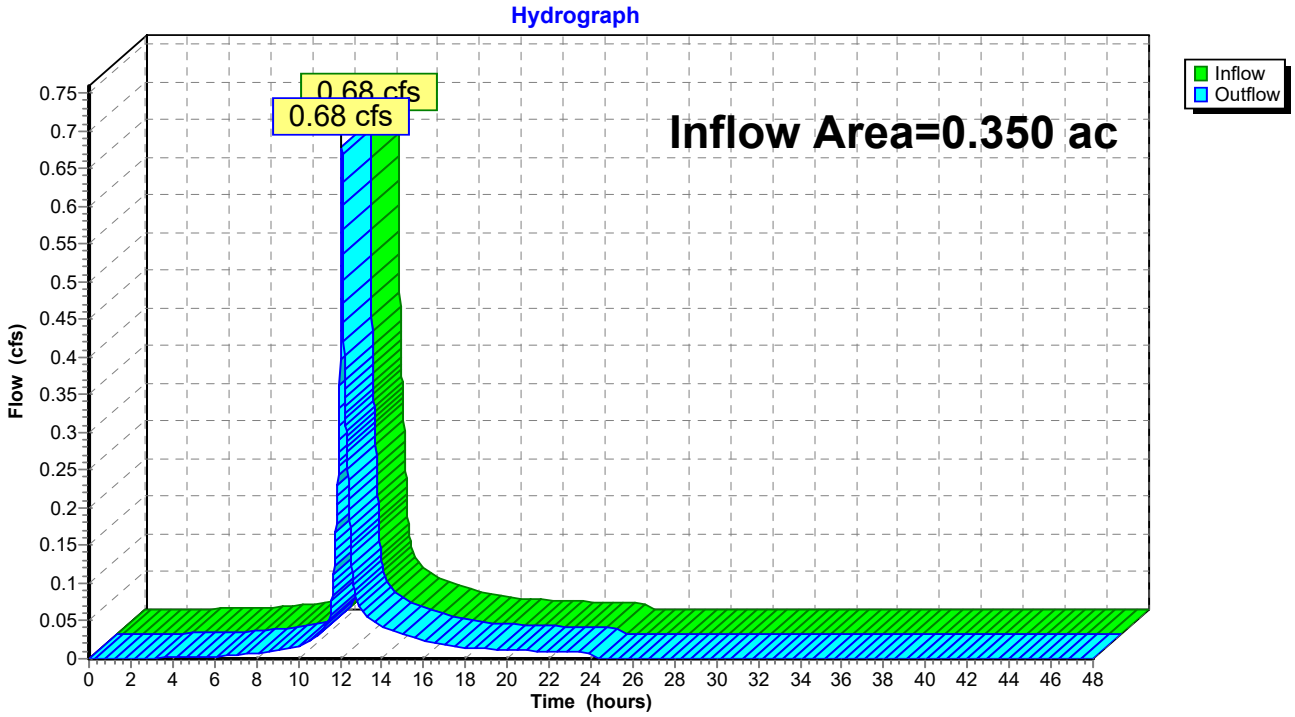


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.350 ac, 44.09% Impervious, Inflow Depth = 1.75" for 2-year event
Inflow = 0.68 cfs @ 12.09 hrs, Volume= 0.051 af
Outflow = 0.68 cfs @ 12.09 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S1.1 - CHESTNUT Runoff Area=7,971 sf 36.57% Impervious Runoff Depth=2.29"
Tc=6.0 min CN=77 Runoff=0.49 cfs 0.035 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=5,013 sf 69.14% Impervious Runoff Depth=4.25"
Tc=6.0 min CN=97 Runoff=0.51 cfs 0.041 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=2,269 sf 15.16% Impervious Runoff Depth=3.00"
Tc=6.0 min CN=85 Runoff=0.18 cfs 0.013 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.00 cfs 0.076 af
Outflow=1.00 cfs 0.076 af

Reach 2R: CEDAR STREET Inflow=0.18 cfs 0.013 af
Outflow=0.18 cfs 0.013 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.19 cfs 0.089 af
Outflow=1.19 cfs 0.089 af

Total Runoff Area = 0.350 ac Runoff Volume = 0.089 af Average Runoff Depth = 3.04"
55.91% Pervious = 0.196 ac 44.09% Impervious = 0.154 ac

Summary for Subcatchment 1.1S: S1.1 - CHESTNUT STREET

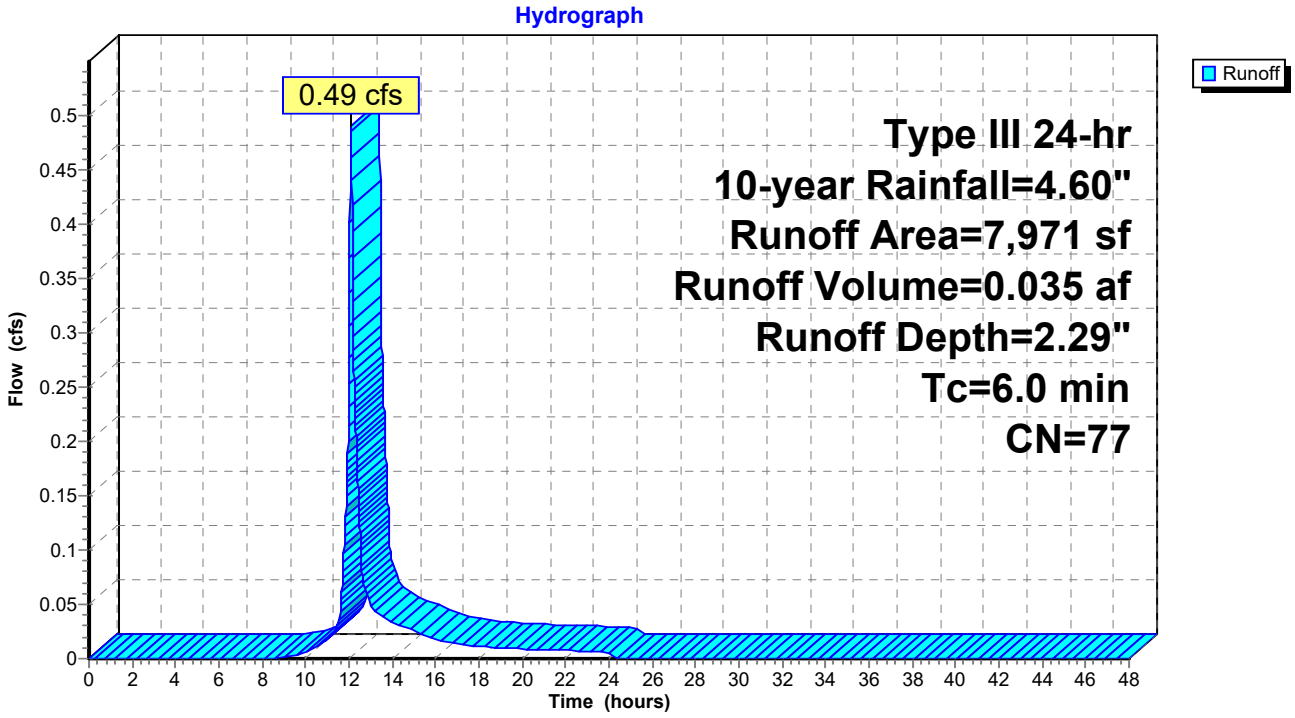
Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	2,308	98	Roof
	607	98	Unconnected pavement, HSG A
	1,344	68	<50% Grass cover, Poor, HSG A
	690	48	Brush, Poor, HSG A
	3,022	68	<50% Grass cover, Poor, HSG A
	7,971	77	Weighted Average
	5,056		63.43% Pervious Area
	2,915		36.57% Impervious Area
	607		20.82% Unconnected

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

Subcatchment 1.1S: S1.1 - CHESTNUT STREET



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

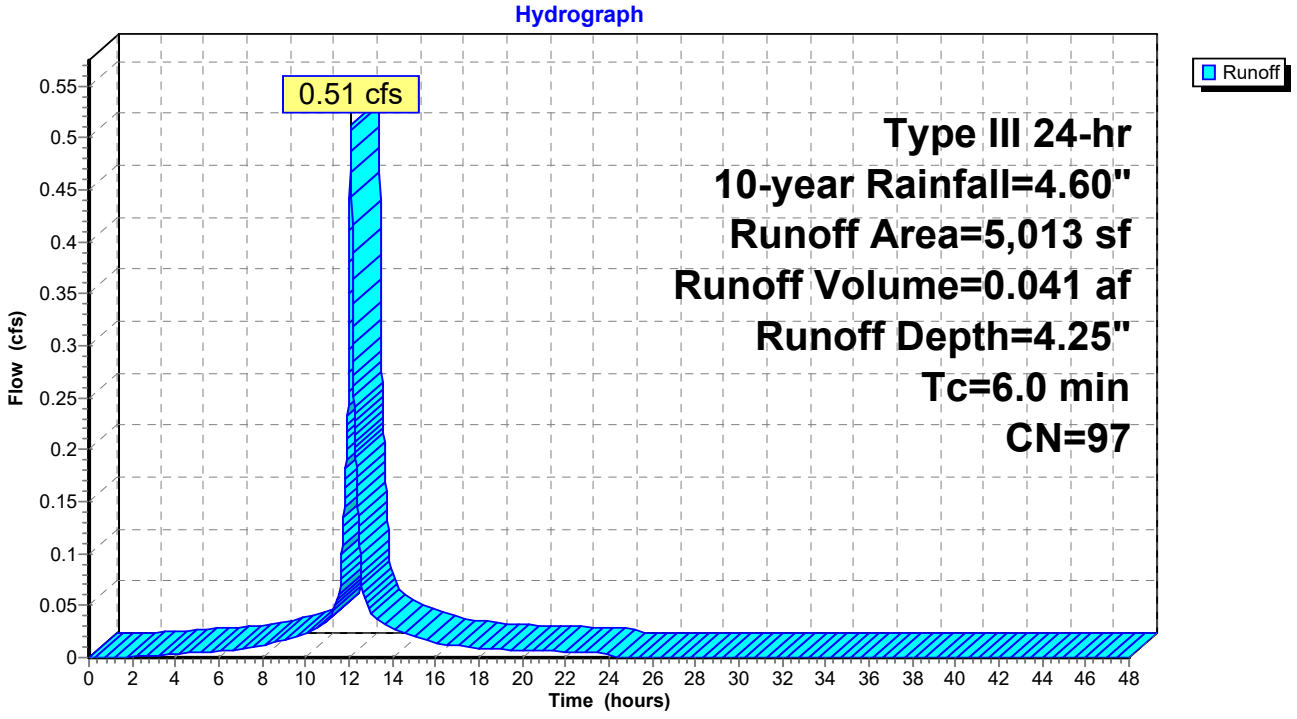
Runoff = 0.51 cfs @ 12.08 hrs, Volume= 0.041 af, Depth= 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	3,244	98	Roof
	222	98	Unconnected pavement, HSG A
	1,547	96	Gravel surface, HSG A
	5,013	97	Weighted Average
	1,547		30.86% Pervious Area
	3,466		69.14% Impervious Area
	222		6.41% Unconnected

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

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 2S: S 2 - CEDAR STREET

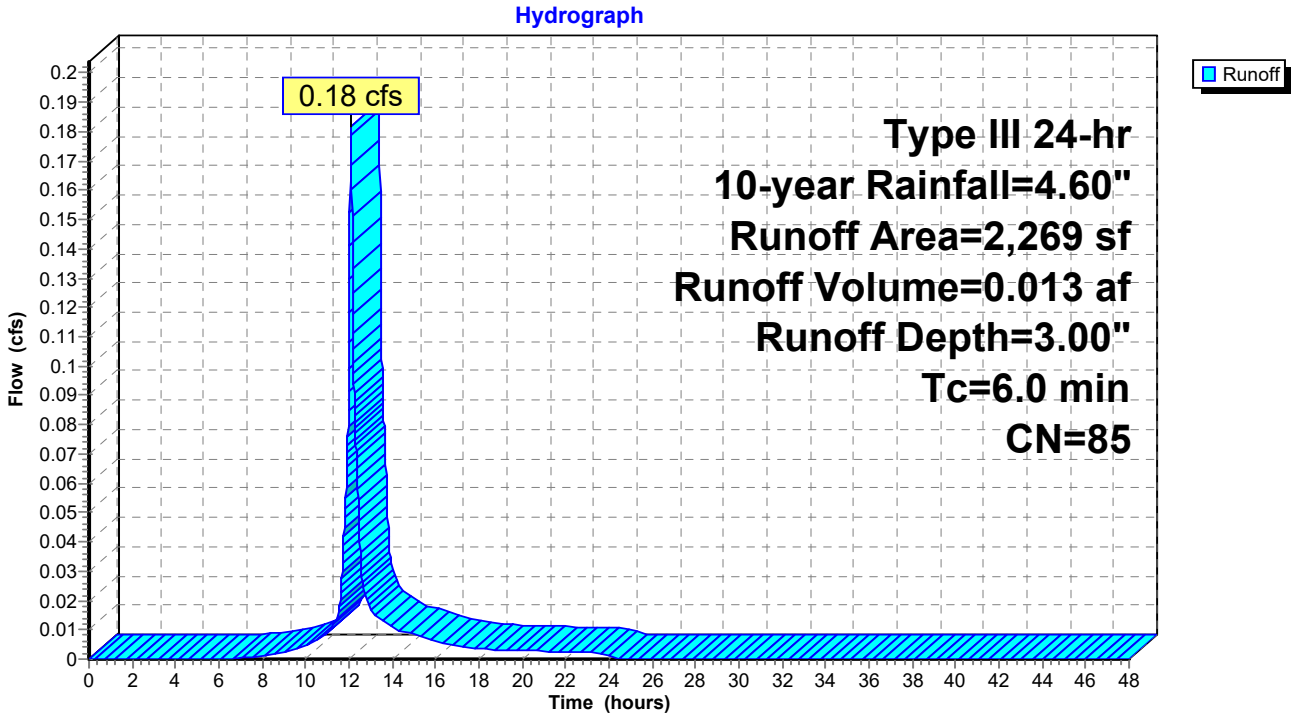
Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.013 af, Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	311	98	Roof
	33	98	Unconnected pavement, HSG A
	904	68	<50% Grass cover, Poor, HSG A
	1,021	96	Gravel surface, HSG A
	2,269	85	Weighted Average
	1,925		84.84% Pervious Area
	344		15.16% Impervious Area
	33		9.59% Unconnected

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

Subcatchment 2S: S 2 - CEDAR STREET

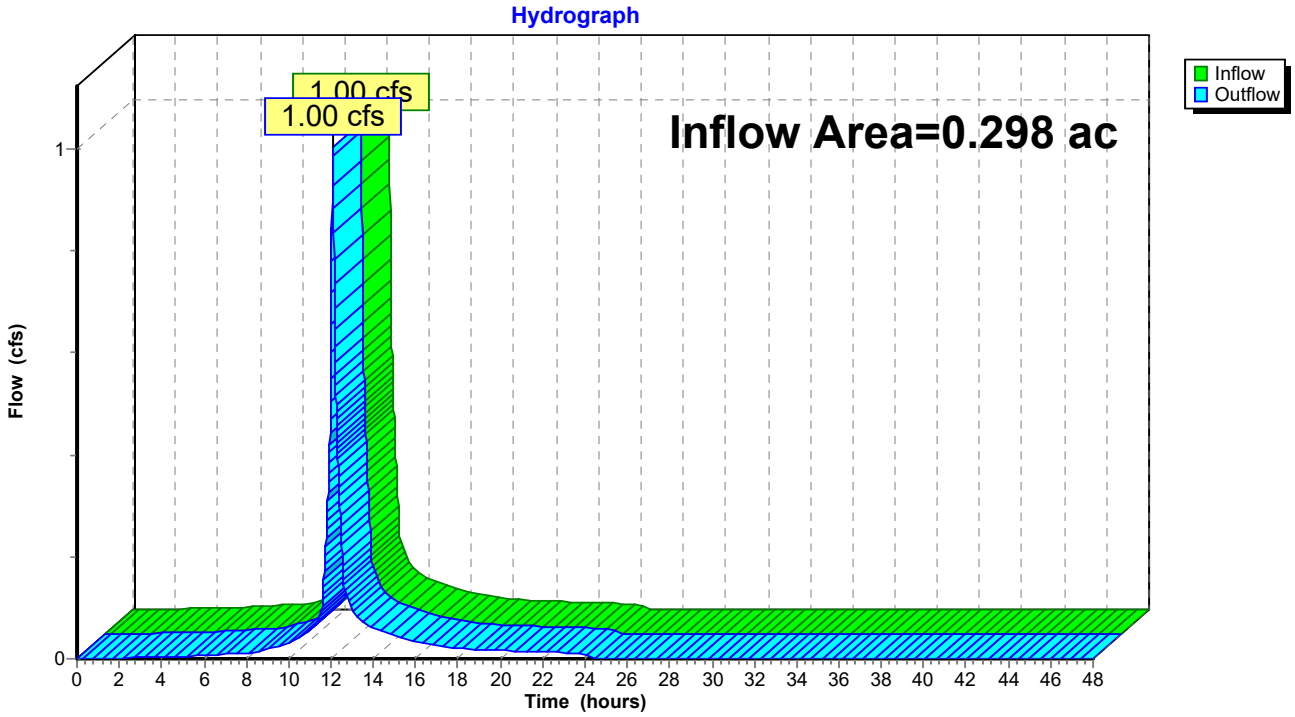


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.298 ac, 49.15% Impervious, Inflow Depth = 3.05" for 10-year event
Inflow = 1.00 cfs @ 12.09 hrs, Volume= 0.076 af
Outflow = 1.00 cfs @ 12.09 hrs, Volume= 0.076 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

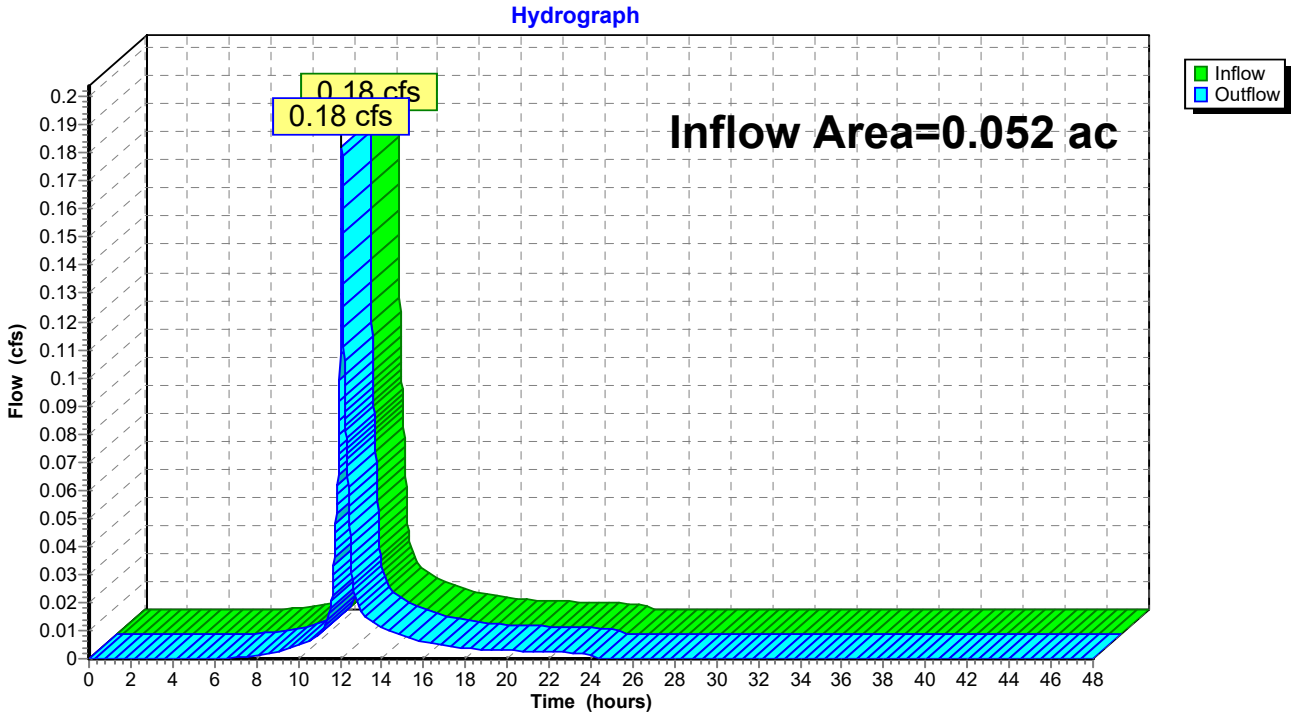


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.052 ac, 15.16% Impervious, Inflow Depth = 3.00" for 10-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= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET

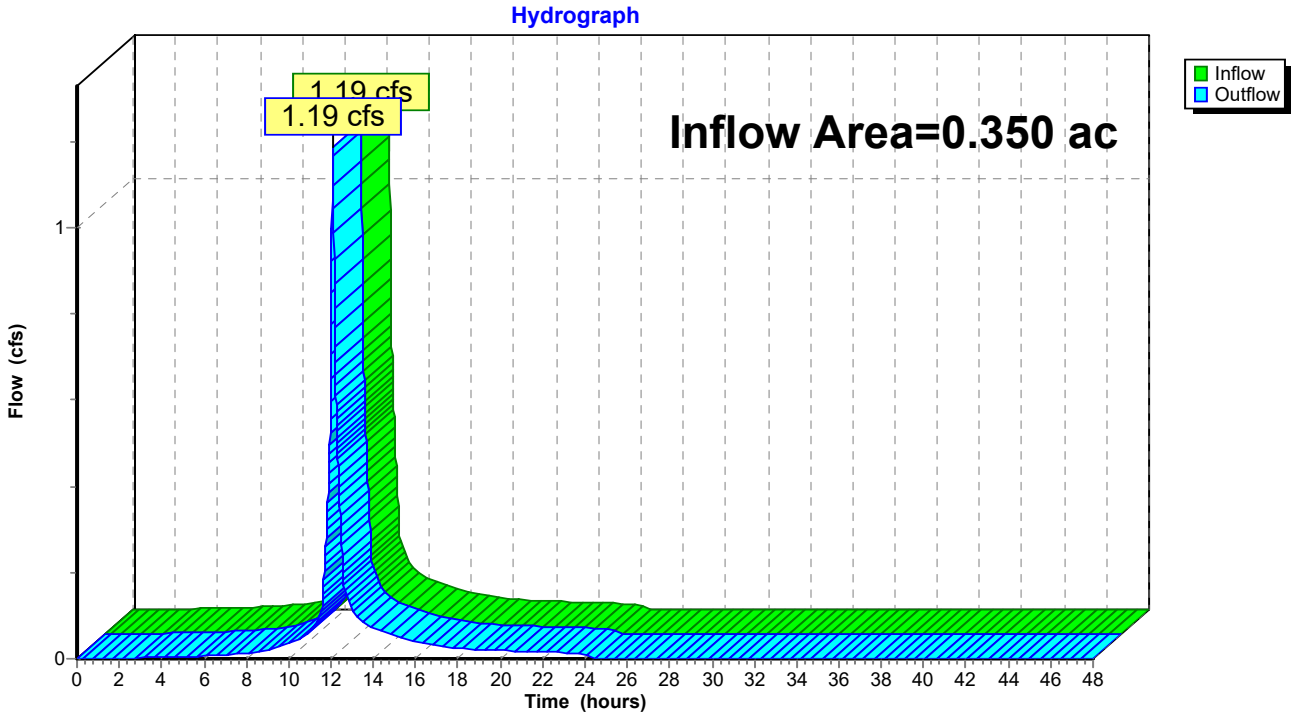


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.350 ac, 44.09% Impervious, Inflow Depth = 3.04" for 10-year event
Inflow = 1.19 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 1.19 cfs @ 12.09 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S1.1 - CHESTNUT Runoff Area=7,971 sf 36.57% Impervious Runoff Depth=3.31"
Tc=6.0 min CN=77 Runoff=0.71 cfs 0.050 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=5,013 sf 69.14% Impervious Runoff Depth=5.44"
Tc=6.0 min CN=97 Runoff=0.65 cfs 0.052 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=2,269 sf 15.16% Impervious Runoff Depth=4.11"
Tc=6.0 min CN=85 Runoff=0.25 cfs 0.018 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.36 cfs 0.103 af
Outflow=1.36 cfs 0.103 af

Reach 2R: CEDAR STREET Inflow=0.25 cfs 0.018 af
Outflow=0.25 cfs 0.018 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.61 cfs 0.120 af
Outflow=1.61 cfs 0.120 af

Total Runoff Area = 0.350 ac Runoff Volume = 0.120 af Average Runoff Depth = 4.13"
55.91% Pervious = 0.196 ac 44.09% Impervious = 0.154 ac

Summary for Subcatchment 1.1S: S1.1 - CHESTNUT STREET

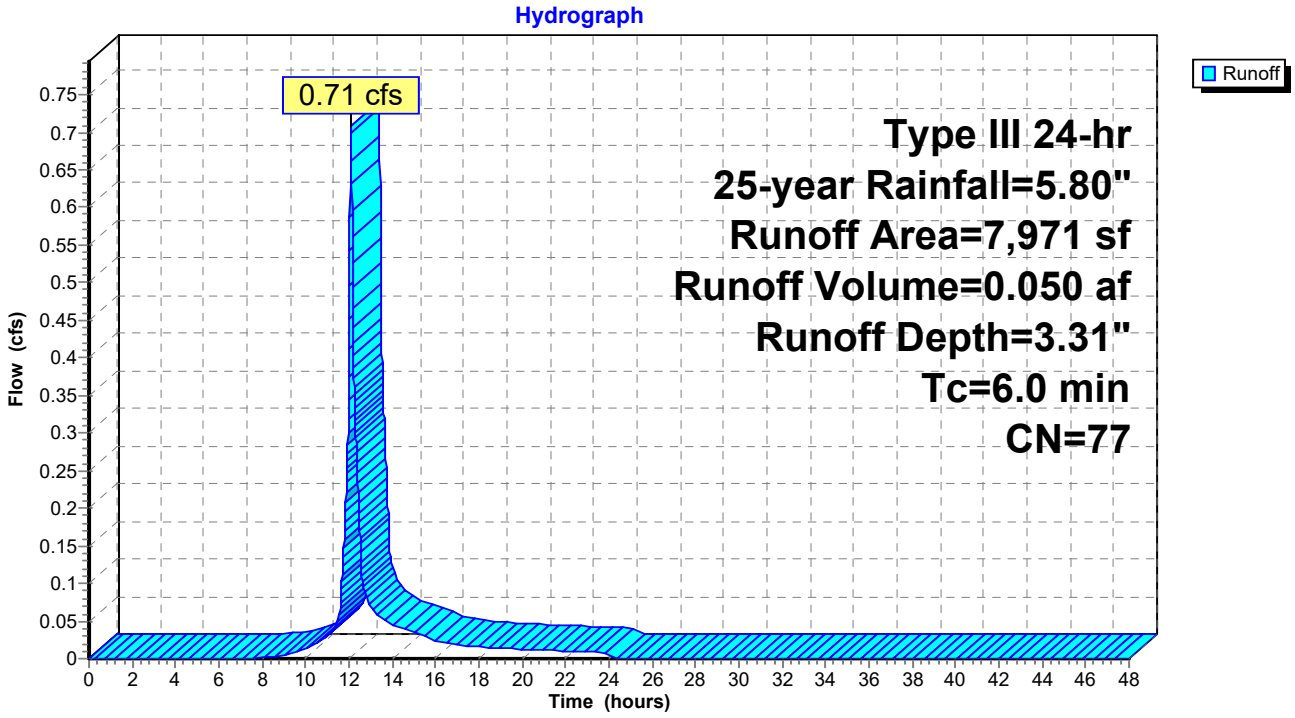
Runoff = 0.71 cfs @ 12.09 hrs, Volume= 0.050 af, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	2,308	98	Roof
	607	98	Unconnected pavement, HSG A
	1,344	68	<50% Grass cover, Poor, HSG A
	690	48	Brush, Poor, HSG A
	3,022	68	<50% Grass cover, Poor, HSG A
	7,971	77	Weighted Average
	5,056		63.43% Pervious Area
	2,915		36.57% Impervious Area
	607		20.82% Unconnected

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

Subcatchment 1.1S: S1.1 - CHESTNUT STREET



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

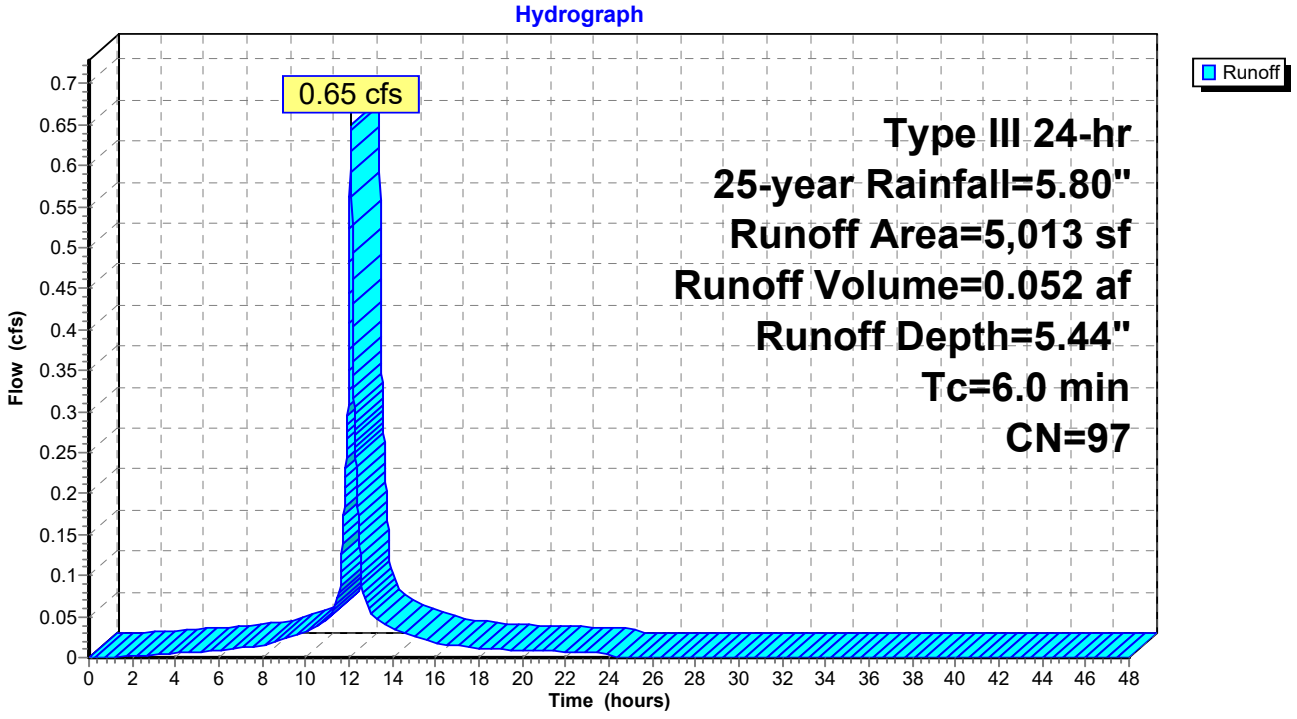
Runoff = 0.65 cfs @ 12.08 hrs, Volume= 0.052 af, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	3,244	98	Roof
	222	98	Unconnected pavement, HSG A
	1,547	96	Gravel surface, HSG A
	5,013	97	Weighted Average
	1,547		30.86% Pervious Area
	3,466		69.14% Impervious Area
	222		6.41% Unconnected

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

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 2S: S 2 - CEDAR STREET

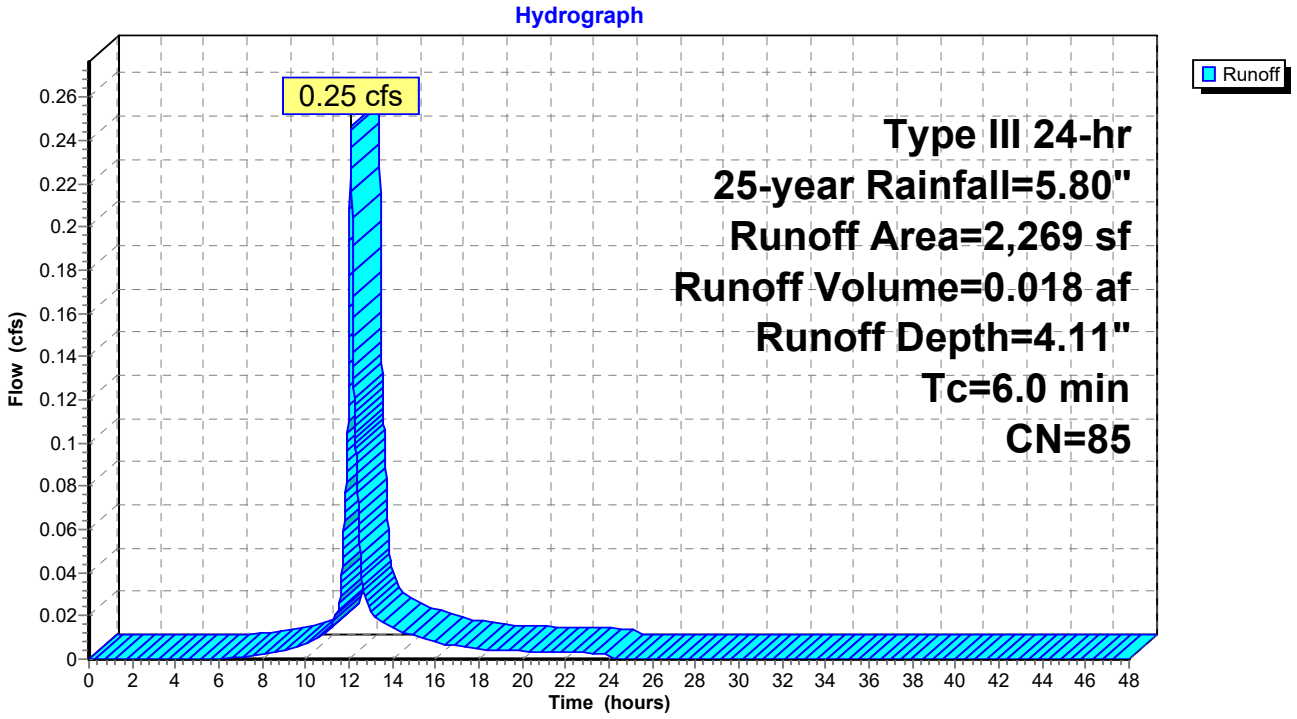
Runoff = 0.25 cfs @ 12.09 hrs, Volume= 0.018 af, Depth= 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	311	98	Roof
	33	98	Unconnected pavement, HSG A
	904	68	<50% Grass cover, Poor, HSG A
	1,021	96	Gravel surface, HSG A
	2,269	85	Weighted Average
	1,925		84.84% Pervious Area
	344		15.16% Impervious Area
	33		9.59% Unconnected

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

Subcatchment 2S: S 2 - CEDAR STREET

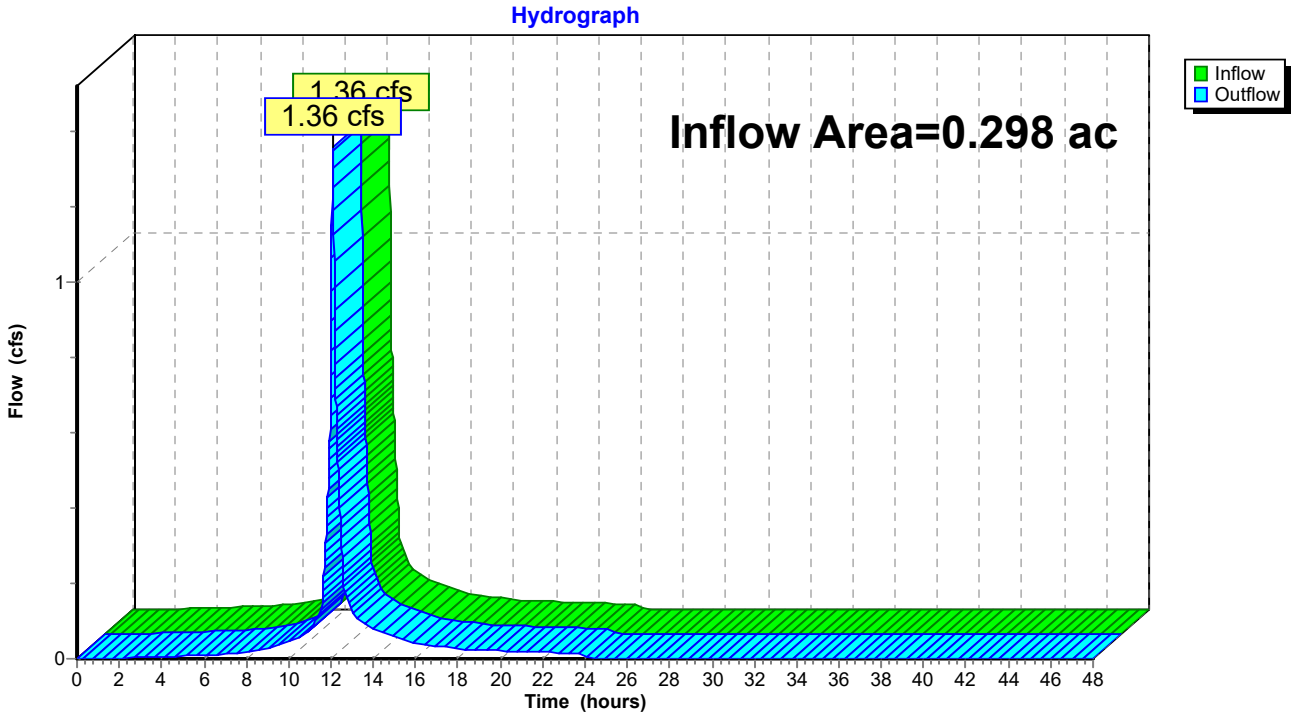


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.298 ac, 49.15% Impervious, Inflow Depth = 4.13" for 25-year event
Inflow = 1.36 cfs @ 12.09 hrs, Volume= 0.103 af
Outflow = 1.36 cfs @ 12.09 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

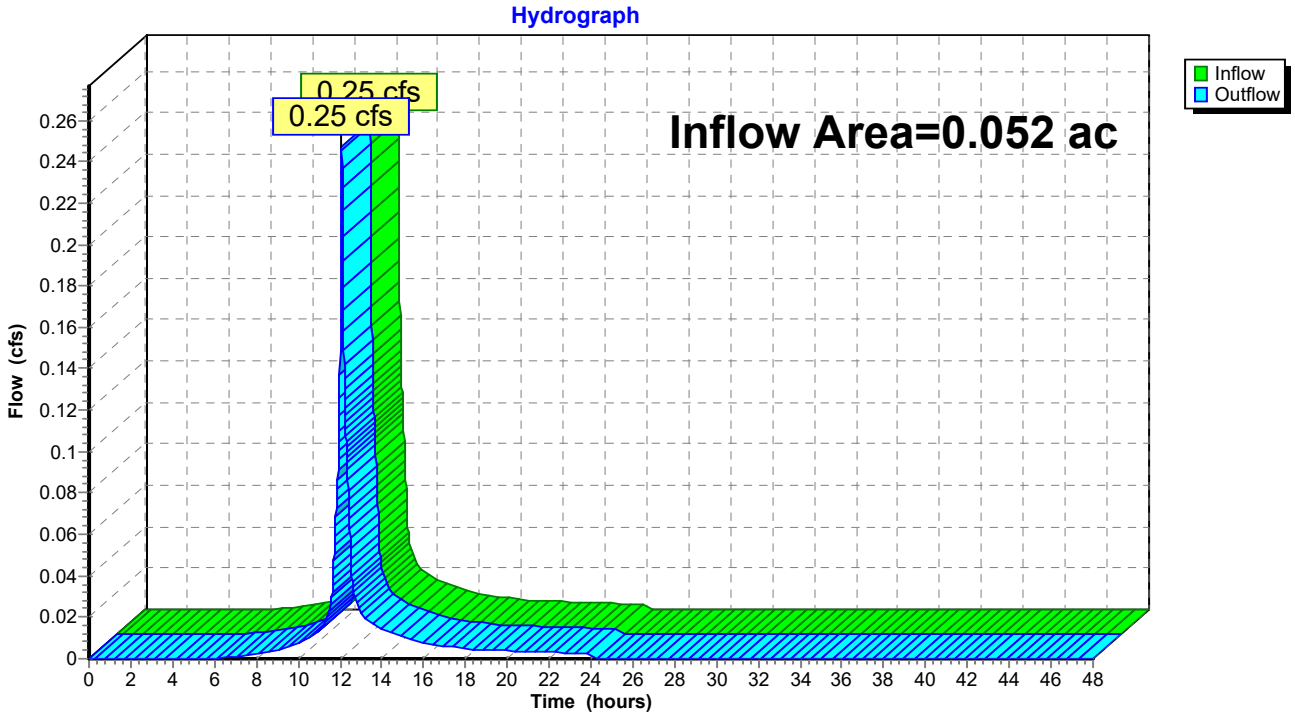


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.052 ac, 15.16% Impervious, Inflow Depth = 4.11" for 25-year event
Inflow = 0.25 cfs @ 12.09 hrs, Volume= 0.018 af
Outflow = 0.25 cfs @ 12.09 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET

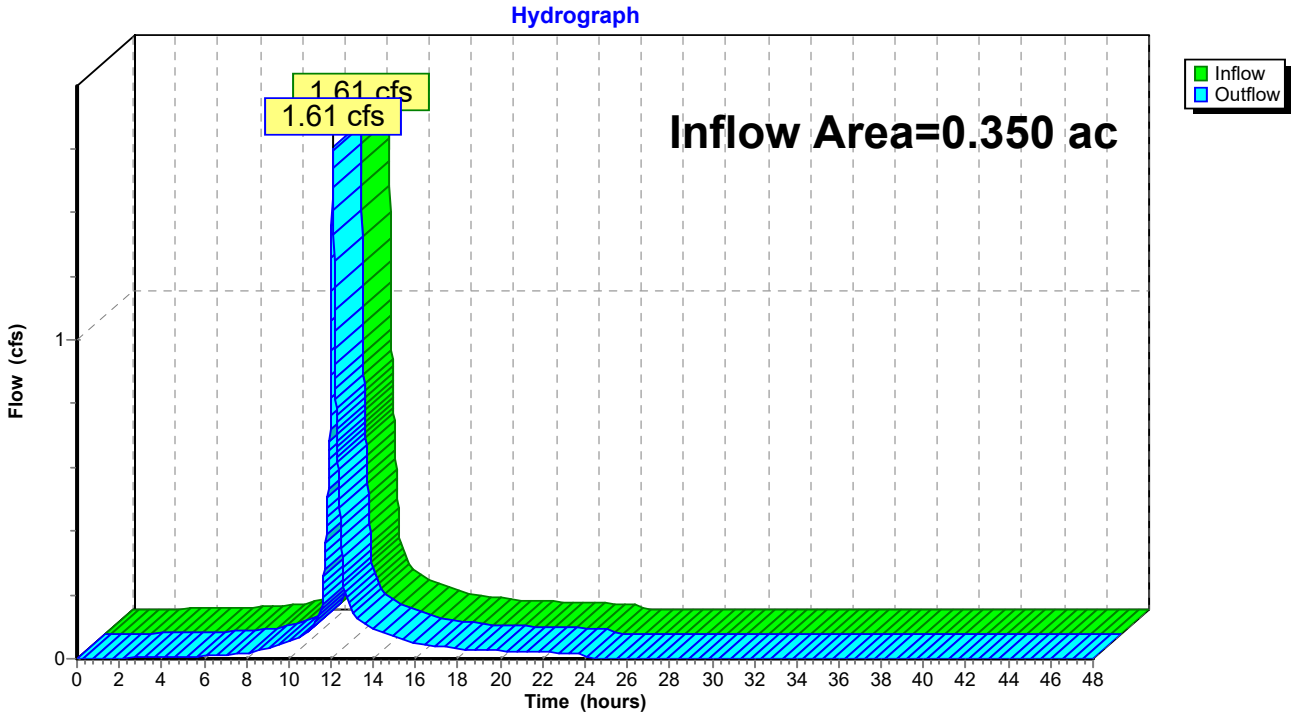


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.350 ac, 44.09% Impervious, Inflow Depth = 4.13" for 25-year event
Inflow = 1.61 cfs @ 12.09 hrs, Volume= 0.120 af
Outflow = 1.61 cfs @ 12.09 hrs, Volume= 0.120 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

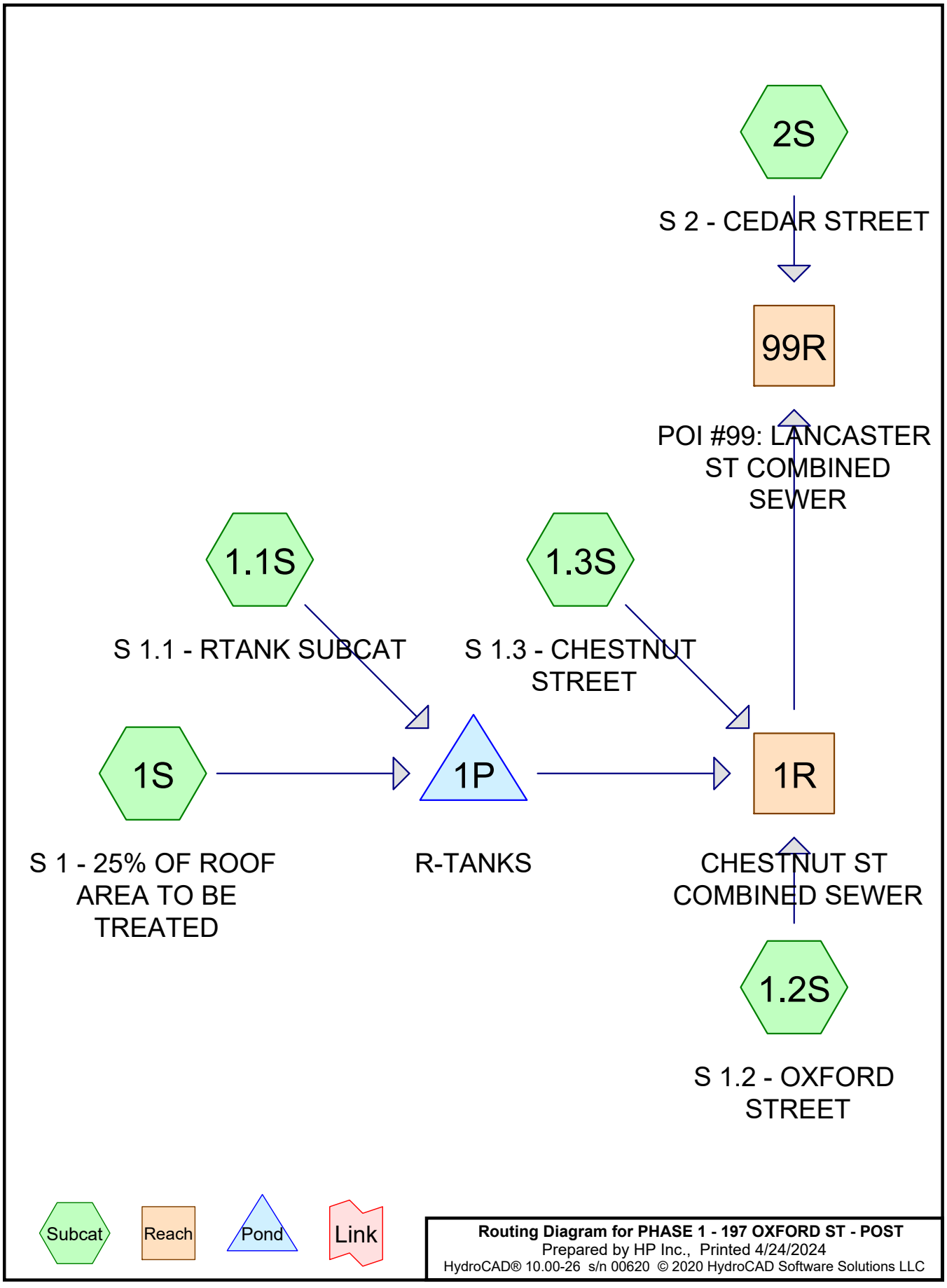


SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Post Development HydroCAD

PHASE 1 - 197 OXFORD STREET


2S
S 2 - CEDAR STREET
99R
POI #99: LANCASTER ST COMBINED SEWER
1.1S
S 1.1 - RTANK SUBCAT
1.3S
S 1.3 - CHESTNUT STREET
1S
S 1 - 25% OF ROOF AREA TO BE TREATED
1P
R-TANKS
1R
CHESTNUT ST COMBINED SEWER
1.2S
S 1.2 - OXFORD STREET
Subcat
Reach
Pond
Link
Routing Diagram for PHASE 1 - 197 OXFORD ST - POST
Prepared by HP Inc., Printed 4/24/2024
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.059	39	>75% Grass cover, Good, HSG A (1.1S, 1.2S, 2S)
0.068	98	Paved parking, HSG A (1.1S, 1.2S, 1.3S)
0.155	98	REMAINING ROOF AREA (1.1S)
0.052	98	Roofs, HSG A (1S)
0.015	98	Unconnected pavement, HSG A (1.3S, 2S)
0.349	**88**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.194	HSG A	1.1S, 1.2S, 1.3S, 1S, 2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.155	Other	1.1S
0.349		**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
0.059	0.000	0.000	0.000	0.000	0.059	>75% Grass cover, Good	1.1S, 1.2S, 2S
0.068	0.000	0.000	0.000	0.000	0.068	Paved parking	1.1S, 1.2S, 1.3S
0.000	0.000	0.000	0.000	0.155	0.155	REMAINING ROOF AREA	1.1S
0.052	0.000	0.000	0.000	0.000	0.052	Roofs	1S
0.015	0.000	0.000	0.000	0.000	0.015	Unconnected pavement	1.3S, 2S
0.194	**0.000**	**0.000**	**0.000**	**0.155**	**0.349**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S 1.1 - RTANK SUBCAT Runoff Area=9,399 sf 93.32% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=94 Runoff=0.59 cfs 0.044 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=2,048 sf 27.15% Impervious Runoff Depth=0.22"
Tc=6.0 min CN=55 Runoff=0.00 cfs 0.001 af

Subcatchment 1.3S: S 1.3 - CHESTNUT Runoff Area=589 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.04 cfs 0.003 af

Subcatchment 1S: S 1 - 25% OF ROOF Runoff Area=2,253 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.16 cfs 0.012 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=920 sf 49.24% Impervious Runoff Depth=0.68"
Tc=6.0 min CN=68 Runoff=0.01 cfs 0.001 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=0.49 cfs 0.060 af
Outflow=0.49 cfs 0.060 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=0.50 cfs 0.061 af
Outflow=0.50 cfs 0.061 af

Pond 1P: R-TANKS Peak Elev=26.08' Storage=856 cf Inflow=0.75 cfs 0.056 af
Outflow=0.46 cfs 0.055 af

Total Runoff Area = 0.349 ac Runoff Volume = 0.062 af Average Runoff Depth = 2.12"
17.01% Pervious = 0.059 ac 82.99% Impervious = 0.290 ac

Summary for Subcatchment 1.1S: S 1.1 - RTANK SUBCAT

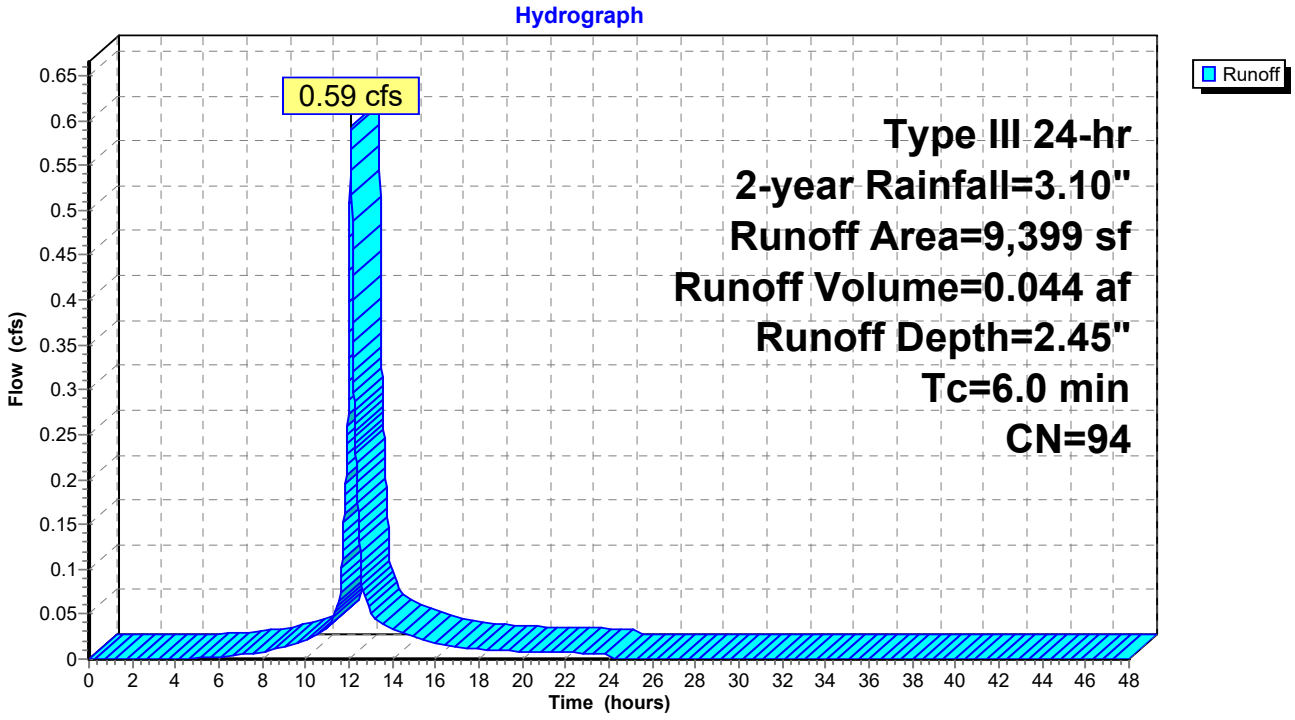
Runoff = 0.59 cfs @ 12.08 hrs, Volume= 0.044 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	2,011	98	Paved parking, HSG A
	628	39	>75% Grass cover, Good, HSG A
*	6,760	98	REMAINING ROOF AREA
	9,399	94	Weighted Average
	628	39	6.68% Pervious Area
	8,771	98	93.32% Impervious Area

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

Subcatchment 1.1S: S 1.1 - RTANK SUBCAT



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

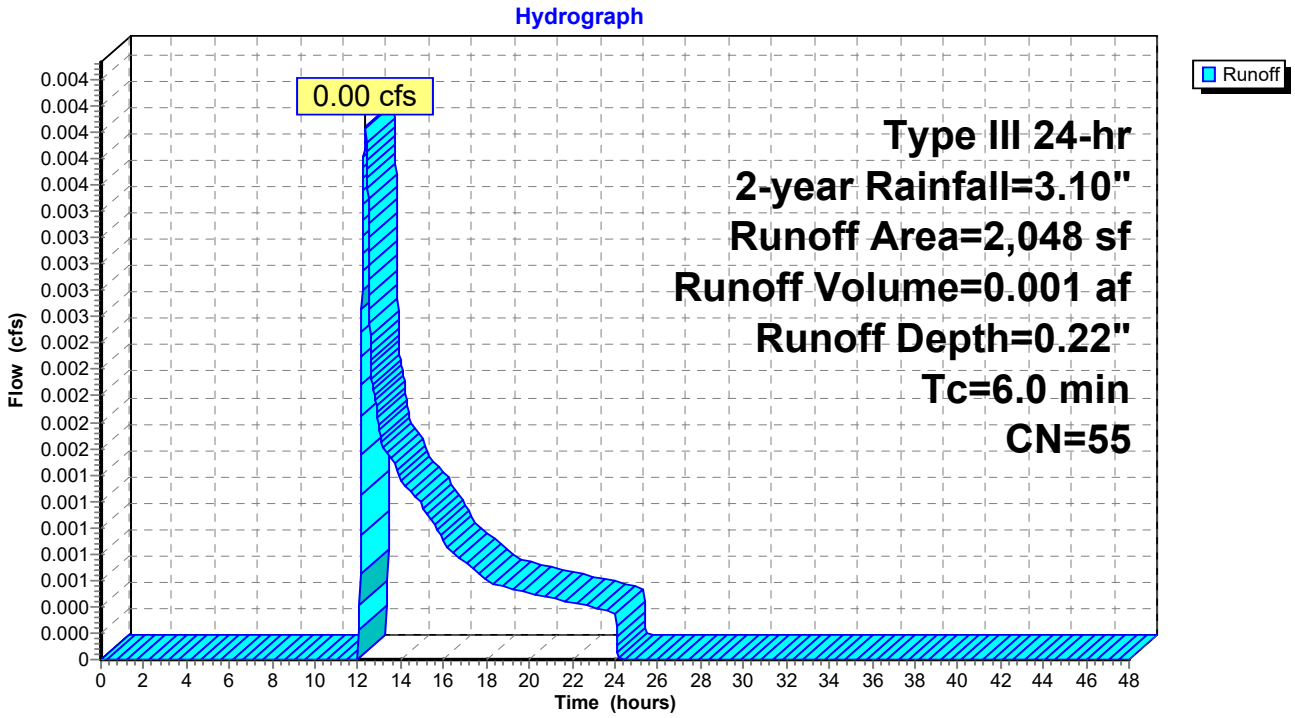
Runoff = 0.00 cfs @ 12.35 hrs, Volume= 0.001 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
556	98	Paved parking, HSG A
1,492	39	>75% Grass cover, Good, HSG A
2,048	55	Weighted Average
1,492	39	72.85% Pervious Area
556	98	27.15% Impervious Area

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

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 1.3S: S 1.3 - CHESTNUT STREET

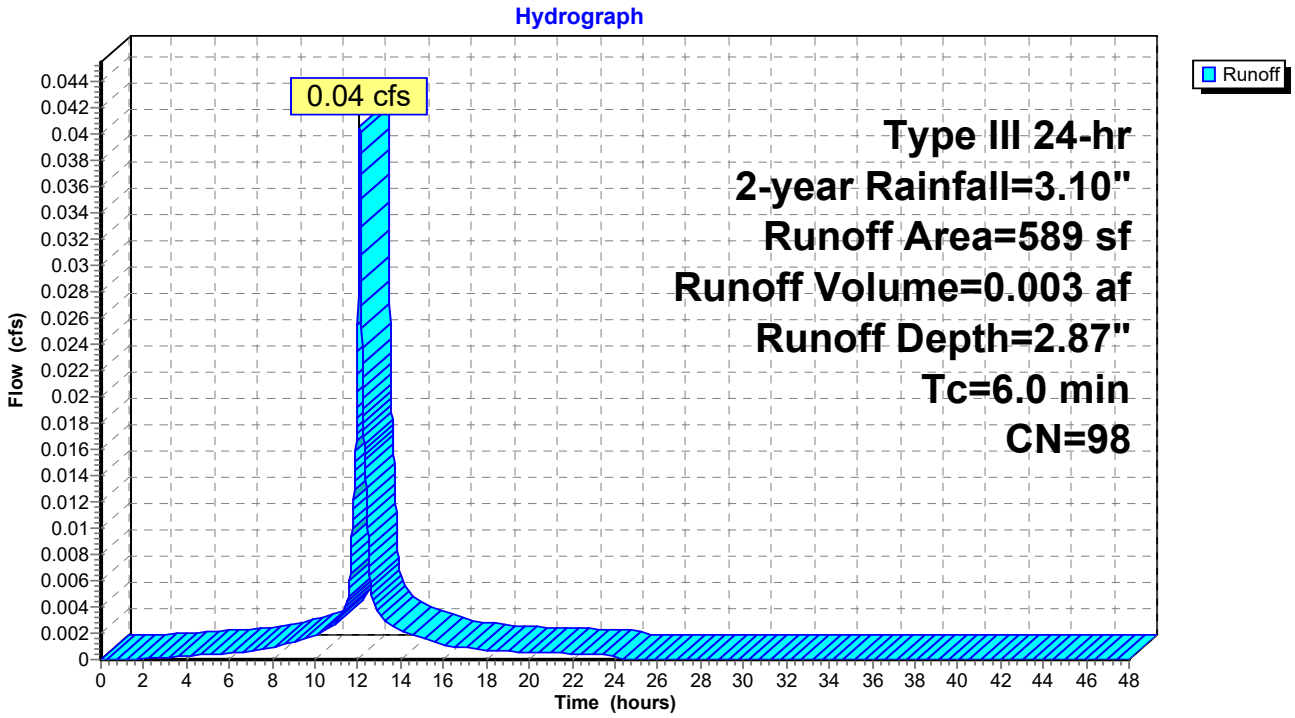
Runoff = 0.04 cfs @ 12.08 hrs, Volume= 0.003 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
190	98	Unconnected pavement, HSG A
399	98	Paved parking, HSG A
589	98	Weighted Average
589	98	100.00% Impervious Area
190		32.26% Unconnected

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

Subcatchment 1.3S: S 1.3 - CHESTNUT STREET



Summary for Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED

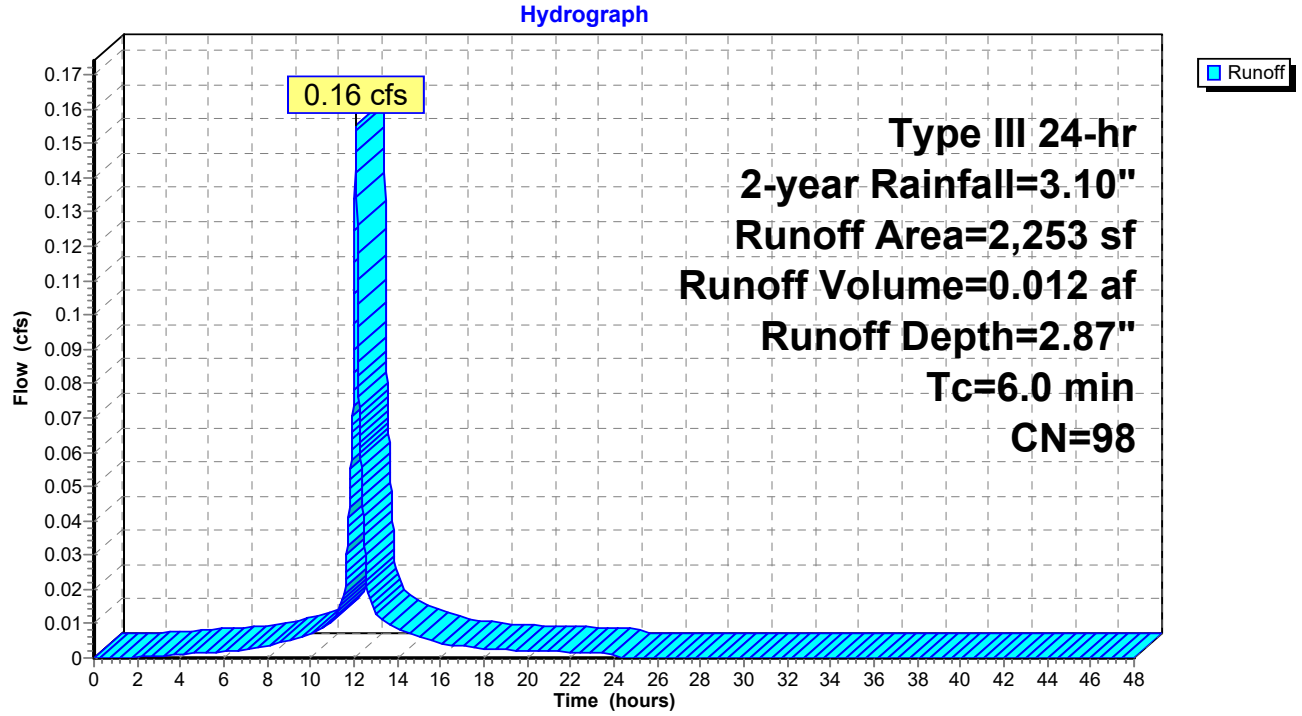
Runoff = 0.16 cfs @ 12.08 hrs, Volume= 0.012 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
2,253	98	Roofs, HSG A
2,253	98	100.00% Impervious Area

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

Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED



Summary for Subcatchment 2S: S 2 - CEDAR STREET

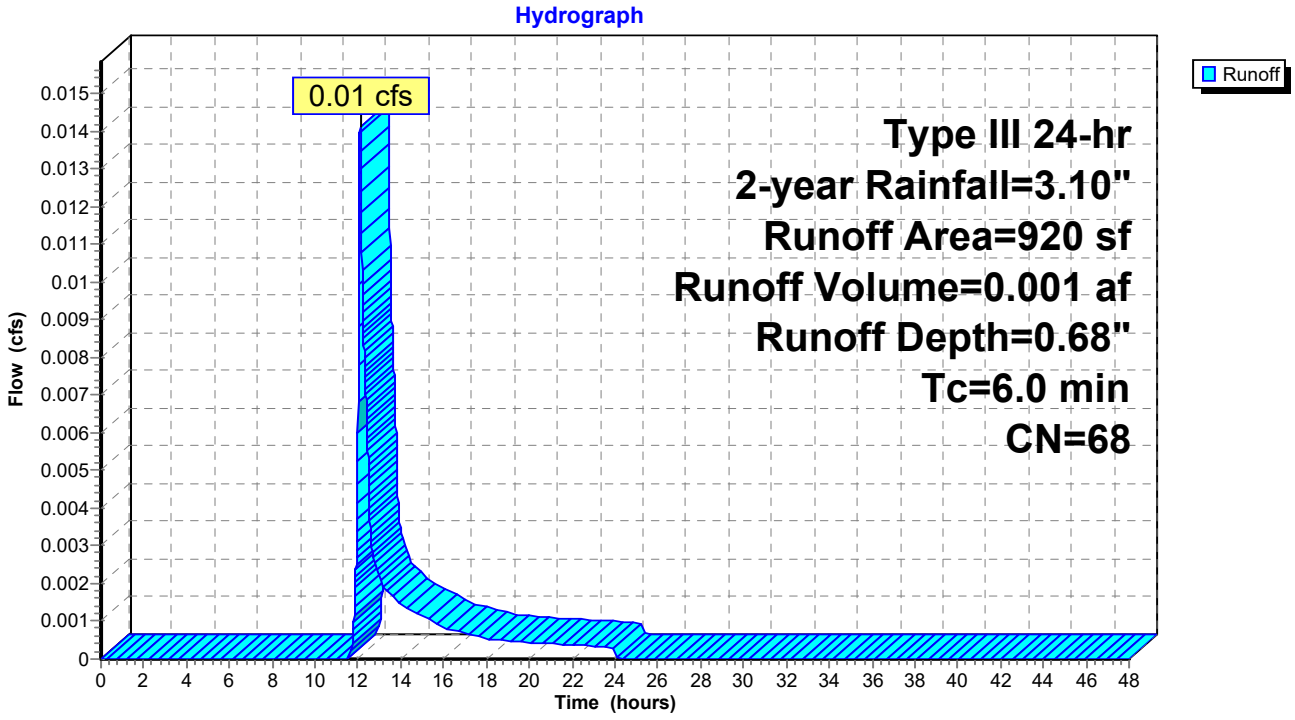
Runoff = 0.01 cfs @ 12.10 hrs, Volume= 0.001 af, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
467	39	>75% Grass cover, Good, HSG A
453	98	Unconnected pavement, HSG A
920	68	Weighted Average
467	39	50.76% Pervious Area
453	98	49.24% Impervious Area
453		100.00% Unconnected

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

Subcatchment 2S: S 2 - CEDAR STREET

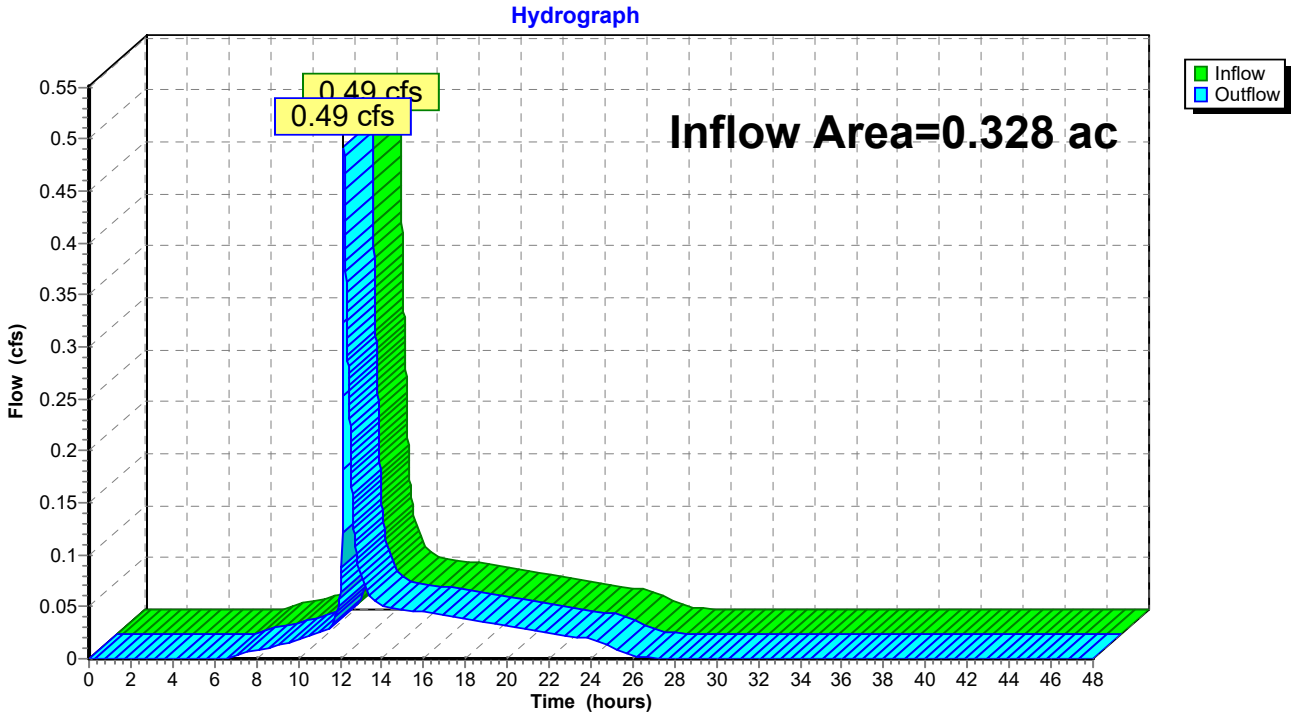


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.328 ac, 85.16% Impervious, Inflow Depth = 2.18" for 2-year event
Inflow = 0.49 cfs @ 12.18 hrs, Volume= 0.060 af
Outflow = 0.49 cfs @ 12.18 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

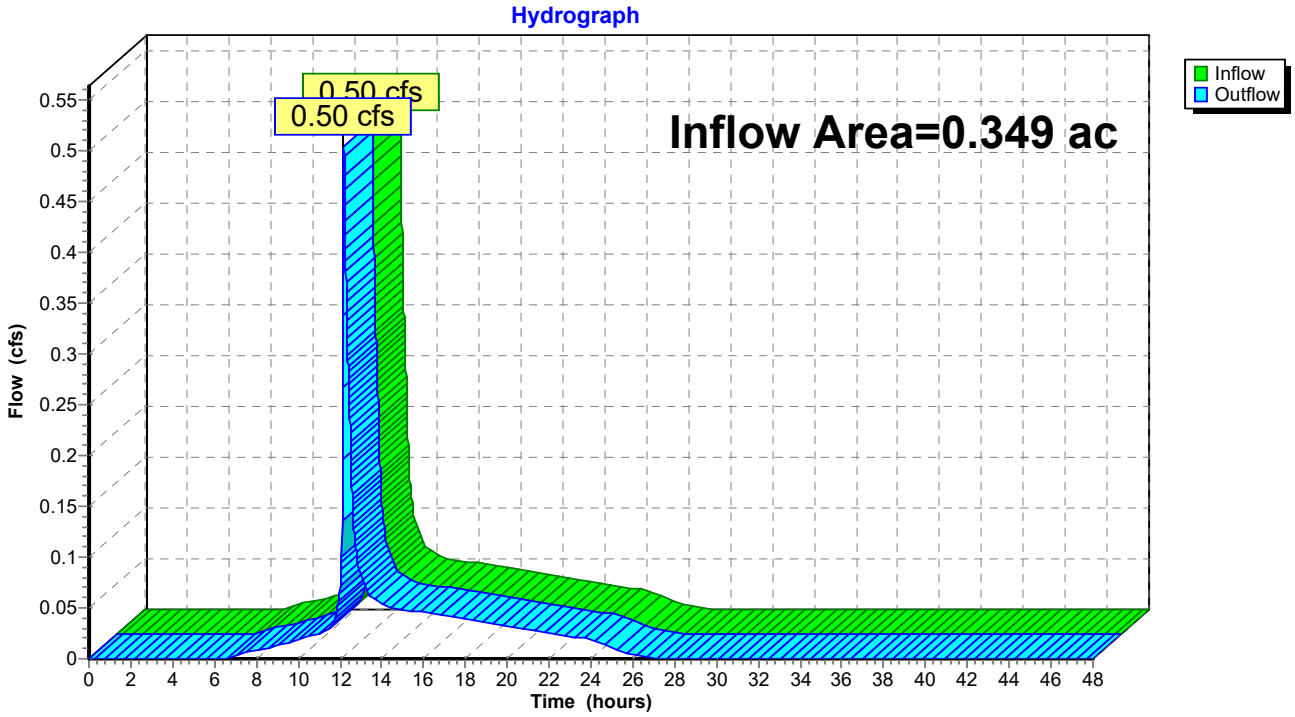


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.349 ac, 82.99% Impervious, Inflow Depth = 2.09" for 2-year event
Inflow = 0.50 cfs @ 12.18 hrs, Volume= 0.061 af
Outflow = 0.50 cfs @ 12.18 hrs, Volume= 0.061 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond 1P: R-TANKS

Inflow Area = 0.267 ac, 94.61% Impervious, Inflow Depth = 2.53" for 2-year event
Inflow = 0.75 cfs @ 12.08 hrs, Volume= 0.056 af
Outflow = 0.46 cfs @ 12.18 hrs, Volume= 0.055 af, Atten= 38%, Lag= 5.9 min
Primary = 0.46 cfs @ 12.18 hrs, Volume= 0.055 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 26.08' @ 12.18 hrs Surf.Area= 415 sf Storage= 856 cf
Flood Elev= 29.00' Surf.Area= 415 sf Storage= 1,001 cf

Plug-Flow detention time= 165.6 min calculated for 0.055 af (98% of inflow)
Center-of-Mass det. time= 155.9 min (937.2 - 781.3)

Volume	Invert	Avail.Storage	Storage Description
#1B	22.38'	583 cf	**6.62'W x 62.65'L x 4.57'H Field B** 1,897 cf Overall - 440 cf Embedded = 1,457 cf x 40.0% Voids
#2B	23.13'	413 cf	**ACF R-Tank HD 2** x 50 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 50 Chambers in 2 Rows
#3	22.75'	5 cf	**4.0" Round Pipe Storage** Inside #1 L= 63.0' S= 0.0100 '/'
		1,001 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	22.31'	**10.0" Round 10" Main Outlet** L= 40.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 22.31' / 21.51' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	22.61'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	25.63'	**10.0" Round Culvert** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 25.63' / 25.62' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	25.63'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=0.46 cfs @ 12.18 hrs HW=26.08' (Free Discharge)
- **1=10" Main Outlet** (Passes 0.46 cfs of 4.24 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 8.91 fps)
  - **3=Culvert** (Barrel Controls 0.41 cfs @ 2.01 fps)
    - **4=4" Overflows (4)** (Passes 0.41 cfs of 0.89 cfs potential flow)

Pond 1P: R-TANKS - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

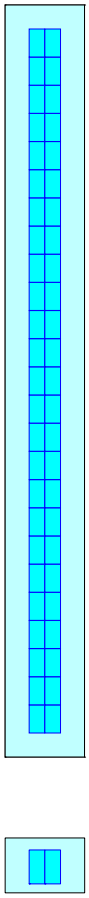
25 Chambers/Row x 2.35' Long = 58.65' Row Length +24.0" End Stone x 2 = 62.65' Base Length
2 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 6.62' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

50 Chambers x 8.3 cf = 412.6 cf Chamber Storage
50 Chambers x 8.7 cf = 434.3 cf Displacement

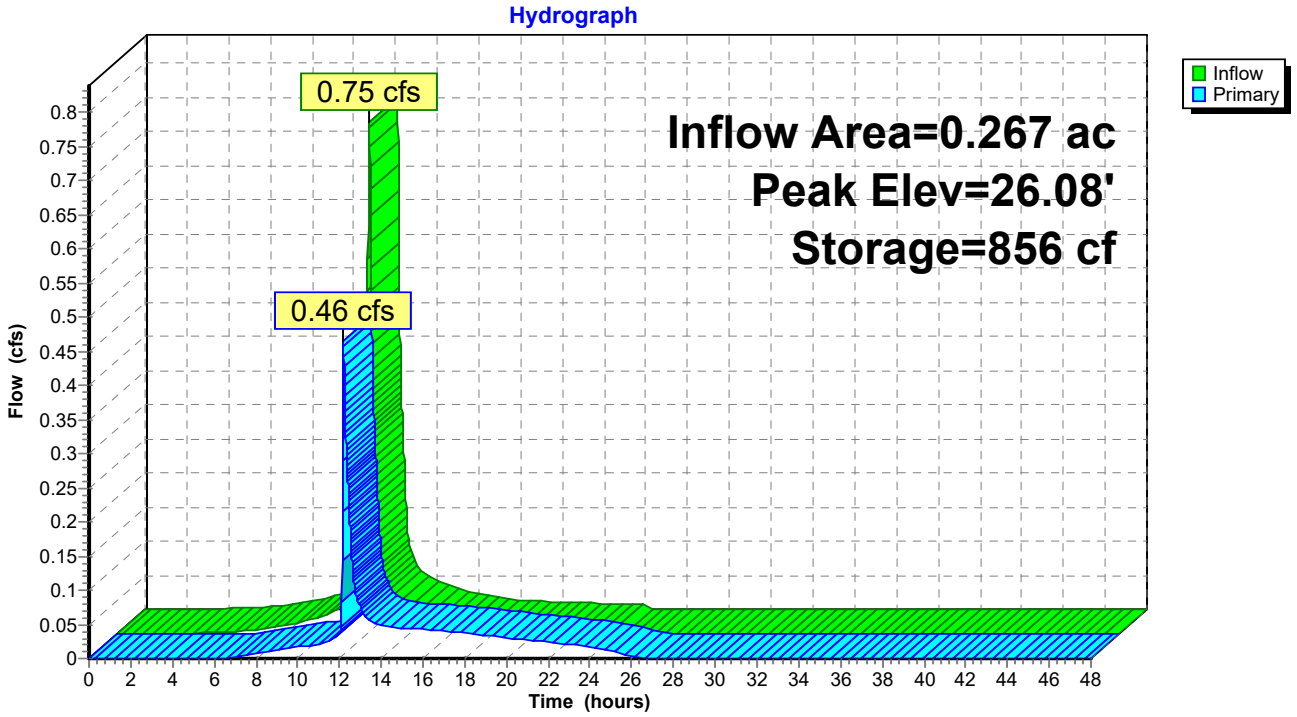
1,897.2 cf Field - 434.3 cf Chambers = 1,462.9 cf Stone x 40.0% Voids = 585.2 cf Stone Storage

Chamber Storage + Stone Storage = 997.7 cf = 0.023 af
Overall Storage Efficiency = 52.6%
Overall System Size = 62.65' x 6.62' x 4.57'

50 Chambers
70.3 cy Field
54.2 cy Stone



Pond 1P: R-TANKS



Stage-Area-Storage for Pond 1P: R-TANKS

Elevation (feet)	Storage (cubic-feet)
22.38	0
22.48	17
22.58	33
22.68	50
22.78	66
22.88	83
22.98	100
23.08	117
23.18	138
23.28	164
23.38	190
23.48	215
23.58	240
23.68	266
23.78	291
23.88	316
23.98	341
24.08	366
24.18	391
24.28	416
24.38	441
24.48	466
24.58	491
24.68	516
24.78	541
24.88	566
24.98	592
25.08	617
25.18	642
25.28	667
25.38	692
25.48	717
25.58	742
25.68	767
25.78	792
25.88	817
25.98	840
26.08	856
26.18	873
26.28	890
26.38	906
26.48	923
26.58	939
26.68	956
26.78	973
26.88	**989**
26.98	**1,001**
27.08	1,001
27.18	1,001
27.28	1,001
27.38	1,001
27.48	1,001
27.58	1,001
27.68	1,001
27.78	1,001
27.88	1,001
27.98	1,001
28.08	1,001
28.18	1,001
28.28	1,001
28.38	1,001
28.48	1,001
28.58	1,001
28.68	1,001
28.78	1,001
28.88	1,001
28.98	1,001

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S 1.1 - RTANK SUBCAT Runoff Area=9,399 sf 93.32% Impervious Runoff Depth=3.91"
Tc=6.0 min CN=94 Runoff=0.93 cfs 0.070 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=2,048 sf 27.15% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=55 Runoff=0.03 cfs 0.003 af

Subcatchment 1.3S: S 1.3 - CHESTNUT Runoff Area=589 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment 1S: S 1 - 25% OF ROOF Runoff Area=2,253 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=920 sf 49.24% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=68 Runoff=0.04 cfs 0.003 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.21 cfs 0.096 af
Outflow=1.21 cfs 0.096 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.25 cfs 0.099 af
Outflow=1.25 cfs 0.099 af

Pond 1P: R-TANKS Peak Elev=26.41' Storage=911 cf Inflow=1.16 cfs 0.089 af
Outflow=1.12 cfs 0.088 af

Total Runoff Area = 0.349 ac Runoff Volume = 0.100 af Average Runoff Depth = 3.44"
17.01% Pervious = 0.059 ac 82.99% Impervious = 0.290 ac

Summary for Subcatchment 1.1S: S 1.1 - RTANK SUBCAT

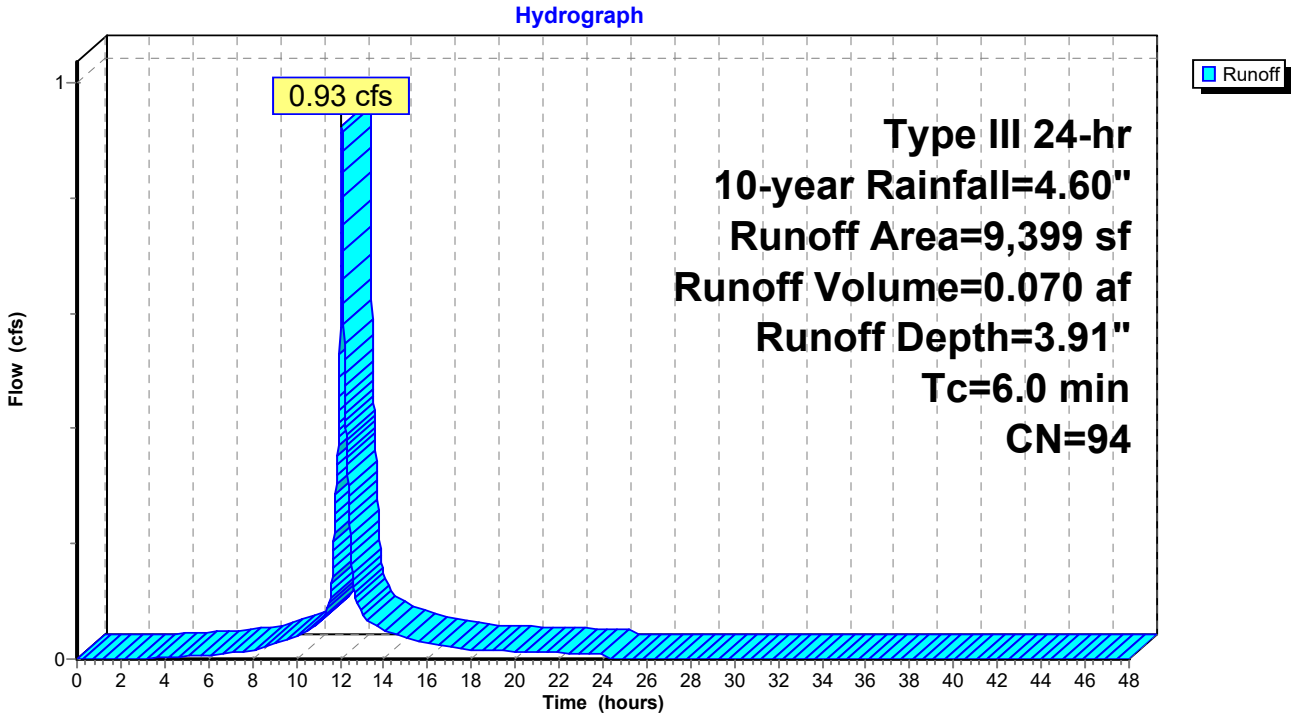
Runoff = 0.93 cfs @ 12.08 hrs, Volume= 0.070 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	2,011	98	Paved parking, HSG A
	628	39	>75% Grass cover, Good, HSG A
*	6,760	98	REMAINING ROOF AREA
	9,399	94	Weighted Average
	628	39	6.68% Pervious Area
	8,771	98	93.32% Impervious Area

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

Subcatchment 1.1S: S 1.1 - RTANK SUBCAT



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

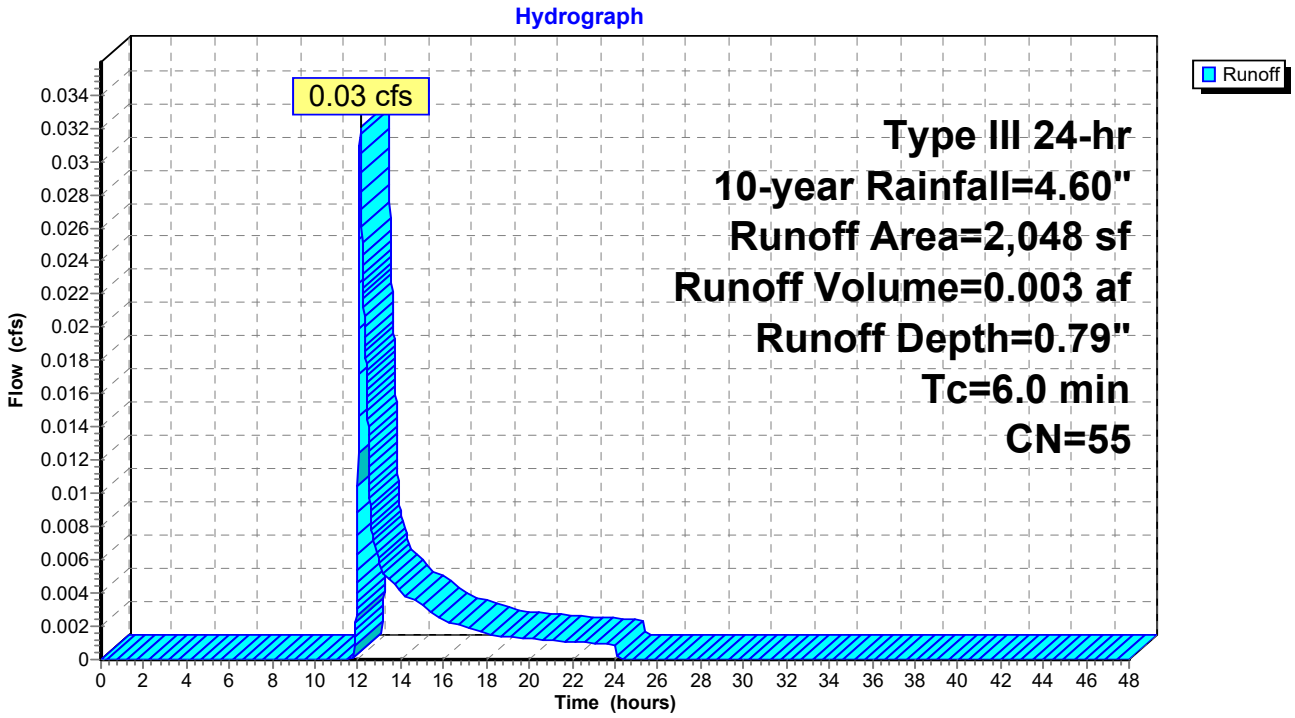
Runoff = 0.03 cfs @ 12.11 hrs, Volume= 0.003 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
556	98	Paved parking, HSG A
1,492	39	>75% Grass cover, Good, HSG A
2,048	55	Weighted Average
1,492	39	72.85% Pervious Area
556	98	27.15% Impervious Area

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

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 1.3S: S 1.3 - CHESTNUT STREET

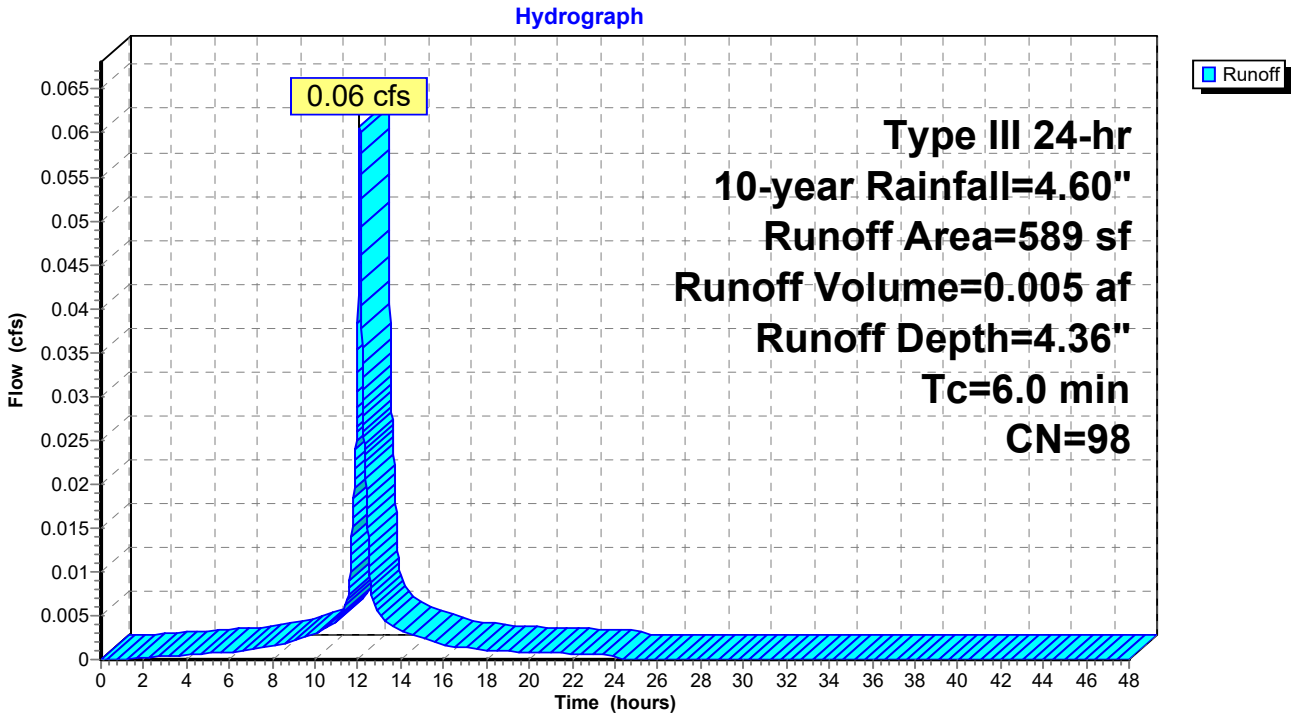
Runoff = 0.06 cfs @ 12.08 hrs, Volume= 0.005 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
190	98	Unconnected pavement, HSG A
399	98	Paved parking, HSG A
589	98	Weighted Average
589	98	100.00% Impervious Area
190		32.26% Unconnected

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

Subcatchment 1.3S: S 1.3 - CHESTNUT STREET



Summary for Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED

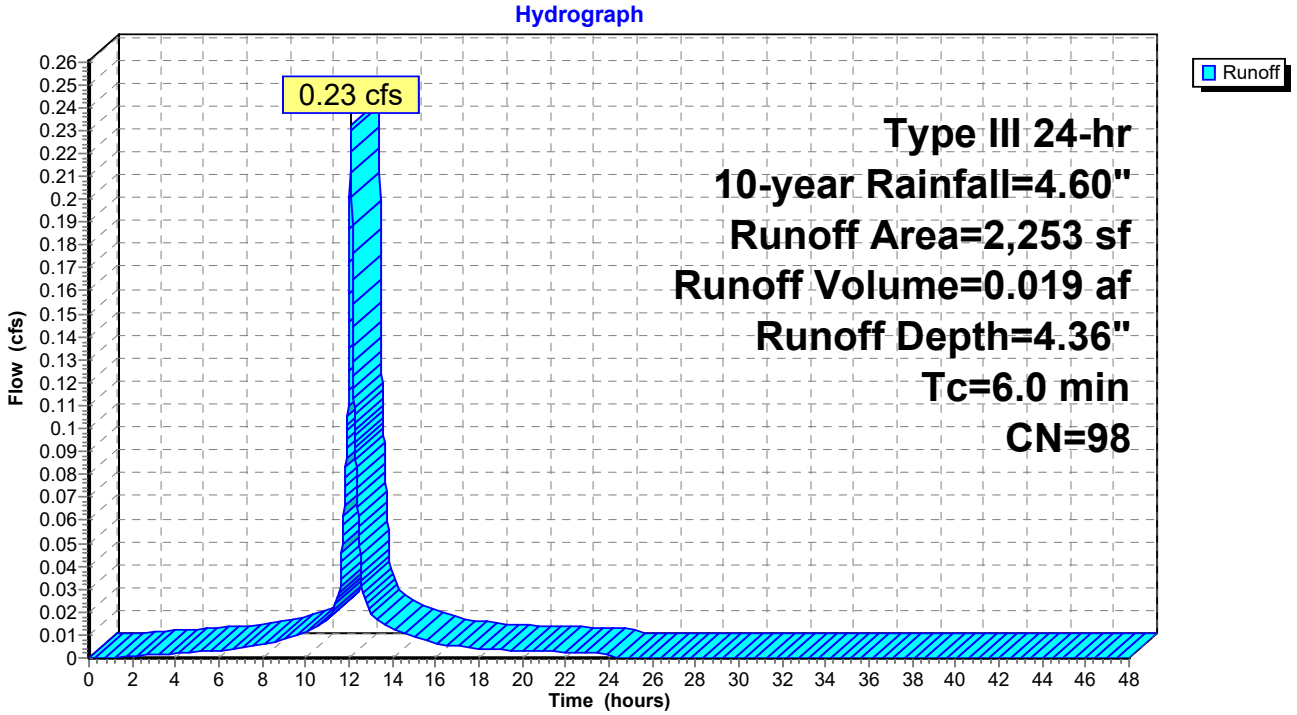
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.019 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
2,253	98	Roofs, HSG A
2,253	98	100.00% Impervious Area

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

Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED



Summary for Subcatchment 2S: S 2 - CEDAR STREET

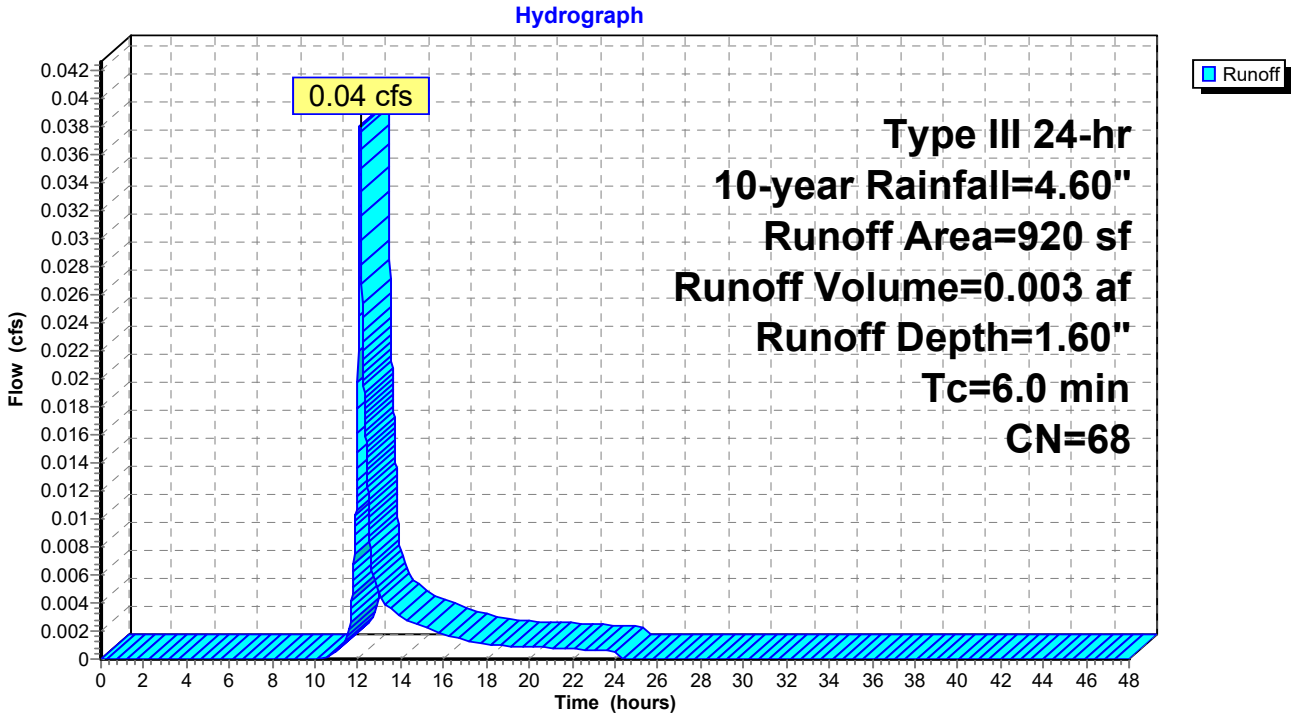
Runoff = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
467	39	>75% Grass cover, Good, HSG A
453	98	Unconnected pavement, HSG A
920	68	Weighted Average
467	39	50.76% Pervious Area
453	98	49.24% Impervious Area
453		100.00% Unconnected

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

Subcatchment 2S: S 2 - CEDAR STREET

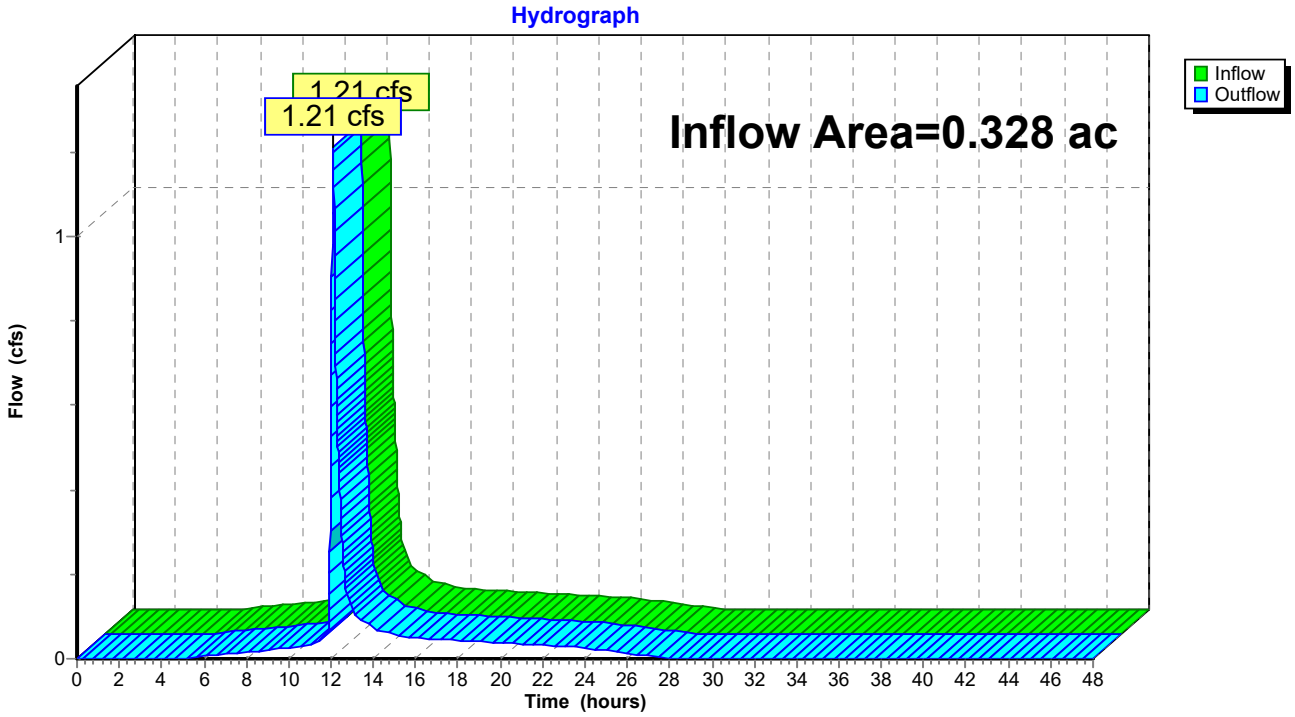


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.328 ac, 85.16% Impervious, Inflow Depth = 3.52" for 10-year event
Inflow = 1.21 cfs @ 12.10 hrs, Volume= 0.096 af
Outflow = 1.21 cfs @ 12.10 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

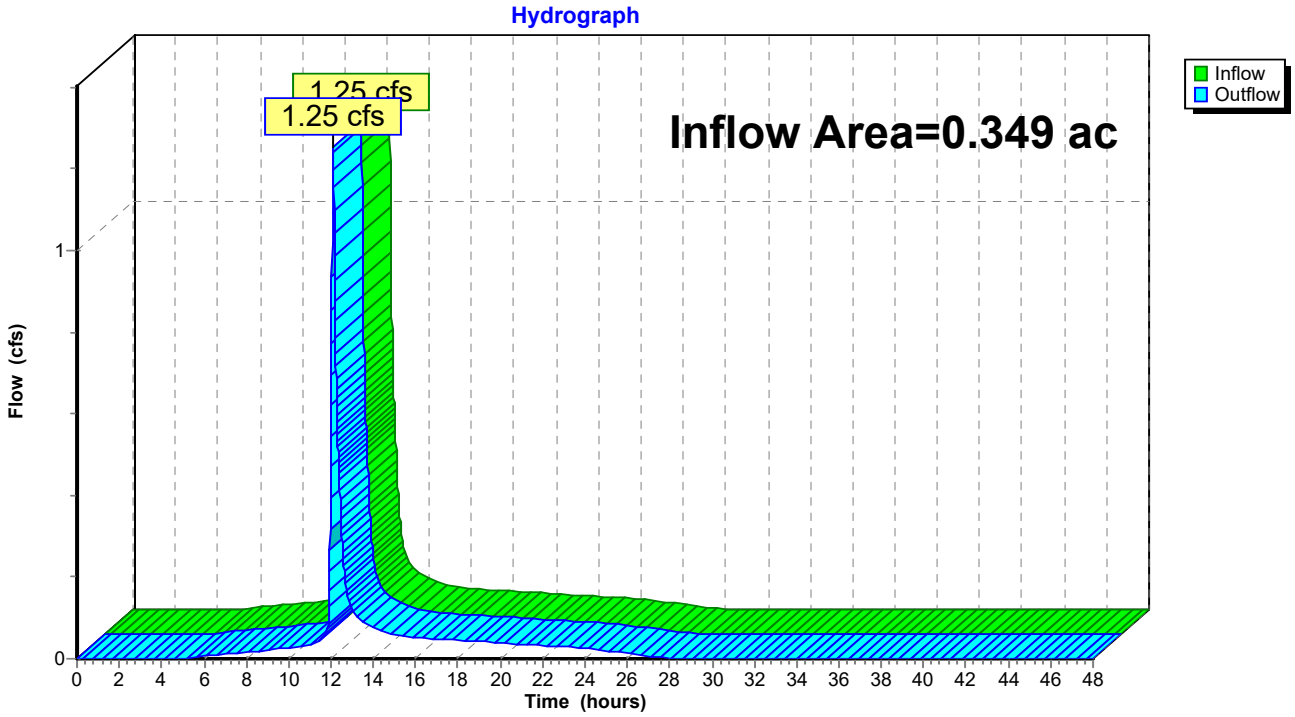


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.349 ac, 82.99% Impervious, Inflow Depth = 3.41" for 10-year event
Inflow = 1.25 cfs @ 12.10 hrs, Volume= 0.099 af
Outflow = 1.25 cfs @ 12.10 hrs, Volume= 0.099 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond 1P: R-TANKS

Inflow Area = 0.267 ac, 94.61% Impervious, Inflow Depth = 4.00" for 10-year event
Inflow = 1.16 cfs @ 12.08 hrs, Volume= 0.089 af
Outflow = 1.12 cfs @ 12.10 hrs, Volume= 0.088 af, Atten= 3%, Lag= 1.2 min
Primary = 1.12 cfs @ 12.10 hrs, Volume= 0.088 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 26.41' @ 12.10 hrs Surf.Area= 415 sf Storage= 911 cf
Flood Elev= 29.00' Surf.Area= 415 sf Storage= 1,001 cf

Plug-Flow detention time= 132.5 min calculated for 0.088 af (99% of inflow)
Center-of-Mass det. time= 126.1 min (896.4 - 770.3)

Volume	Invert	Avail.Storage	Storage Description
#1B	22.38'	583 cf	**6.62'W x 62.65'L x 4.57'H Field B** 1,897 cf Overall - 440 cf Embedded = 1,457 cf x 40.0% Voids
#2B	23.13'	413 cf	**ACF R-Tank HD 2** x 50 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 50 Chambers in 2 Rows
#3	22.75'	5 cf	**4.0" Round Pipe Storage** Inside #1 L= 63.0' S= 0.0100 '/'
		1,001 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	22.31'	**10.0" Round 10" Main Outlet** L= 40.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 22.31' / 21.51' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	22.61'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	25.63'	**10.0" Round Culvert** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 25.63' / 25.62' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	25.63'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=1.12 cfs @ 12.10 hrs HW=26.41' (Free Discharge)
- **1=10" Main Outlet** (Passes 1.12 cfs of 4.45 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 9.34 fps)
  - **3=Culvert** (Barrel Controls 1.07 cfs @ 2.61 fps)
    - **4=4" Overflows (4)** (Passes 1.07 cfs of 1.32 cfs potential flow)

Pond 1P: R-TANKS - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

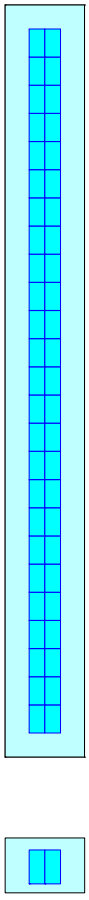
25 Chambers/Row x 2.35' Long = 58.65' Row Length +24.0" End Stone x 2 = 62.65' Base Length
2 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 6.62' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

50 Chambers x 8.3 cf = 412.6 cf Chamber Storage
50 Chambers x 8.7 cf = 434.3 cf Displacement

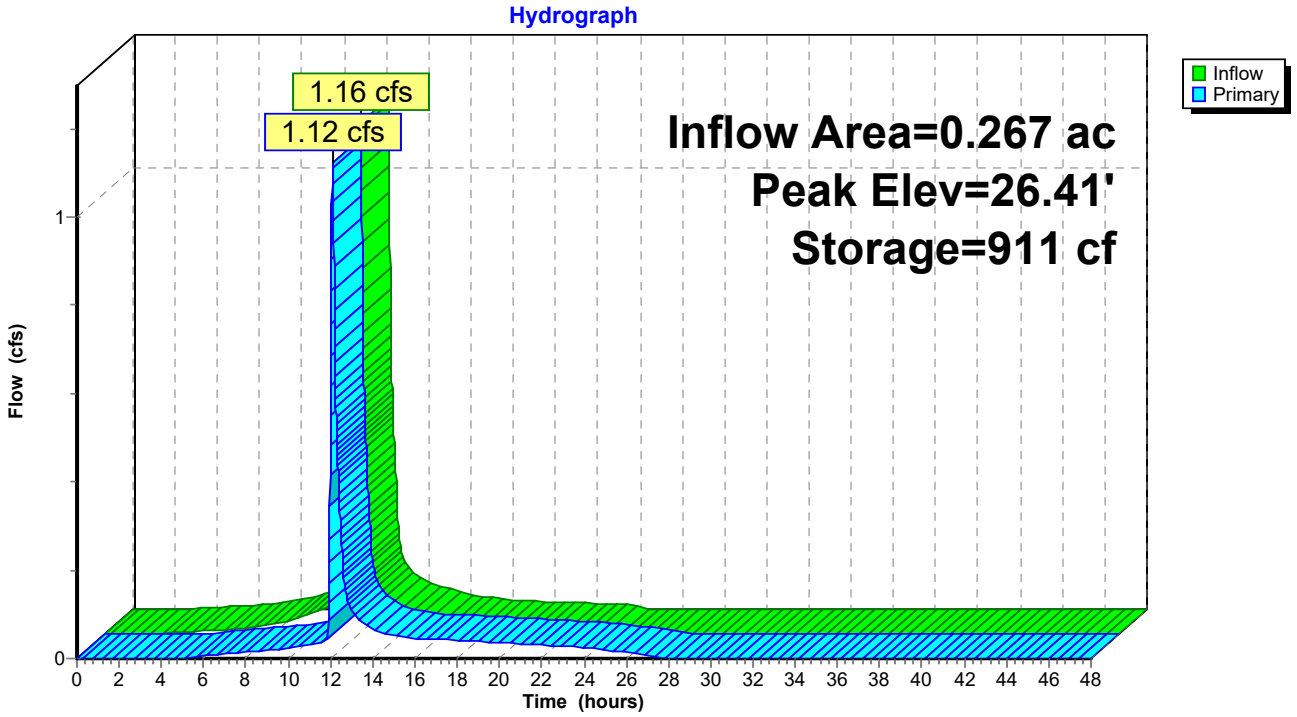
1,897.2 cf Field - 434.3 cf Chambers = 1,462.9 cf Stone x 40.0% Voids = 585.2 cf Stone Storage

Chamber Storage + Stone Storage = 997.7 cf = 0.023 af
Overall Storage Efficiency = 52.6%
Overall System Size = 62.65' x 6.62' x 4.57'

50 Chambers
70.3 cy Field
54.2 cy Stone



Pond 1P: R-TANKS



Stage-Area-Storage for Pond 1P: R-TANKS

Elevation (feet)	Storage (cubic-feet)
22.38	0
22.48	17
22.58	33
22.68	50
22.78	66
22.88	83
22.98	100
23.08	117
23.18	138
23.28	164
23.38	190
23.48	215
23.58	240
23.68	266
23.78	291
23.88	316
23.98	341
24.08	366
24.18	391
24.28	416
24.38	441
24.48	466
24.58	491
24.68	516
24.78	541
24.88	566
24.98	592
25.08	617
25.18	642
25.28	667
25.38	692
25.48	717
25.58	742
25.68	767
25.78	792
25.88	817
25.98	840
26.08	856
26.18	873
26.28	890
26.38	906
26.48	923
26.58	939
26.68	956
26.78	973
26.88	**989**
26.98	**1,001**
27.08	1,001
27.18	1,001
27.28	1,001
27.38	1,001
27.48	1,001
27.58	1,001
27.68	1,001
27.78	1,001
27.88	1,001
27.98	1,001
28.08	1,001
28.18	1,001
28.28	1,001
28.38	1,001
28.48	1,001
28.58	1,001
28.68	1,001
28.78	1,001
28.88	1,001
28.98	1,001

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S 1.1 - RTANK SUBCAT Runoff Area=9,399 sf 93.32% Impervious Runoff Depth=5.10"
Tc=6.0 min CN=94 Runoff=1.19 cfs 0.092 af

Subcatchment 1.2S: S 1.2 - OXFORD Runoff Area=2,048 sf 27.15% Impervious Runoff Depth=1.40"
Tc=6.0 min CN=55 Runoff=0.07 cfs 0.006 af

Subcatchment 1.3S: S 1.3 - CHESTNUT Runoff Area=589 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.08 cfs 0.006 af

Subcatchment 1S: S 1 - 25% OF ROOF Runoff Area=2,253 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.29 cfs 0.024 af

Subcatchment 2S: S 2 - CEDAR STREET Runoff Area=920 sf 49.24% Impervious Runoff Depth=2.47"
Tc=6.0 min CN=68 Runoff=0.06 cfs 0.004 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.58 cfs 0.127 af
Outflow=1.58 cfs 0.127 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.64 cfs 0.131 af
Outflow=1.64 cfs 0.131 af

Pond 1P: R-TANKS Peak Elev=26.56' Storage=936 cf Inflow=1.48 cfs 0.116 af
Outflow=1.43 cfs 0.115 af

Total Runoff Area = 0.349 ac Runoff Volume = 0.132 af Average Runoff Depth = 4.53"
17.01% Pervious = 0.059 ac 82.99% Impervious = 0.290 ac

Summary for Subcatchment 1.1S: S 1.1 - RTANK SUBCAT

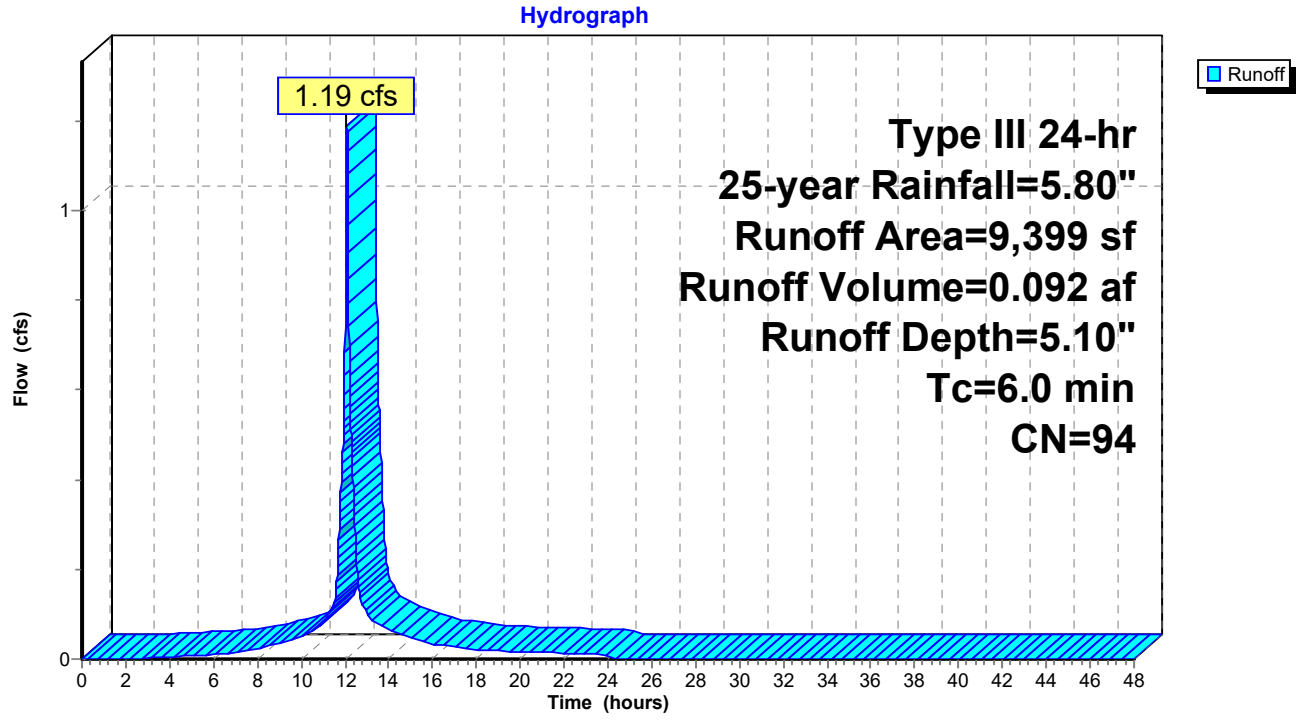
Runoff = 1.19 cfs @ 12.08 hrs, Volume= 0.092 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	2,011	98	Paved parking, HSG A
	628	39	>75% Grass cover, Good, HSG A
*	6,760	98	REMAINING ROOF AREA
	9,399	94	Weighted Average
	628	39	6.68% Pervious Area
	8,771	98	93.32% Impervious Area

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

Subcatchment 1.1S: S 1.1 - RTANK SUBCAT



Summary for Subcatchment 1.2S: S 1.2 - OXFORD STREET

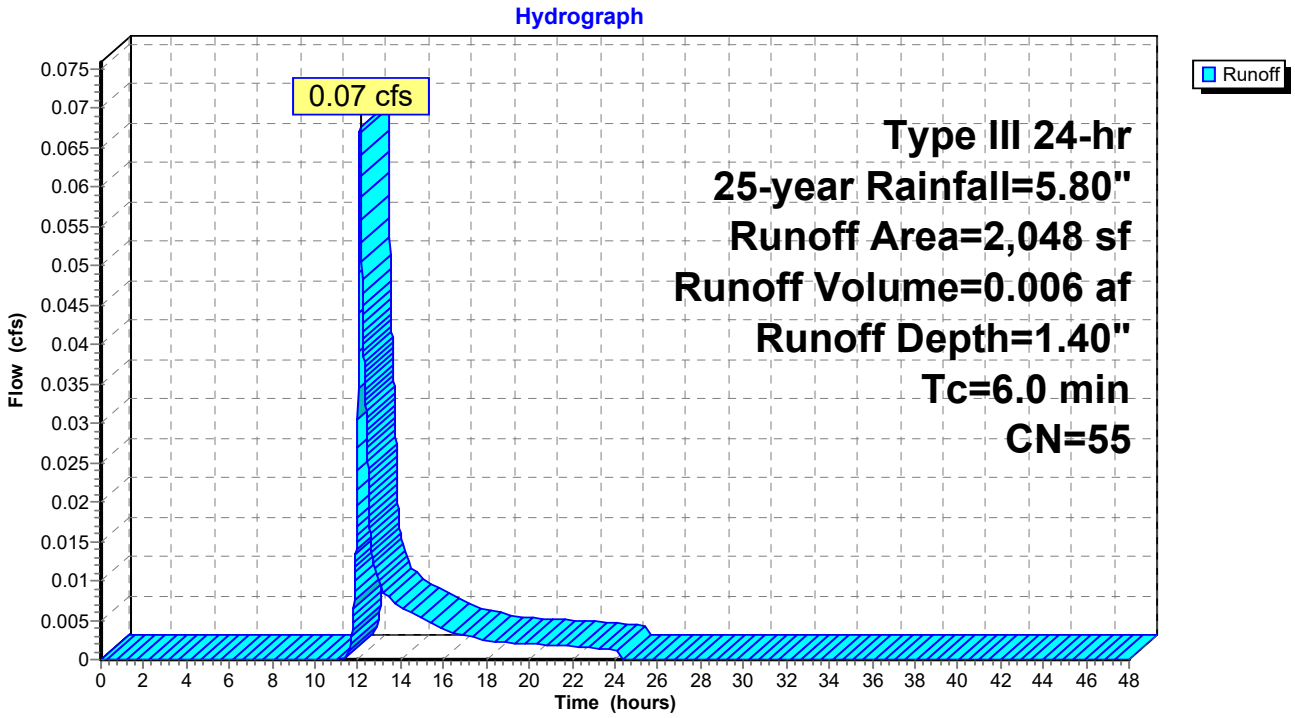
Runoff = 0.07 cfs @ 12.10 hrs, Volume= 0.006 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
556	98	Paved parking, HSG A
1,492	39	>75% Grass cover, Good, HSG A
2,048	55	Weighted Average
1,492	39	72.85% Pervious Area
556	98	27.15% Impervious Area

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

Subcatchment 1.2S: S 1.2 - OXFORD STREET



Summary for Subcatchment 1.3S: S 1.3 - CHESTNUT STREET

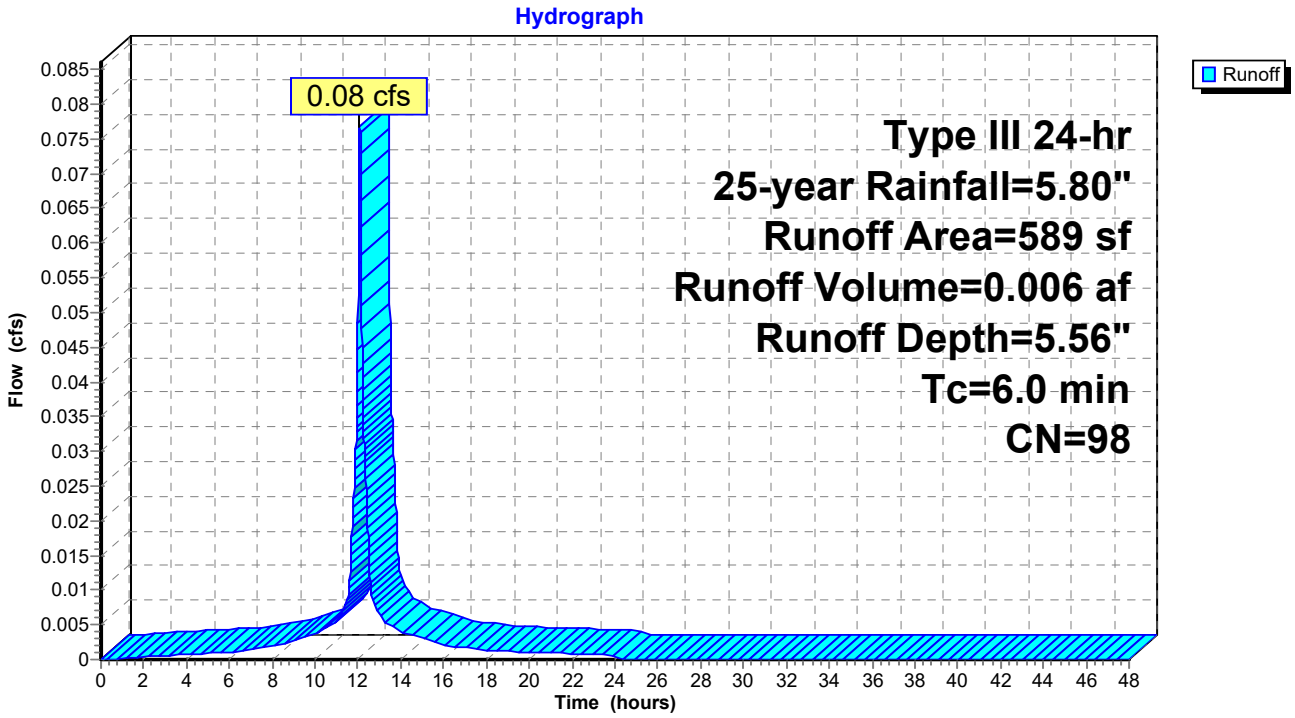
Runoff = 0.08 cfs @ 12.08 hrs, Volume= 0.006 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
190	98	Unconnected pavement, HSG A
399	98	Paved parking, HSG A
589	98	Weighted Average
589	98	100.00% Impervious Area
190		32.26% Unconnected

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

Subcatchment 1.3S: S 1.3 - CHESTNUT STREET



Summary for Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED

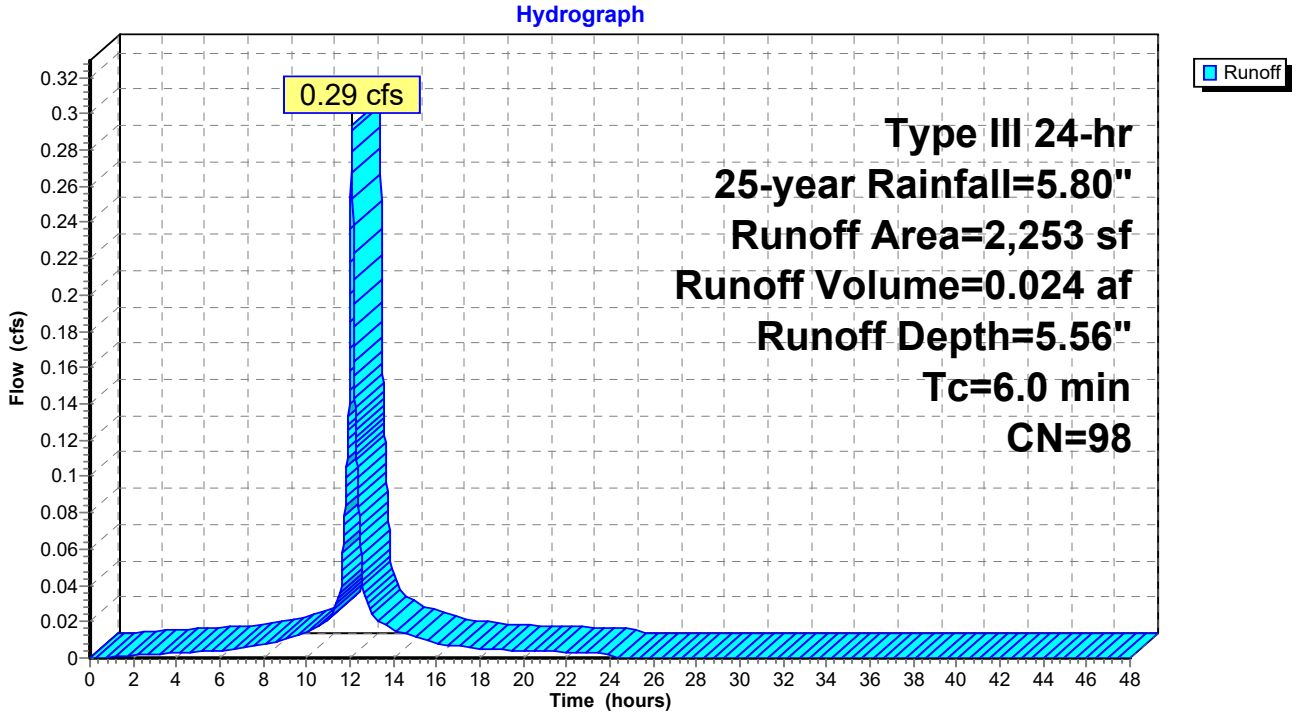
Runoff = 0.29 cfs @ 12.08 hrs, Volume= 0.024 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
2,253	98	Roofs, HSG A
2,253	98	100.00% Impervious Area

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

Subcatchment 1S: S 1 - 25% OF ROOF AREA TO BE TREATED



Summary for Subcatchment 2S: S 2 - CEDAR STREET

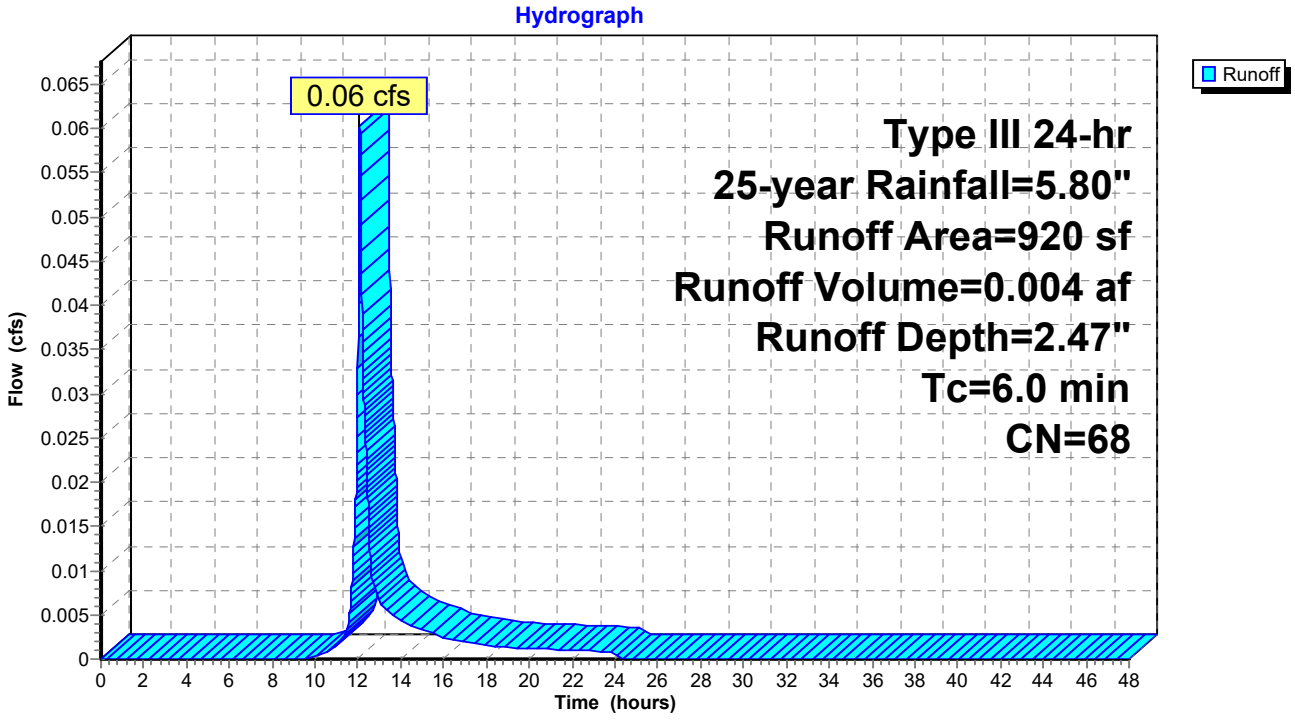
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.004 af, Depth= 2.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
467	39	>75% Grass cover, Good, HSG A
453	98	Unconnected pavement, HSG A
920	68	Weighted Average
467	39	50.76% Pervious Area
453	98	49.24% Impervious Area
453		100.00% Unconnected

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

Subcatchment 2S: S 2 - CEDAR STREET

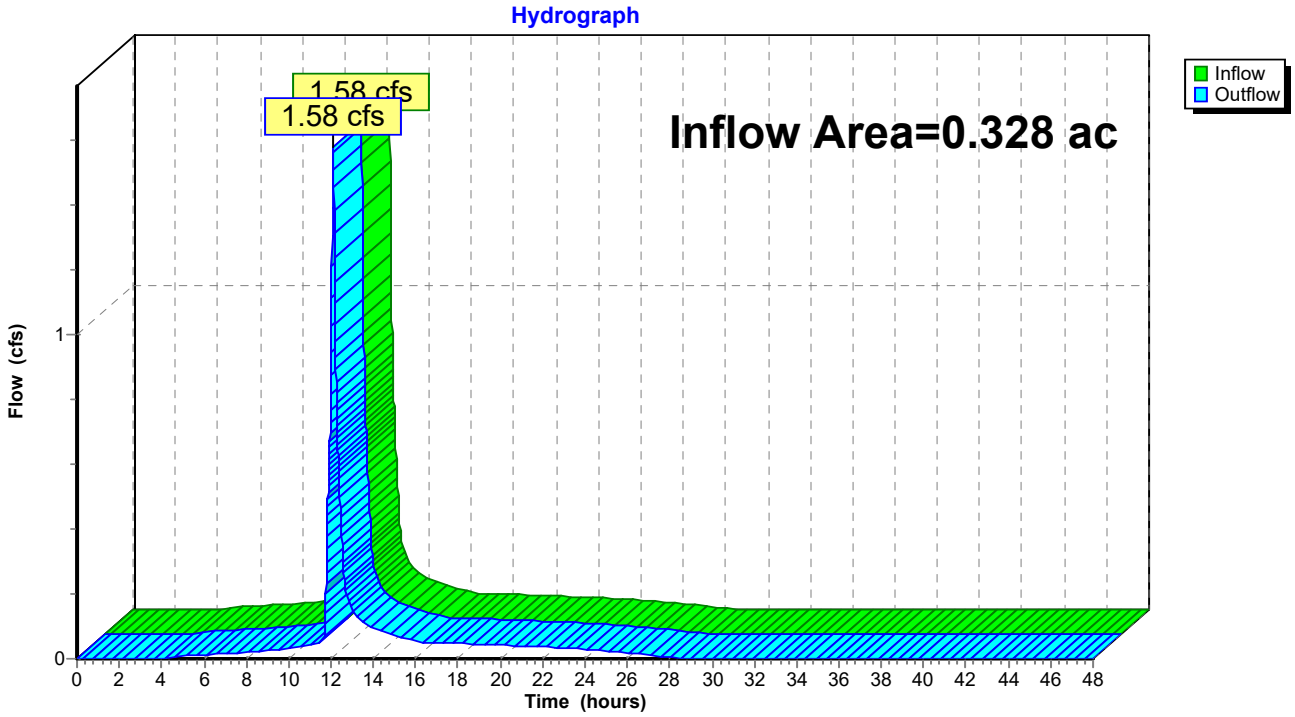


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.328 ac, 85.16% Impervious, Inflow Depth = 4.63" for 25-year event
Inflow = 1.58 cfs @ 12.10 hrs, Volume= 0.127 af
Outflow = 1.58 cfs @ 12.10 hrs, Volume= 0.127 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

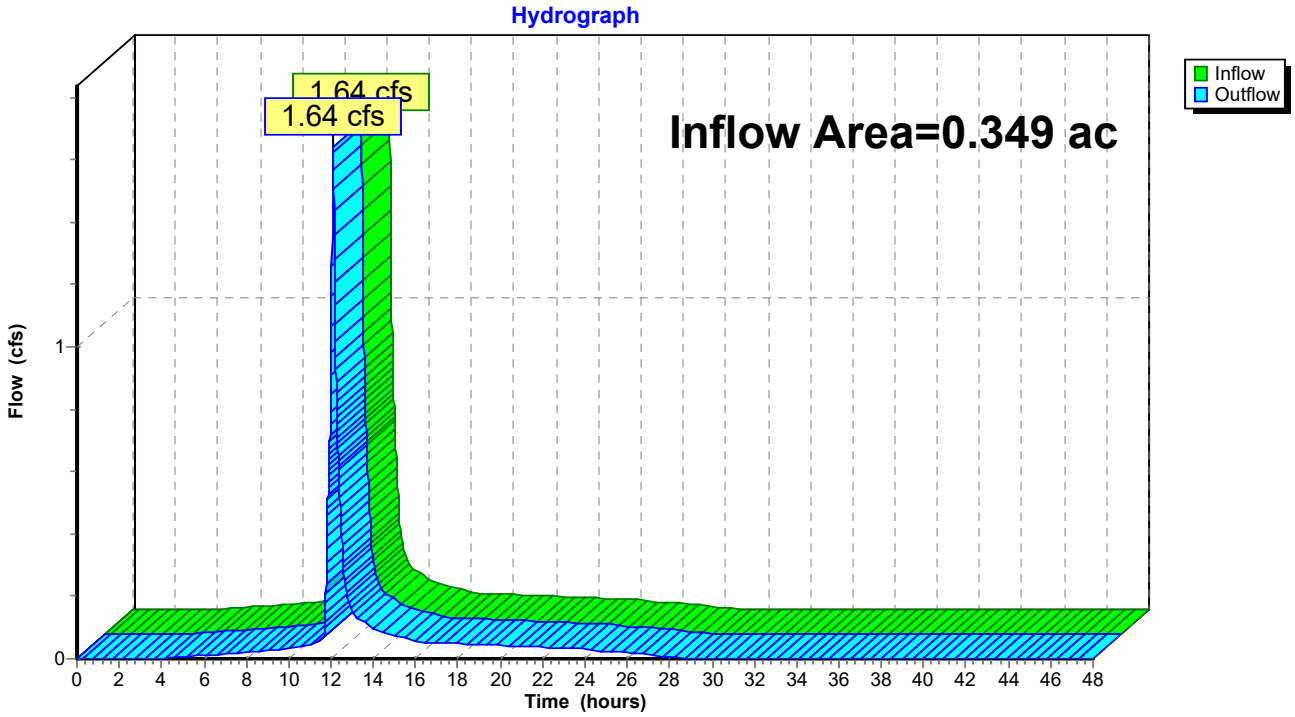


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.349 ac, 82.99% Impervious, Inflow Depth = 4.50" for 25-year event
Inflow = 1.64 cfs @ 12.10 hrs, Volume= 0.131 af
Outflow = 1.64 cfs @ 12.10 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond 1P: R-TANKS

Inflow Area = 0.267 ac, 94.61% Impervious, Inflow Depth = 5.19" for 25-year event
Inflow = 1.48 cfs @ 12.08 hrs, Volume= 0.116 af
Outflow = 1.43 cfs @ 12.10 hrs, Volume= 0.115 af, Atten= 3%, Lag= 1.2 min
Primary = 1.43 cfs @ 12.10 hrs, Volume= 0.115 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 26.56' @ 12.10 hrs Surf.Area= 415 sf Storage= 936 cf
Flood Elev= 29.00' Surf.Area= 415 sf Storage= 1,001 cf

Plug-Flow detention time= 117.4 min calculated for 0.115 af (99% of inflow)
Center-of-Mass det. time= 112.3 min (876.8 - 764.5)

Volume	Invert	Avail.Storage	Storage Description
#1B	22.38'	583 cf	**6.62'W x 62.65'L x 4.57'H Field B** 1,897 cf Overall - 440 cf Embedded = 1,457 cf x 40.0% Voids
#2B	23.13'	413 cf	**ACF R-Tank HD 2** x 50 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 50 Chambers in 2 Rows
#3	22.75'	5 cf	**4.0" Round Pipe Storage** Inside #1 L= 63.0' S= 0.0100 '/'
		1,001 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	22.31'	**10.0" Round 10" Main Outlet** L= 40.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 22.31' / 21.51' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	22.61'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	25.63'	**10.0" Round Culvert** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 25.63' / 25.62' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	25.63'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=1.43 cfs @ 12.10 hrs HW=26.56' (Free Discharge)
- **1=10" Main Outlet** (Passes 1.43 cfs of 4.54 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 9.52 fps)
  - **3=Culvert** (Barrel Controls 1.38 cfs @ 2.84 fps)
    - **4=4" Overflows (4)** (Passes 1.38 cfs of 1.47 cfs potential flow)

Pond 1P: R-TANKS - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

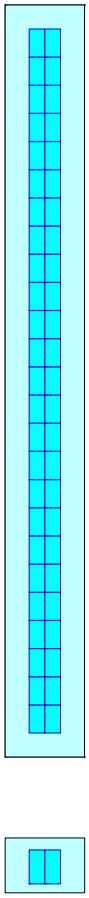
25 Chambers/Row x 2.35' Long = 58.65' Row Length +24.0" End Stone x 2 = 62.65' Base Length
2 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 6.62' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

50 Chambers x 8.3 cf = 412.6 cf Chamber Storage
50 Chambers x 8.7 cf = 434.3 cf Displacement

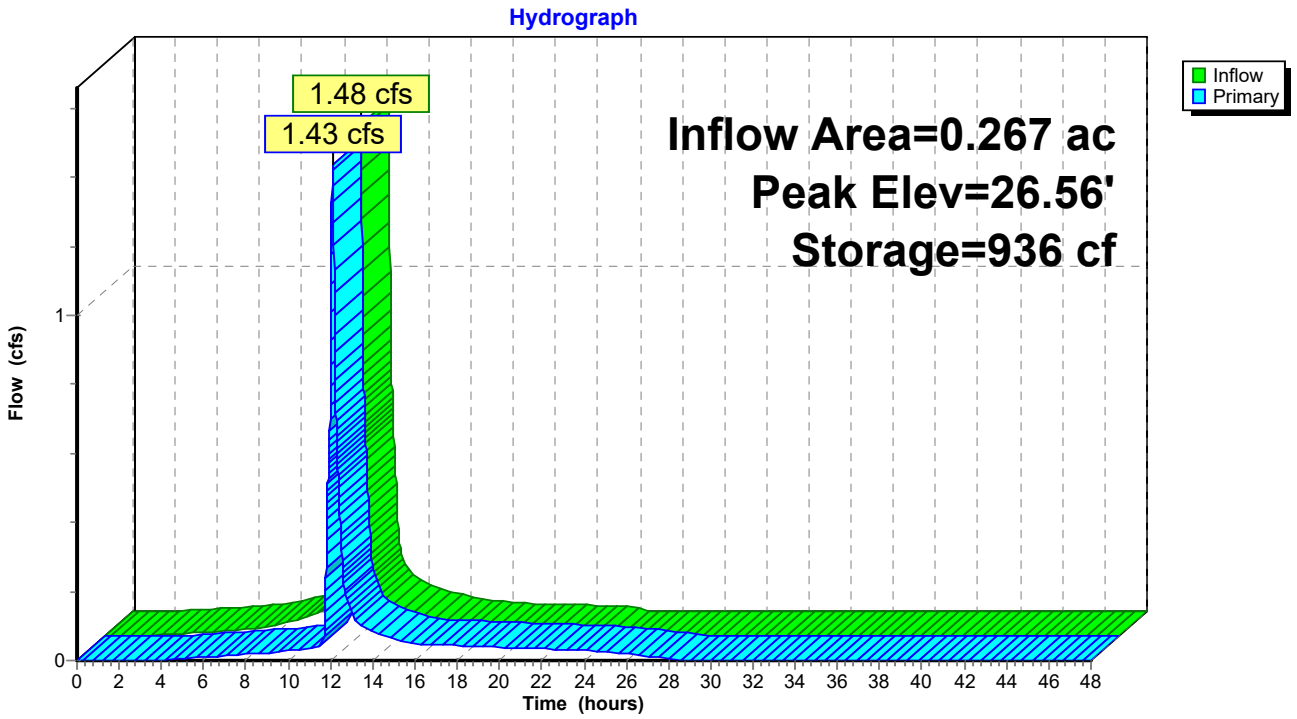
1,897.2 cf Field - 434.3 cf Chambers = 1,462.9 cf Stone x 40.0% Voids = 585.2 cf Stone Storage

Chamber Storage + Stone Storage = 997.7 cf = 0.023 af
Overall Storage Efficiency = 52.6%
Overall System Size = 62.65' x 6.62' x 4.57'

50 Chambers
70.3 cy Field
54.2 cy Stone



Pond 1P: R-TANKS



Stage-Area-Storage for Pond 1P: R-TANKS

Elevation (feet)	Storage (cubic-feet)
22.38	0
22.48	17
22.58	33
22.68	50
22.78	66
22.88	83
22.98	100
23.08	117
23.18	138
23.28	164
23.38	190
23.48	215
23.58	240
23.68	266
23.78	291
23.88	316
23.98	341
24.08	366
24.18	391
24.28	416
24.38	441
24.48	466
24.58	491
24.68	516
24.78	541
24.88	566
24.98	592
25.08	617
25.18	642
25.28	667
25.38	692
25.48	717
25.58	742
25.68	767
25.78	792
25.88	817
25.98	840
26.08	856
26.18	873
26.28	890
26.38	906
26.48	923
26.58	939
26.68	956
26.78	973
26.88	**989**
26.98	**1,001**
27.08	1,001
27.18	1,001
27.28	1,001
27.38	1,001
27.48	1,001
27.58	1,001
27.68	1,001
27.78	1,001
27.88	1,001
27.98	1,001
28.08	1,001
28.18	1,001
28.28	1,001
28.38	1,001
28.48	1,001
28.58	1,001
28.68	1,001
28.78	1,001
28.88	1,001
28.98	1,001

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: HydroCAD Calculations

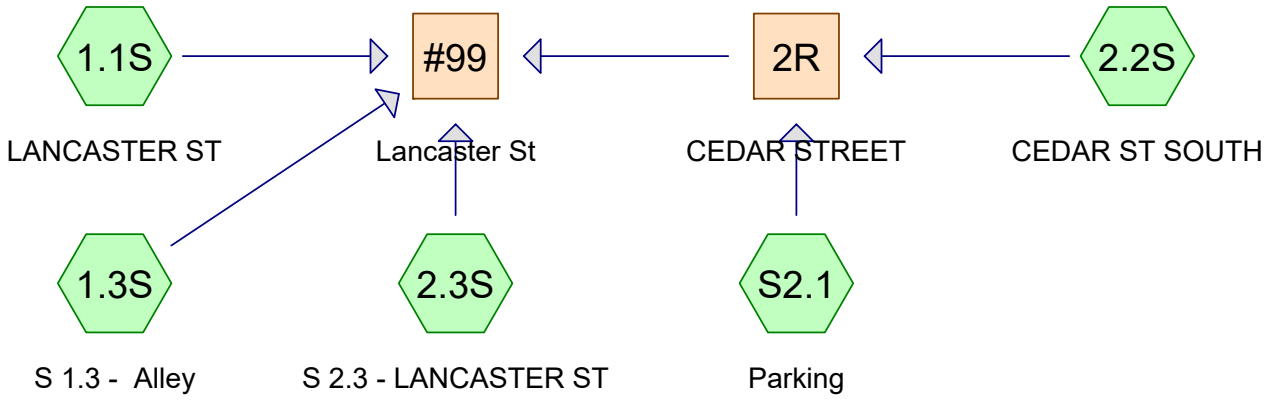
PHASE 2 - 50 CEDAR STREET

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Pre Development HydroCAD

PHASE 2 - 50 CEDAR STREET



Subcat Reach Pond Link

Routing Diagram for PHASE 2 - 50 CEDAR ST - PRE
Prepared by HP Inc., Printed 4/25/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.120	68	<50% Grass cover, Poor, HSG A (1.3S, 2.2S, 2.3S)
0.046	98	Parking (S2.1)
0.215	98	Paved parking, HSG A (1.1S, 1.3S, 2.2S, 2.3S)
0.381	**89**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.335	HSG A	1.1S, 1.3S, 2.2S, 2.3S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.046	Other	S2.1
0.381		**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
0.120	0.000	0.000	0.000	0.000	0.120	<50% Grass cover, Poor	1.3S, 2.2S, 2.3S
0.000	0.000	0.000	0.000	0.046	0.046	Parking	S2.1
0.215	0.000	0.000	0.000	0.000	0.215	Paved parking	1.1S, 1.3S, 2.2S, 2.3S
0.335	**0.000**	**0.000**	**0.000**	**0.046**	**0.381**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: LANCASTER ST Runoff Area=1,862 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.13 cfs 0.010 af

Subcatchment 1.3S: S 1.3 - Alley Runoff Area=1,251 sf 84.89% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=93 Runoff=0.08 cfs 0.006 af

Subcatchment 2.2S: CEDAR ST SOUTH Runoff Area=6,494 sf 74.28% Impervious Runoff Depth=2.08"
Tc=6.0 min CN=90 Runoff=0.36 cfs 0.026 af

Subcatchment 2.3S: S 2.3 - LANCASTER ST Runoff Area=4,993 sf 32.53% Impervious Runoff Depth=1.20"
Tc=6.0 min CN=78 Runoff=0.16 cfs 0.011 af

Subcatchment S2.1: Parking Runoff Area=2,008 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.14 cfs 0.011 af

Reach #99: Lancaster St Inflow=0.86 cfs 0.064 af
Outflow=0.86 cfs 0.064 af

Reach 2R: CEDAR STREET Inflow=0.50 cfs 0.037 af
Outflow=0.50 cfs 0.037 af

Total Runoff Area = 0.381 ac Runoff Volume = 0.064 af Average Runoff Depth = 2.02"
31.48% Pervious = 0.120 ac 68.52% Impervious = 0.261 ac

Summary for Subcatchment 1.1S: LANCASTER ST

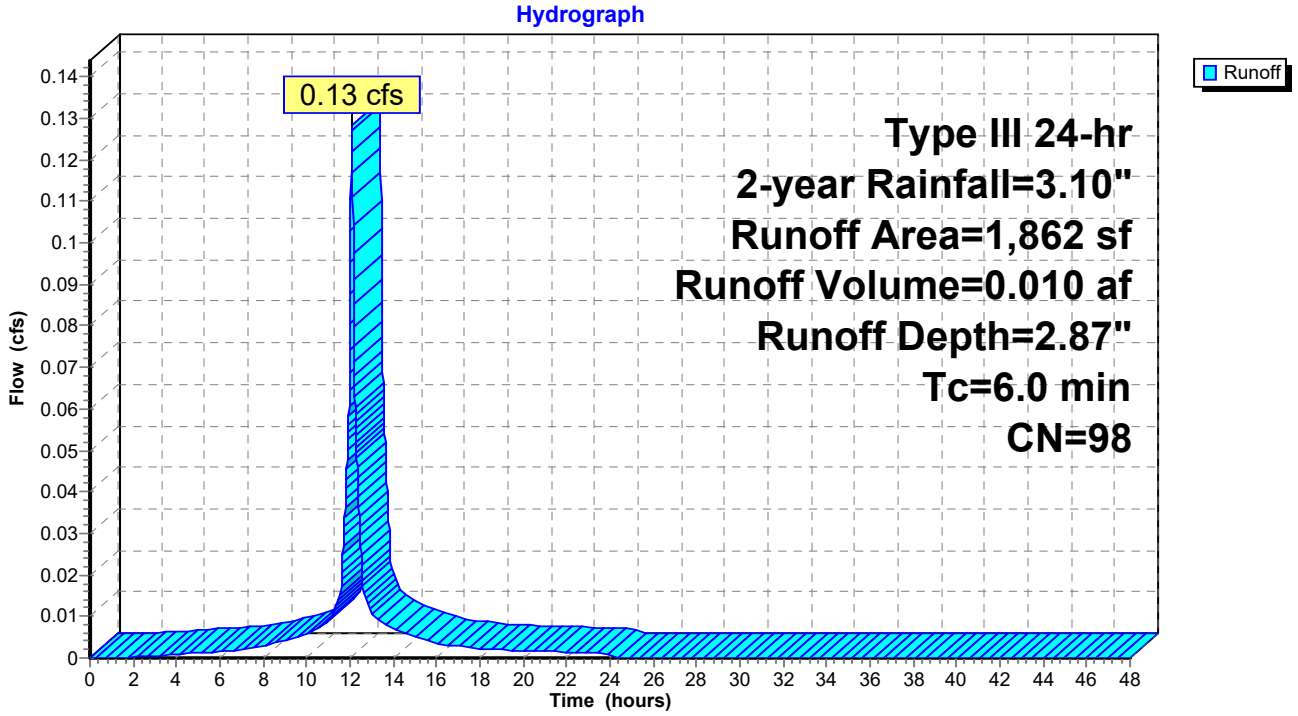
Runoff = 0.13 cfs @ 12.08 hrs, Volume= 0.010 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
1,862	98	Paved parking, HSG A
1,862	98	100.00% Impervious Area

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

Subcatchment 1.1S: LANCASTER ST



Summary for Subcatchment 1.3S: S 1.3 - Alley

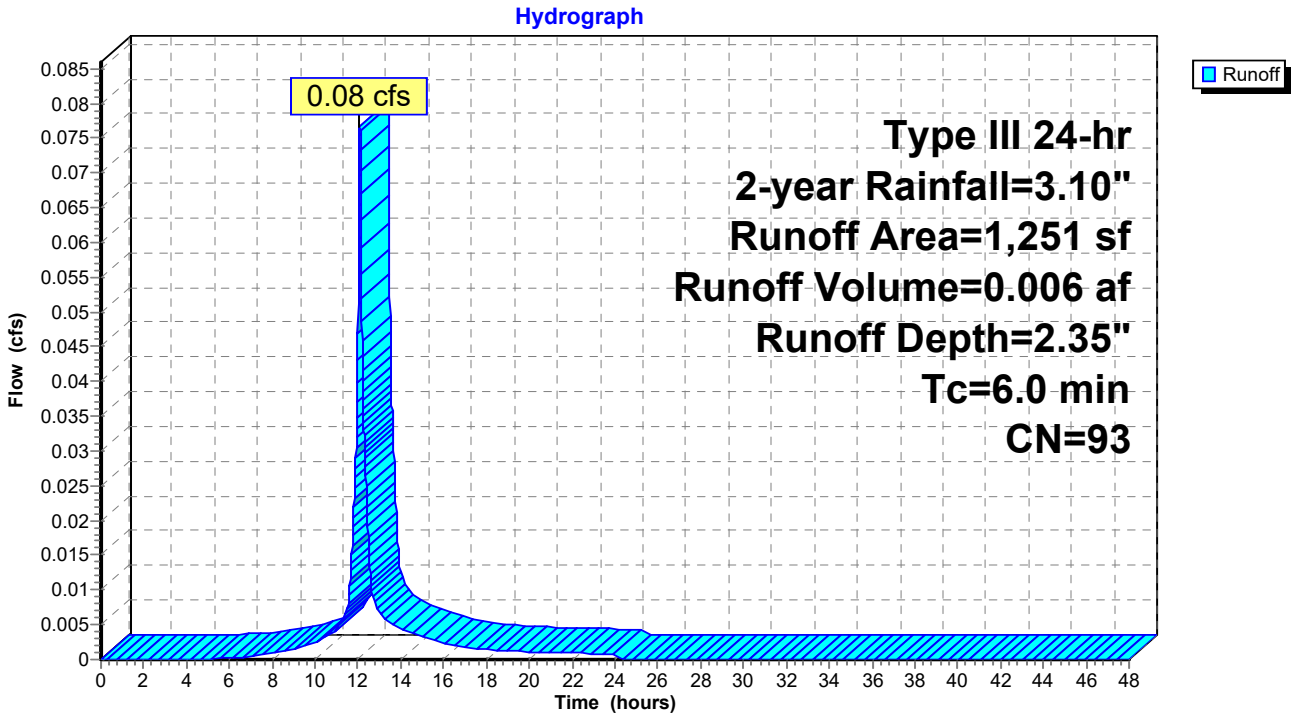
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
189	68	<50% Grass cover, Poor, HSG A
1,062	98	Paved parking, HSG A
1,251	93	Weighted Average
189	68	15.11% Pervious Area
1,062	98	84.89% Impervious Area

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

Subcatchment 1.3S: S 1.3 - Alley



Summary for Subcatchment 2.2S: CEDAR ST SOUTH

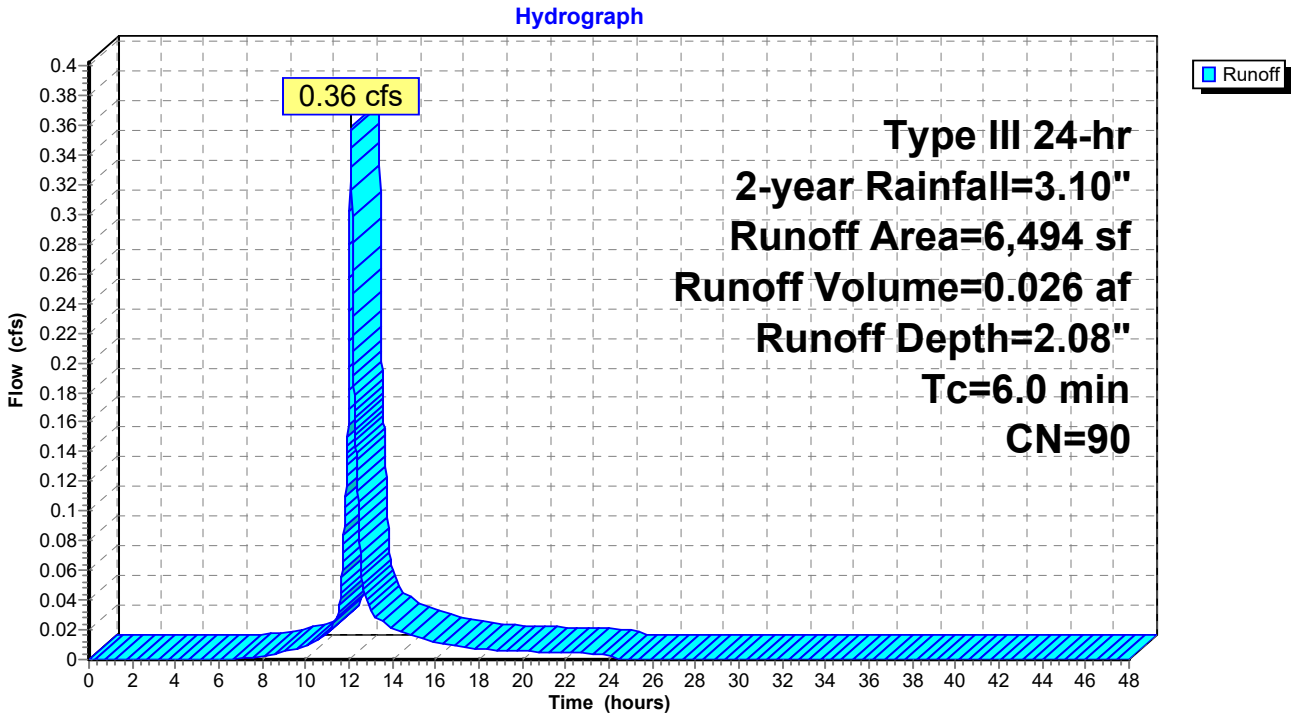
Runoff = 0.36 cfs @ 12.09 hrs, Volume= 0.026 af, Depth= 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
1,670	68	<50% Grass cover, Poor, HSG A
4,824	98	Paved parking, HSG A
6,494	90	Weighted Average
1,670	68	25.72% Pervious Area
4,824	98	74.28% Impervious Area

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

Subcatchment 2.2S: CEDAR ST SOUTH



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER ST

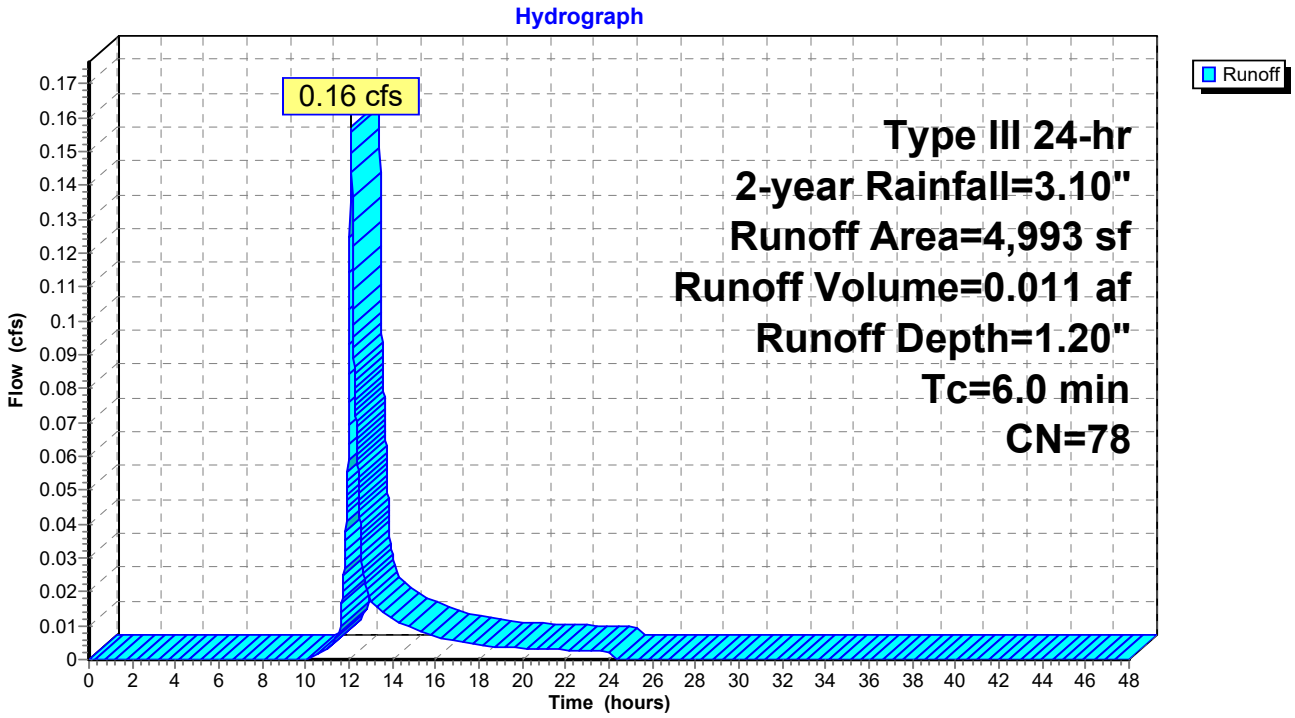
Runoff = 0.16 cfs @ 12.09 hrs, Volume= 0.011 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
3,369	68	<50% Grass cover, Poor, HSG A
1,624	98	Paved parking, HSG A
4,993	78	Weighted Average
3,369	68	67.47% Pervious Area
1,624	98	32.53% Impervious Area

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

Subcatchment 2.3S: S 2.3 - LANCASTER ST



Summary for Subcatchment S2.1: Parking

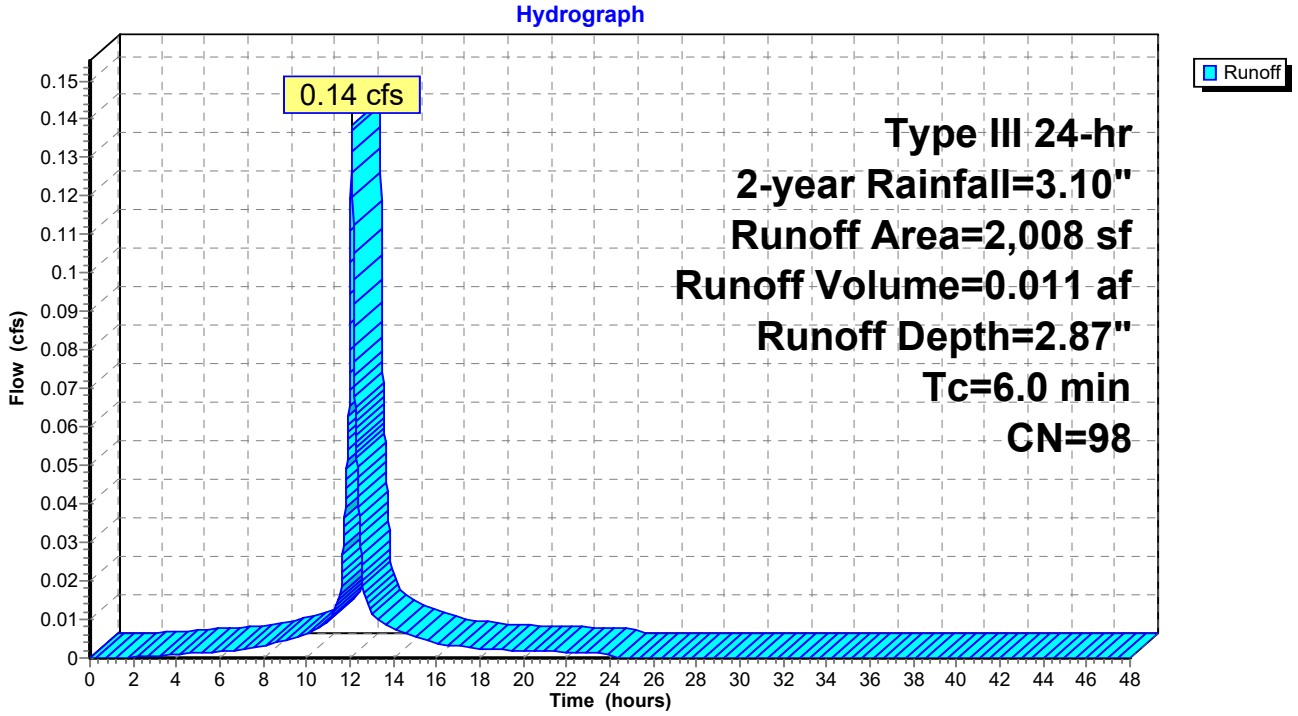
Runoff = 0.14 cfs @ 12.08 hrs, Volume= 0.011 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	2,008	98	Parking
	2,008	98	100.00% Impervious Area

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

Subcatchment S2.1: Parking

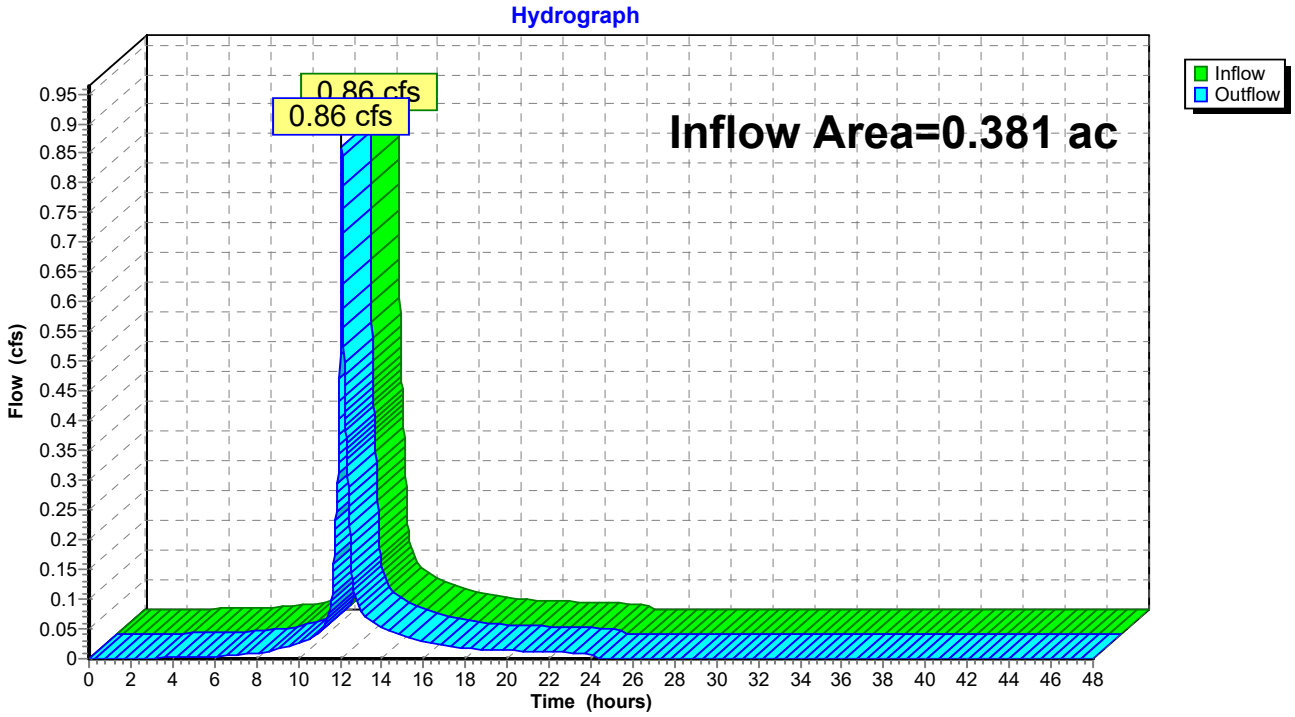


Summary for Reach #99: Lancaster St

Inflow Area = 0.381 ac, 68.52% Impervious, Inflow Depth = 2.02" for 2-year event
Inflow = 0.86 cfs @ 12.09 hrs, Volume= 0.064 af
Outflow = 0.86 cfs @ 12.09 hrs, Volume= 0.064 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster St

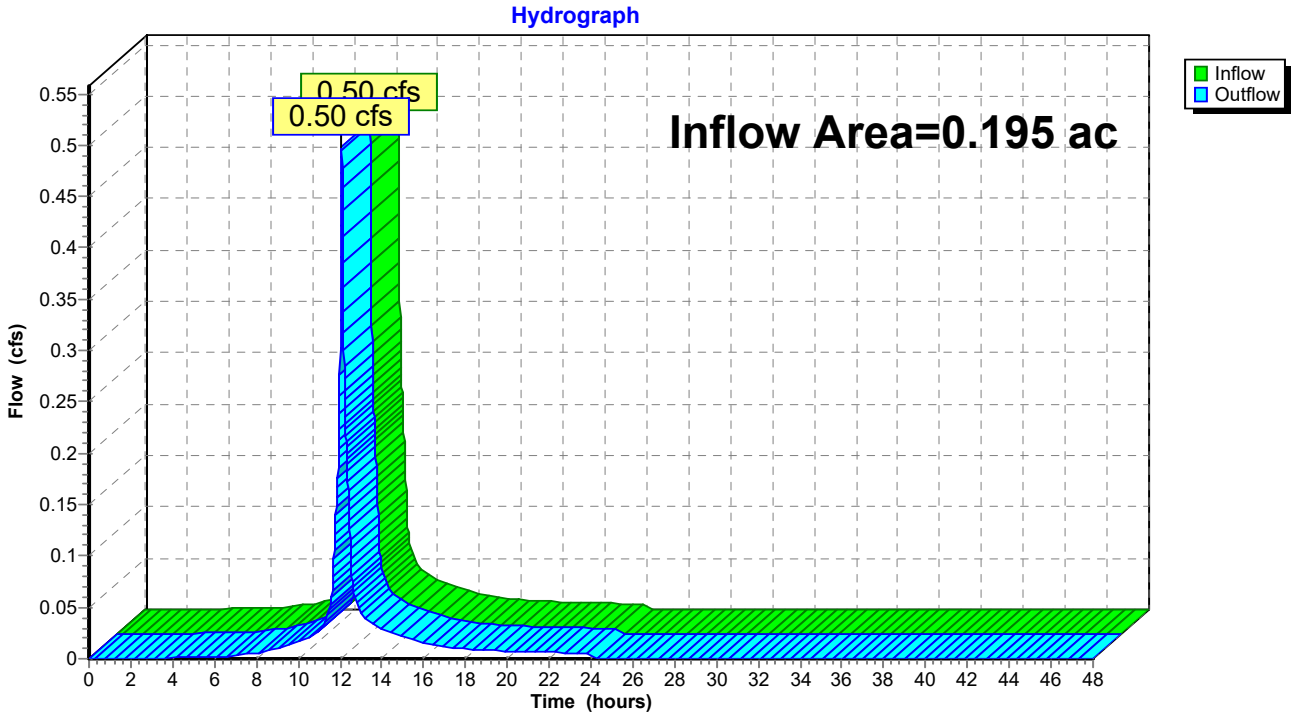


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.195 ac, 80.36% Impervious, Inflow Depth = 2.26" for 2-year event
Inflow = 0.50 cfs @ 12.09 hrs, Volume= 0.037 af
Outflow = 0.50 cfs @ 12.09 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: LANCASTER ST Runoff Area=1,862 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.19 cfs 0.016 af

Subcatchment 1.3S: S 1.3 - Alley Runoff Area=1,251 sf 84.89% Impervious Runoff Depth=3.81"
Tc=6.0 min CN=93 Runoff=0.12 cfs 0.009 af

Subcatchment 2.2S: CEDAR ST SOUTH Runoff Area=6,494 sf 74.28% Impervious Runoff Depth=3.49"
Tc=6.0 min CN=90 Runoff=0.59 cfs 0.043 af

Subcatchment 2.3S: S 2.3 - LANCASTER ST Runoff Area=4,993 sf 32.53% Impervious Runoff Depth=2.38"
Tc=6.0 min CN=78 Runoff=0.32 cfs 0.023 af

Subcatchment S2.1: Parking Runoff Area=2,008 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.21 cfs 0.017 af

Reach #99: Lancaster St Inflow=1.43 cfs 0.107 af
Outflow=1.43 cfs 0.107 af

Reach 2R: CEDAR STREET Inflow=0.80 cfs 0.060 af
Outflow=0.80 cfs 0.060 af

Total Runoff Area = 0.381 ac Runoff Volume = 0.107 af Average Runoff Depth = 3.38"
31.48% Pervious = 0.120 ac 68.52% Impervious = 0.261 ac

Summary for Subcatchment 1.1S: LANCASTER ST

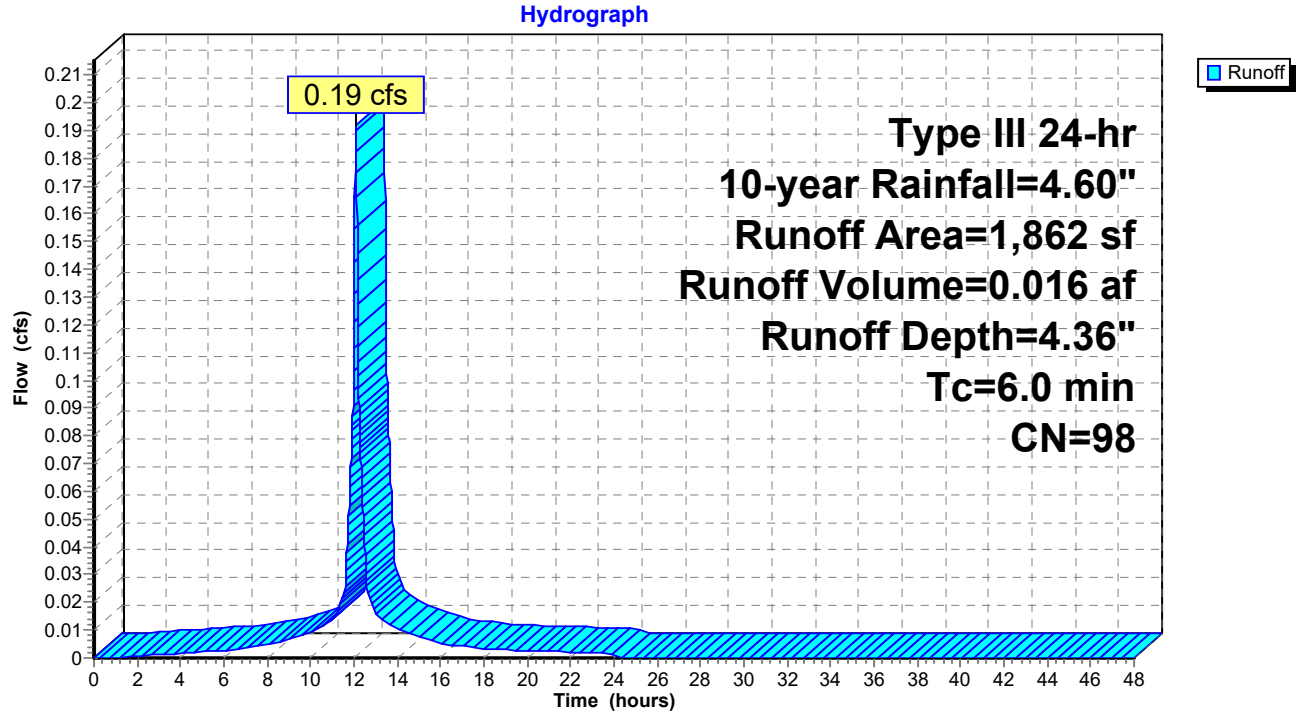
Runoff = 0.19 cfs @ 12.08 hrs, Volume= 0.016 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
1,862	98	Paved parking, HSG A
1,862	98	100.00% Impervious Area

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

Subcatchment 1.1S: LANCASTER ST



Summary for Subcatchment 1.3S: S 1.3 - Alley

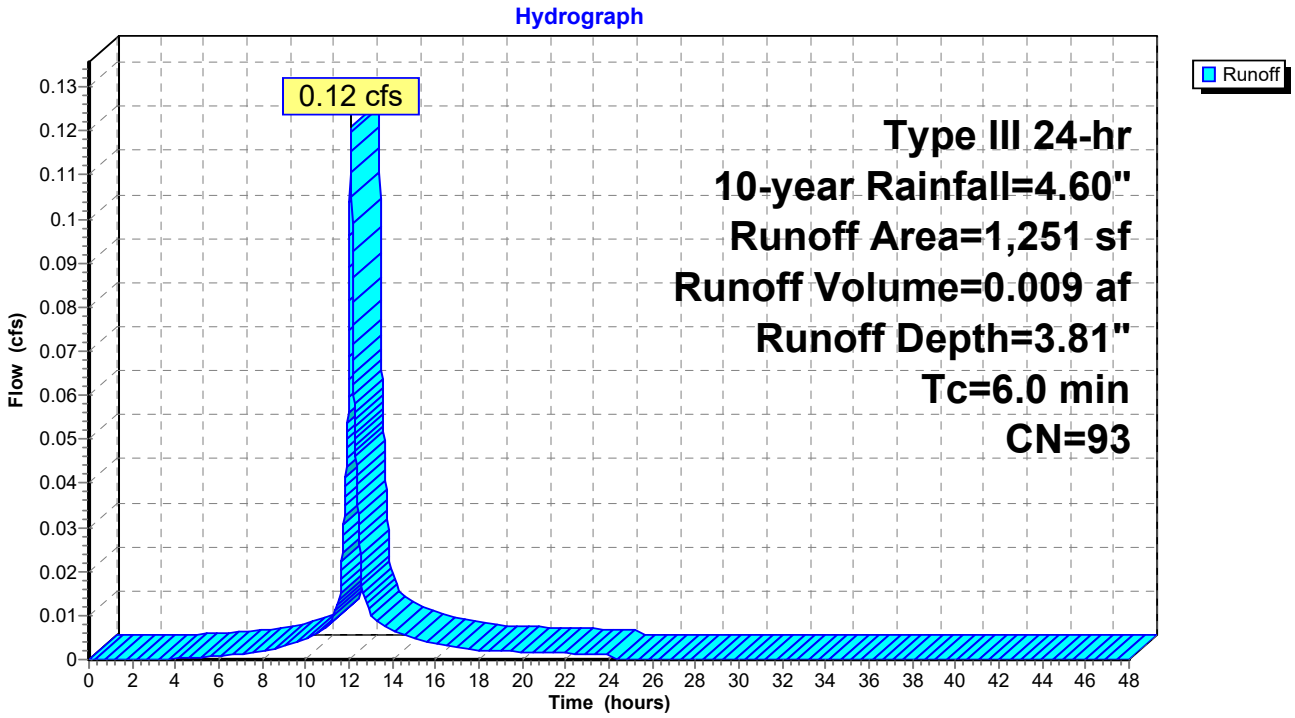
Runoff = 0.12 cfs @ 12.08 hrs, Volume= 0.009 af, Depth= 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
189	68	<50% Grass cover, Poor, HSG A
1,062	98	Paved parking, HSG A
1,251	93	Weighted Average
189	68	15.11% Pervious Area
1,062	98	84.89% Impervious Area

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

Subcatchment 1.3S: S 1.3 - Alley



Summary for Subcatchment 2.2S: CEDAR ST SOUTH

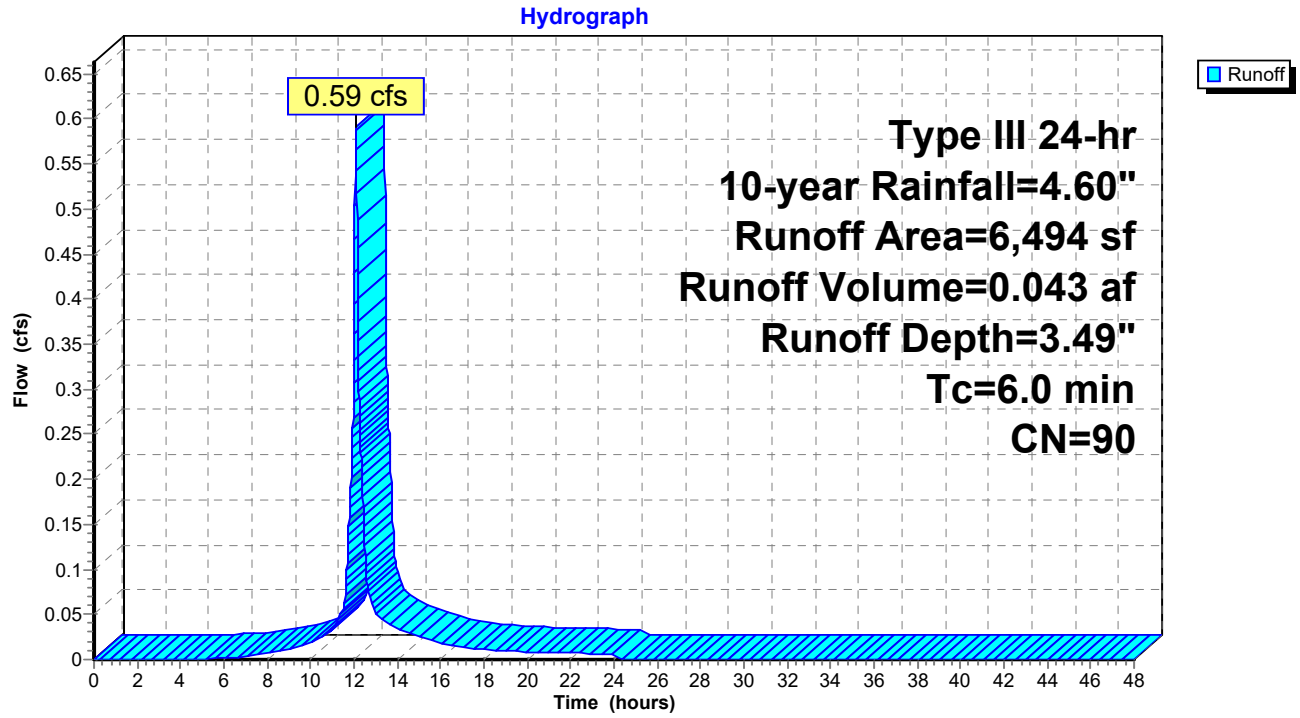
Runoff = 0.59 cfs @ 12.09 hrs, Volume= 0.043 af, Depth= 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
1,670	68	<50% Grass cover, Poor, HSG A
4,824	98	Paved parking, HSG A
6,494	90	Weighted Average
1,670	68	25.72% Pervious Area
4,824	98	74.28% Impervious Area

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

Subcatchment 2.2S: CEDAR ST SOUTH



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER ST

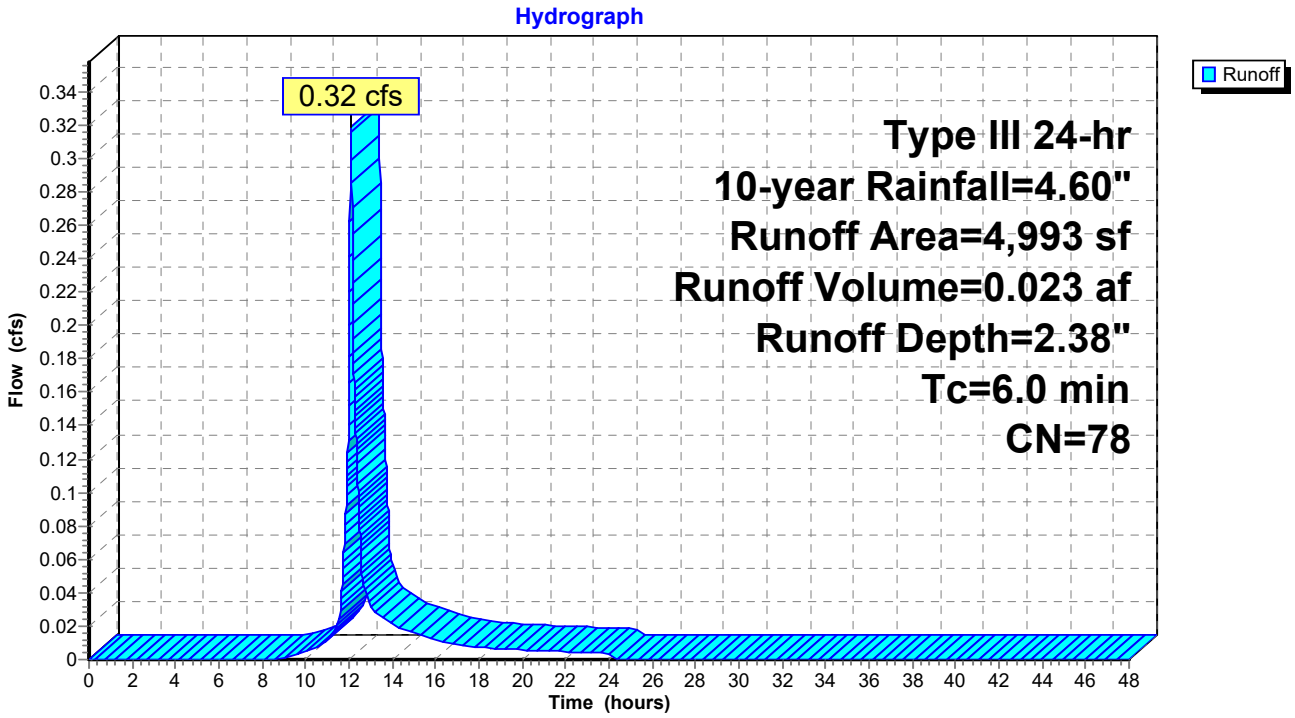
Runoff = 0.32 cfs @ 12.09 hrs, Volume= 0.023 af, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
3,369	68	<50% Grass cover, Poor, HSG A
1,624	98	Paved parking, HSG A
4,993	78	Weighted Average
3,369	68	67.47% Pervious Area
1,624	98	32.53% Impervious Area

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

Subcatchment 2.3S: S 2.3 - LANCASTER ST



Summary for Subcatchment S2.1: Parking

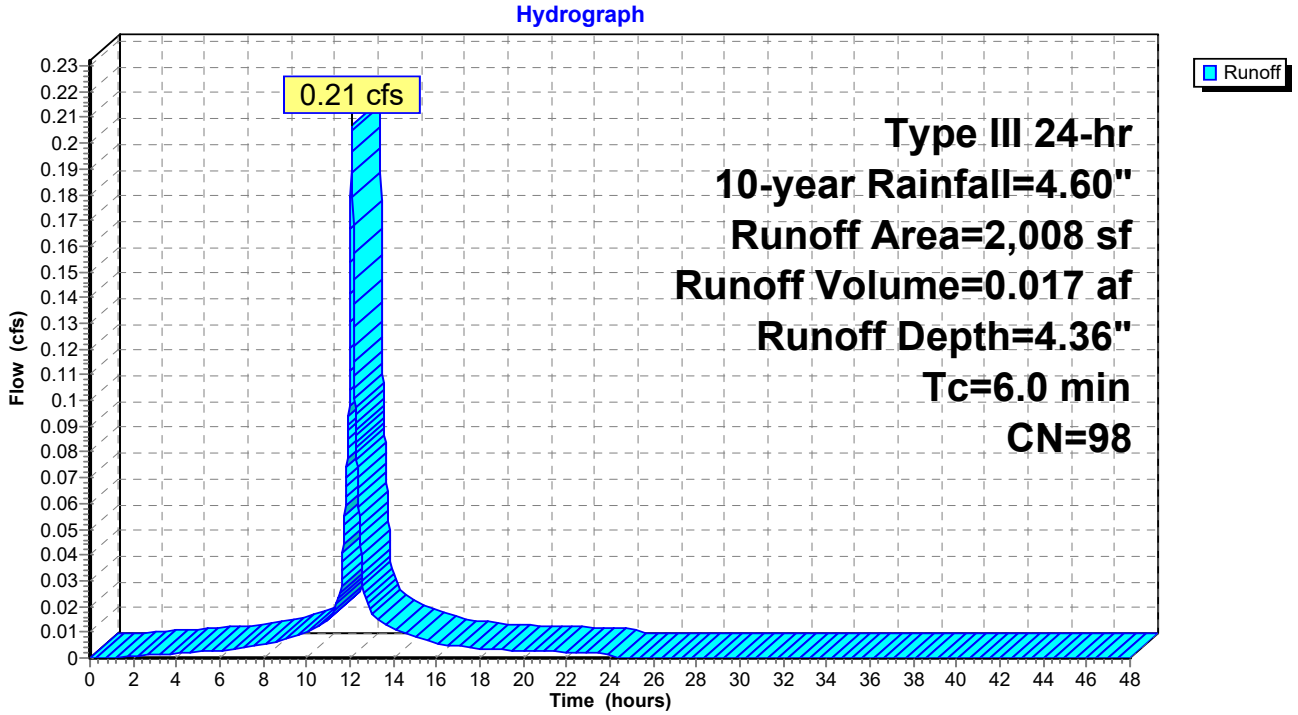
Runoff = 0.21 cfs @ 12.08 hrs, Volume= 0.017 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	2,008	98	Parking
	2,008	98	100.00% Impervious Area

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

Subcatchment S2.1: Parking

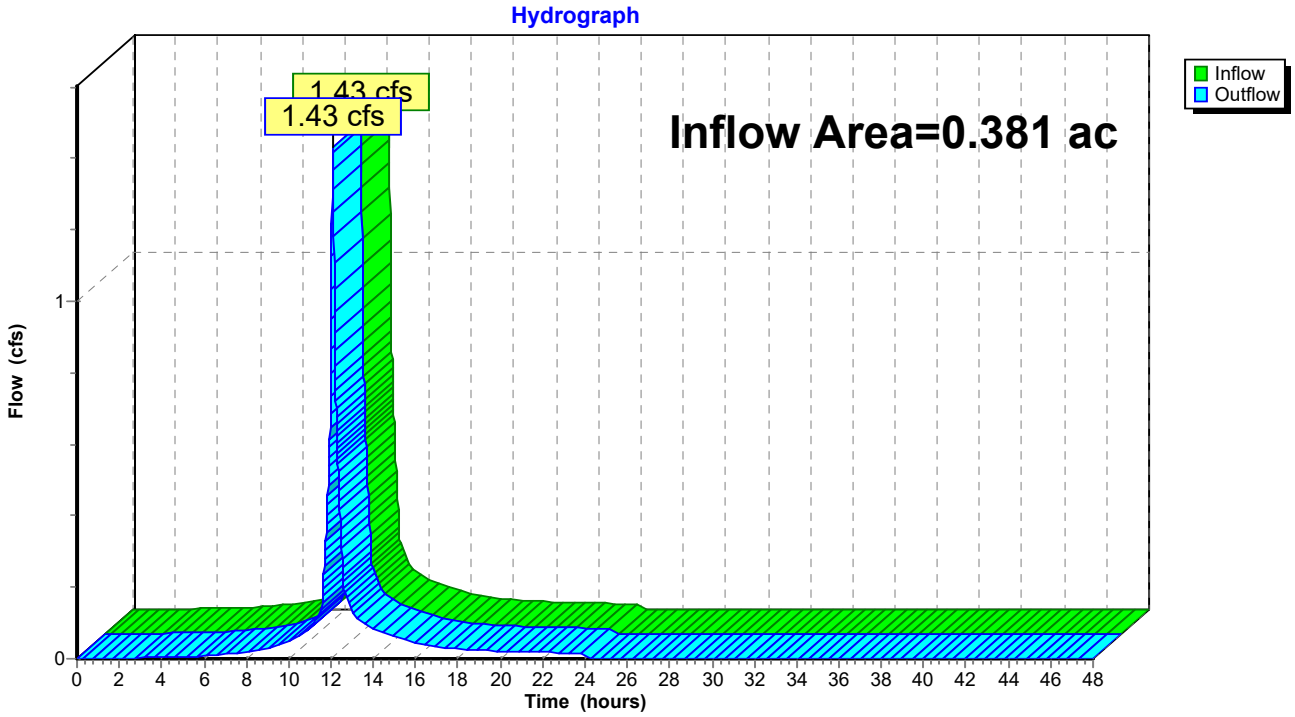


Summary for Reach #99: Lancaster St

Inflow Area = 0.381 ac, 68.52% Impervious, Inflow Depth = 3.38" for 10-year event
Inflow = 1.43 cfs @ 12.09 hrs, Volume= 0.107 af
Outflow = 1.43 cfs @ 12.09 hrs, Volume= 0.107 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster St

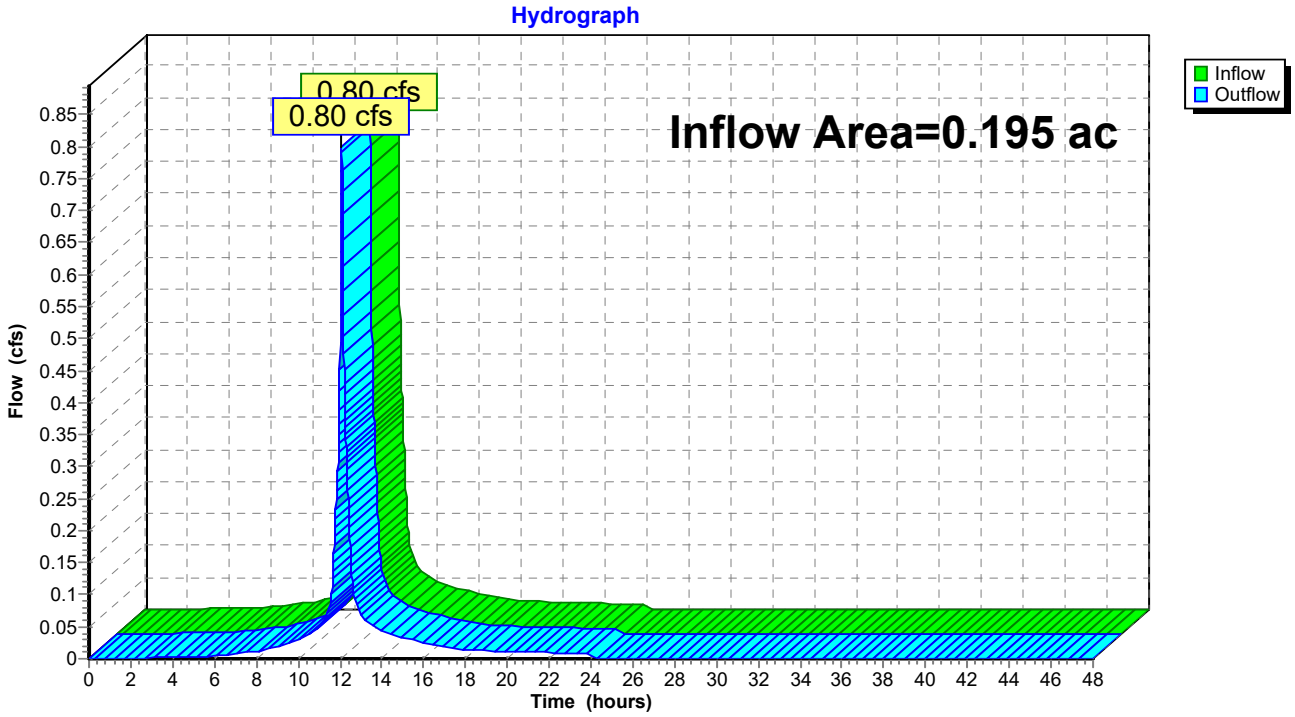


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.195 ac, 80.36% Impervious, Inflow Depth = 3.70" for 10-year event
Inflow = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af
Outflow = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: LANCASTER ST Runoff Area=1,862 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.24 cfs 0.020 af

Subcatchment 1.3S: S 1.3 - Alley Runoff Area=1,251 sf 84.89% Impervious Runoff Depth=4.99"
Tc=6.0 min CN=93 Runoff=0.16 cfs 0.012 af

Subcatchment 2.2S: CEDAR ST SOUTH Runoff Area=6,494 sf 74.28% Impervious Runoff Depth=4.65"
Tc=6.0 min CN=90 Runoff=0.78 cfs 0.058 af

Subcatchment 2.3S: S 2.3 - LANCASTER ST Runoff Area=4,993 sf 32.53% Impervious Runoff Depth=3.40"
Tc=6.0 min CN=78 Runoff=0.46 cfs 0.033 af

Subcatchment S2.1: Parking Runoff Area=2,008 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.26 cfs 0.021 af

Reach #99: Lancaster St Inflow=1.89 cfs 0.143 af
Outflow=1.89 cfs 0.143 af

Reach 2R: CEDAR STREET Inflow=1.04 cfs 0.079 af
Outflow=1.04 cfs 0.079 af

Total Runoff Area = 0.381 ac Runoff Volume = 0.143 af Average Runoff Depth = 4.51"
31.48% Pervious = 0.120 ac 68.52% Impervious = 0.261 ac

Summary for Subcatchment 1.1S: LANCASTER ST

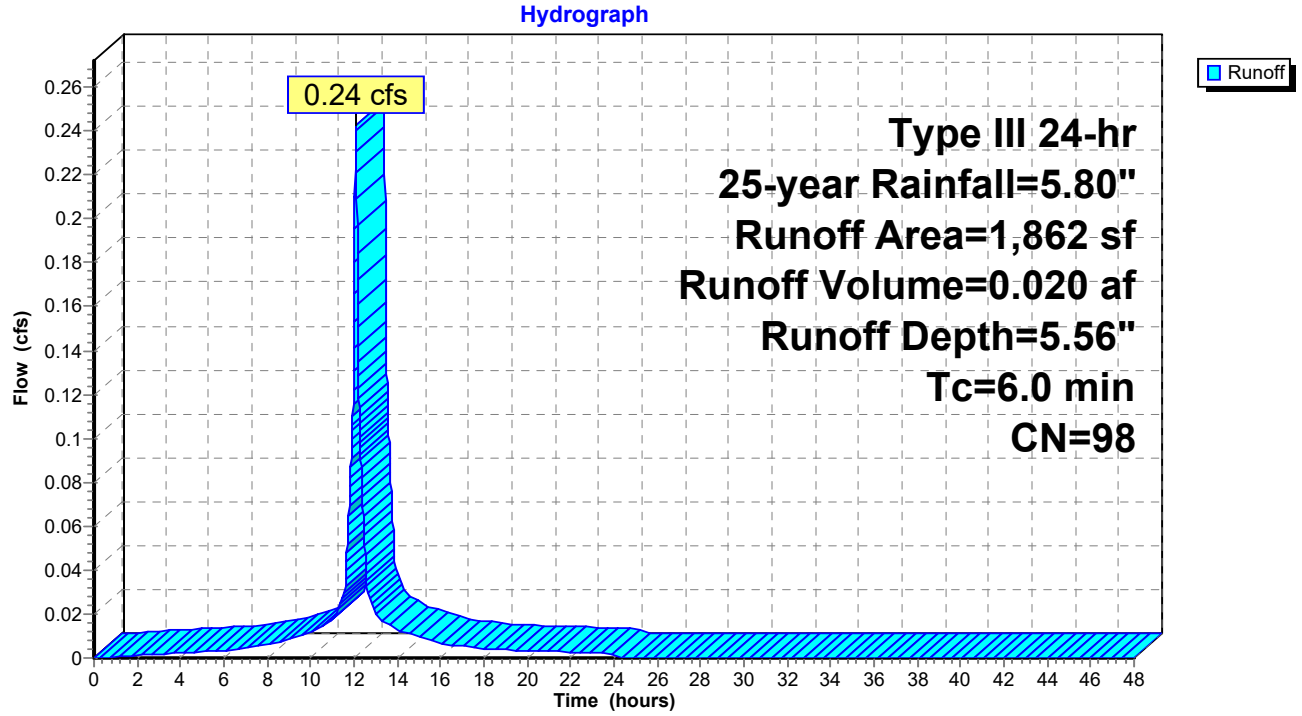
Runoff = 0.24 cfs @ 12.08 hrs, Volume= 0.020 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
1,862	98	Paved parking, HSG A
1,862	98	100.00% Impervious Area

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

Subcatchment 1.1S: LANCASTER ST



Summary for Subcatchment 1.3S: S 1.3 - Alley

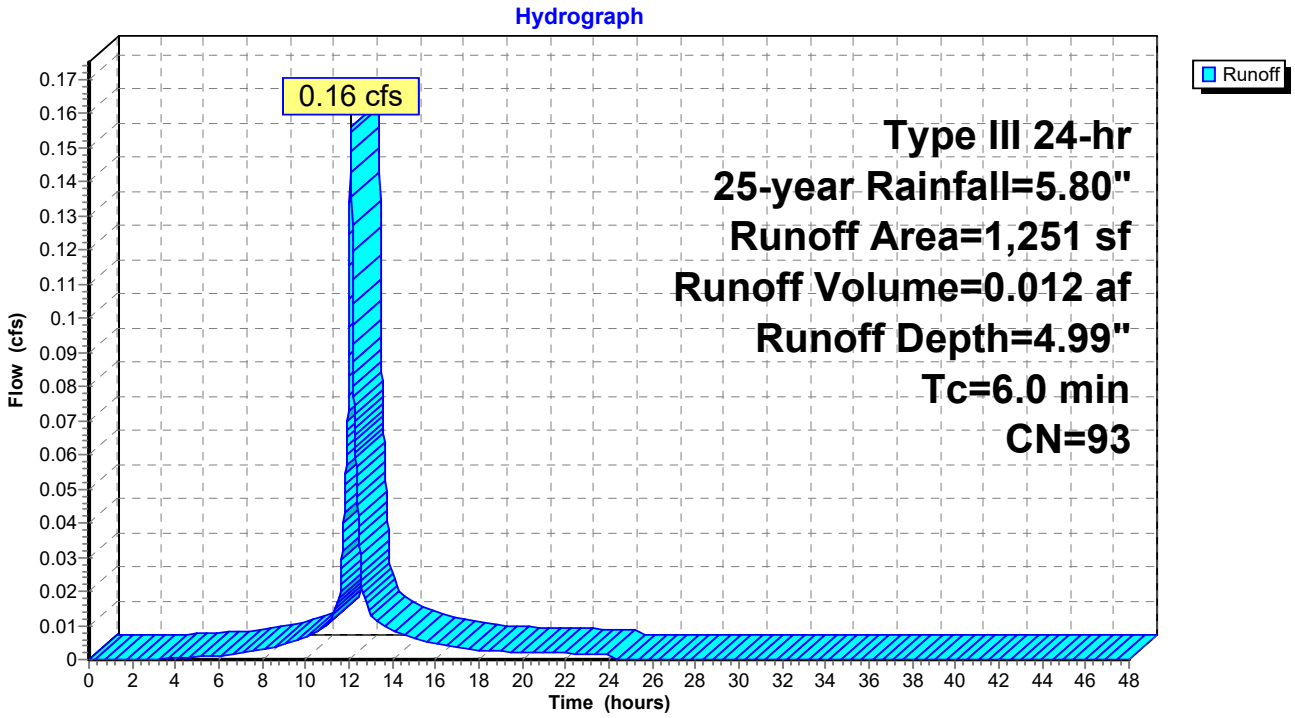
Runoff = 0.16 cfs @ 12.08 hrs, Volume= 0.012 af, Depth= 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
189	68	<50% Grass cover, Poor, HSG A
1,062	98	Paved parking, HSG A
1,251	93	Weighted Average
189	68	15.11% Pervious Area
1,062	98	84.89% Impervious Area

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

Subcatchment 1.3S: S 1.3 - Alley



Summary for Subcatchment 2.2S: CEDAR ST SOUTH

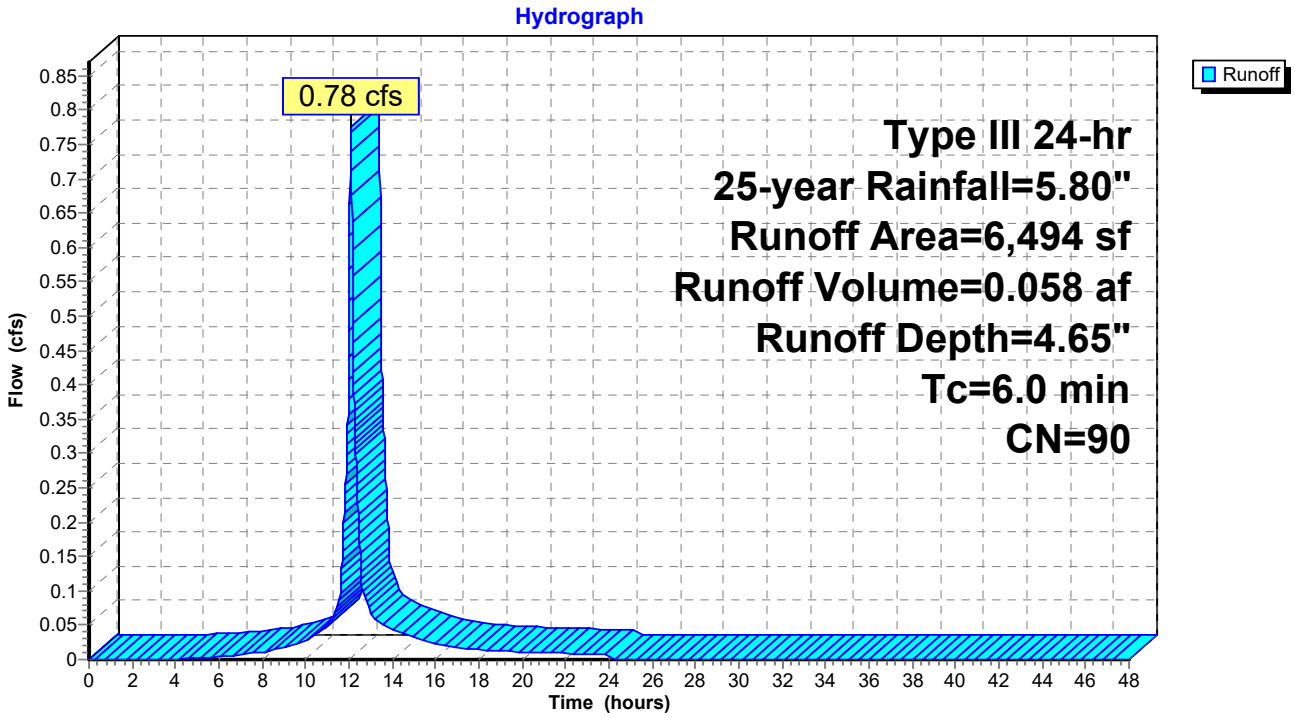
Runoff = 0.78 cfs @ 12.08 hrs, Volume= 0.058 af, Depth= 4.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
1,670	68	<50% Grass cover, Poor, HSG A
4,824	98	Paved parking, HSG A
6,494	90	Weighted Average
1,670	68	25.72% Pervious Area
4,824	98	74.28% Impervious Area

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

Subcatchment 2.2S: CEDAR ST SOUTH



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER ST

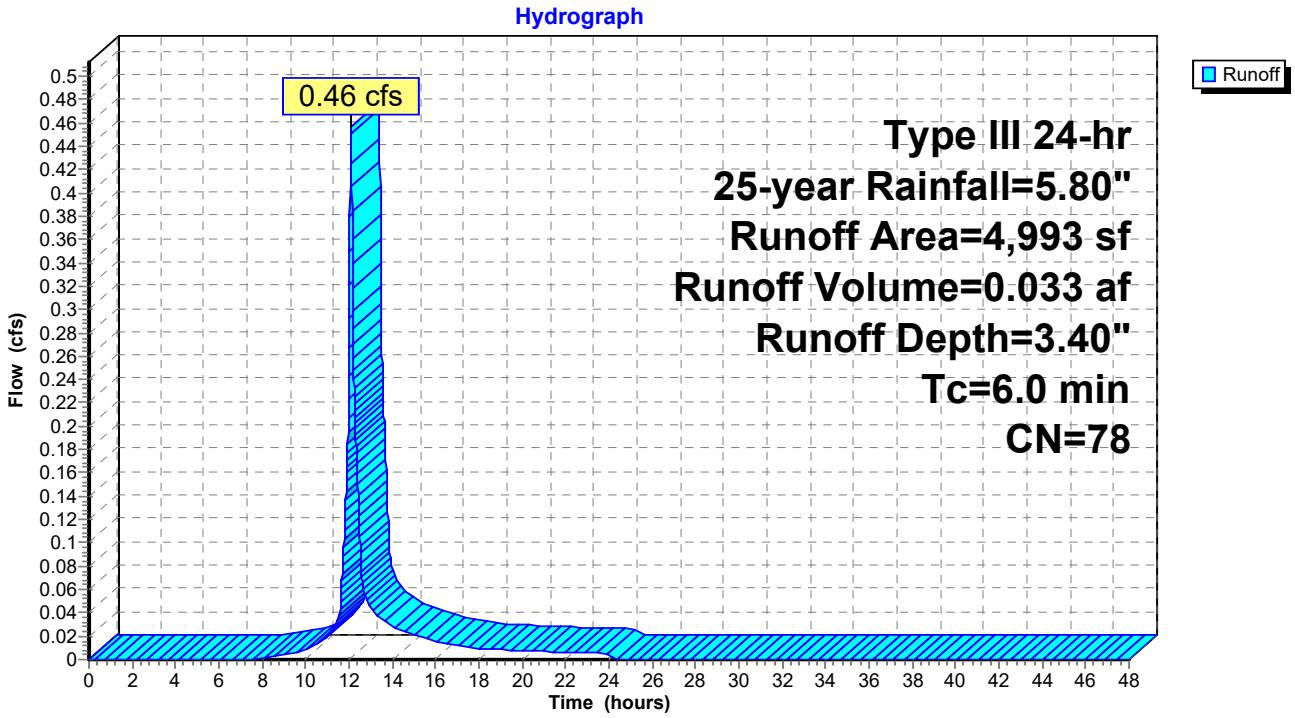
Runoff = 0.46 cfs @ 12.09 hrs, Volume= 0.033 af, Depth= 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
3,369	68	<50% Grass cover, Poor, HSG A
1,624	98	Paved parking, HSG A
4,993	78	Weighted Average
3,369	68	67.47% Pervious Area
1,624	98	32.53% Impervious Area

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

Subcatchment 2.3S: S 2.3 - LANCASTER ST



Summary for Subcatchment S2.1: Parking

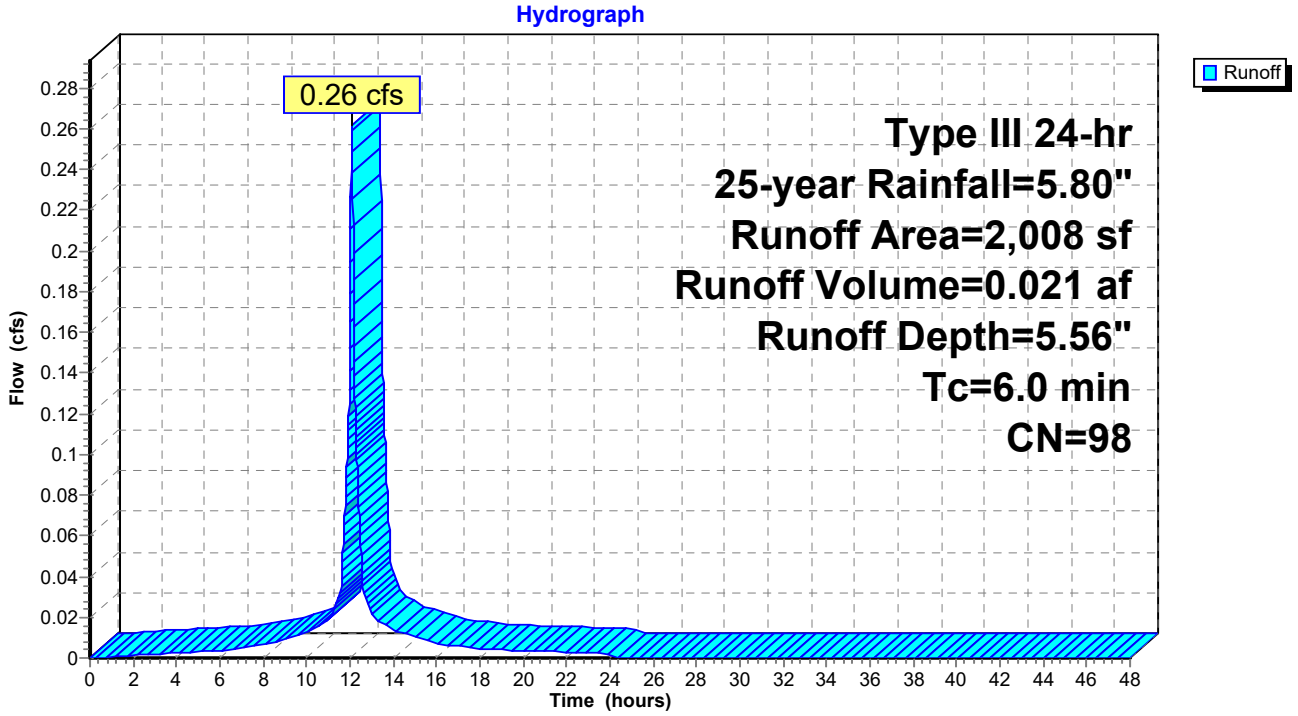
Runoff = 0.26 cfs @ 12.08 hrs, Volume= 0.021 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	2,008	98	Parking
	2,008	98	100.00% Impervious Area

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

Subcatchment S2.1: Parking

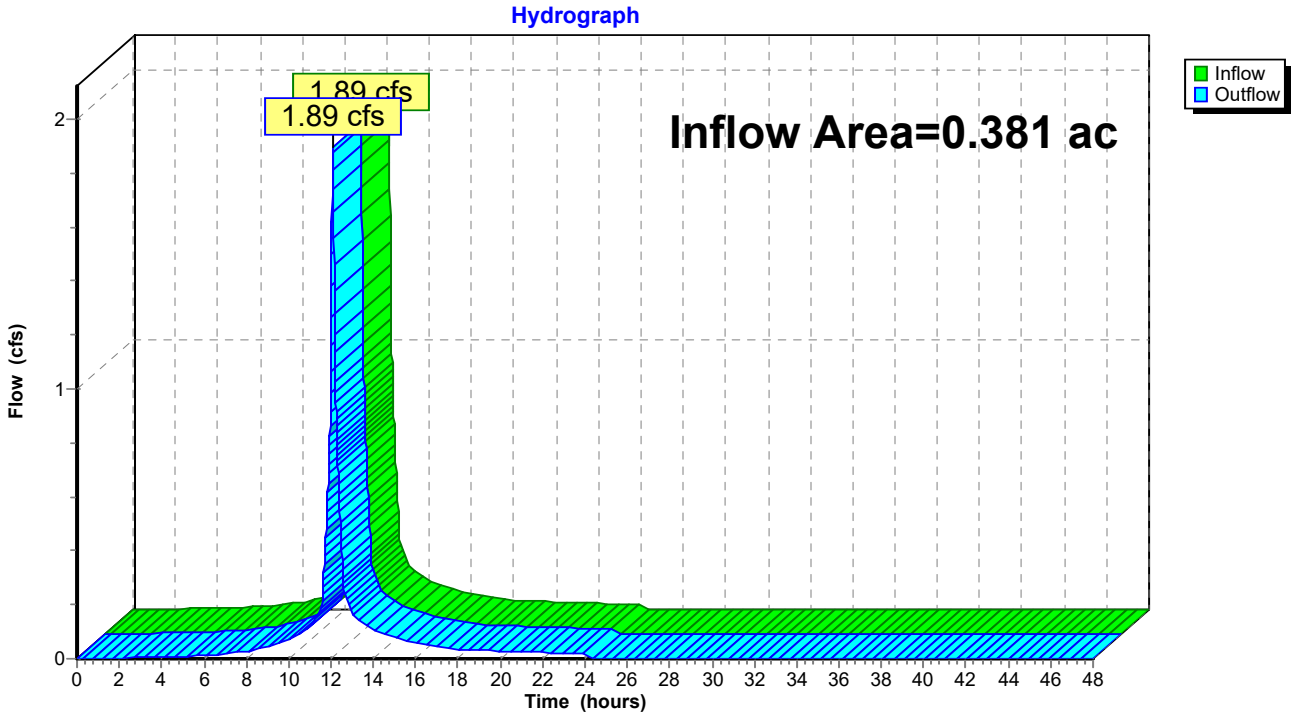


Summary for Reach #99: Lancaster St

Inflow Area = 0.381 ac, 68.52% Impervious, Inflow Depth = 4.51" for 25-year event
Inflow = 1.89 cfs @ 12.09 hrs, Volume= 0.143 af
Outflow = 1.89 cfs @ 12.09 hrs, Volume= 0.143 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster St

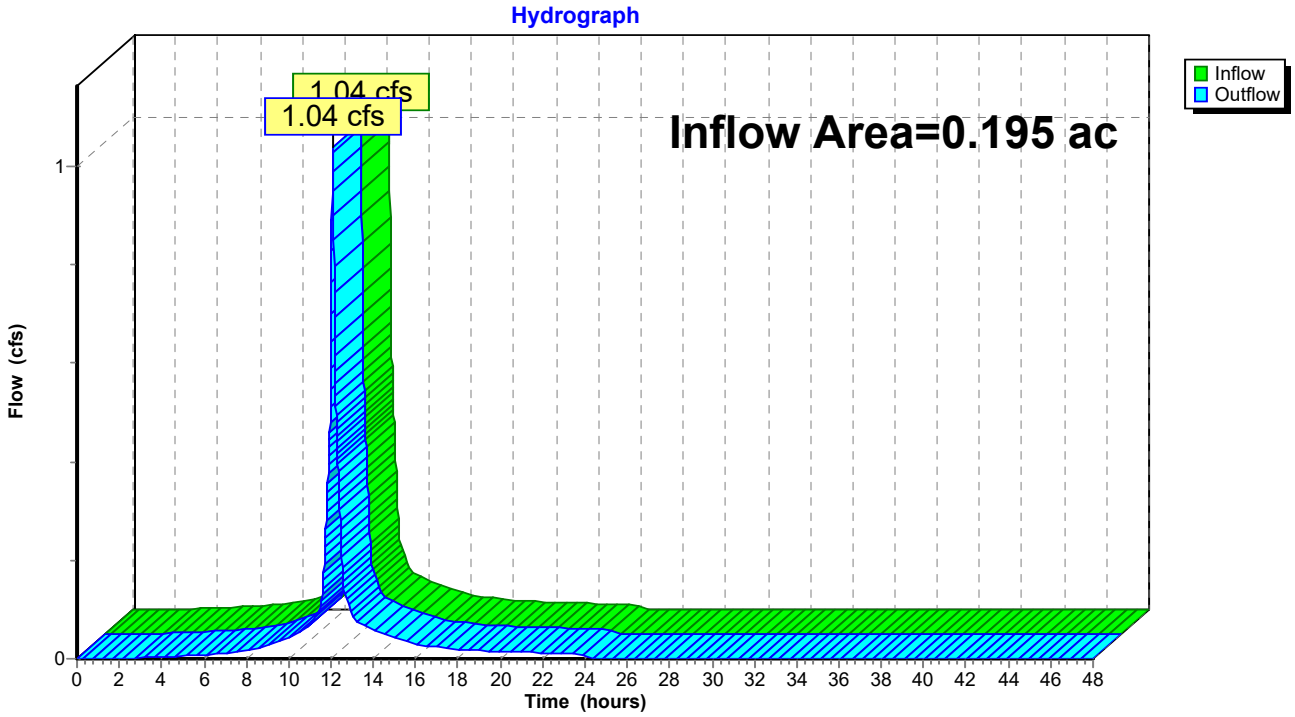


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.195 ac, 80.36% Impervious, Inflow Depth = 4.87" for 25-year event
Inflow = 1.04 cfs @ 12.08 hrs, Volume= 0.079 af
Outflow = 1.04 cfs @ 12.08 hrs, Volume= 0.079 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET

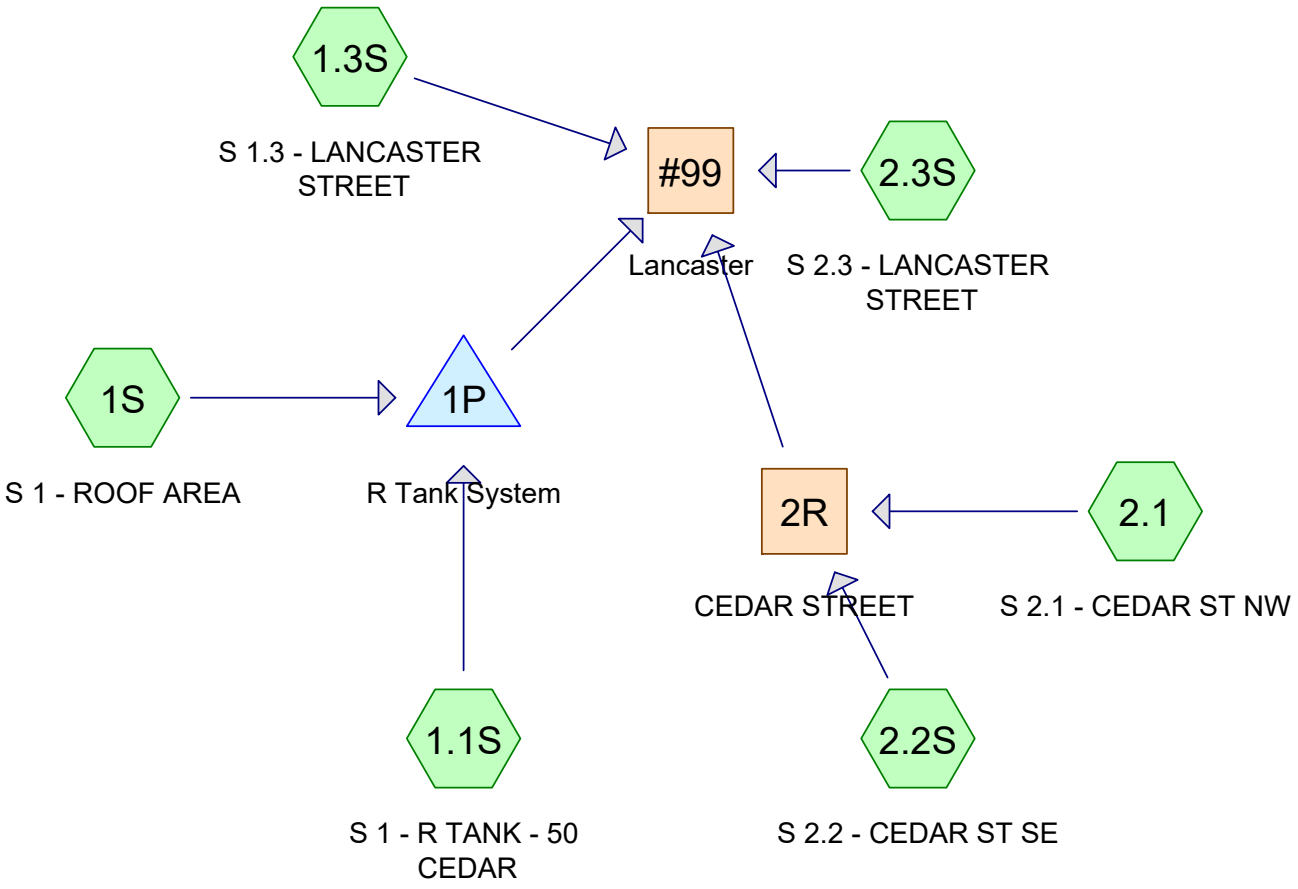


SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Post Development HydroCAD

PHASE 2 - 50 CEDAR STREET



Subcat Reach Pond Link

Routing Diagram for PHASE 2 - 50 CEDAR ST - POST
Prepared by HP Inc., Printed 4/25/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.068	39	>75% Grass cover, Good, HSG A (1.3S, 2.1, 2.2S, 2.3S)
0.202	98	Paved parking, HSG A (1.1S, 1.3S, 2.1, 2.2S, 2.3S)
0.111	98	Roof and Pave (1S)

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.269	HSG A	1.1S, 1.3S, 2.1, 2.2S, 2.3S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.111	Other	1S

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.068	0.000	0.000	0.000	0.000	0.068	>75% Grass cover, Good	1.3S, 2.1, 2.2S, 2.3S
0.202	0.000	0.000	0.000	0.000	0.202	Paved parking	1.1S, 1.3S, 2.1, 2.2S, 2.3S
0.000	0.000	0.000	0.000	0.111	0.111	Roof and Pave	1S

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S 1 - R TANK - 50 Runoff Area=1,944 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.13 cfs 0.011 af

Subcatchment 1.3S: S 1.3 - LANCASTER Runoff Area=1,733 sf 72.01% Impervious Runoff Depth=1.39"
Tc=6.0 min CN=81 Runoff=0.06 cfs 0.005 af

Subcatchment 1S: S 1 - ROOF AREA Runoff Area=4,851 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.33 cfs 0.027 af

Subcatchment 2.1: S 2.1 - CEDAR ST NW Runoff Area=1,397 sf 43.31% Impervious Runoff Depth=0.55"
Tc=6.0 min CN=65 Runoff=0.02 cfs 0.001 af

Subcatchment 2.2S: S 2.2 - CEDAR ST SE Runoff Area=6,321 sf 76.29% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=84 Runoff=0.27 cfs 0.019 af

Subcatchment 2.3S: S 2.3 - LANCASTER Runoff Area=328 sf 48.48% Impervious Runoff Depth=0.68"
Tc=6.0 min CN=68 Runoff=0.01 cfs 0.000 af

Reach #99: Lancaster Inflow=0.40 cfs 0.062 af
Outflow=0.40 cfs 0.062 af

Reach 2R: CEDAR STREET Inflow=0.29 cfs 0.021 af
Outflow=0.29 cfs 0.021 af

Pond 1P: R Tank System Peak Elev=25.21' Storage=546 cf Inflow=0.47 cfs 0.037 af
Outflow=0.21 cfs 0.036 af

Summary for Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR

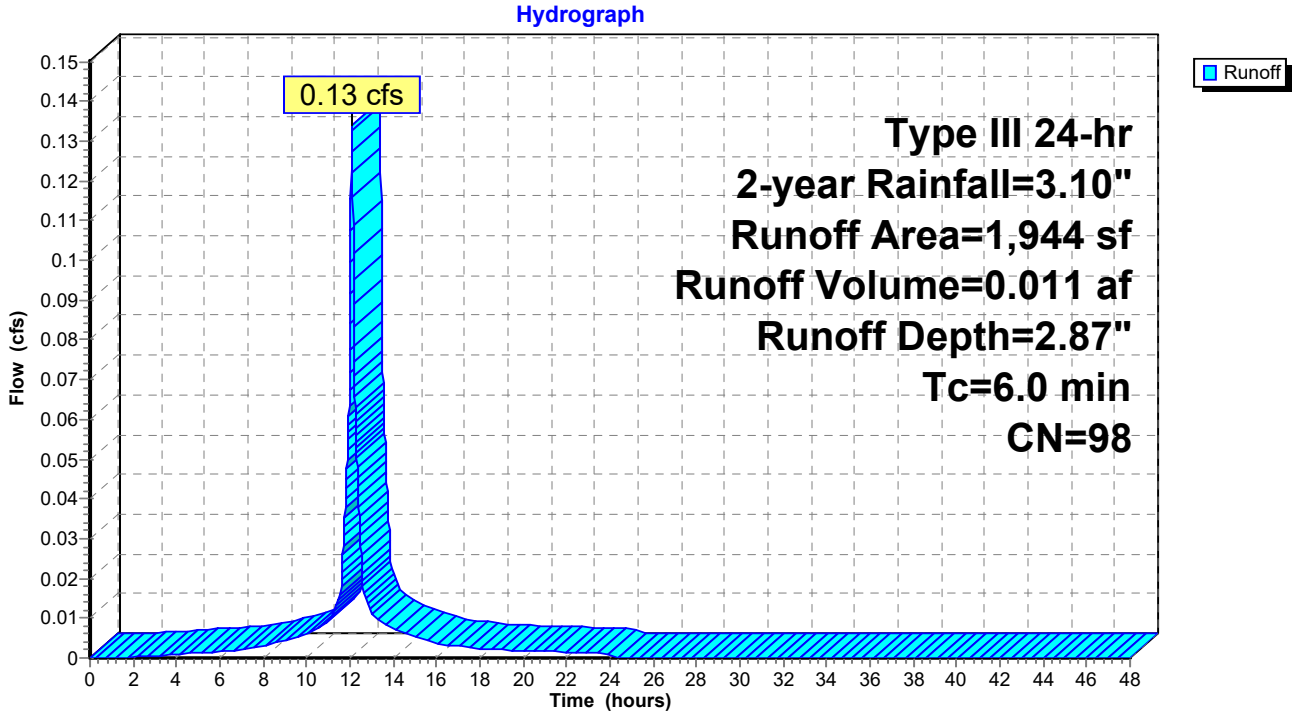
Runoff = 0.13 cfs @ 12.08 hrs, Volume= 0.011 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
1,944	98	Paved parking, HSG A
1,944		100.00% Impervious Area

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

Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR



Summary for Subcatchment 1.3S: S 1.3 - LANCASTER STREET

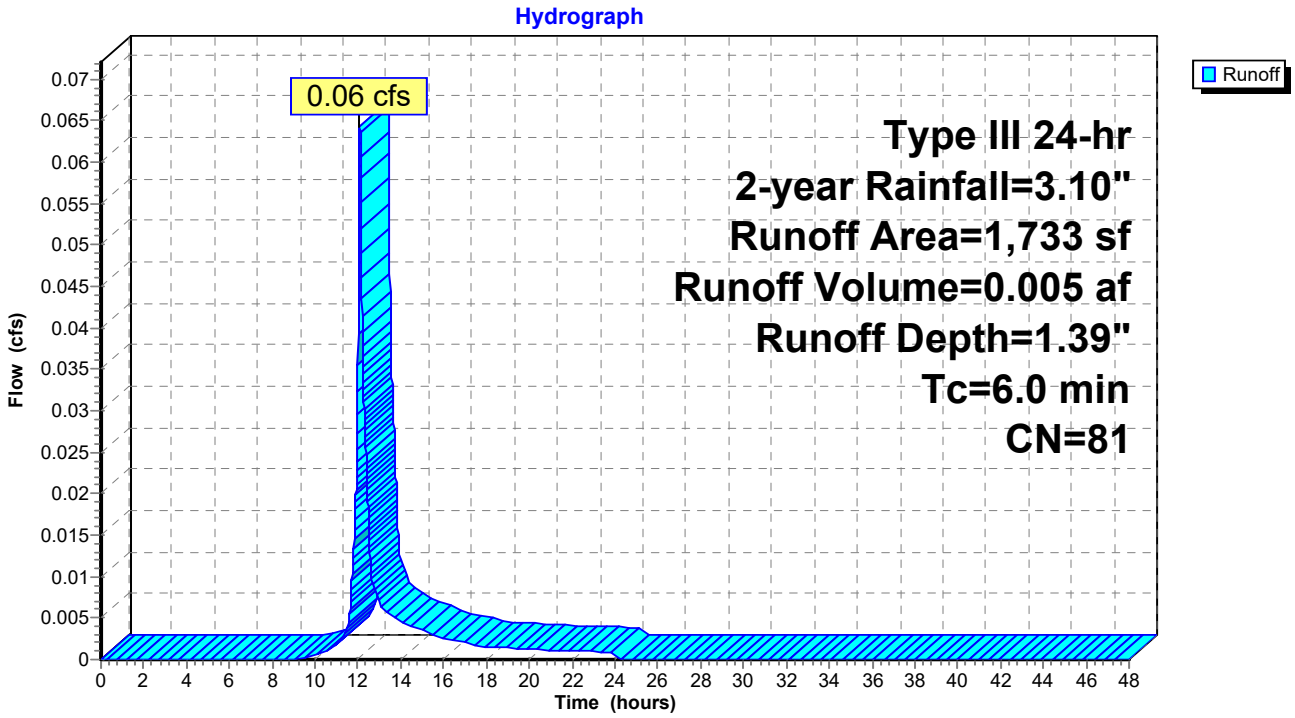
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth= 1.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
485	39	>75% Grass cover, Good, HSG A
1,248	98	Paved parking, HSG A
1,733	81	Weighted Average
485		27.99% Pervious Area
1,248		72.01% Impervious Area

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

Subcatchment 1.3S: S 1.3 - LANCASTER STREET



Summary for Subcatchment 1S: S 1 - ROOF AREA

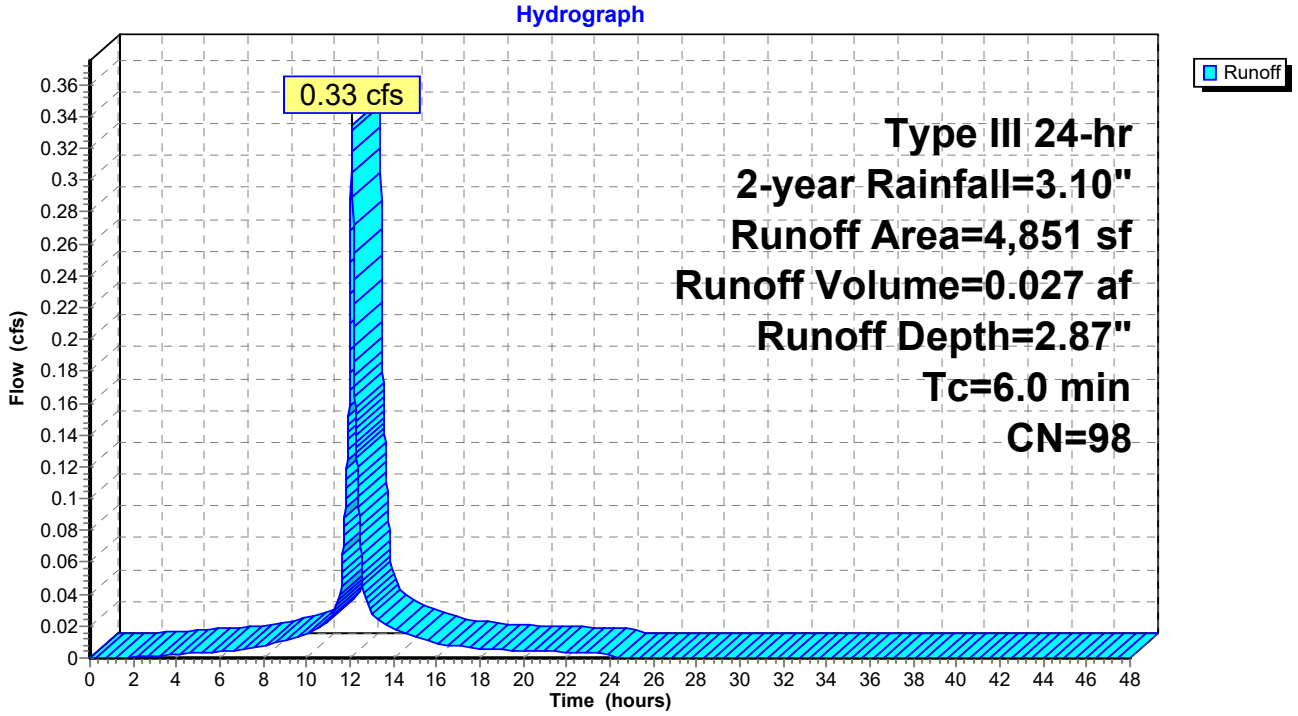
Runoff = 0.33 cfs @ 12.08 hrs, Volume= 0.027 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	4,851	98	Roof and Pave
	4,851		100.00% Impervious Area

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

Subcatchment 1S: S 1 - ROOF AREA



Summary for Subcatchment 2.1: S 2.1 - CEDAR ST NW

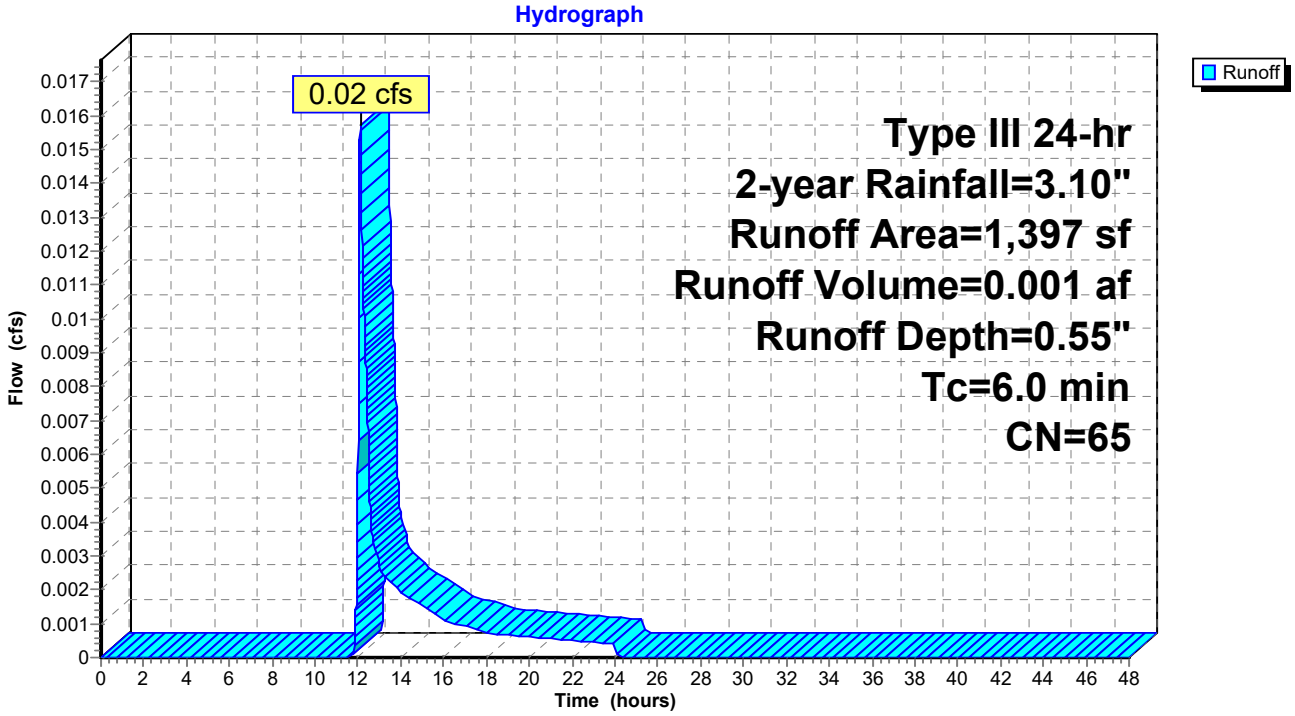
Runoff = 0.02 cfs @ 12.11 hrs, Volume= 0.001 af, Depth= 0.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
792	39	>75% Grass cover, Good, HSG A
605	98	Paved parking, HSG A
1,397	65	Weighted Average
792		56.69% Pervious Area
605		43.31% Impervious Area

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

Subcatchment 2.1: S 2.1 - CEDAR ST NW



Summary for Subcatchment 2.2S: S 2.2 - CEDAR ST SE

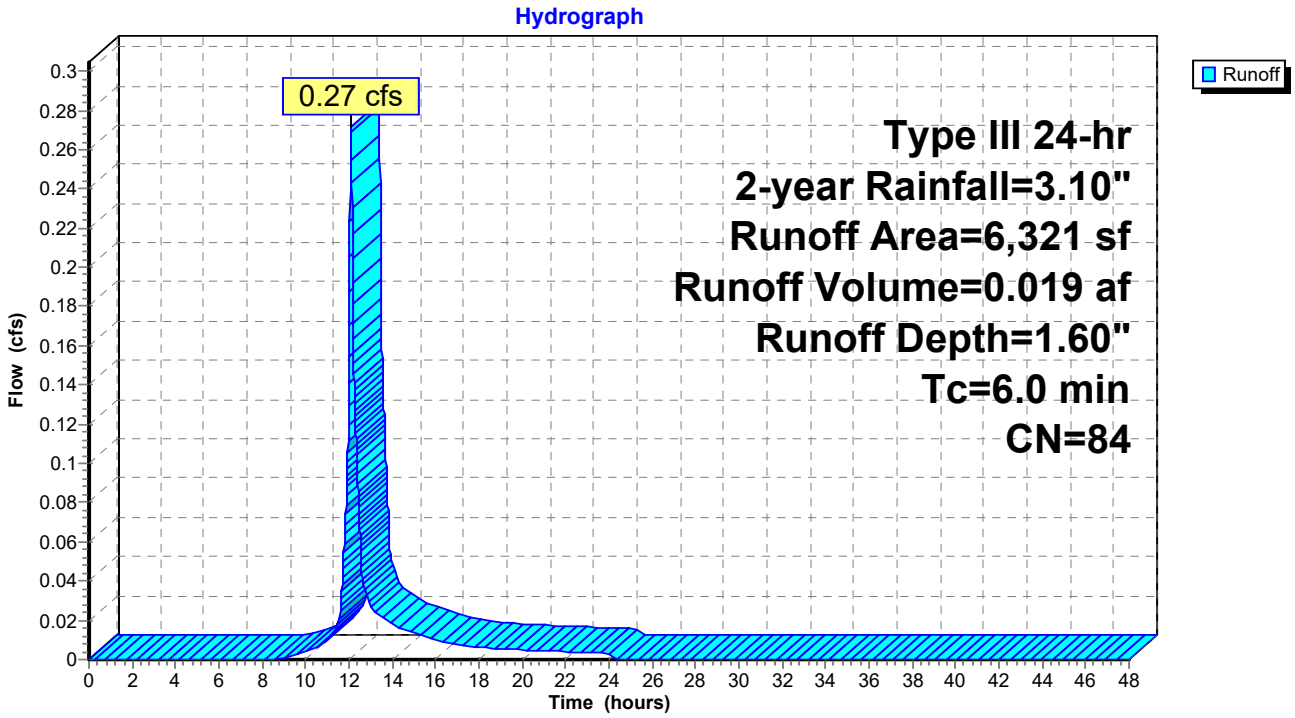
Runoff = 0.27 cfs @ 12.09 hrs, Volume= 0.019 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
1,499	39	>75% Grass cover, Good, HSG A
4,822	98	Paved parking, HSG A
6,321	84	Weighted Average
1,499		23.71% Pervious Area
4,822		76.29% Impervious Area

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

Subcatchment 2.2S: S 2.2 - CEDAR ST SE



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER STREET

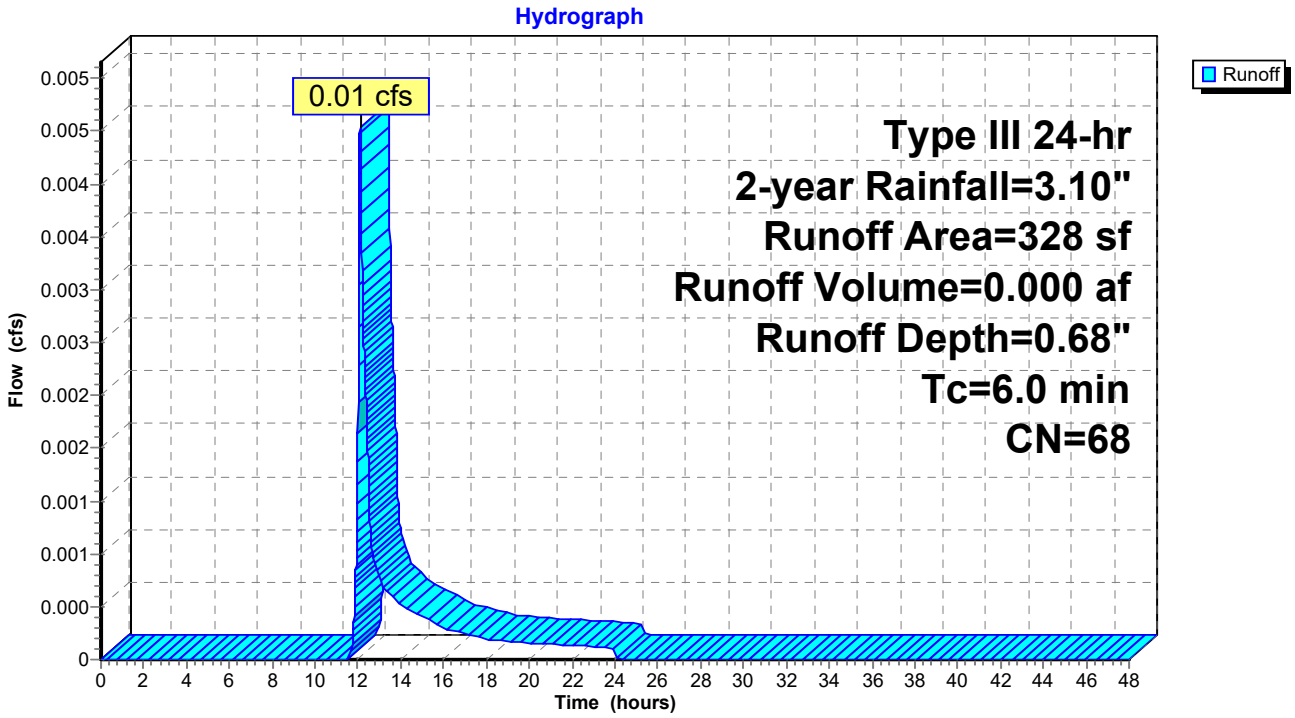
Runoff = 0.01 cfs @ 12.10 hrs, Volume= 0.000 af, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
169	39	>75% Grass cover, Good, HSG A
159	98	Paved parking, HSG A
328	68	Weighted Average
169		51.52% Pervious Area
159		48.48% Impervious Area

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

Subcatchment 2.3S: S 2.3 - LANCASTER STREET

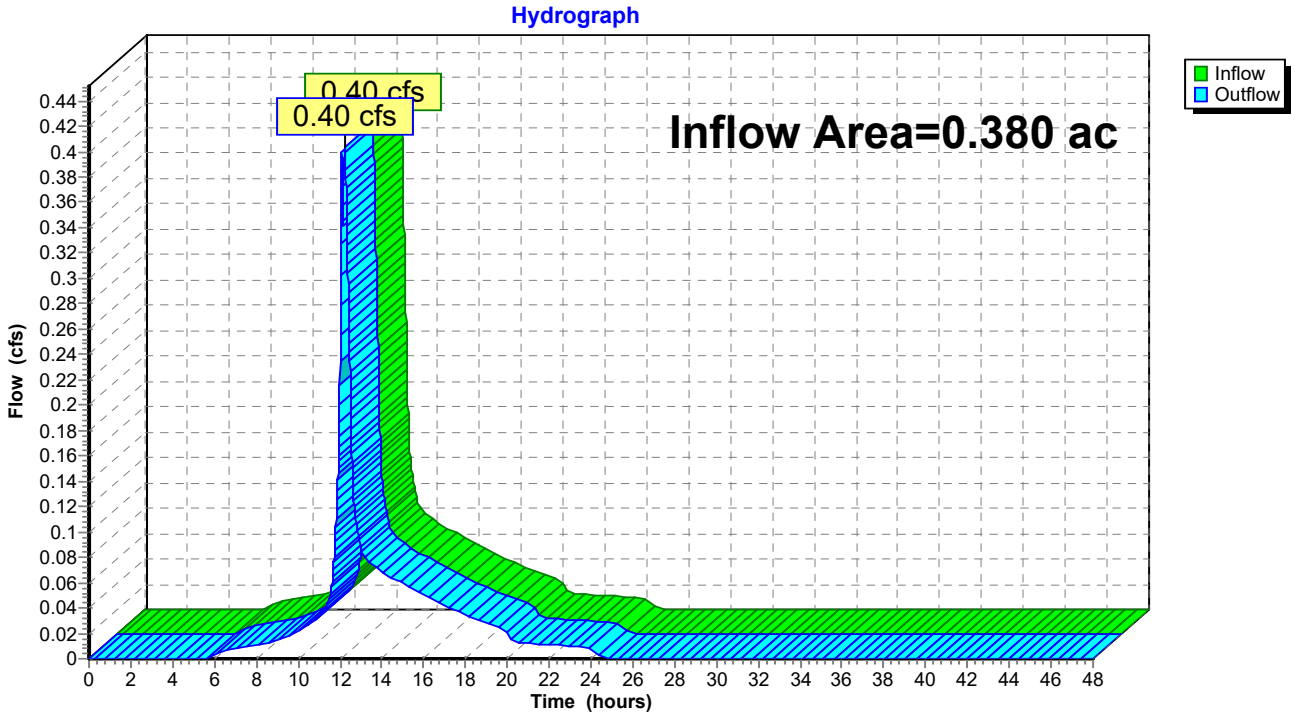


Summary for Reach #99: Lancaster

Inflow Area = 0.380 ac, 82.23% Impervious, Inflow Depth = 1.96" for 2-year event
Inflow = 0.40 cfs @ 12.22 hrs, Volume= 0.062 af
Outflow = 0.40 cfs @ 12.22 hrs, Volume= 0.062 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster

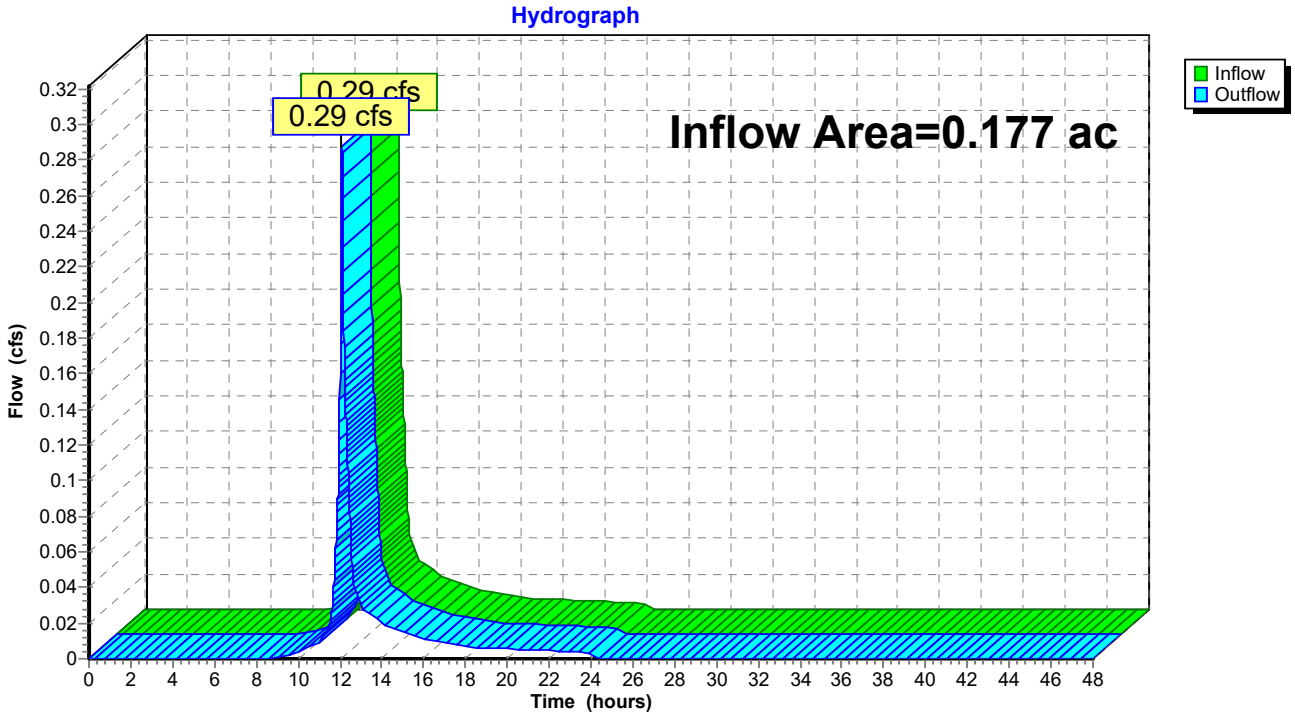


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.177 ac, 70.32% Impervious, Inflow Depth = 1.41" for 2-year event
Inflow = 0.29 cfs @ 12.09 hrs, Volume= 0.021 af
Outflow = 0.29 cfs @ 12.09 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET



Summary for Pond 1P: R Tank System

Inflow Area = 0.156 ac,100.00% Impervious, Inflow Depth = 2.87" for 2-year event
Inflow = 0.47 cfs @ 12.08 hrs, Volume= 0.037 af
Outflow = 0.21 cfs @ 12.25 hrs, Volume= 0.036 af, Atten= 55%, Lag= 10.2 min
Primary = 0.21 cfs @ 12.25 hrs, Volume= 0.036 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 25.21' @ 12.25 hrs Surf.Area= 254 sf Storage= 546 cf
Flood Elev= 26.75' Surf.Area= 254 sf Storage= 656 cf

Plug-Flow detention time= 114.0 min calculated for 0.036 af (97% of inflow)
Center-of-Mass det. time= 97.9 min (855.0 - 757.1)

Volume	Invert	Avail.Storage	Storage Description
#1B	21.68'	325 cf	**9.25'W x 27.46'L x 4.57'H Field B** 1,161 cf Overall - 347 cf Embedded = 814 cf x 40.0% Voids
#2B	22.43'	330 cf	**ACF R-Tank HD 2** x 40 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 40 Chambers in 4 Rows
		656 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	21.74'	**10.0" Round 10" Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 21.74' / 21.70' S= 0.0044 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	21.84'	**1.0" Vert. 1" Orifice** C= 0.600
#3	Device 2	22.09'	**4.0" Round 4" UNDERDRAIN** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.09' / 21.84' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 1	24.92'	**8.0" Round 8" COMBINED OVERFLOW PIPE** L= 3.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.90' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#5	Device 4	24.92'	**4.0" Round 3 - 4" OVERFLOW PIPES X 3.00** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.91' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf

Primary OutFlow Max=0.21 cfs @ 12.25 hrs HW=25.20' (Free Discharge)
- **1=10" Culvert** (Passes 0.21 cfs of 3.62 cfs potential flow)
  - **2=1" Orifice** (Orifice Controls 0.05 cfs @ 8.78 fps)
    - **3=4" UNDERDRAIN** (Passes 0.05 cfs of 0.50 cfs potential flow)
  - **4=8" COMBINED OVERFLOW PIPE** (Barrel Controls 0.16 cfs @ 1.69 fps)
    - **5=3 - 4" OVERFLOW PIPES** (Passes 0.16 cfs of 0.28 cfs potential flow)

Pond 1P: R Tank System - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

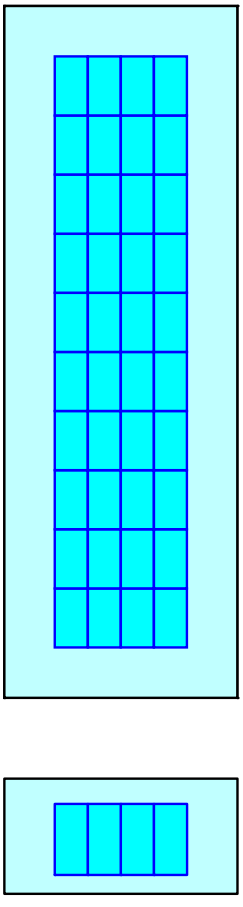
10 Chambers/Row x 2.35' Long = 23.46' Row Length +24.0" End Stone x 2 = 27.46' Base Length
4 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 9.25' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

40 Chambers x 8.3 cf = 330.1 cf Chamber Storage
40 Chambers x 8.7 cf = 347.4 cf Displacement

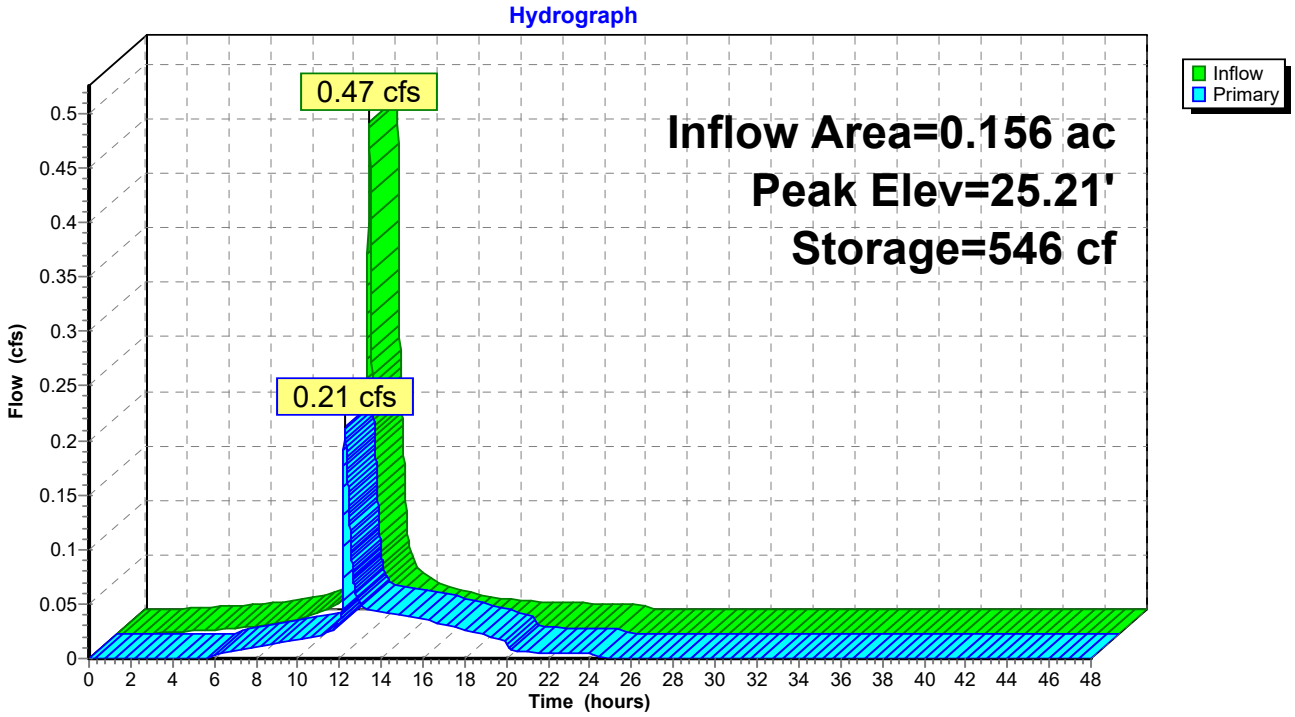
1,161.0 cf Field - 347.4 cf Chambers = 813.6 cf Stone x 40.0% Voids = 325.4 cf Stone Storage

Chamber Storage + Stone Storage = 655.5 cf = 0.015 af
Overall Storage Efficiency = 56.5%
Overall System Size = 27.46' x 9.25' x 4.57'

40 Chambers
43.0 cy Field
30.1 cy Stone



Pond 1P: R Tank System



Stage-Area-Storage for Pond 1P: R Tank System

Elevation (feet)	Storage (cubic-feet)
21.68	0
21.78	10
21.88	20
21.98	30
22.08	41
22.18	51
22.28	61
22.38	71
22.48	85
22.58	102
22.68	119
22.78	135
22.88	152
22.98	169
23.08	186
23.18	203
23.28	220
23.38	237
23.48	254
23.58	271
23.68	288
23.78	305
23.88	322
23.98	339
24.08	356
24.18	372
24.28	389
24.38	406
24.48	423
24.58	440
24.68	457
24.78	474
24.88	491
24.98	508
25.08	525
25.18	542
25.28	557
25.38	567
25.48	577
25.58	587
25.68	597
25.78	608
25.88	618
25.98	628
26.08	638
26.18	**648**
26.28	**656**
26.38	656
26.48	656
26.58	656
26.68	656

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S 1 - R TANK - 50 Runoff Area=1,944 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.20 cfs 0.016 af

Subcatchment 1.3S: S 1.3 - LANCASTER Runoff Area=1,733 sf 72.01% Impervious Runoff Depth=2.63"
Tc=6.0 min CN=81 Runoff=0.12 cfs 0.009 af

Subcatchment 1S: S 1 - ROOF AREA Runoff Area=4,851 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.50 cfs 0.040 af

Subcatchment 2.1: S 2.1 - CEDAR ST NW Runoff Area=1,397 sf 43.31% Impervious Runoff Depth=1.39"
Tc=6.0 min CN=65 Runoff=0.05 cfs 0.004 af

Subcatchment 2.2S: S 2.2 - CEDAR ST SE Runoff Area=6,321 sf 76.29% Impervious Runoff Depth=2.91"
Tc=6.0 min CN=84 Runoff=0.49 cfs 0.035 af

Subcatchment 2.3S: S 2.3 - LANCASTER Runoff Area=328 sf 48.48% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=68 Runoff=0.01 cfs 0.001 af

Reach #99: Lancaster Inflow=1.35 cfs 0.104 af
Outflow=1.35 cfs 0.104 af

Reach 2R: CEDAR STREET Inflow=0.54 cfs 0.039 af
Outflow=0.54 cfs 0.039 af

Pond 1P: R Tank System Peak Elev=25.54' Storage=584 cf Inflow=0.70 cfs 0.057 af
Outflow=0.68 cfs 0.056 af

Summary for Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR

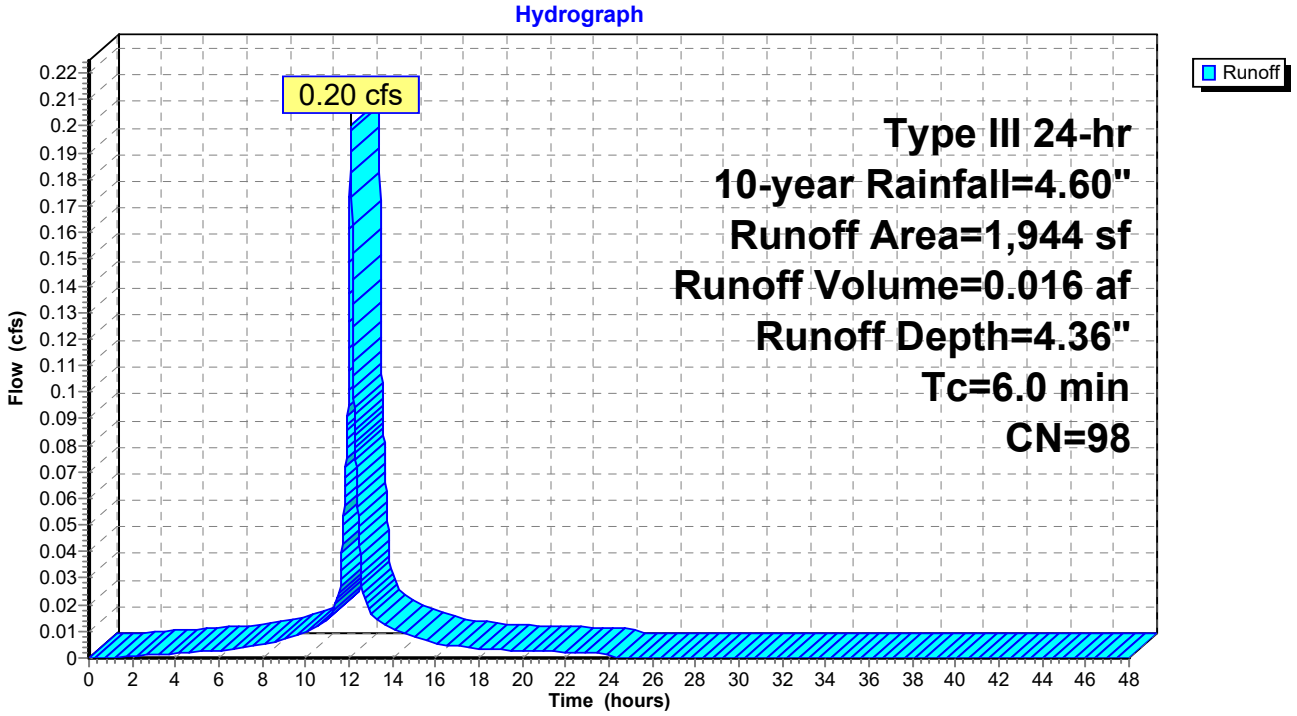
Runoff = 0.20 cfs @ 12.08 hrs, Volume= 0.016 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
1,944	98	Paved parking, HSG A
1,944		100.00% Impervious Area

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

Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR



Summary for Subcatchment 1.3S: S 1.3 - LANCASTER STREET

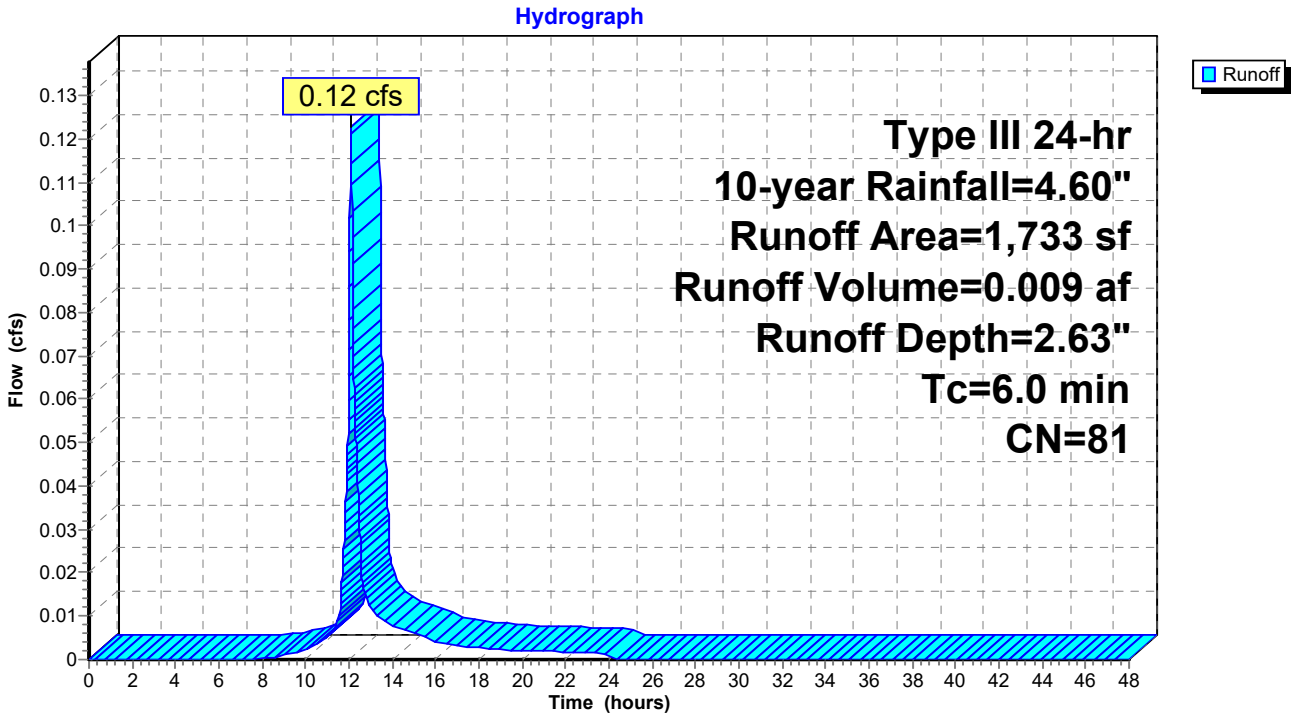
Runoff = 0.12 cfs @ 12.09 hrs, Volume= 0.009 af, Depth= 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
485	39	>75% Grass cover, Good, HSG A
1,248	98	Paved parking, HSG A
1,733	81	Weighted Average
485		27.99% Pervious Area
1,248		72.01% Impervious Area

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

Subcatchment 1.3S: S 1.3 - LANCASTER STREET



Summary for Subcatchment 1S: S 1 - ROOF AREA

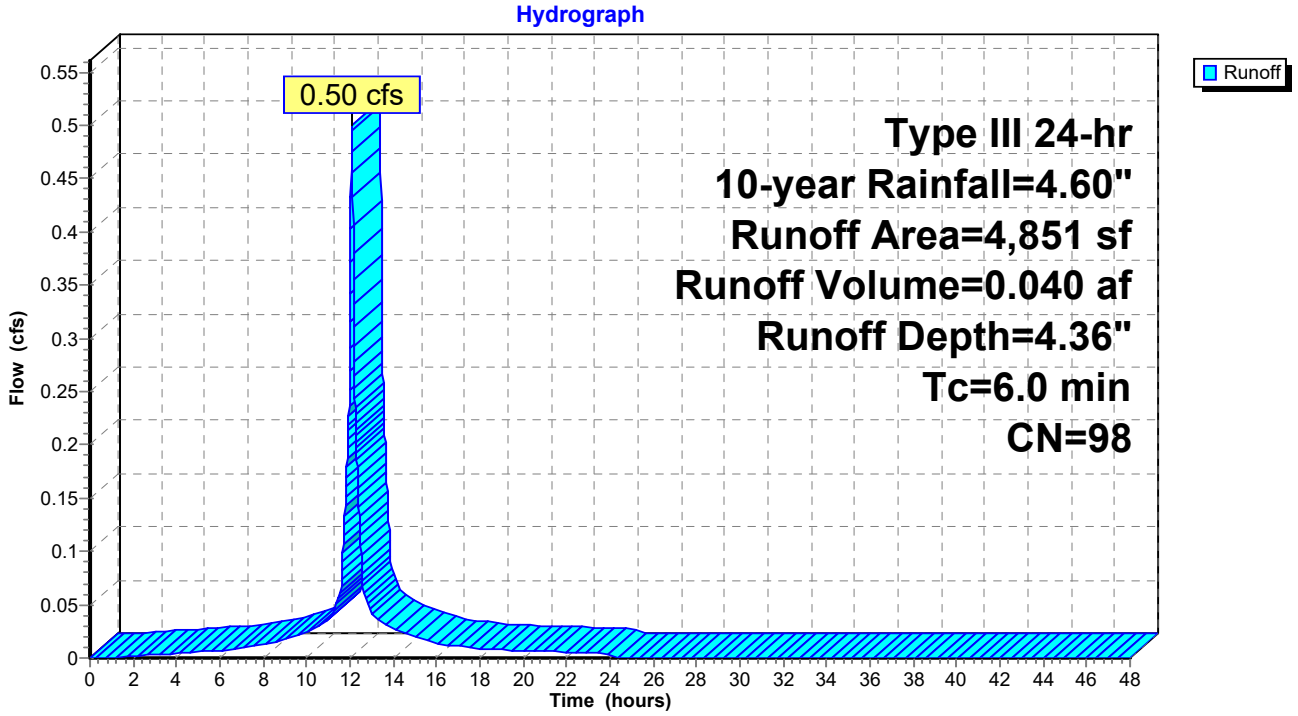
Runoff = 0.50 cfs @ 12.08 hrs, Volume= 0.040 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	4,851	98	Roof and Pave
	4,851		100.00% Impervious Area

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

Subcatchment 1S: S 1 - ROOF AREA



Summary for Subcatchment 2.1: S 2.1 - CEDAR ST NW

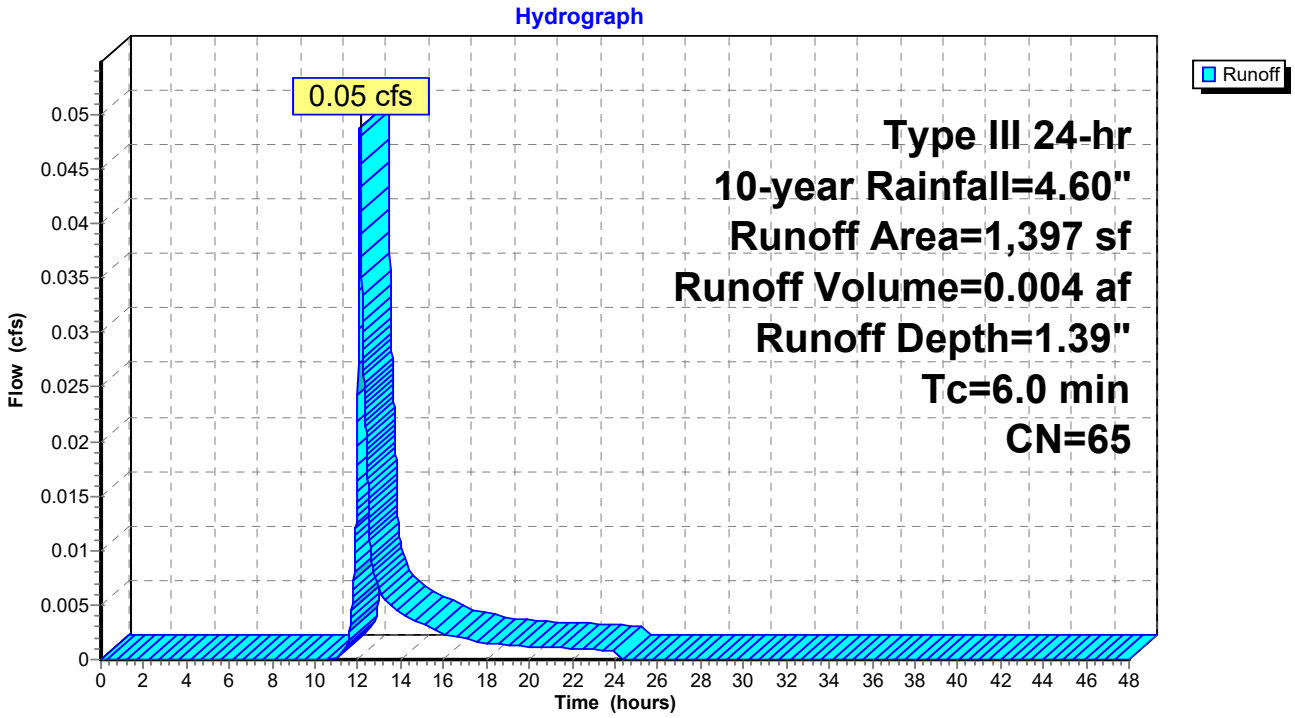
Runoff = 0.05 cfs @ 12.10 hrs, Volume= 0.004 af, Depth= 1.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
792	39	>75% Grass cover, Good, HSG A
605	98	Paved parking, HSG A
1,397	65	Weighted Average
792		56.69% Pervious Area
605		43.31% Impervious Area

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

Subcatchment 2.1: S 2.1 - CEDAR ST NW



Summary for Subcatchment 2.2S: S 2.2 - CEDAR ST SE

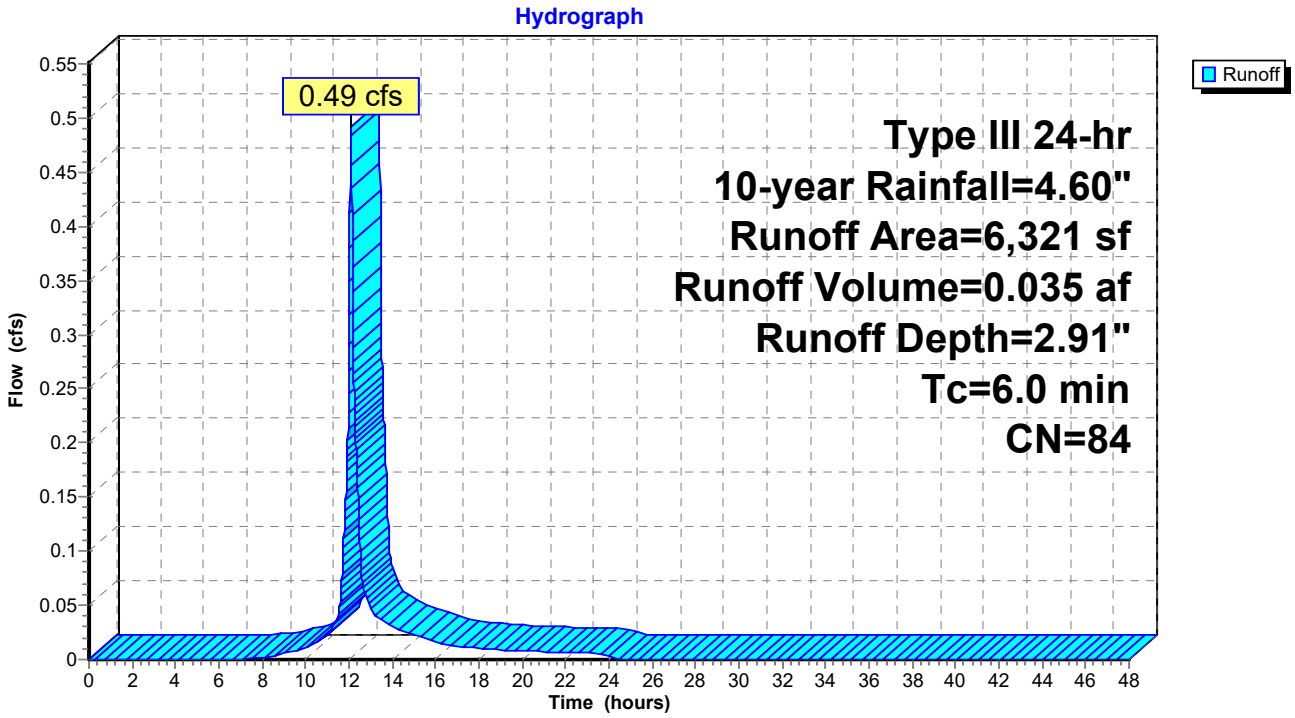
Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
1,499	39	>75% Grass cover, Good, HSG A
4,822	98	Paved parking, HSG A
6,321	84	Weighted Average
1,499		23.71% Pervious Area
4,822		76.29% Impervious Area

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

Subcatchment 2.2S: S 2.2 - CEDAR ST SE



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER STREET

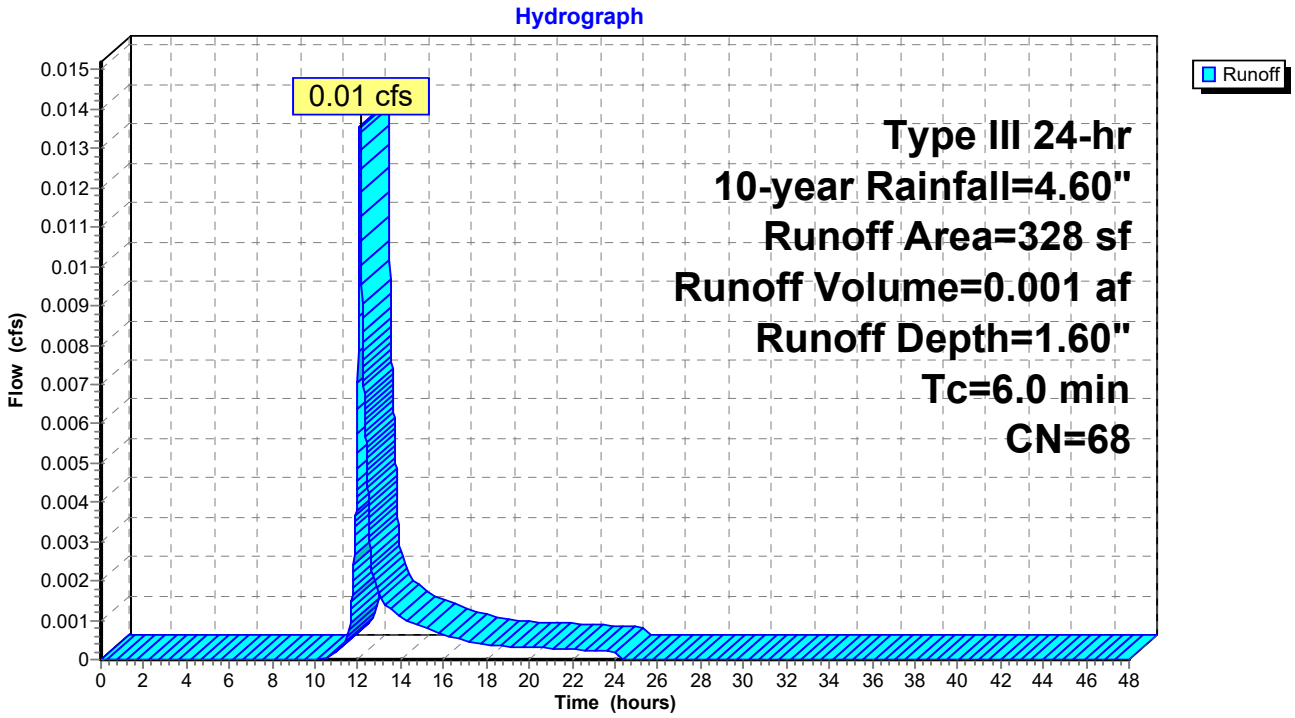
Runoff = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
169	39	>75% Grass cover, Good, HSG A
159	98	Paved parking, HSG A
328	68	Weighted Average
169		51.52% Pervious Area
159		48.48% Impervious Area

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

Subcatchment 2.3S: S 2.3 - LANCASTER STREET

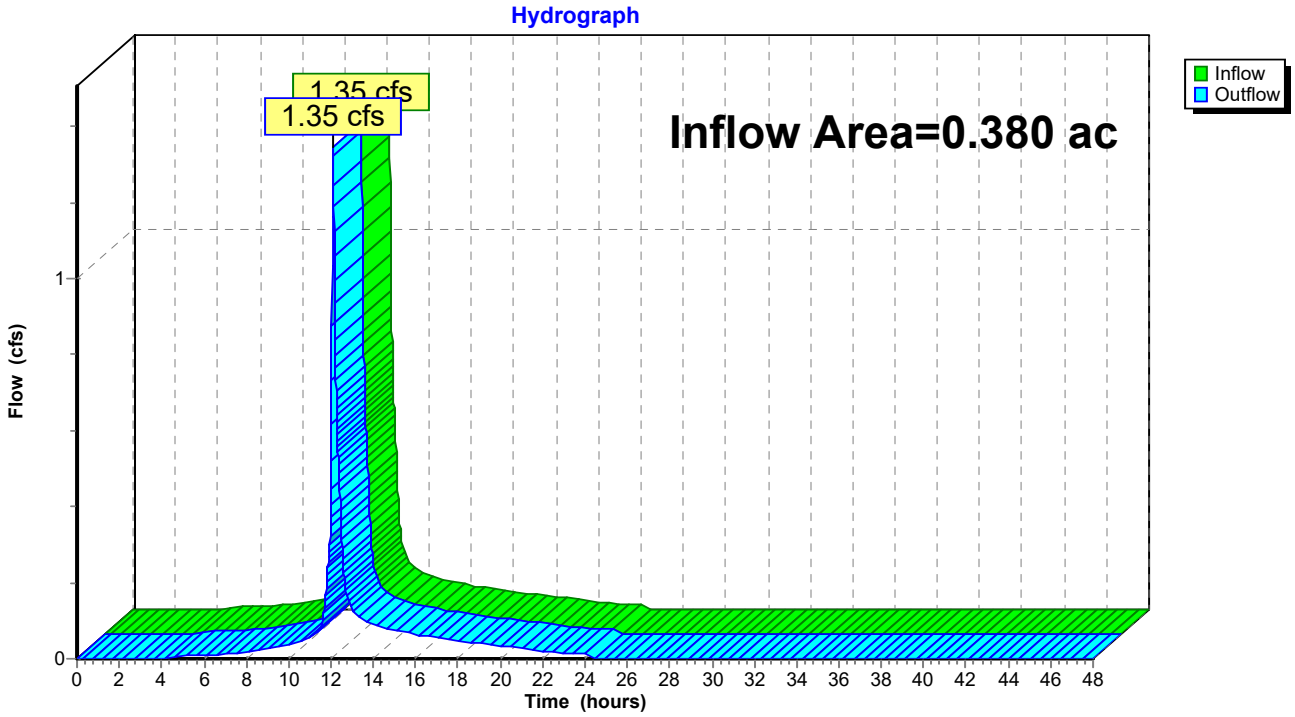


Summary for Reach #99: Lancaster

Inflow Area = 0.380 ac, 82.23% Impervious, Inflow Depth = 3.29" for 10-year event
Inflow = 1.35 cfs @ 12.10 hrs, Volume= 0.104 af
Outflow = 1.35 cfs @ 12.10 hrs, Volume= 0.104 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster

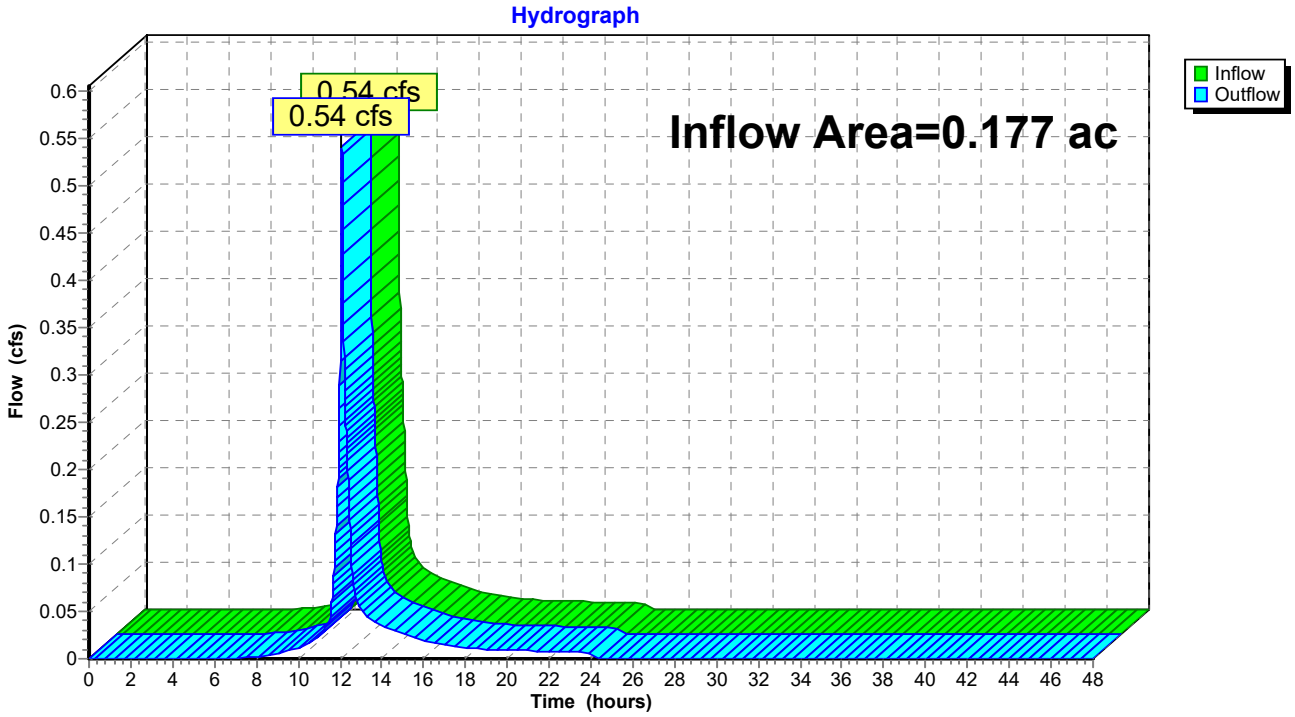


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.177 ac, 70.32% Impervious, Inflow Depth = 2.63" for 10-year event
Inflow = 0.54 cfs @ 12.09 hrs, Volume= 0.039 af
Outflow = 0.54 cfs @ 12.09 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET



Summary for Pond 1P: R Tank System

Inflow Area = 0.156 ac,100.00% Impervious, Inflow Depth = 4.36" for 10-year event
Inflow = 0.70 cfs @ 12.08 hrs, Volume= 0.057 af
Outflow = 0.68 cfs @ 12.10 hrs, Volume= 0.056 af, Atten= 3%, Lag= 1.3 min
Primary = 0.68 cfs @ 12.10 hrs, Volume= 0.056 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 25.54' @ 12.10 hrs Surf.Area= 254 sf Storage= 584 cf
Flood Elev= 26.75' Surf.Area= 254 sf Storage= 656 cf

Plug-Flow detention time= 95.2 min calculated for 0.056 af (98% of inflow)
Center-of-Mass det. time= 84.1 min (833.5 - 749.4)

Volume	Invert	Avail.Storage	Storage Description
#1B	21.68'	325 cf	**9.25'W x 27.46'L x 4.57'H Field B** 1,161 cf Overall - 347 cf Embedded = 814 cf x 40.0% Voids
#2B	22.43'	330 cf	**ACF R-Tank HD 2** x 40 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 40 Chambers in 4 Rows
		656 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	21.74'	**10.0" Round 10" Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 21.74' / 21.70' S= 0.0044 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	21.84'	**1.0" Vert. 1" Orifice** C= 0.600
#3	Device 2	22.09'	**4.0" Round 4" UNDERDRAIN** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.09' / 21.84' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 1	24.92'	**8.0" Round 8" COMBINED OVERFLOW PIPE** L= 3.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.90' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#5	Device 4	24.92'	**4.0" Round 3 - 4" OVERFLOW PIPES X 3.00** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.91' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf

Primary OutFlow Max=0.68 cfs @ 12.10 hrs HW=25.54' (Free Discharge)
- **1=10" Culvert** (Passes 0.68 cfs of 3.82 cfs potential flow)
  - **2=1" Orifice** (Orifice Controls 0.05 cfs @ 9.21 fps)
    - **3=4" UNDERDRAIN** (Passes 0.05 cfs of 0.53 cfs potential flow)
  - **4=8" COMBINED OVERFLOW PIPE** (Barrel Controls 0.63 cfs @ 2.39 fps)
    - **5=3 - 4" OVERFLOW PIPES** (Passes 0.63 cfs of 0.67 cfs potential flow)

Pond 1P: R Tank System - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

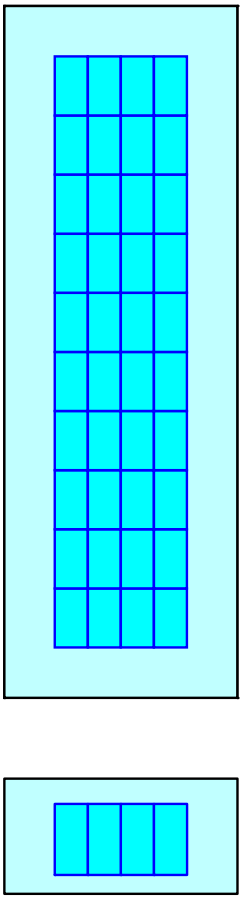
10 Chambers/Row x 2.35' Long = 23.46' Row Length +24.0" End Stone x 2 = 27.46' Base Length
4 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 9.25' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

40 Chambers x 8.3 cf = 330.1 cf Chamber Storage
40 Chambers x 8.7 cf = 347.4 cf Displacement

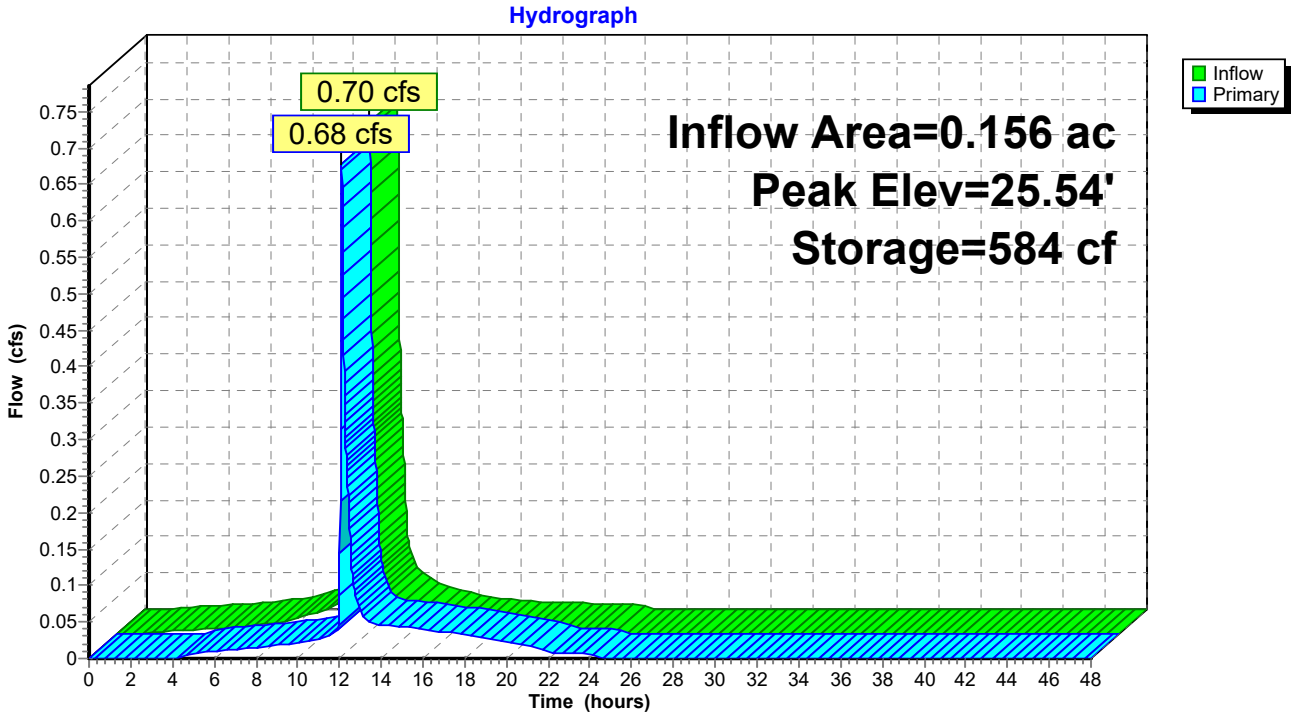
1,161.0 cf Field - 347.4 cf Chambers = 813.6 cf Stone x 40.0% Voids = 325.4 cf Stone Storage

Chamber Storage + Stone Storage = 655.5 cf = 0.015 af
Overall Storage Efficiency = 56.5%
Overall System Size = 27.46' x 9.25' x 4.57'

40 Chambers
43.0 cy Field
30.1 cy Stone



Pond 1P: R Tank System



Stage-Area-Storage for Pond 1P: R Tank System

Elevation (feet)	Storage (cubic-feet)
21.68	0
21.78	10
21.88	20
21.98	30
22.08	41
22.18	51
22.28	61
22.38	71
22.48	85
22.58	102
22.68	119
22.78	135
22.88	152
22.98	169
23.08	186
23.18	203
23.28	220
23.38	237
23.48	254
23.58	271
23.68	288
23.78	305
23.88	322
23.98	339
24.08	356
24.18	372
24.28	389
24.38	406
24.48	423
24.58	440
24.68	457
24.78	474
24.88	491
24.98	508
25.08	525
25.18	542
25.28	557
25.38	567
25.48	577
25.58	587
25.68	597
25.78	608
25.88	618
25.98	628
26.08	638
26.18	**648**
26.28	**656**
26.38	656
26.48	656
26.58	656
26.68	656

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S 1 - R TANK - 50 Runoff Area=1,944 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.25 cfs 0.021 af

Subcatchment 1.3S: S 1.3 - LANCASTER Runoff Area=1,733 sf 72.01% Impervious Runoff Depth=3.70"
Tc=6.0 min CN=81 Runoff=0.17 cfs 0.012 af

Subcatchment 1S: S 1 - ROOF AREA Runoff Area=4,851 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.63 cfs 0.052 af

Subcatchment 2.1: S 2.1 - CEDAR ST NW Runoff Area=1,397 sf 43.31% Impervious Runoff Depth=2.21"
Tc=6.0 min CN=65 Runoff=0.08 cfs 0.006 af

Subcatchment 2.2S: S 2.2 - CEDAR ST SE Runoff Area=6,321 sf 76.29% Impervious Runoff Depth=4.01"
Tc=6.0 min CN=84 Runoff=0.67 cfs 0.048 af

Subcatchment 2.3S: S 2.3 - LANCASTER Runoff Area=328 sf 48.48% Impervious Runoff Depth=2.47"
Tc=6.0 min CN=68 Runoff=0.02 cfs 0.002 af

Reach #99: Lancaster Inflow=1.77 cfs 0.140 af
Outflow=1.77 cfs 0.140 af

Reach 2R: CEDAR STREET Inflow=0.75 cfs 0.054 af
Outflow=0.75 cfs 0.054 af

Pond 1P: R Tank System Peak Elev=25.71' Storage=601 cf Inflow=0.89 cfs 0.072 af
Outflow=0.84 cfs 0.071 af

Summary for Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR

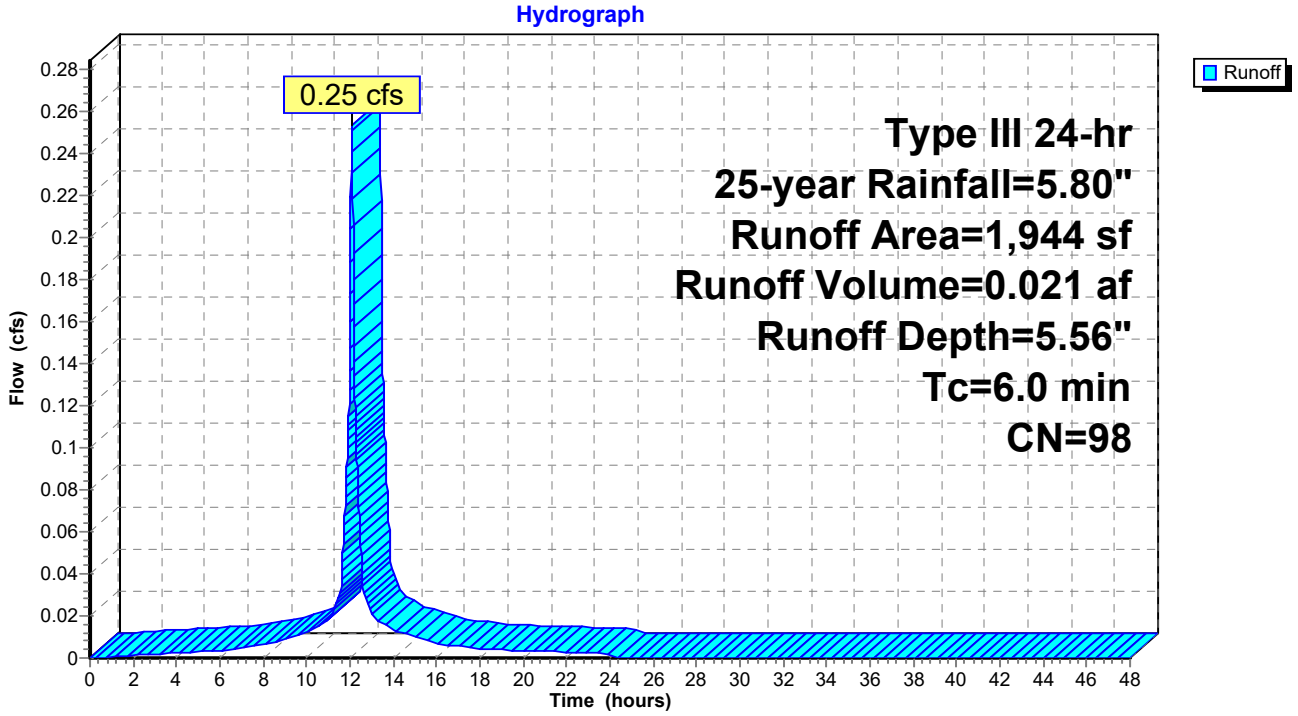
Runoff = 0.25 cfs @ 12.08 hrs, Volume= 0.021 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
1,944	98	Paved parking, HSG A
1,944		100.00% Impervious Area

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

Subcatchment 1.1S: S 1 - R TANK - 50 CEDAR



Summary for Subcatchment 1.3S: S 1.3 - LANCASTER STREET

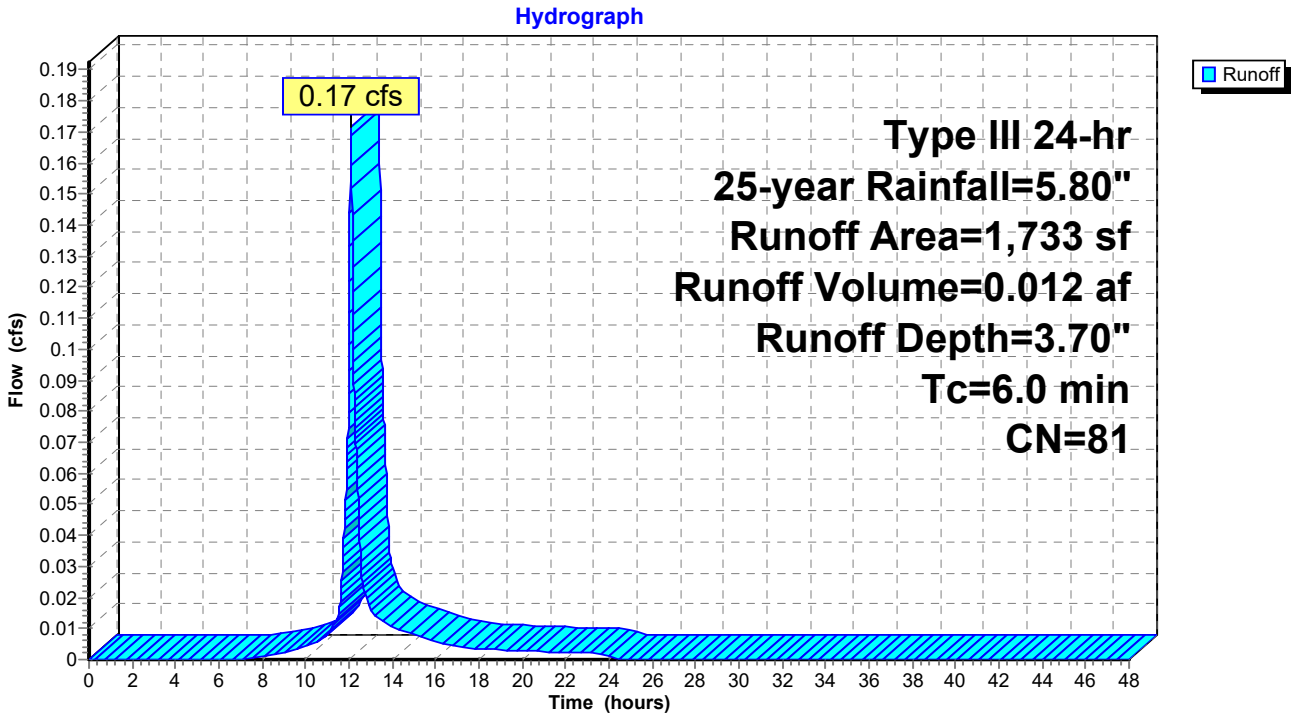
Runoff = 0.17 cfs @ 12.09 hrs, Volume= 0.012 af, Depth= 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
485	39	>75% Grass cover, Good, HSG A
1,248	98	Paved parking, HSG A
1,733	81	Weighted Average
485		27.99% Pervious Area
1,248		72.01% Impervious Area

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

Subcatchment 1.3S: S 1.3 - LANCASTER STREET



Summary for Subcatchment 1S: S 1 - ROOF AREA

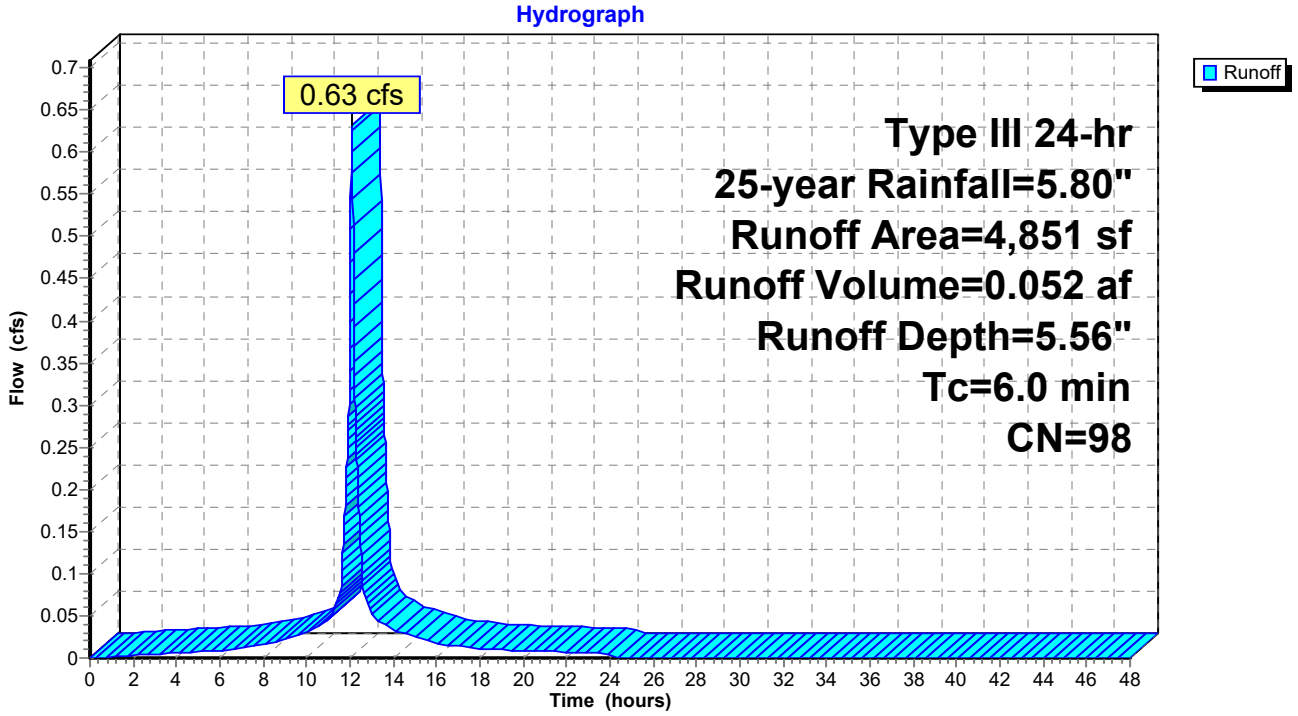
Runoff = 0.63 cfs @ 12.08 hrs, Volume= 0.052 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	4,851	98	Roof and Pave
	4,851		100.00% Impervious Area

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

Subcatchment 1S: S 1 - ROOF AREA



Summary for Subcatchment 2.1: S 2.1 - CEDAR ST NW

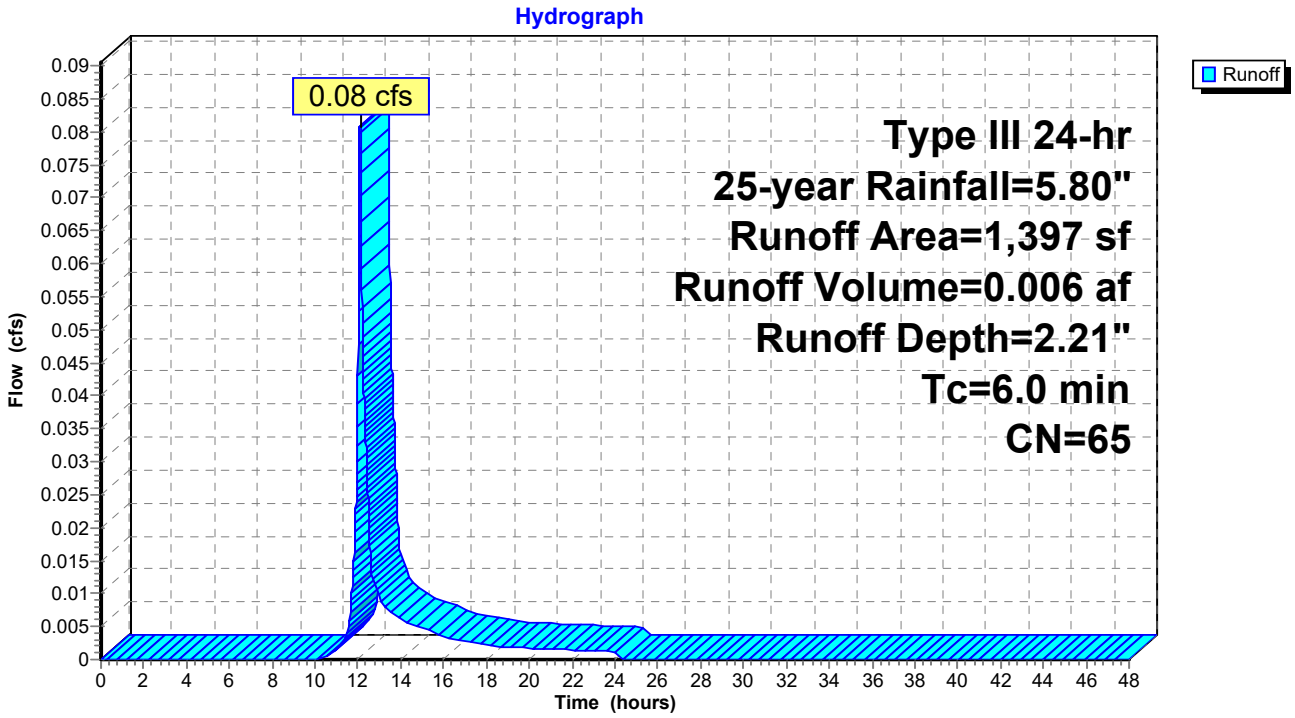
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
792	39	>75% Grass cover, Good, HSG A
605	98	Paved parking, HSG A
1,397	65	Weighted Average
792		56.69% Pervious Area
605		43.31% Impervious Area

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

Subcatchment 2.1: S 2.1 - CEDAR ST NW



Summary for Subcatchment 2.2S: S 2.2 - CEDAR ST SE

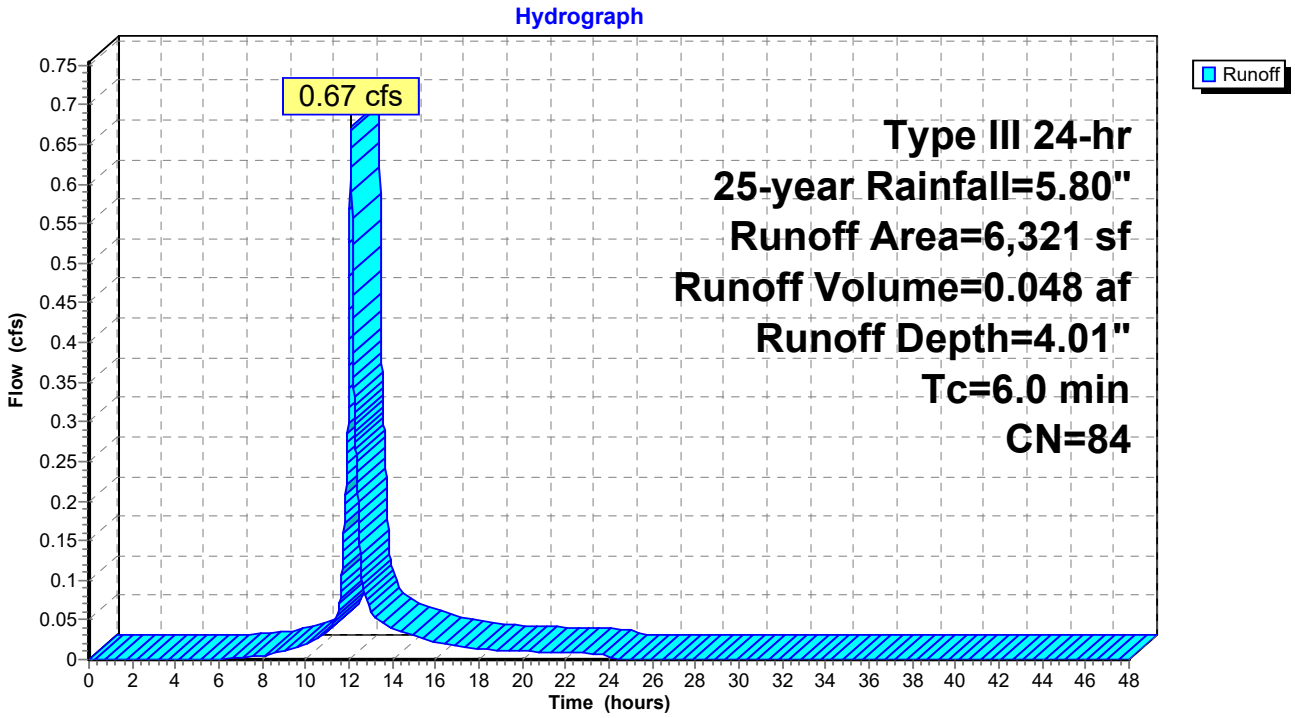
Runoff = 0.67 cfs @ 12.09 hrs, Volume= 0.048 af, Depth= 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
1,499	39	>75% Grass cover, Good, HSG A
4,822	98	Paved parking, HSG A
6,321	84	Weighted Average
1,499		23.71% Pervious Area
4,822		76.29% Impervious Area

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

Subcatchment 2.2S: S 2.2 - CEDAR ST SE



Summary for Subcatchment 2.3S: S 2.3 - LANCASTER STREET

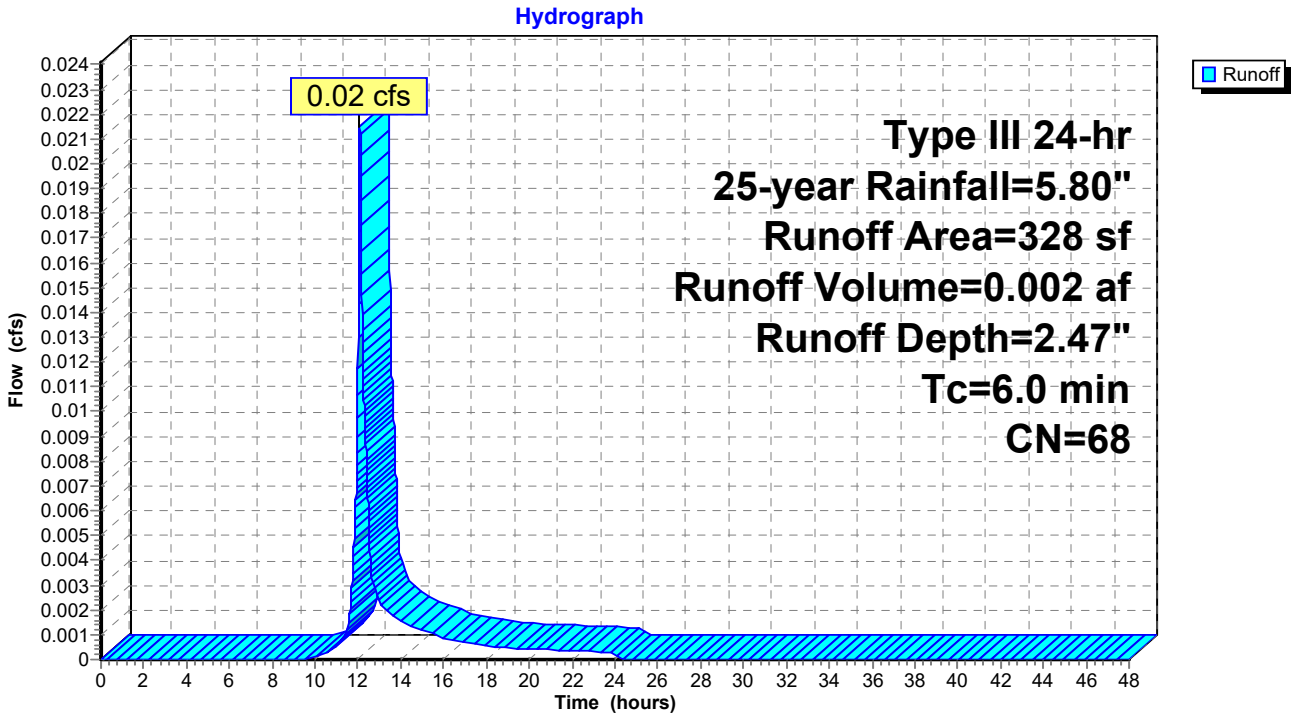
Runoff = 0.02 cfs @ 12.09 hrs, Volume= 0.002 af, Depth= 2.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
169	39	>75% Grass cover, Good, HSG A
159	98	Paved parking, HSG A
328	68	Weighted Average
169		51.52% Pervious Area
159		48.48% Impervious Area

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

Subcatchment 2.3S: S 2.3 - LANCASTER STREET

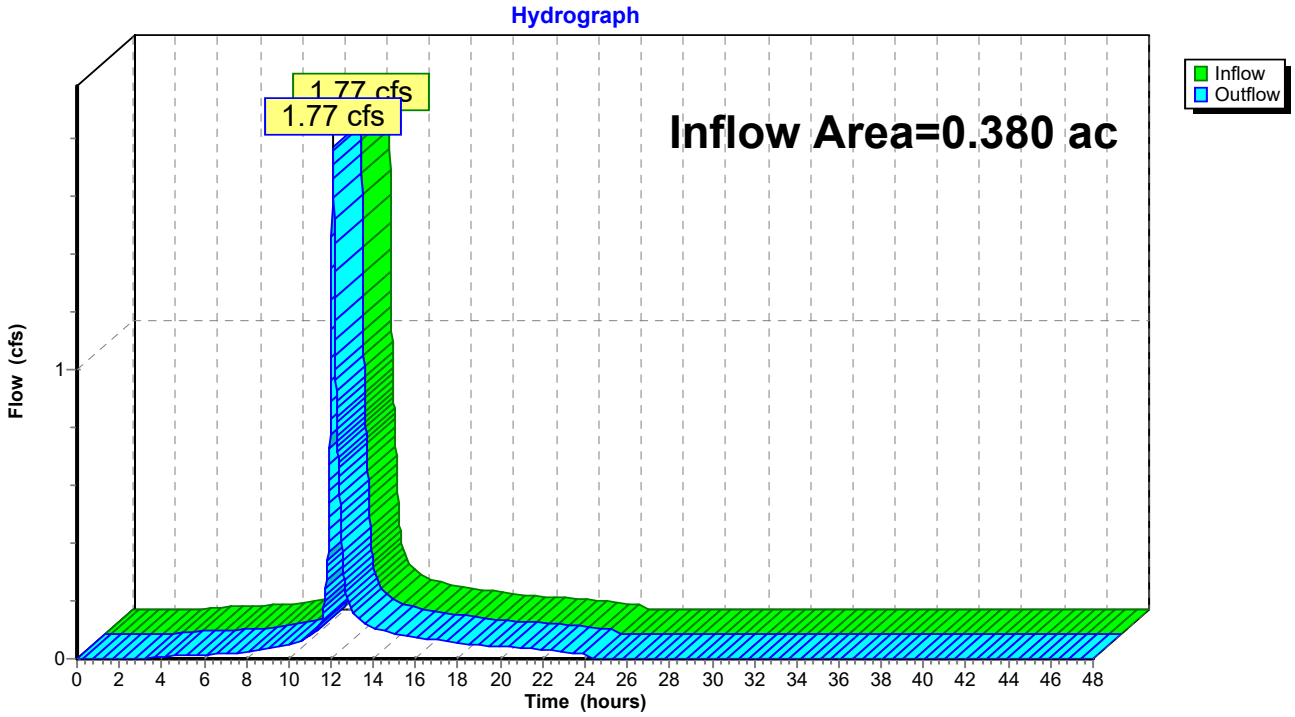


Summary for Reach #99: Lancaster

Inflow Area = 0.380 ac, 82.23% Impervious, Inflow Depth = 4.40" for 25-year event
Inflow = 1.77 cfs @ 12.09 hrs, Volume= 0.140 af
Outflow = 1.77 cfs @ 12.09 hrs, Volume= 0.140 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach #99: Lancaster

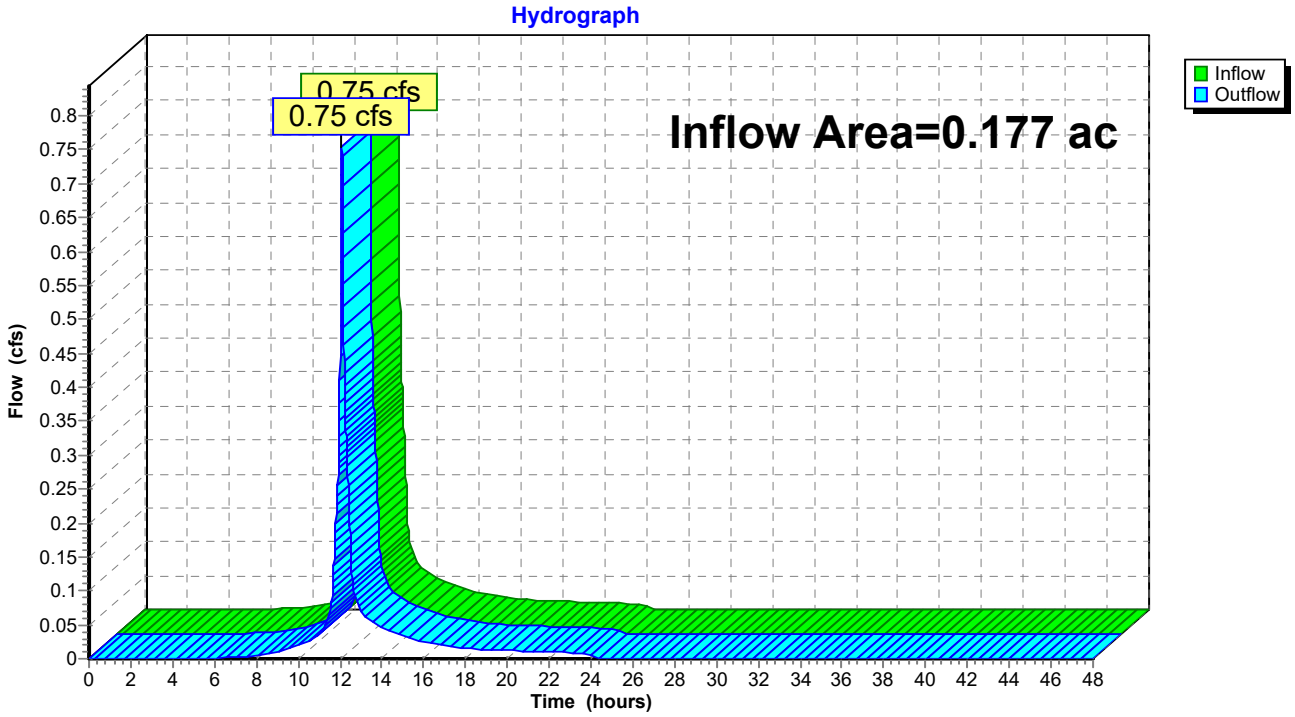


Summary for Reach 2R: CEDAR STREET

Inflow Area = 0.177 ac, 70.32% Impervious, Inflow Depth = 3.68" for 25-year event
Inflow = 0.75 cfs @ 12.09 hrs, Volume= 0.054 af
Outflow = 0.75 cfs @ 12.09 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: CEDAR STREET



Summary for Pond 1P: R Tank System

Inflow Area = 0.156 ac,100.00% Impervious, Inflow Depth = 5.56" for 25-year event
Inflow = 0.89 cfs @ 12.08 hrs, Volume= 0.072 af
Outflow = 0.84 cfs @ 12.11 hrs, Volume= 0.071 af, Atten= 5%, Lag= 1.6 min
Primary = 0.84 cfs @ 12.11 hrs, Volume= 0.071 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 25.71' @ 12.11 hrs Surf.Area= 254 sf Storage= 601 cf
Flood Elev= 26.75' Surf.Area= 254 sf Storage= 656 cf

Plug-Flow detention time= 86.8 min calculated for 0.071 af (99% of inflow)
Center-of-Mass det. time= 77.9 min (823.6 - 745.7)

Volume	Invert	Avail.Storage	Storage Description
#1B	21.68'	325 cf	**9.25'W x 27.46'L x 4.57'H Field B** 1,161 cf Overall - 347 cf Embedded = 814 cf x 40.0% Voids
#2B	22.43'	330 cf	**ACF R-Tank HD 2** x 40 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 40 Chambers in 4 Rows
		656 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	21.74'	**10.0" Round 10" Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 21.74' / 21.70' S= 0.0044 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	21.84'	**1.0" Vert. 1" Orifice** C= 0.600
#3	Device 2	22.09'	**4.0" Round 4" UNDERDRAIN** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 22.09' / 21.84' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 1	24.92'	**8.0" Round 8" COMBINED OVERFLOW PIPE** L= 3.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.90' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#5	Device 4	24.92'	**4.0" Round 3 - 4" OVERFLOW PIPES X 3.00** L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.92' / 24.91' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf

Primary OutFlow Max=0.84 cfs @ 12.11 hrs HW=25.71' (Free Discharge)
- **1=10" Culvert** (Passes 0.84 cfs of 3.91 cfs potential flow)
  - **2=1" Orifice** (Orifice Controls 0.05 cfs @ 9.42 fps)
    - **3=4" UNDERDRAIN** (Passes 0.05 cfs of 0.54 cfs potential flow)
  - **4=8" COMBINED OVERFLOW PIPE** (Passes 0.79 cfs of 0.88 cfs potential flow)
    - **5=3 - 4" OVERFLOW PIPES** (Inlet Controls 0.79 cfs @ 3.01 fps)

Pond 1P: R Tank System - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

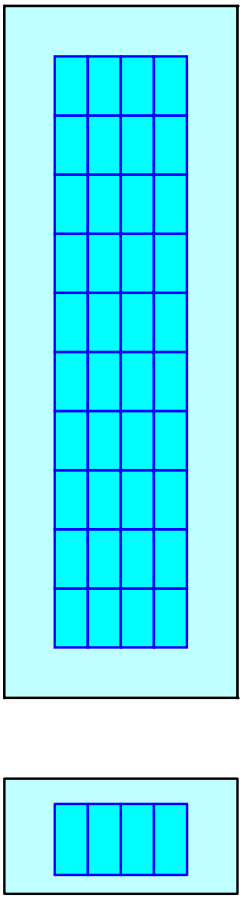
10 Chambers/Row x 2.35' Long = 23.46' Row Length +24.0" End Stone x 2 = 27.46' Base Length
4 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 9.25' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

40 Chambers x 8.3 cf = 330.1 cf Chamber Storage
40 Chambers x 8.7 cf = 347.4 cf Displacement

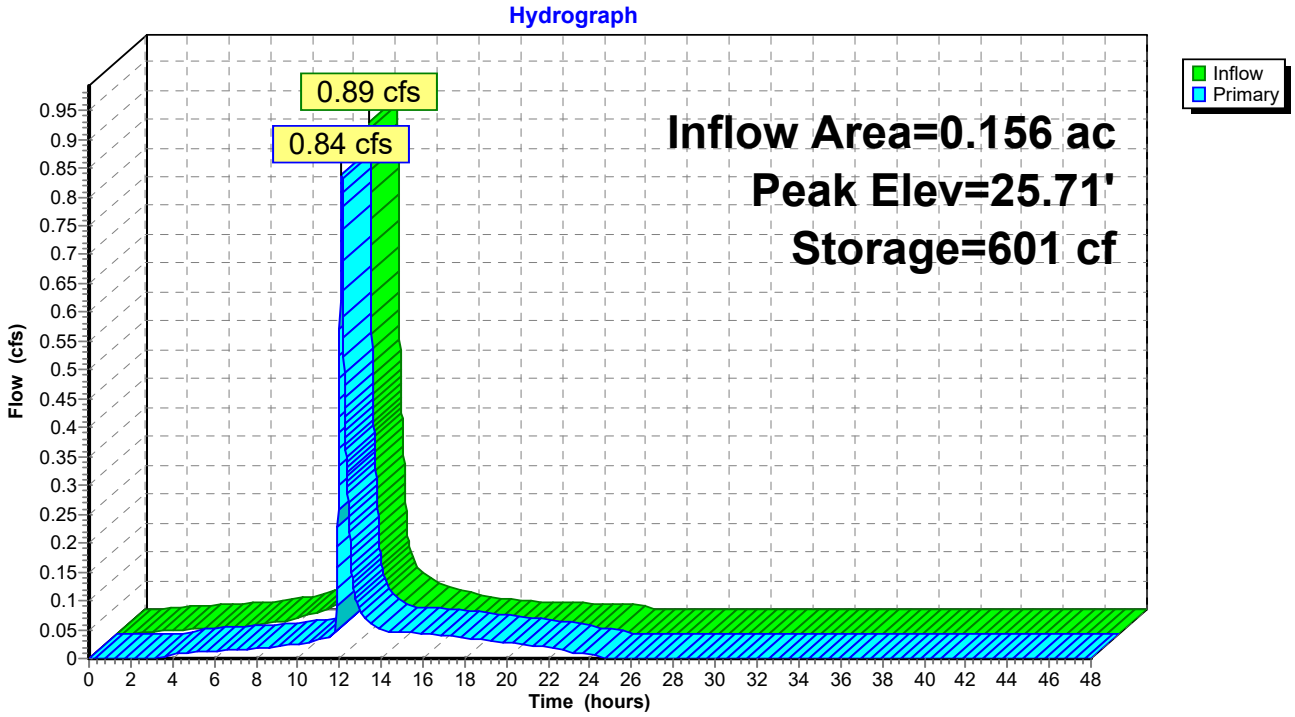
1,161.0 cf Field - 347.4 cf Chambers = 813.6 cf Stone x 40.0% Voids = 325.4 cf Stone Storage

Chamber Storage + Stone Storage = 655.5 cf = 0.015 af
Overall Storage Efficiency = 56.5%
Overall System Size = 27.46' x 9.25' x 4.57'

40 Chambers
43.0 cy Field
30.1 cy Stone



Pond 1P: R Tank System



Stage-Area-Storage for Pond 1P: R Tank System

Elevation (feet)	Storage (cubic-feet)
21.68	0
21.78	10
21.88	20
21.98	30
22.08	41
22.18	51
22.28	61
22.38	71
22.48	85
22.58	102
22.68	119
22.78	135
22.88	152
22.98	169
23.08	186
23.18	203
23.28	220
23.38	237
23.48	254
23.58	271
23.68	288
23.78	305
23.88	322
23.98	339
24.08	356
24.18	372
24.28	389
24.38	406
24.48	423
24.58	440
24.68	457
24.78	474
24.88	491
24.98	508
25.08	525
25.18	542
25.28	557
25.38	567
25.48	577
25.58	587
25.68	597
25.78	608
25.88	618
25.98	628
26.08	638
26.18	**648**
26.28	**656**
26.38	656
26.48	656
26.58	656
26.68	656

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: HydroCAD Calculations

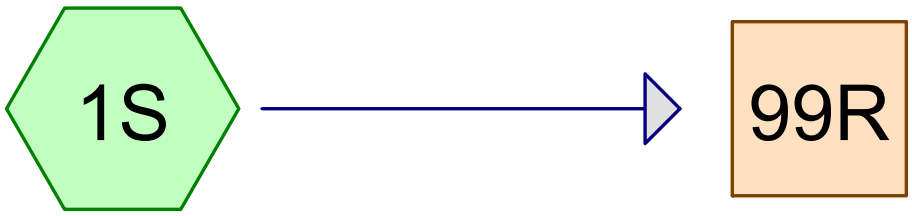
PHASE 3 - 158 LANCASTER STREET

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Pre Development HydroCAD

PHASE 3 - 158 LANCASTER STREET



S 1 - TOTAL RUNOFF AREA

POI #99: LANCASTER ST COMBINED SEWER

Subcat Reach Pond Link

Routing Diagram for PHASE 3 - 158 LANCASTER ST - PRE
Prepared by HP Inc., Printed 4/25/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.117	49	50-75% Grass cover, Fair, HSG A (1S)
0.290	98	Paved parking, HSG A (1S)
0.407	**84**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.407	HSG A	1S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
0.407		**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
0.117	0.000	0.000	0.000	0.000	0.117	50-75% Grass cover, Fair	1S
0.290	0.000	0.000	0.000	0.000	0.290	Paved parking	1S
0.407	**0.000**	**0.000**	**0.000**	**0.000**	**0.407**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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: S 1 - TOTAL RUNOFF Runoff Area=17,735 sf 71.16% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=84 Runoff=0.76 cfs 0.054 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=0.76 cfs 0.054 af
Outflow=0.76 cfs 0.054 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.054 af Average Runoff Depth = 1.60"
28.84% Pervious = 0.117 ac 71.16% Impervious = 0.290 ac

Summary for Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

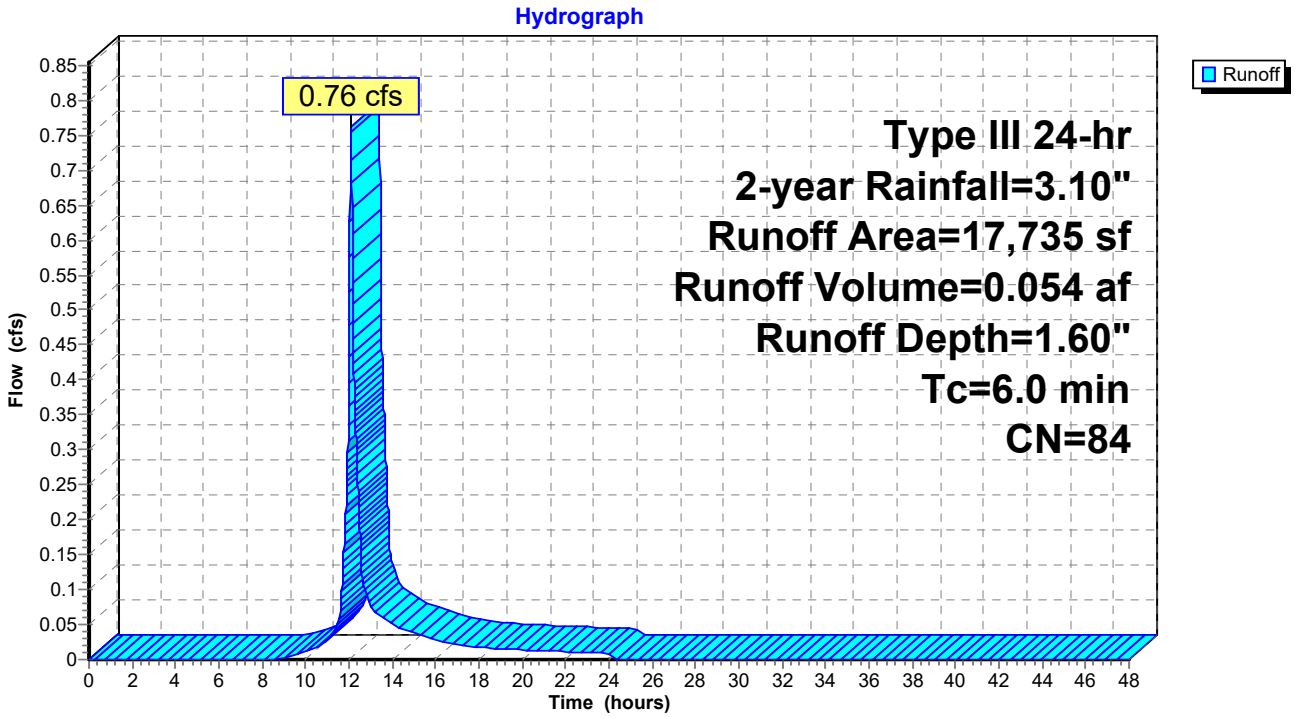
Runoff = 0.76 cfs @ 12.09 hrs, Volume= 0.054 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
12,620	98	Paved parking, HSG A
5,115	49	50-75% Grass cover, Fair, HSG A
17,735	84	Weighted Average
5,115	49	28.84% Pervious Area
12,620	98	71.16% Impervious Area

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

Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

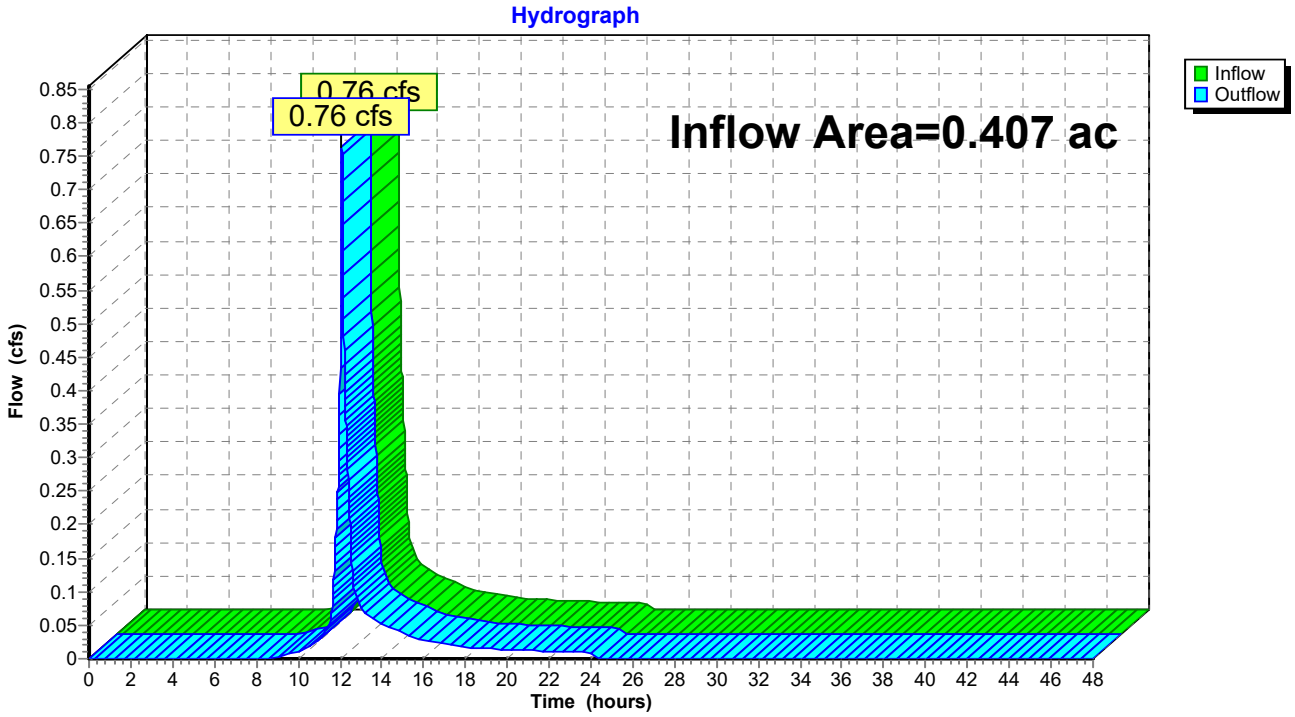


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 71.16% Impervious, Inflow Depth = 1.60" for 2-year event
Inflow = 0.76 cfs @ 12.09 hrs, Volume= 0.054 af
Outflow = 0.76 cfs @ 12.09 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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: S 1 - TOTAL RUNOFF Runoff Area=17,735 sf 71.16% Impervious Runoff Depth=2.91"
Tc=6.0 min CN=84 Runoff=1.38 cfs 0.099 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.38 cfs 0.099 af
Outflow=1.38 cfs 0.099 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.099 af Average Runoff Depth = 2.91"
28.84% Pervious = 0.117 ac 71.16% Impervious = 0.290 ac

Summary for Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

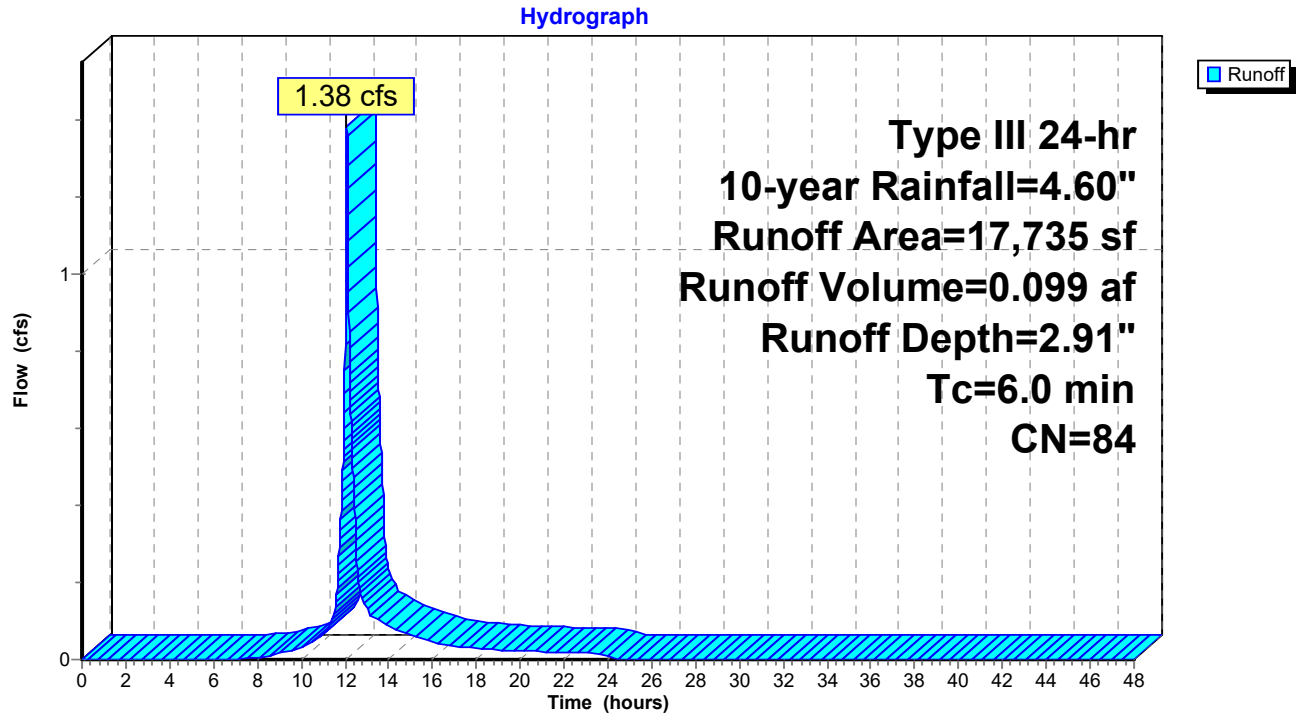
Runoff = 1.38 cfs @ 12.09 hrs, Volume= 0.099 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
12,620	98	Paved parking, HSG A
5,115	49	50-75% Grass cover, Fair, HSG A
17,735	84	Weighted Average
5,115	49	28.84% Pervious Area
12,620	98	71.16% Impervious Area

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

Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

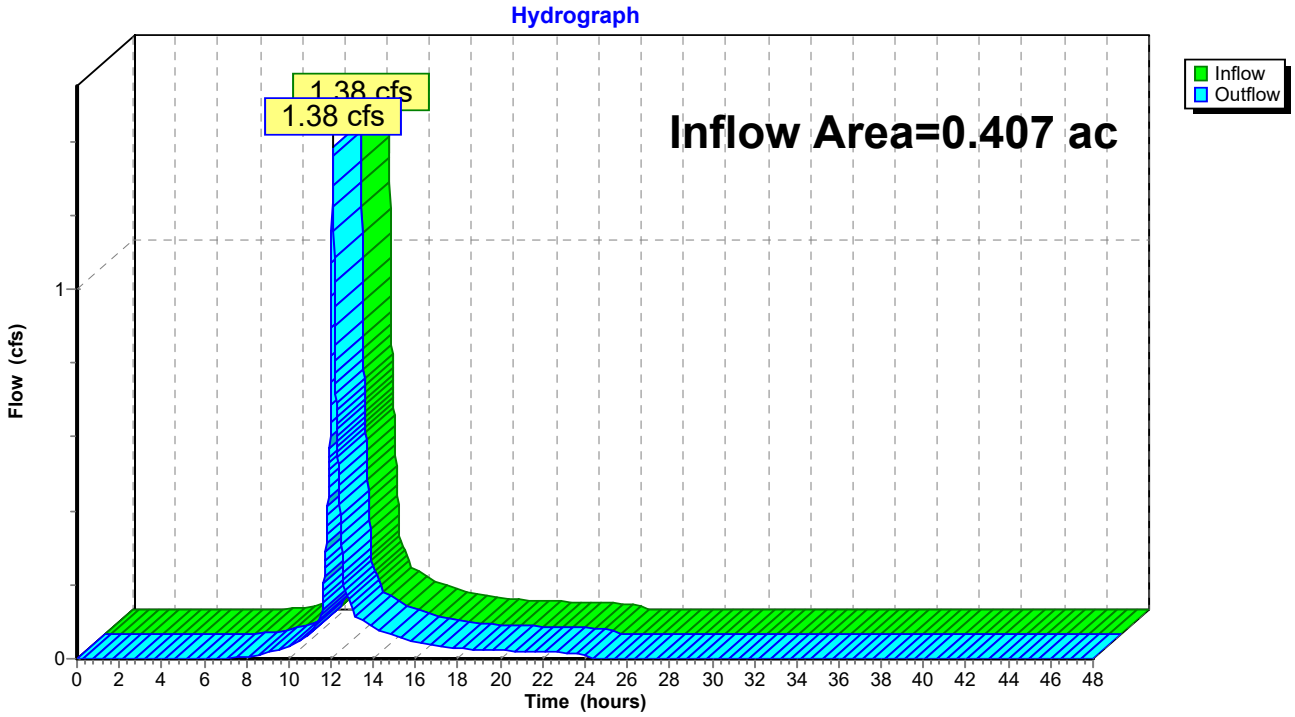


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 71.16% Impervious, Inflow Depth = 2.91" for 10-year event
Inflow = 1.38 cfs @ 12.09 hrs, Volume= 0.099 af
Outflow = 1.38 cfs @ 12.09 hrs, Volume= 0.099 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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: S 1 - TOTAL RUNOFF Runoff Area=17,735 sf 71.16% Impervious Runoff Depth=4.01"
Tc=6.0 min CN=84 Runoff=1.89 cfs 0.136 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.89 cfs 0.136 af
Outflow=1.89 cfs 0.136 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.136 af Average Runoff Depth = 4.01"
28.84% Pervious = 0.117 ac 71.16% Impervious = 0.290 ac

Summary for Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

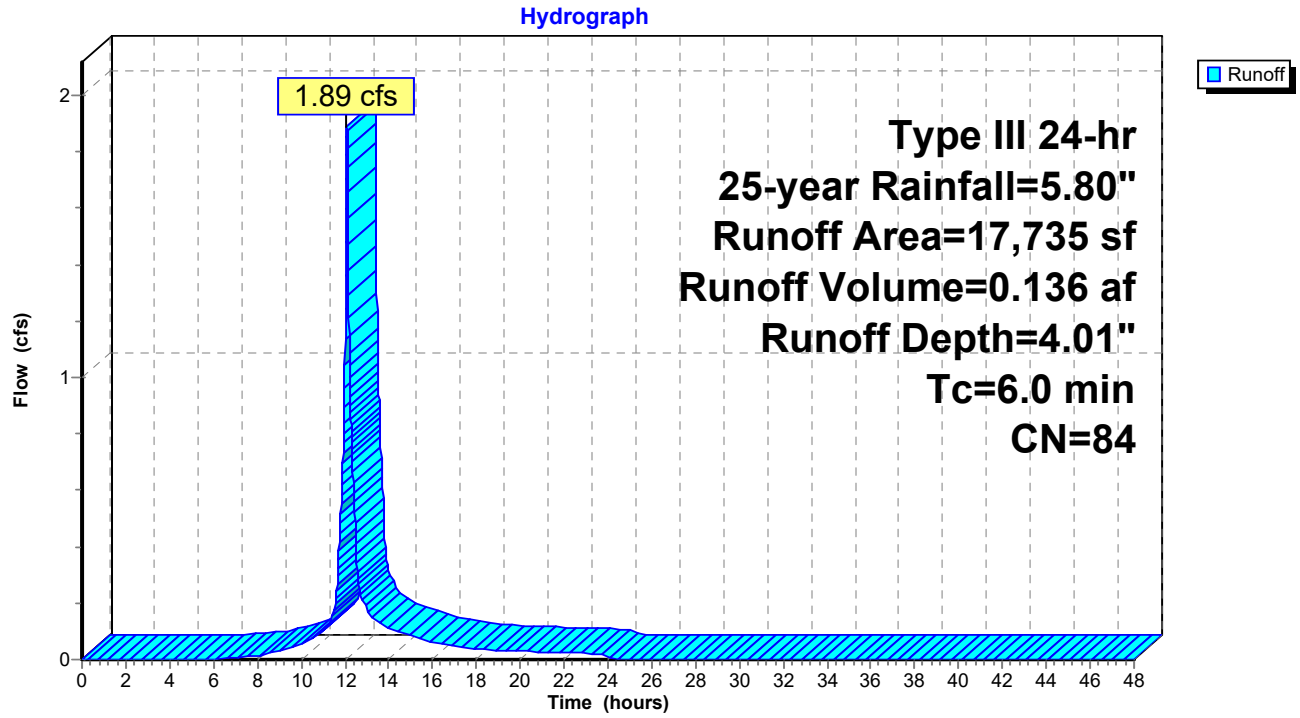
Runoff = 1.89 cfs @ 12.09 hrs, Volume= 0.136 af, Depth= 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
12,620	98	Paved parking, HSG A
5,115	49	50-75% Grass cover, Fair, HSG A
17,735	84	Weighted Average
5,115	49	28.84% Pervious Area
12,620	98	71.16% Impervious Area

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

Subcatchment 1S: S 1 - TOTAL RUNOFF AREA

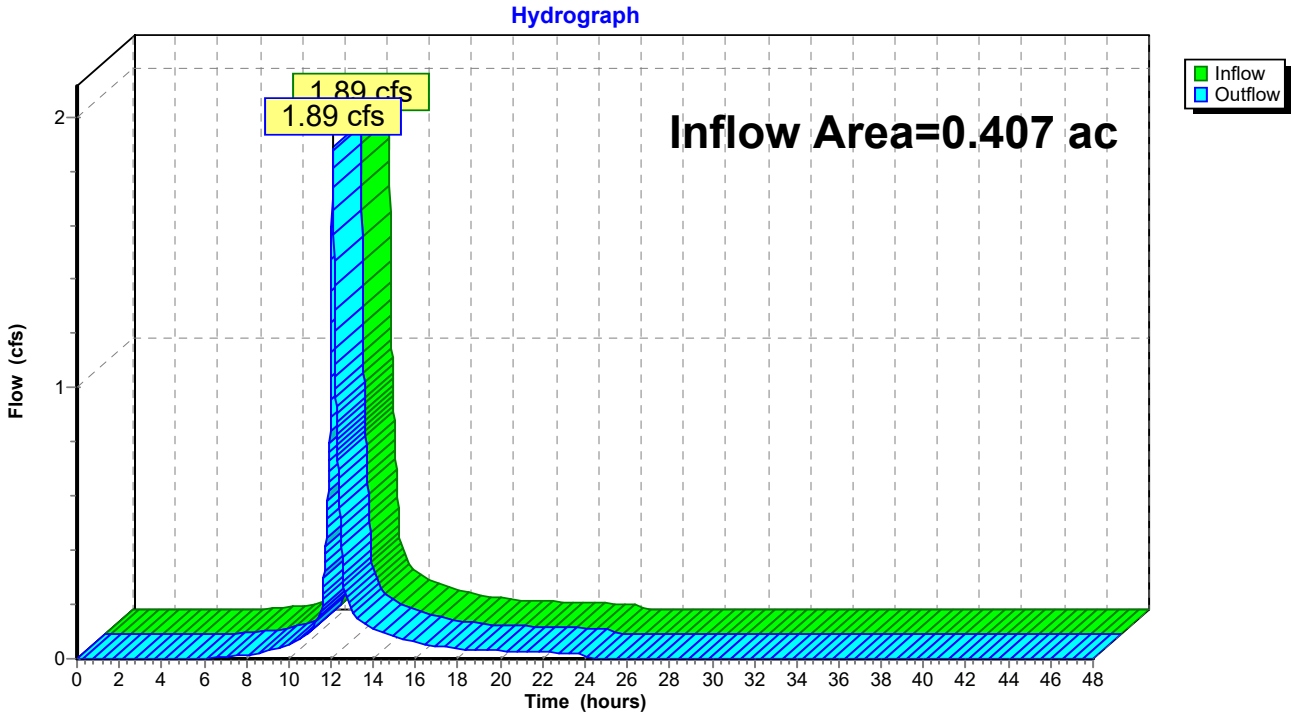


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 71.16% Impervious, Inflow Depth = 4.01" for 25-year event
Inflow = 1.89 cfs @ 12.09 hrs, Volume= 0.136 af
Outflow = 1.89 cfs @ 12.09 hrs, Volume= 0.136 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

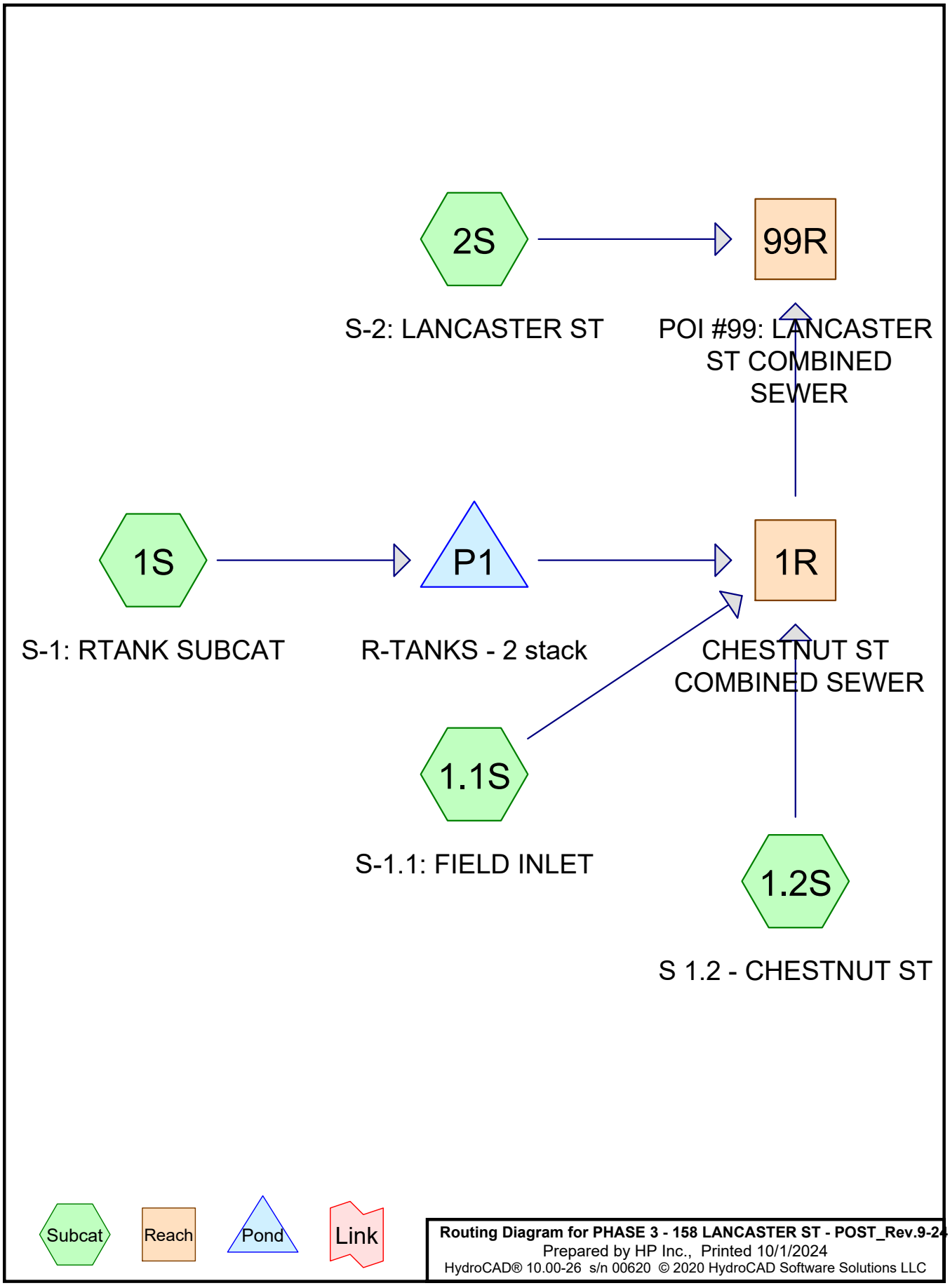


SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Post Development HydroCAD

PHASE 3 - 158 LANCASTER STREET


2S
99R
S-2: LANCASTER ST
POI #99: LANCASTER ST COMBINED SEWER
1S
P1
1R
S-1: RTANK SUBCAT
R-TANKS - 2 stack
CHESTNUT ST COMBINED SEWER
1.1S
S-1.1: FIELD INLET
1.2S
S 1.2 - CHESTNUT ST
Subcat
Reach
Pond
Link
Routing Diagram for PHASE 3 - 158 LANCASTER ST - POST_Rev.9-24
Prepared by HP Inc., Printed 10/1/2024
HydroCAD® 10.00-26 s/n 00620 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.140	39	>75% Grass cover, Good, HSG A (1.1S, 1.2S, 1S)
0.129	98	Paved parking, HSG A (1S)
0.113	98	ROOF AREA (1S)
0.024	98	Unconnected pavement, HSG A (1.1S, 1.2S, 2S)
0.407	**78**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.294	HSG A	1.1S, 1.2S, 1S, 2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.113	Other	1S
0.407		**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
0.140	0.000	0.000	0.000	0.000	0.140	>75% Grass cover, Good	1.1S, 1.2S, 1S
0.129	0.000	0.000	0.000	0.000	0.129	Paved parking	1S
0.000	0.000	0.000	0.000	0.113	0.113	ROOF AREA	1S
0.024	0.000	0.000	0.000	0.000	0.024	Unconnected pavement	1.1S, 1.2S, 2S
0.294	**0.000**	**0.000**	**0.000**	**0.113**	**0.407**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	P1	8.74	8.03	143.0	0.0050	0.010	10.0	0.0	0.0
2	P1	11.67	11.61	9.0	0.0067	0.010	10.0	0.0	0.0

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S-1.1: FIELD INLET Runoff Area=3,502 sf 0.71% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=39 Runoff=0.00 cfs 0.000 af

Subcatchment 1.2S: S 1.2 - CHESTNUT ST Runoff Area=2,793 sf 29.86% Impervious Runoff Depth=0.07"
Tc=6.0 min UI Adjusted CN=48 Runoff=0.00 cfs 0.000 af

Subcatchment 1S: S-1: RTANK SUBCAT Runoff Area=11,214 sf 93.90% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=94 Runoff=0.71 cfs 0.052 af

Subcatchment 2S: S-2: LANCASTER ST Runoff Area=199 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.01 cfs 0.001 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=0.35 cfs 0.052 af
Outflow=0.35 cfs 0.052 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=0.36 cfs 0.053 af
Outflow=0.36 cfs 0.053 af

Pond P1: R-TANKS - 2 stack Peak Elev=12.02' Storage=869 cf Inflow=0.71 cfs 0.052 af
Outflow=0.35 cfs 0.051 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.054 af Average Runoff Depth = 1.59"
34.56% Pervious = 0.140 ac 65.44% Impervious = 0.266 ac

Summary for Subcatchment 1.1S: S-1.1: FIELD INLET

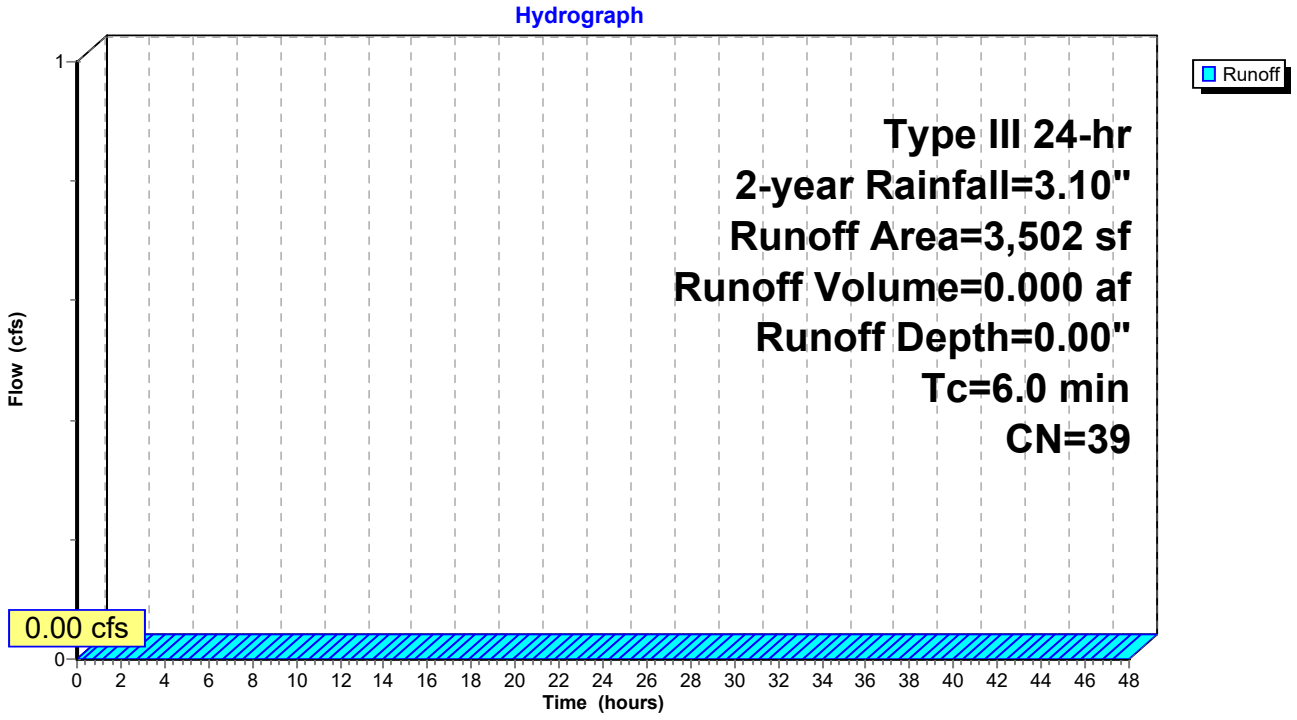
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
25	98	Unconnected pavement, HSG A
3,477	39	>75% Grass cover, Good, HSG A
3,502	39	Weighted Average
3,477	39	99.29% Pervious Area
25	98	0.71% Impervious Area
25		100.00% Unconnected

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

Subcatchment 1.1S: S-1.1: FIELD INLET



Summary for Subcatchment 1.2S: S 1.2 - CHESTNUT ST

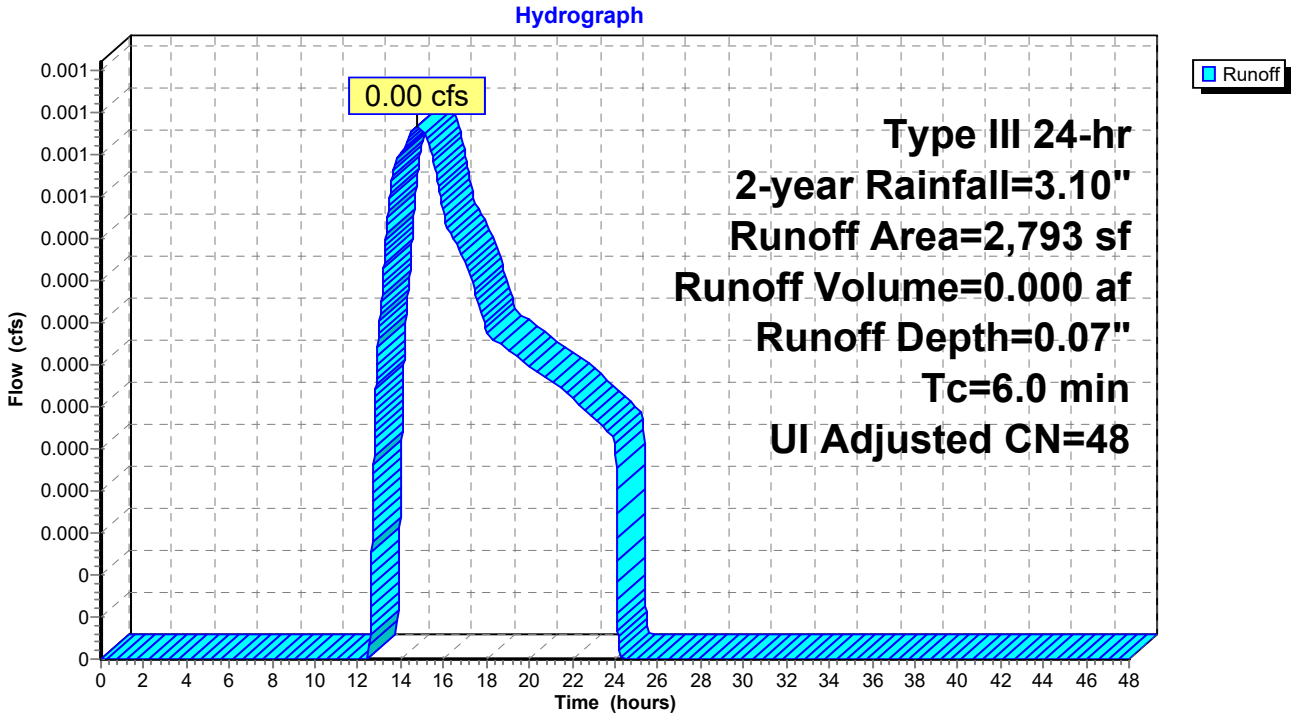
Runoff = 0.00 cfs @ 14.74 hrs, Volume= 0.000 af, Depth= 0.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Adj	Description
834	98		Unconnected pavement, HSG A
1,959	39		>75% Grass cover, Good, HSG A
2,793	57	48	Weighted Average, UI Adjusted
1,959	39	39	70.14% Pervious Area
834	98	98	29.86% Impervious Area
834			100.00% Unconnected

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

Subcatchment 1.2S: S 1.2 - CHESTNUT ST



Summary for Subcatchment 1S: S-1: RTANK SUBCAT

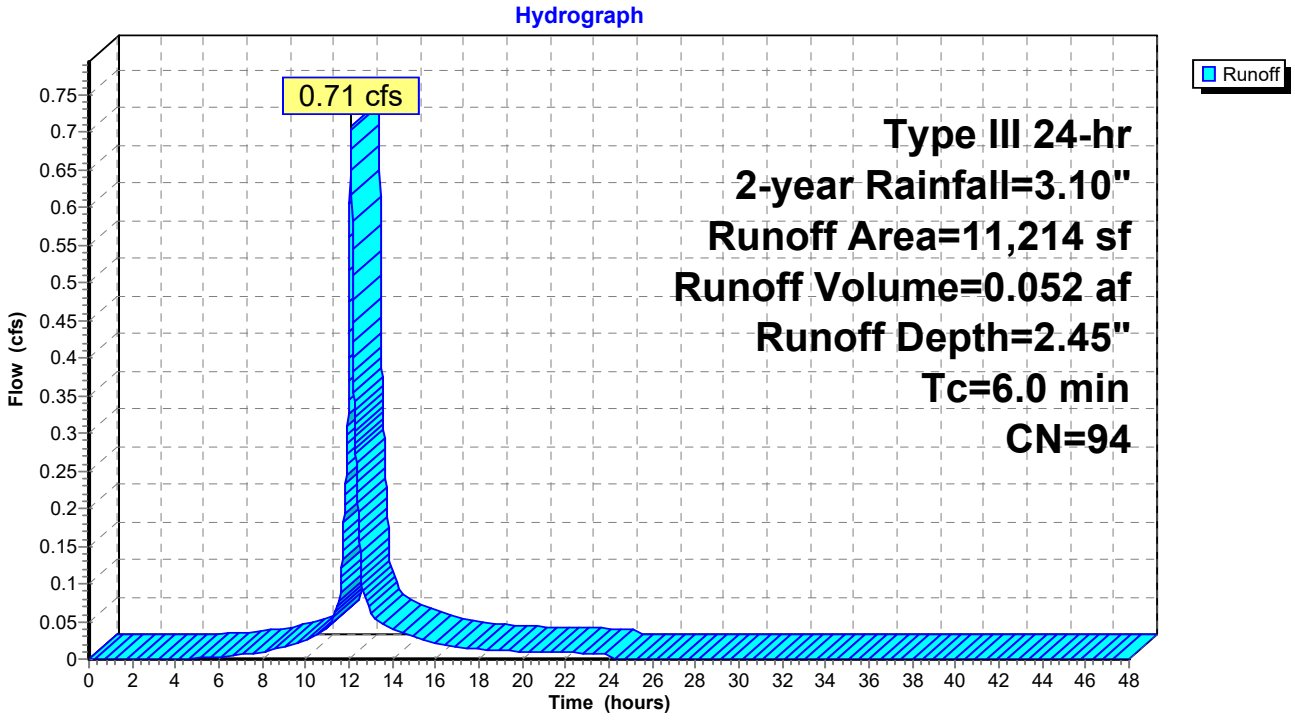
Runoff = 0.71 cfs @ 12.08 hrs, Volume= 0.052 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	5,609	98	Paved parking, HSG A
	684	39	>75% Grass cover, Good, HSG A
*	4,921	98	ROOF AREA
	11,214	94	Weighted Average
	684	39	6.10% Pervious Area
	10,530	98	93.90% Impervious Area

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

Subcatchment 1S: S-1: RTANK SUBCAT



Summary for Subcatchment 2S: S-2: LANCASTER ST

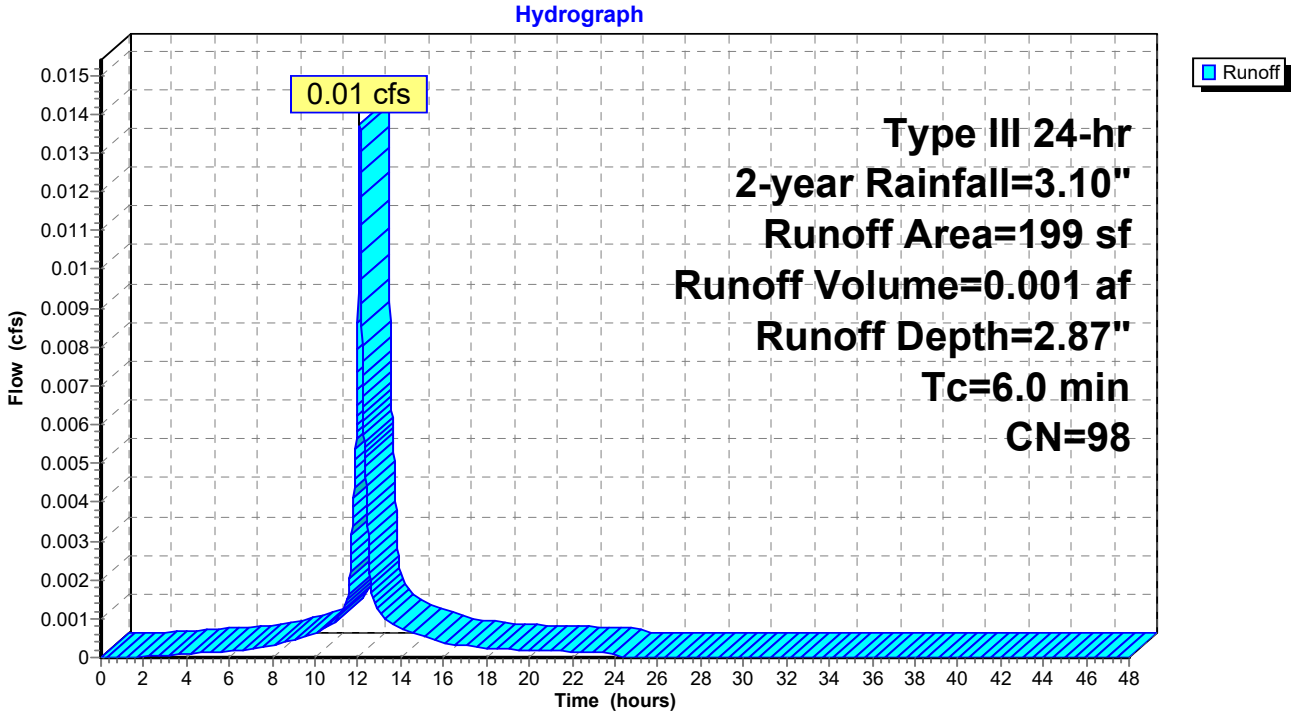
Runoff = 0.01 cfs @ 12.08 hrs, Volume= 0.001 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
199	98	Unconnected pavement, HSG A
199	98	100.00% Impervious Area
199		100.00% Unconnected

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

Subcatchment 2S: S-2: LANCASTER ST

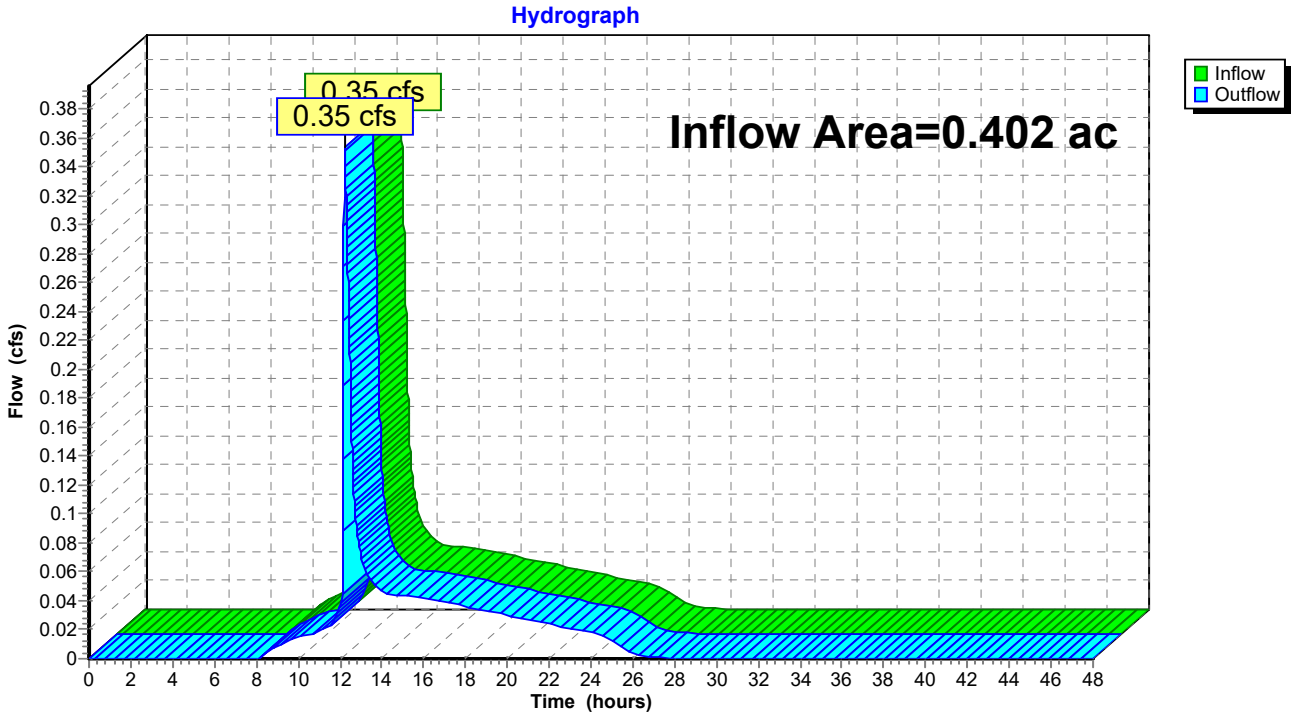


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.402 ac, 65.05% Impervious, Inflow Depth = 1.54" for 2-year event
Inflow = 0.35 cfs @ 12.23 hrs, Volume= 0.052 af
Outflow = 0.35 cfs @ 12.23 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

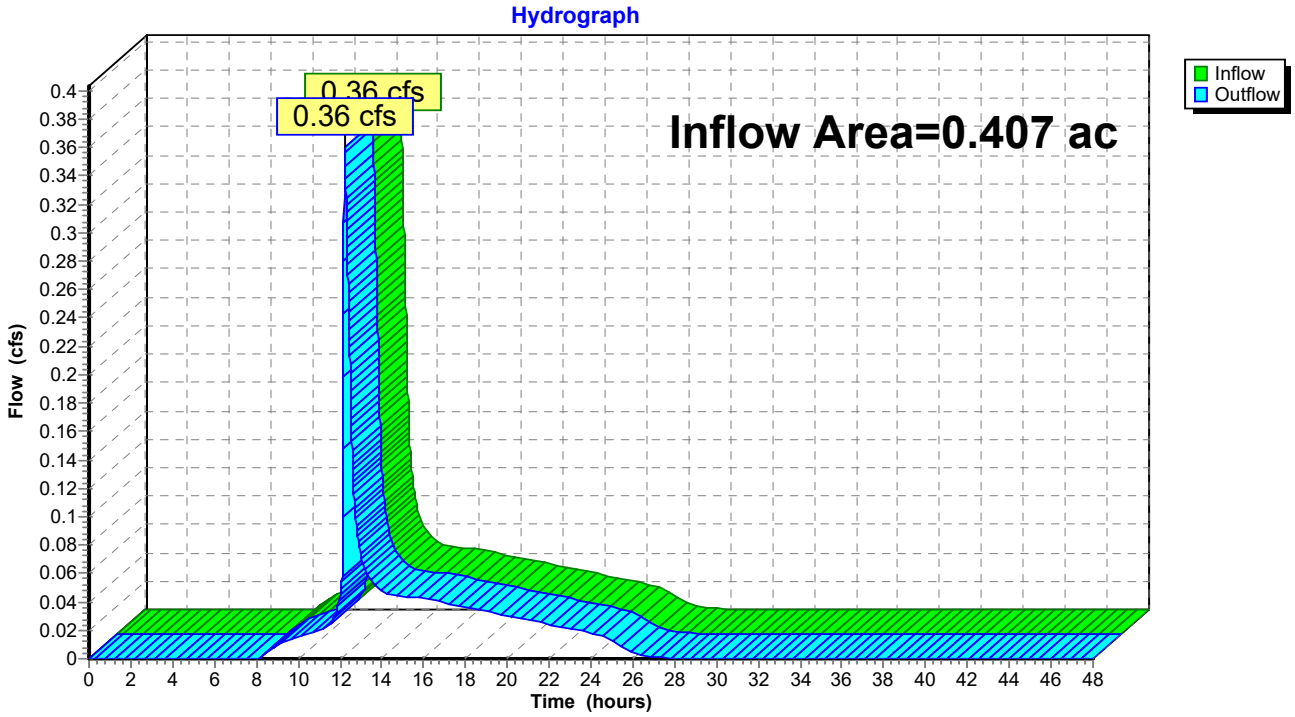


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 65.44% Impervious, Inflow Depth = 1.55" for 2-year event
Inflow = 0.36 cfs @ 12.23 hrs, Volume= 0.053 af
Outflow = 0.36 cfs @ 12.23 hrs, Volume= 0.053 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond P1: R-TANKS - 2 stack

Inflow Area = 0.257 ac, 93.90% Impervious, Inflow Depth = 2.45" for 2-year event
Inflow = 0.71 cfs @ 12.08 hrs, Volume= 0.052 af
Outflow = 0.35 cfs @ 12.23 hrs, Volume= 0.051 af, Atten= 50%, Lag= 8.8 min
Primary = 0.35 cfs @ 12.23 hrs, Volume= 0.051 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 12.02' @ 12.23 hrs Surf.Area= 364 sf Storage= 869 cf
Flood Elev= 13.50' Surf.Area= 364 sf Storage= 1,012 cf

Plug-Flow detention time= 185.6 min calculated for 0.051 af (97% of inflow)
Center-of-Mass det. time= 169.9 min (958.1 - 788.2)

Volume	Invert	Avail.Storage	Storage Description
#1B	8.43'	414 cf	**14.50'W x 25.11'L x 4.57'H Field B** 1,664 cf Overall - 629 cf Embedded = 1,035 cf x 40.0% Voids
#2B	9.18'	594 cf	**ACF R-Tank HD 2** x 72 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 72 Chambers in 8 Rows
#3	8.84'	4 cf	**4.0" Round Pipe Storage** Inside #1 L= 45.0' S= 0.0100 '/'
		1,012 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	8.74'	**10.0" Round 10" Main Outlet** L= 143.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 8.74' / 8.03' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	8.84'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	11.67'	**10.0" Round 10" OVERFLOW HEADER PIPE** L= 9.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 11.67' / 11.61' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	11.67'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=0.35 cfs @ 12.23 hrs HW=12.02' (Free Discharge)
- **1=10" Main Outlet** (Passes 0.35 cfs of 3.45 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 8.53 fps)
  - **3=10" OVERFLOW HEADER PIPE** (Barrel Controls 0.31 cfs @ 2.07 fps)
    - **4=4" Overflows (4)** (Passes 0.31 cfs of 0.72 cfs potential flow)

Pond P1: R-TANKS - 2 stack - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

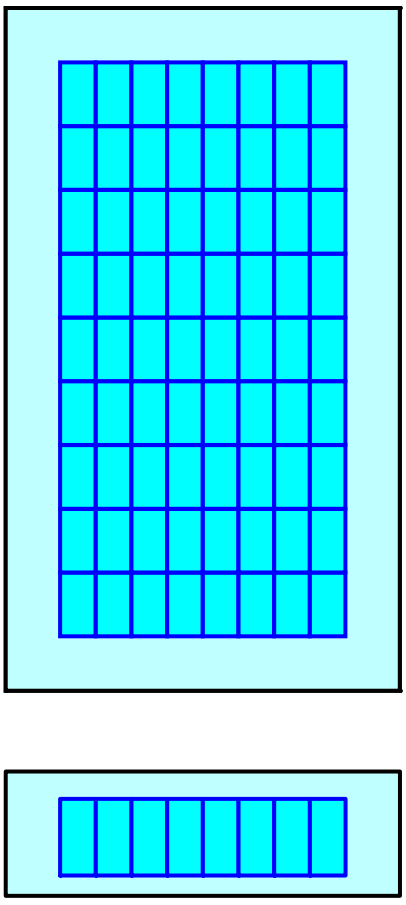
9 Chambers/Row x 2.35' Long = 21.11' Row Length +24.0" End Stone x 2 = 25.11' Base Length
8 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 14.50' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

72 Chambers x 8.3 cf = 594.1 cf Chamber Storage
72 Chambers x 8.7 cf = 625.4 cf Displacement

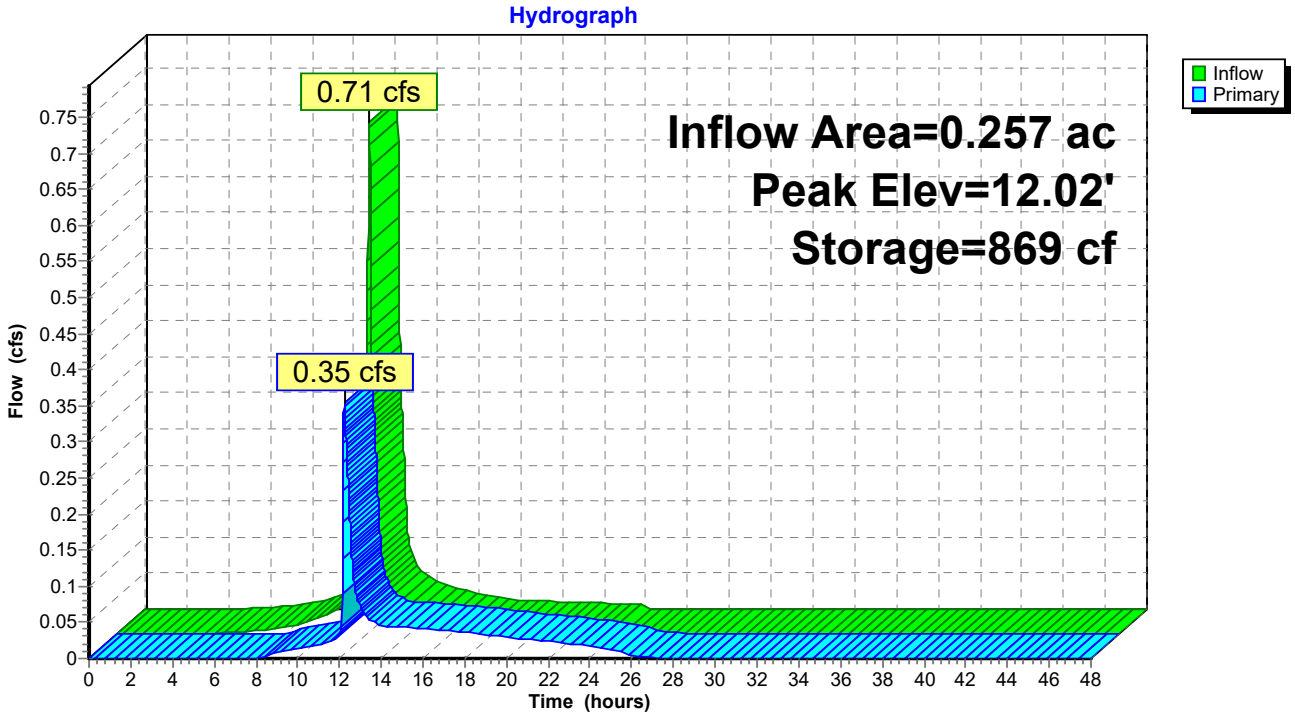
1,664.5 cf Field - 625.4 cf Chambers = 1,039.1 cf Stone x 40.0% Voids = 415.6 cf Stone Storage

Chamber Storage + Stone Storage = 1,009.8 cf = 0.023 af
Overall Storage Efficiency = 60.7%
Overall System Size = 25.11' x 14.50' x 4.57'

72 Chambers
61.6 cy Field
38.5 cy Stone



Pond P1: R-TANKS - 2 stack



Stage-Area-Storage for Pond P1: R-TANKS - 2 stack

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
8.43	0	9.49	194	10.55	478
8.45	3	9.51	200	10.57	483
8.47	6	9.53	205	10.59	489
8.49	9	9.55	211	10.61	494
8.51	12	9.57	216	10.63	500
8.53	15	9.59	221	10.65	505
8.55	17	9.61	227	10.67	510
8.57	20	9.63	232	10.69	516
8.59	23	9.65	237	10.71	521
8.61	26	9.67	243	10.73	526
8.63	29	9.69	248	10.75	532
8.65	32	9.71	253	10.77	537
8.67	35	9.73	259	10.79	542
8.69	38	9.75	264	10.81	548
8.71	41	9.77	269	10.83	553
8.73	44	9.79	275	10.85	558
8.75	47	9.81	280	10.87	564
8.77	50	9.83	285	10.89	569
8.79	52	9.85	291	10.91	574
8.81	55	9.87	296	10.93	580
8.83	58	9.89	302	10.95	585
8.85	61	9.91	307	10.97	590
8.87	64	9.93	312	10.99	596
8.89	67	9.95	318	11.01	601
8.91	70	9.97	323	11.03	607
8.93	73	9.99	328	11.05	612
8.95	76	10.01	334	11.07	617
8.97	79	10.03	339	11.09	623
8.99	82	10.05	344	11.11	628
9.01	85	10.07	350	11.13	633
9.03	88	10.09	355	11.15	639
9.05	91	10.11	360	11.17	644
9.07	94	10.13	366	11.19	649
9.09	97	10.15	371	11.21	655
9.11	100	10.17	376	11.23	660
9.13	103	10.19	382	11.25	665
9.15	106	10.21	387	11.27	671
9.17	109	10.23	393	11.29	676
9.19	113	10.25	398	11.31	681
9.21	118	10.27	403	11.33	687
9.23	124	10.29	409	11.35	692
9.25	129	10.31	414	11.37	698
9.27	135	10.33	419	11.39	703
9.29	140	10.35	425	11.41	708
9.31	146	10.37	430	11.43	714
9.33	151	10.39	435	11.45	719
9.35	156	10.41	441	11.47	724
9.37	162	10.43	446	11.49	730
9.39	167	10.45	451	11.51	735
9.41	173	10.47	457	11.53	740
9.43	178	10.49	462	11.55	746
9.45	184	10.51	467	11.57	751
9.47	189	10.53	473	11.59	756

Stage-Area-Storage for Pond P1: R-TANKS - 2 stack (continued)

Elevation (feet)	Storage (cubic-feet)
11.61	762
11.63	767
11.65	772
11.67	778
11.69	783
11.71	788
11.73	794
11.75	799
11.77	805
11.79	810
11.81	815
11.83	821
11.85	826
11.87	831
11.89	837
11.91	842
11.93	847
11.95	853
11.97	858
11.99	863
12.01	868
12.03	871
12.05	874
12.07	876
12.09	879
12.11	882
12.13	885
12.15	888
12.17	891
12.19	894
12.21	897
12.23	900
12.25	903
12.27	906
12.29	908
12.31	911
12.33	914
12.35	917
12.37	920
12.39	923
12.41	926
12.43	929
12.45	932
12.47	935
12.49	938
12.51	941
12.53	943
12.55	946
12.57	949
12.59	952
12.61	955
12.63	958
12.65	961
12.67	964
12.69	967
12.71	970
12.73	973
12.75	975
12.77	978
12.79	981
12.81	984
12.83	987
12.85	990
12.87	993
12.89	996
12.91	999
12.93	1,002
12.95	1,005
12.97	1,008
12.99	1,010
13.01	**1,012**
13.03	1,012
13.05	1,012
13.07	1,012
13.09	1,012
13.11	1,012
13.13	1,012
13.15	1,012
13.17	1,012
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13.29	1,012
13.31	1,012
13.33	1,012
13.35	1,012
13.37	1,012
13.39	1,012
13.41	1,012
13.43	1,012
13.45	1,012
13.47	1,012
13.49	1,012

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S-1.1: FIELD INLET Runoff Area=3,502 sf 0.71% Impervious Runoff Depth=0.13"
Tc=6.0 min CN=39 Runoff=0.00 cfs 0.001 af

Subcatchment 1.2S: S 1.2 - CHESTNUT ST Runoff Area=2,793 sf 29.86% Impervious Runoff Depth=0.45"
Tc=6.0 min UI Adjusted CN=48 Runoff=0.01 cfs 0.002 af

Subcatchment 1S: S-1: RTANK SUBCAT Runoff Area=11,214 sf 93.90% Impervious Runoff Depth=3.91"
Tc=6.0 min CN=94 Runoff=1.10 cfs 0.084 af

Subcatchment 2S: S-2: LANCASTER ST Runoff Area=199 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.02 cfs 0.002 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.09 cfs 0.086 af
Outflow=1.09 cfs 0.086 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.11 cfs 0.087 af
Outflow=1.11 cfs 0.087 af

Pond P1: R-TANKS - 2 stack Peak Elev=12.39' Storage=924 cf Inflow=1.10 cfs 0.084 af
Outflow=1.08 cfs 0.083 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.089 af Average Runoff Depth = 2.62"
34.56% Pervious = 0.140 ac 65.44% Impervious = 0.266 ac

Summary for Subcatchment 1.1S: S-1.1: FIELD INLET

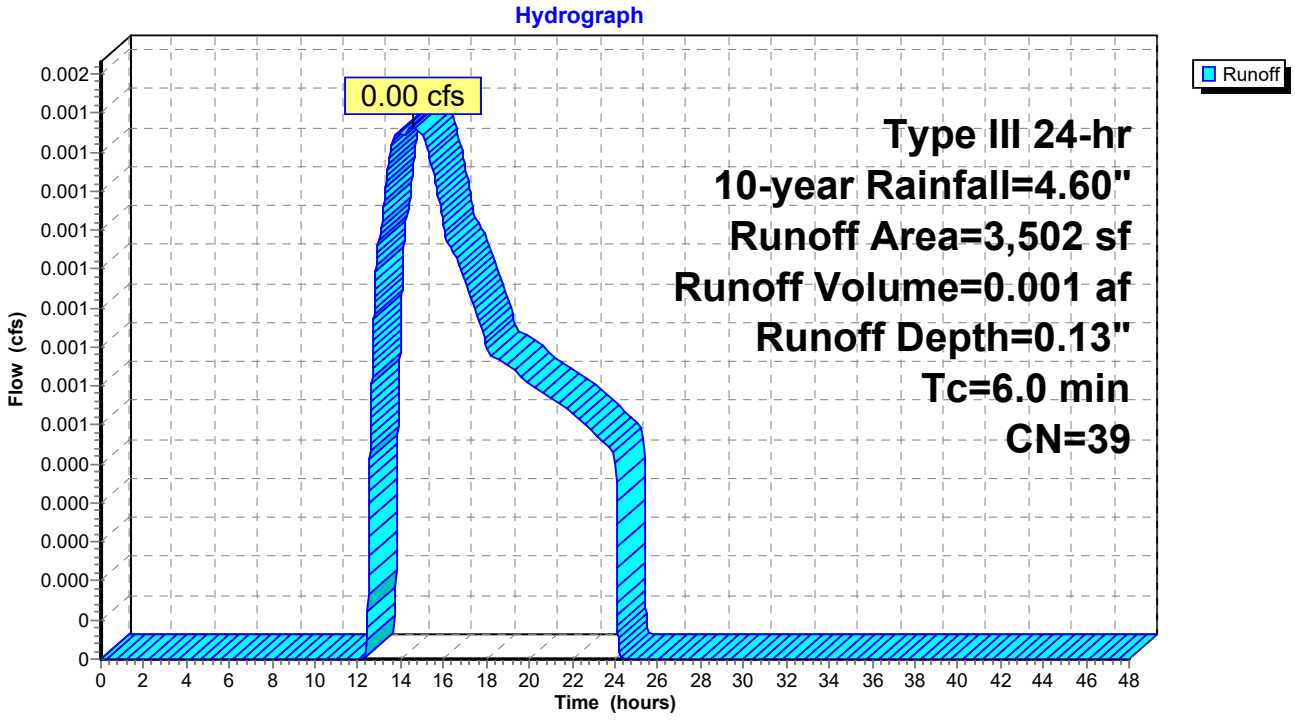
Runoff = 0.00 cfs @ 14.58 hrs, Volume= 0.001 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
25	98	Unconnected pavement, HSG A
3,477	39	>75% Grass cover, Good, HSG A
3,502	39	Weighted Average
3,477	39	99.29% Pervious Area
25	98	0.71% Impervious Area
25		100.00% Unconnected

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

Subcatchment 1.1S: S-1.1: FIELD INLET



Summary for Subcatchment 1.2S: S 1.2 - CHESTNUT ST

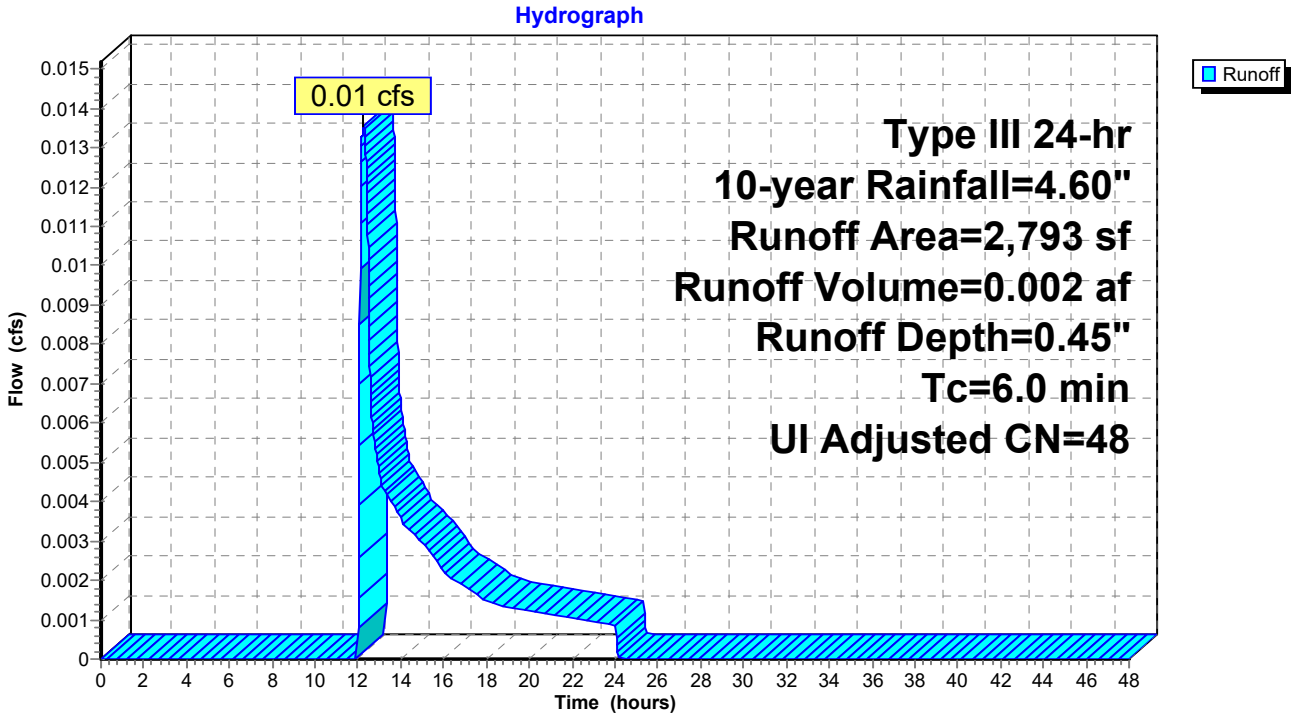
Runoff = 0.01 cfs @ 12.28 hrs, Volume= 0.002 af, Depth= 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Adj	Description
834	98		Unconnected pavement, HSG A
1,959	39		>75% Grass cover, Good, HSG A
2,793	57	48	Weighted Average, UI Adjusted
1,959	39	39	70.14% Pervious Area
834	98	98	29.86% Impervious Area
834			100.00% Unconnected

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

Subcatchment 1.2S: S 1.2 - CHESTNUT ST



Summary for Subcatchment 1S: S-1: RTANK SUBCAT

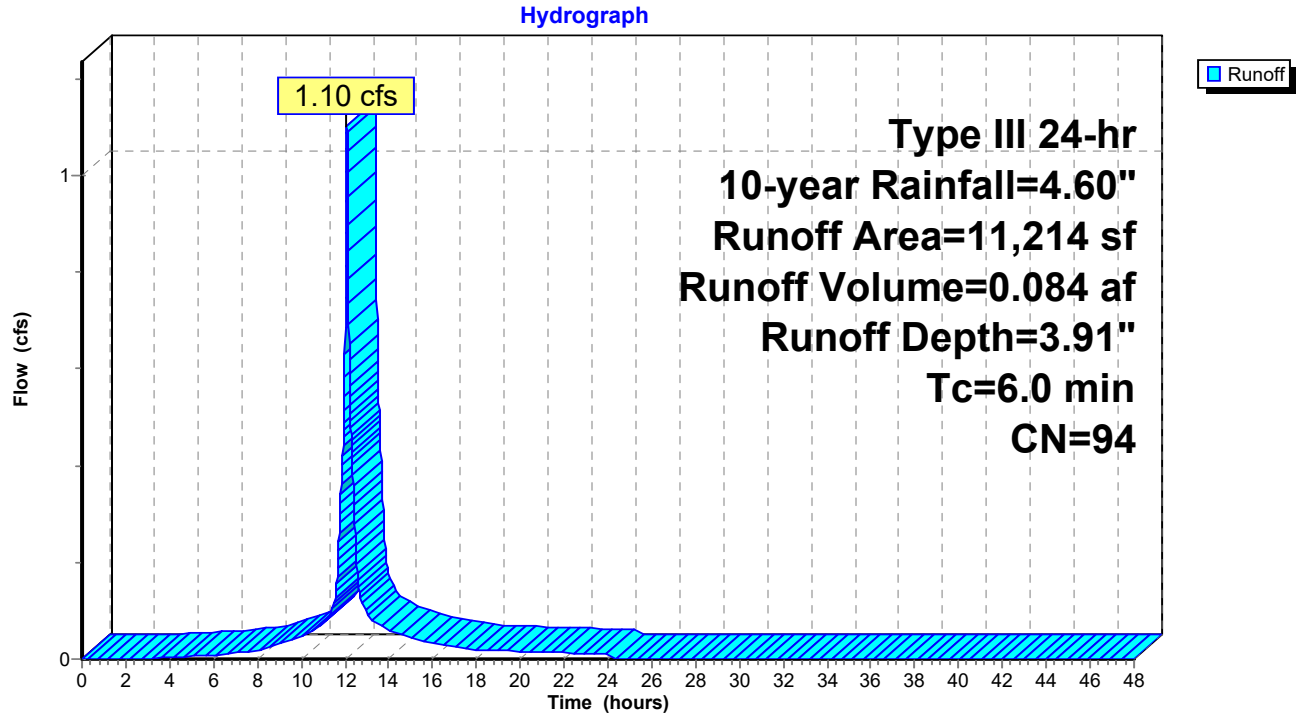
Runoff = 1.10 cfs @ 12.08 hrs, Volume= 0.084 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	5,609	98	Paved parking, HSG A
	684	39	>75% Grass cover, Good, HSG A
*	4,921	98	ROOF AREA
	11,214	94	Weighted Average
	684	39	6.10% Pervious Area
	10,530	98	93.90% Impervious Area

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

Subcatchment 1S: S-1: RTANK SUBCAT



Summary for Subcatchment 2S: S-2: LANCASTER ST

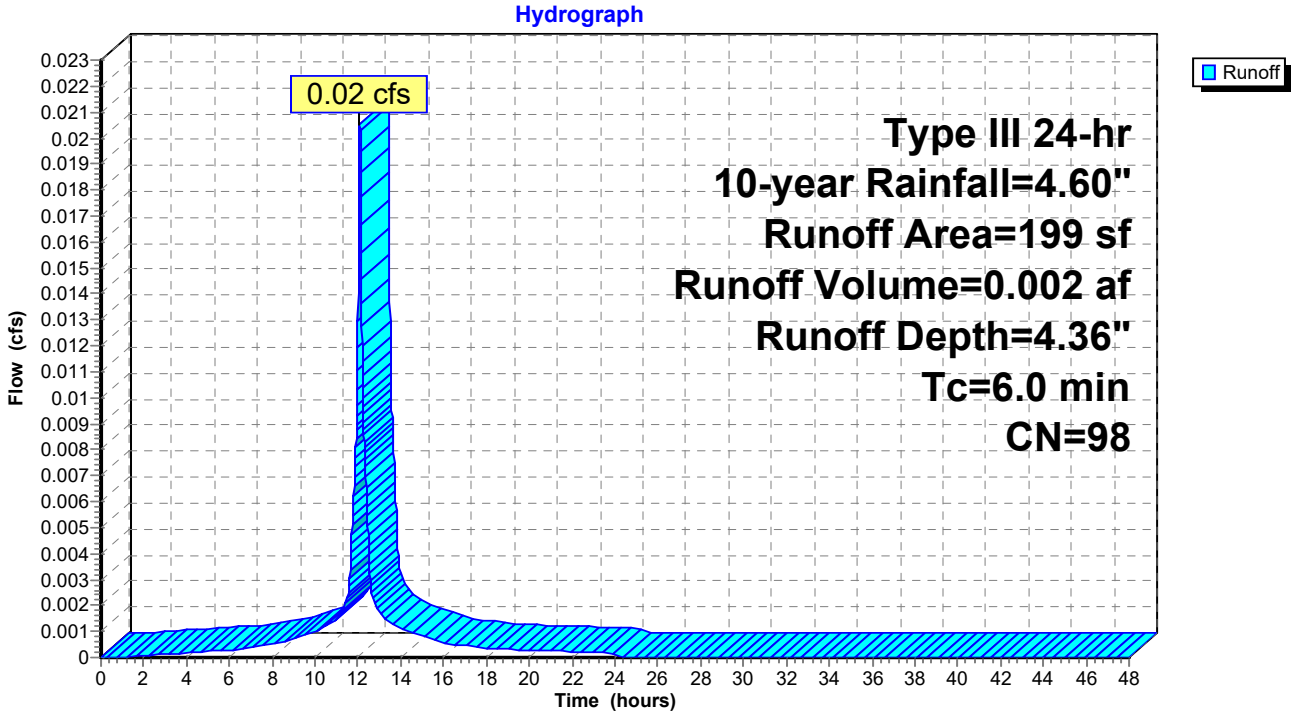
Runoff = 0.02 cfs @ 12.08 hrs, Volume= 0.002 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
199	98	Unconnected pavement, HSG A
199	98	100.00% Impervious Area
199		100.00% Unconnected

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

Subcatchment 2S: S-2: LANCASTER ST

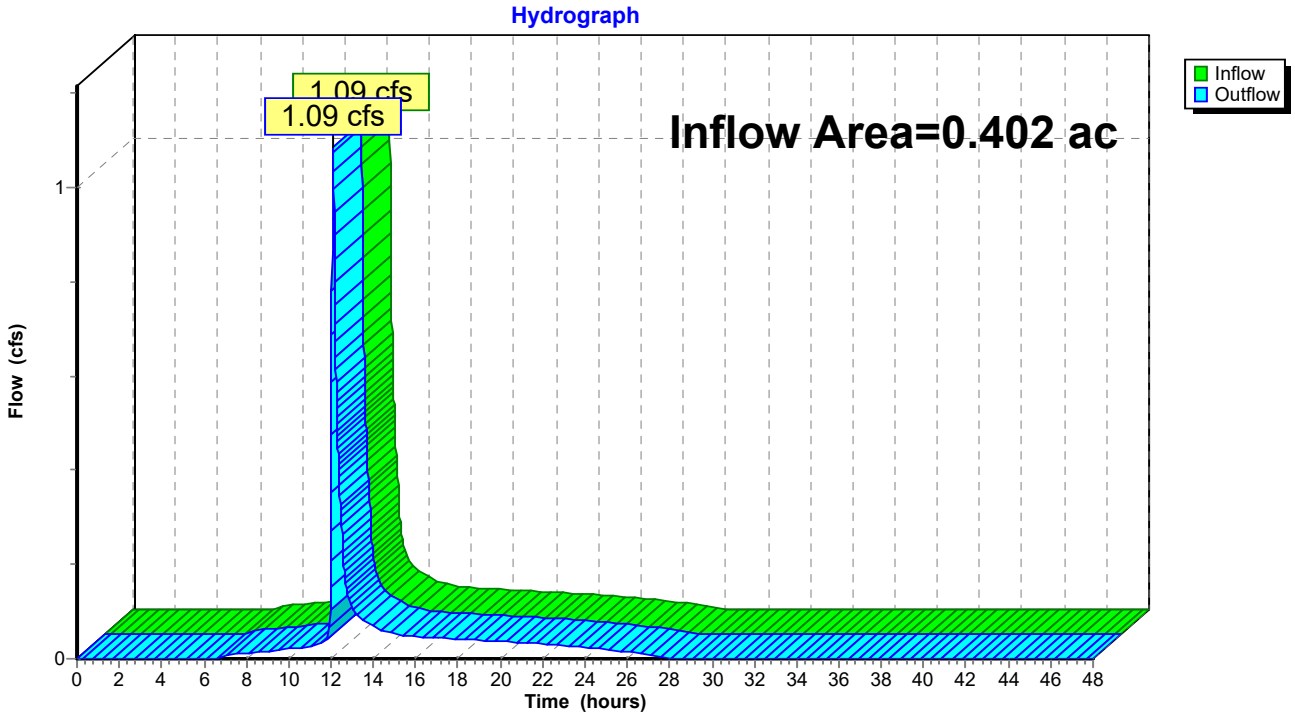


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.402 ac, 65.05% Impervious, Inflow Depth = 2.56" for 10-year event
Inflow = 1.09 cfs @ 12.10 hrs, Volume= 0.086 af
Outflow = 1.09 cfs @ 12.10 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

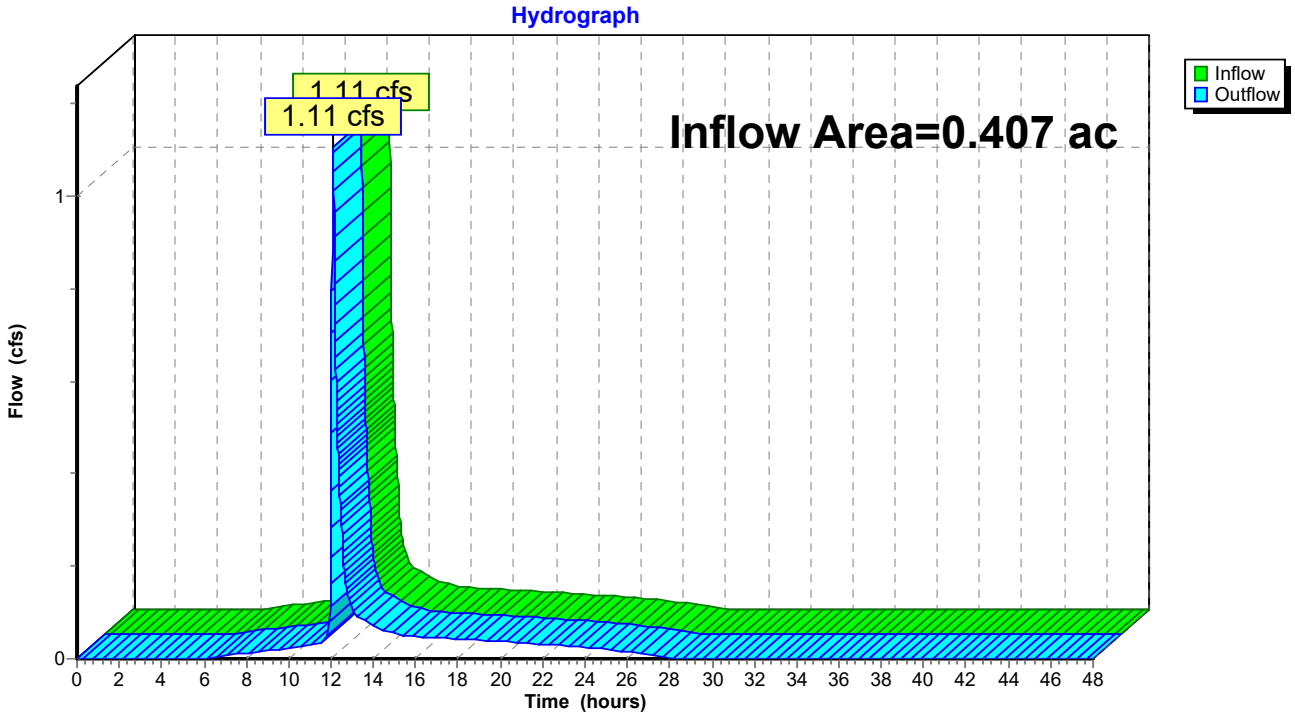


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 65.44% Impervious, Inflow Depth = 2.58" for 10-year event
Inflow = 1.11 cfs @ 12.10 hrs, Volume= 0.087 af
Outflow = 1.11 cfs @ 12.10 hrs, Volume= 0.087 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond P1: R-TANKS - 2 stack

Inflow Area = 0.257 ac, 93.90% Impervious, Inflow Depth = 3.91" for 10-year event
Inflow = 1.10 cfs @ 12.08 hrs, Volume= 0.084 af
Outflow = 1.08 cfs @ 12.10 hrs, Volume= 0.083 af, Atten= 3%, Lag= 1.1 min
Primary = 1.08 cfs @ 12.10 hrs, Volume= 0.083 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 12.39' @ 12.10 hrs Surf.Area= 364 sf Storage= 924 cf
Flood Elev= 13.50' Surf.Area= 364 sf Storage= 1,012 cf

Plug-Flow detention time= 145.7 min calculated for 0.083 af (98% of inflow)
Center-of-Mass det. time= 135.4 min (911.3 - 775.9)

Volume	Invert	Avail.Storage	Storage Description
#1B	8.43'	414 cf	**14.50'W x 25.11'L x 4.57'H Field B** 1,664 cf Overall - 629 cf Embedded = 1,035 cf x 40.0% Voids
#2B	9.18'	594 cf	**ACF R-Tank HD 2** x 72 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 72 Chambers in 8 Rows
#3	8.84'	4 cf	**4.0" Round Pipe Storage** Inside #1 L= 45.0' S= 0.0100 '/'
		1,012 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	8.74'	**10.0" Round 10" Main Outlet** L= 143.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 8.74' / 8.03' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	8.84'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	11.67'	**10.0" Round 10" OVERFLOW HEADER PIPE** L= 9.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 11.67' / 11.61' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	11.67'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=1.07 cfs @ 12.10 hrs HW=12.39' (Free Discharge)
- **1=10" Main Outlet** (Passes 1.07 cfs of 3.65 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 9.02 fps)
  - **3=10" OVERFLOW HEADER PIPE** (Barrel Controls 1.03 cfs @ 2.73 fps)
    - **4=4" Overflows (4)** (Passes 1.03 cfs of 1.25 cfs potential flow)

Pond P1: R-TANKS - 2 stack - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

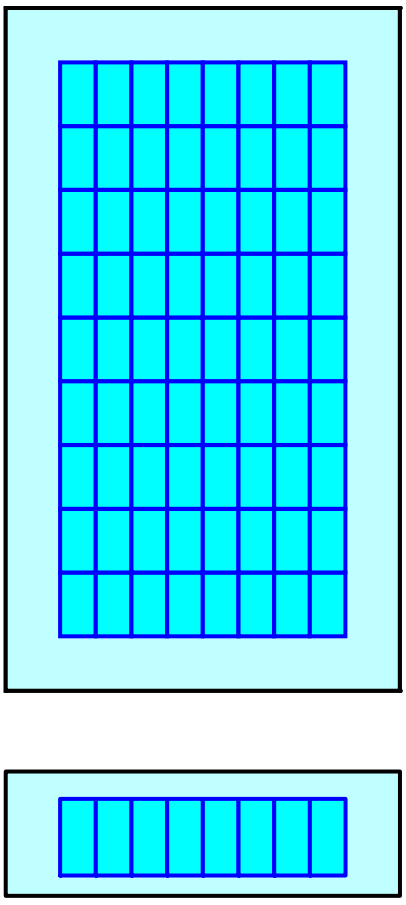
9 Chambers/Row x 2.35' Long = 21.11' Row Length +24.0" End Stone x 2 = 25.11' Base Length
8 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 14.50' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

72 Chambers x 8.3 cf = 594.1 cf Chamber Storage
72 Chambers x 8.7 cf = 625.4 cf Displacement

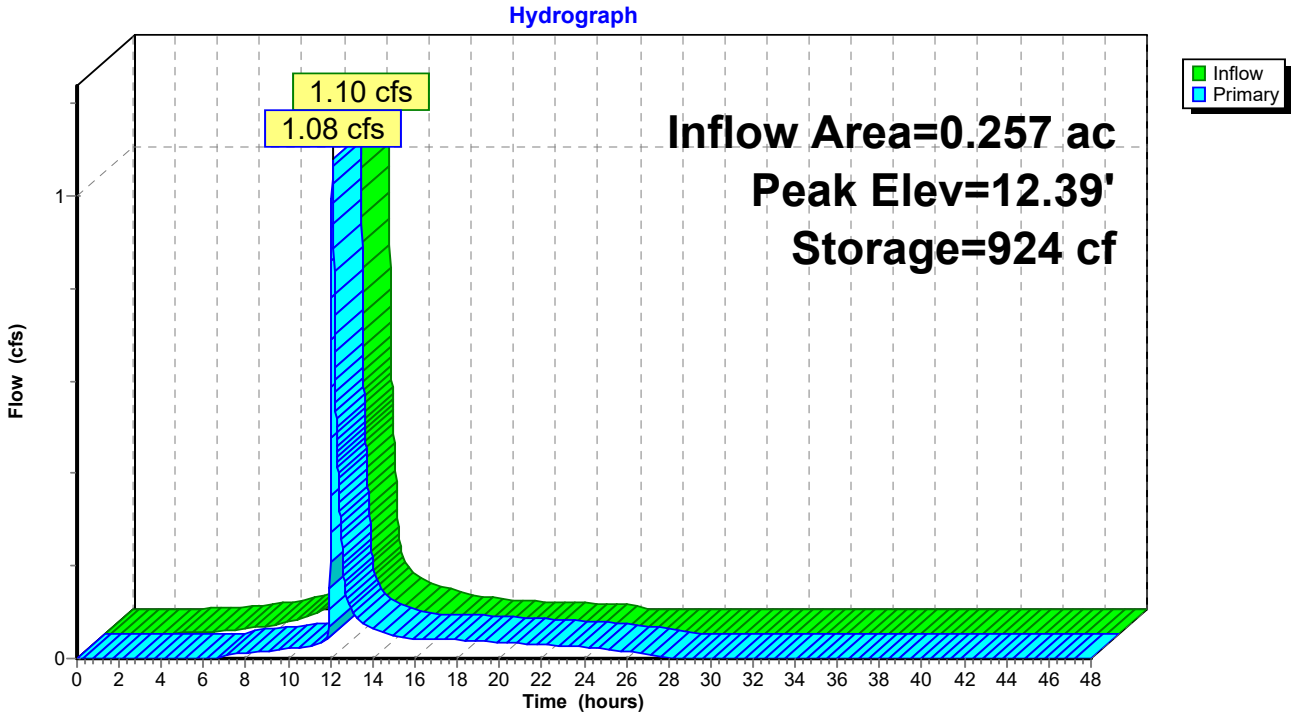
1,664.5 cf Field - 625.4 cf Chambers = 1,039.1 cf Stone x 40.0% Voids = 415.6 cf Stone Storage

Chamber Storage + Stone Storage = 1,009.8 cf = 0.023 af
Overall Storage Efficiency = 60.7%
Overall System Size = 25.11' x 14.50' x 4.57'

72 Chambers
61.6 cy Field
38.5 cy Stone



Pond P1: R-TANKS - 2 stack



Stage-Area-Storage for Pond P1: R-TANKS - 2 stack

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
8.43	0	9.49	194	10.55	478
8.45	3	9.51	200	10.57	483
8.47	6	9.53	205	10.59	489
8.49	9	9.55	211	10.61	494
8.51	12	9.57	216	10.63	500
8.53	15	9.59	221	10.65	505
8.55	17	9.61	227	10.67	510
8.57	20	9.63	232	10.69	516
8.59	23	9.65	237	10.71	521
8.61	26	9.67	243	10.73	526
8.63	29	9.69	248	10.75	532
8.65	32	9.71	253	10.77	537
8.67	35	9.73	259	10.79	542
8.69	38	9.75	264	10.81	548
8.71	41	9.77	269	10.83	553
8.73	44	9.79	275	10.85	558
8.75	47	9.81	280	10.87	564
8.77	50	9.83	285	10.89	569
8.79	52	9.85	291	10.91	574
8.81	55	9.87	296	10.93	580
8.83	58	9.89	302	10.95	585
8.85	61	9.91	307	10.97	590
8.87	64	9.93	312	10.99	596
8.89	67	9.95	318	11.01	601
8.91	70	9.97	323	11.03	607
8.93	73	9.99	328	11.05	612
8.95	76	10.01	334	11.07	617
8.97	79	10.03	339	11.09	623
8.99	82	10.05	344	11.11	628
9.01	85	10.07	350	11.13	633
9.03	88	10.09	355	11.15	639
9.05	91	10.11	360	11.17	644
9.07	94	10.13	366	11.19	649
9.09	97	10.15	371	11.21	655
9.11	100	10.17	376	11.23	660
9.13	103	10.19	382	11.25	665
9.15	106	10.21	387	11.27	671
9.17	109	10.23	393	11.29	676
9.19	113	10.25	398	11.31	681
9.21	118	10.27	403	11.33	687
9.23	124	10.29	409	11.35	692
9.25	129	10.31	414	11.37	698
9.27	135	10.33	419	11.39	703
9.29	140	10.35	425	11.41	708
9.31	146	10.37	430	11.43	714
9.33	151	10.39	435	11.45	719
9.35	156	10.41	441	11.47	724
9.37	162	10.43	446	11.49	730
9.39	167	10.45	451	11.51	735
9.41	173	10.47	457	11.53	740
9.43	178	10.49	462	11.55	746
9.45	184	10.51	467	11.57	751
9.47	189	10.53	473	11.59	756

Stage-Area-Storage for Pond P1: R-TANKS - 2 stack (continued)

Elevation (feet)	Storage (cubic-feet)
11.61	762
11.63	767
11.65	772
11.67	778
11.69	783
11.71	788
11.73	794
11.75	799
11.77	805
11.79	810
11.81	815
11.83	821
11.85	826
11.87	831
11.89	837
11.91	842
11.93	847
11.95	853
11.97	858
11.99	863
12.01	868
12.03	871
12.05	874
12.07	876
12.09	879
12.11	882
12.13	885
12.15	888
12.17	891
12.19	894
12.21	897
12.23	900
12.25	903
12.27	906
12.29	908
12.31	911
12.33	914
12.35	917
12.37	920
12.39	923
12.41	926
12.43	929
12.45	932
12.47	935
12.49	938
12.51	941
12.53	943
12.55	946
12.57	949
12.59	952
12.61	955
12.63	958
12.65	961
12.67	964
12.69	967
12.71	970
12.73	973
12.75	975
12.77	978
12.79	981
12.81	984
12.83	987
12.85	990
12.87	993
12.89	996
12.91	999
12.93	1,002
12.95	1,005
12.97	1,008
12.99	1,010
13.01	**1,012**
13.03	1,012
13.05	1,012
13.07	1,012
13.09	1,012
13.11	1,012
13.13	1,012
13.15	1,012
13.17	1,012
13.19	1,012
13.21	1,012
13.23	1,012
13.25	1,012
13.27	1,012
13.29	1,012
13.31	1,012
13.33	1,012
13.35	1,012
13.37	1,012
13.39	1,012
13.41	1,012
13.43	1,012
13.45	1,012
13.47	1,012
13.49	1,012

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 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 1.1S: S-1.1: FIELD INLET Runoff Area=3,502 sf 0.71% Impervious Runoff Depth=0.39"
Tc=6.0 min CN=39 Runoff=0.01 cfs 0.003 af

Subcatchment 1.2S: S 1.2 - CHESTNUT ST Runoff Area=2,793 sf 29.86% Impervious Runoff Depth=0.91"
Tc=6.0 min UI Adjusted CN=48 Runoff=0.05 cfs 0.005 af

Subcatchment 1S: S-1: RTANK SUBCAT Runoff Area=11,214 sf 93.90% Impervious Runoff Depth=5.10"
Tc=6.0 min CN=94 Runoff=1.42 cfs 0.109 af

Subcatchment 2S: S-2: LANCASTER ST Runoff Area=199 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.03 cfs 0.002 af

Reach 1R: CHESTNUT ST COMBINED SEWER Inflow=1.43 cfs 0.115 af
Outflow=1.43 cfs 0.115 af

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER Inflow=1.46 cfs 0.118 af
Outflow=1.46 cfs 0.118 af

Pond P1: R-TANKS - 2 stack Peak Elev=12.53' Storage=944 cf Inflow=1.42 cfs 0.109 af
Outflow=1.38 cfs 0.108 af

Total Runoff Area = 0.407 ac Runoff Volume = 0.119 af Average Runoff Depth = 3.51"
34.56% Pervious = 0.140 ac 65.44% Impervious = 0.266 ac

Summary for Subcatchment 1.1S: S-1.1: FIELD INLET

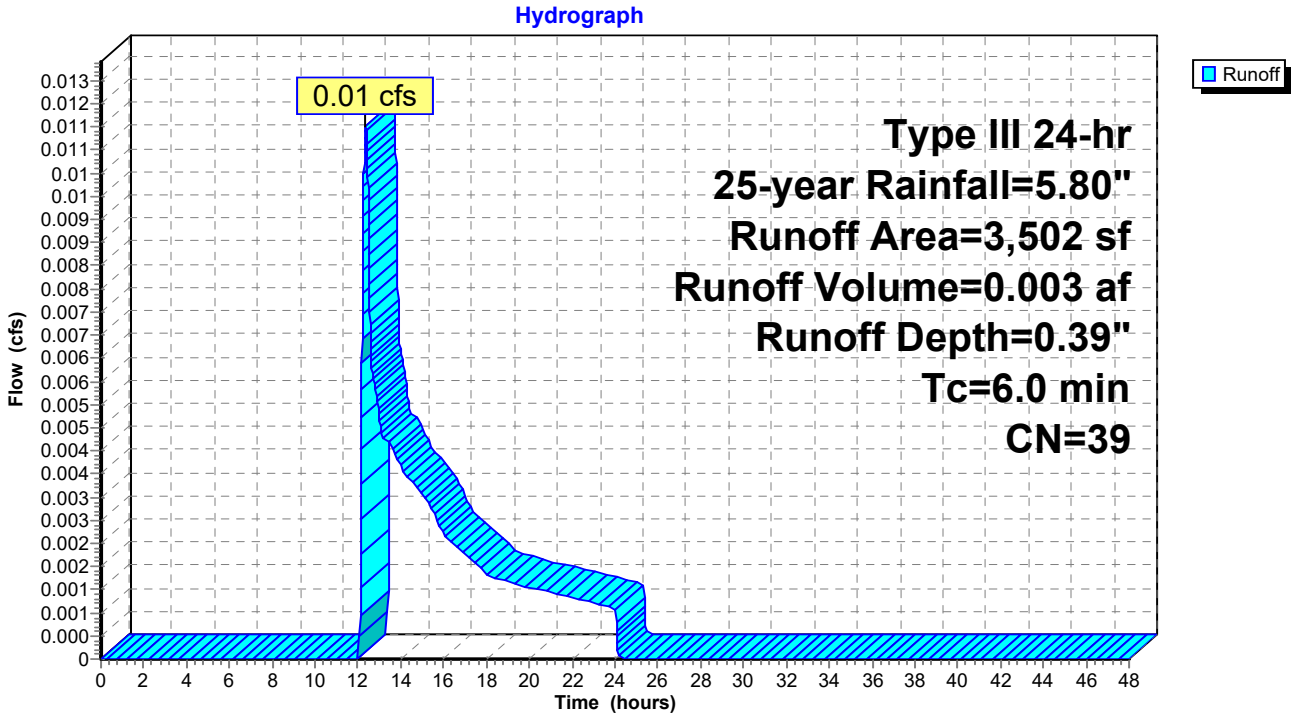
Runoff = 0.01 cfs @ 12.37 hrs, Volume= 0.003 af, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
25	98	Unconnected pavement, HSG A
3,477	39	>75% Grass cover, Good, HSG A
3,502	39	Weighted Average
3,477	39	99.29% Pervious Area
25	98	0.71% Impervious Area
25		100.00% Unconnected

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

Subcatchment 1.1S: S-1.1: FIELD INLET



Summary for Subcatchment 1.2S: S 1.2 - CHESTNUT ST

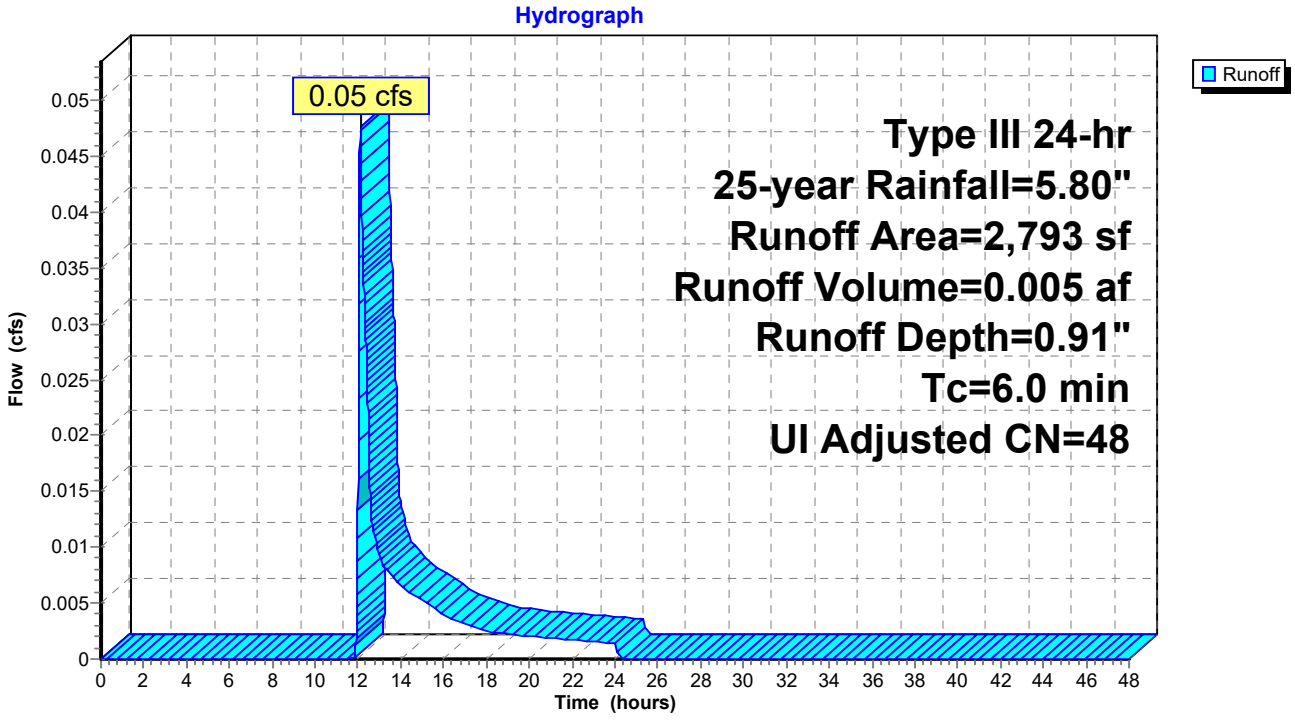
Runoff = 0.05 cfs @ 12.12 hrs, Volume= 0.005 af, Depth= 0.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Adj	Description
834	98		Unconnected pavement, HSG A
1,959	39		>75% Grass cover, Good, HSG A
2,793	57	48	Weighted Average, UI Adjusted
1,959	39	39	70.14% Pervious Area
834	98	98	29.86% Impervious Area
834			100.00% Unconnected

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

Subcatchment 1.2S: S 1.2 - CHESTNUT ST



Summary for Subcatchment 1S: S-1: RTANK SUBCAT

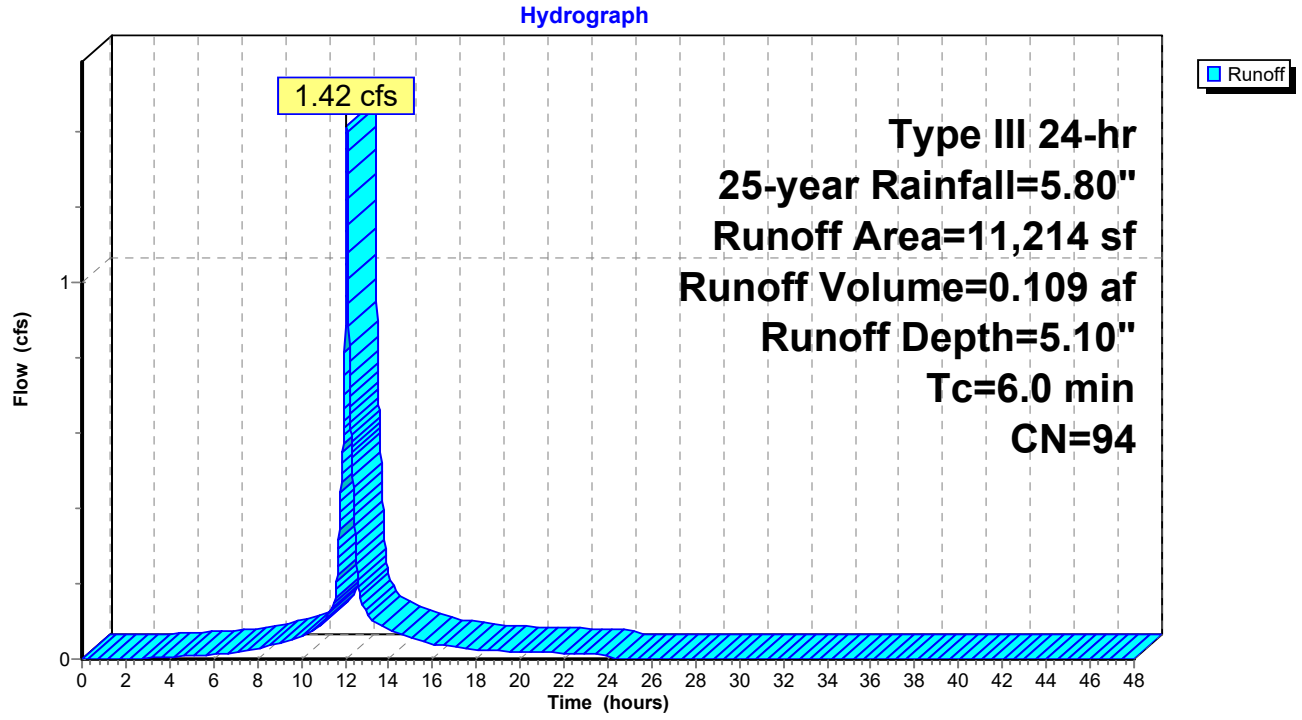
Runoff = 1.42 cfs @ 12.08 hrs, Volume= 0.109 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	5,609	98	Paved parking, HSG A
	684	39	>75% Grass cover, Good, HSG A
*	4,921	98	ROOF AREA
	11,214	94	Weighted Average
	684	39	6.10% Pervious Area
	10,530	98	93.90% Impervious Area

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

Subcatchment 1S: S-1: RTANK SUBCAT



Summary for Subcatchment 2S: S-2: LANCASTER ST

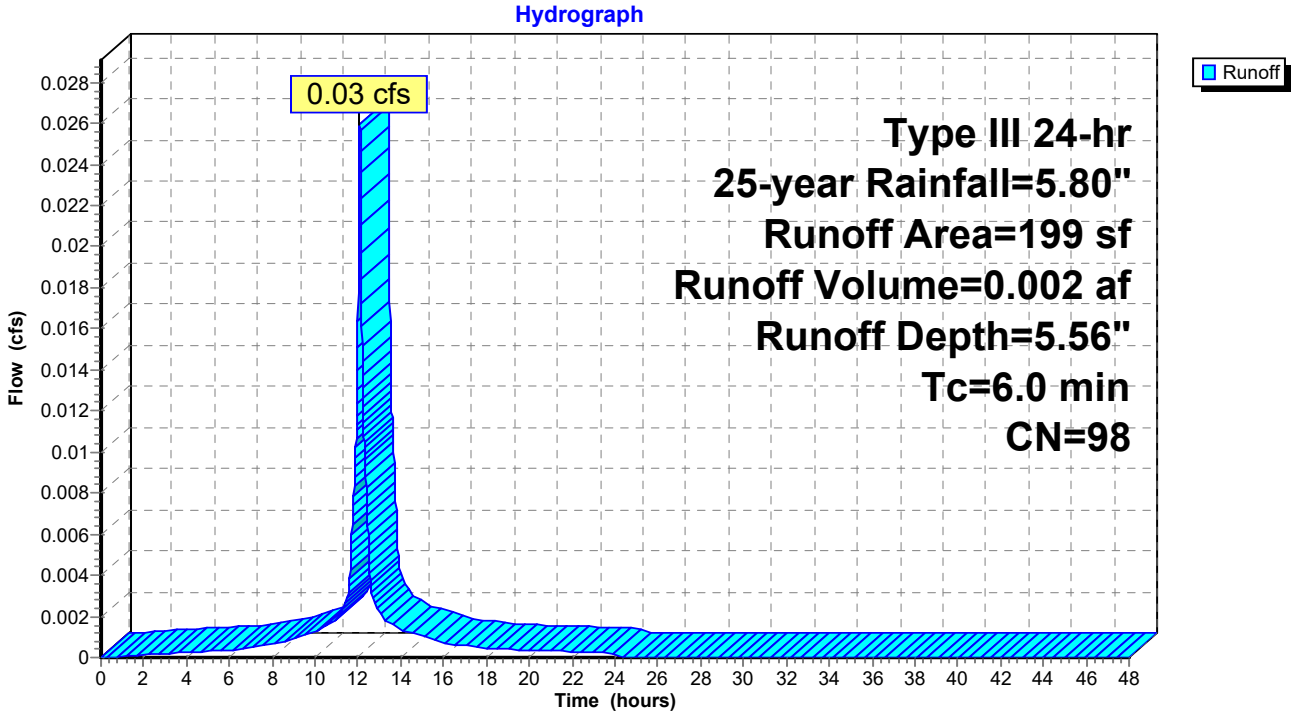
Runoff = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
199	98	Unconnected pavement, HSG A
199	98	100.00% Impervious Area
199		100.00% Unconnected

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

Subcatchment 2S: S-2: LANCASTER ST

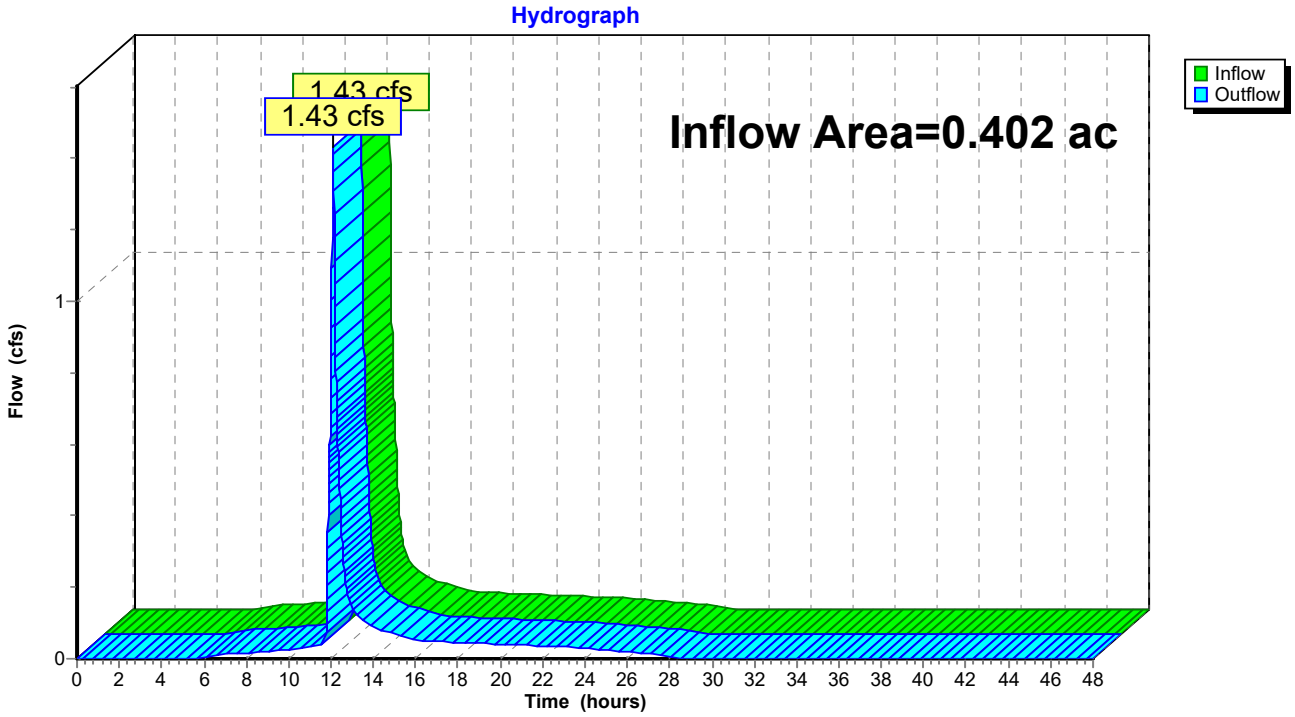


Summary for Reach 1R: CHESTNUT ST COMBINED SEWER

Inflow Area = 0.402 ac, 65.05% Impervious, Inflow Depth = 3.45" for 25-year event
Inflow = 1.43 cfs @ 12.10 hrs, Volume= 0.115 af
Outflow = 1.43 cfs @ 12.10 hrs, Volume= 0.115 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: CHESTNUT ST COMBINED SEWER

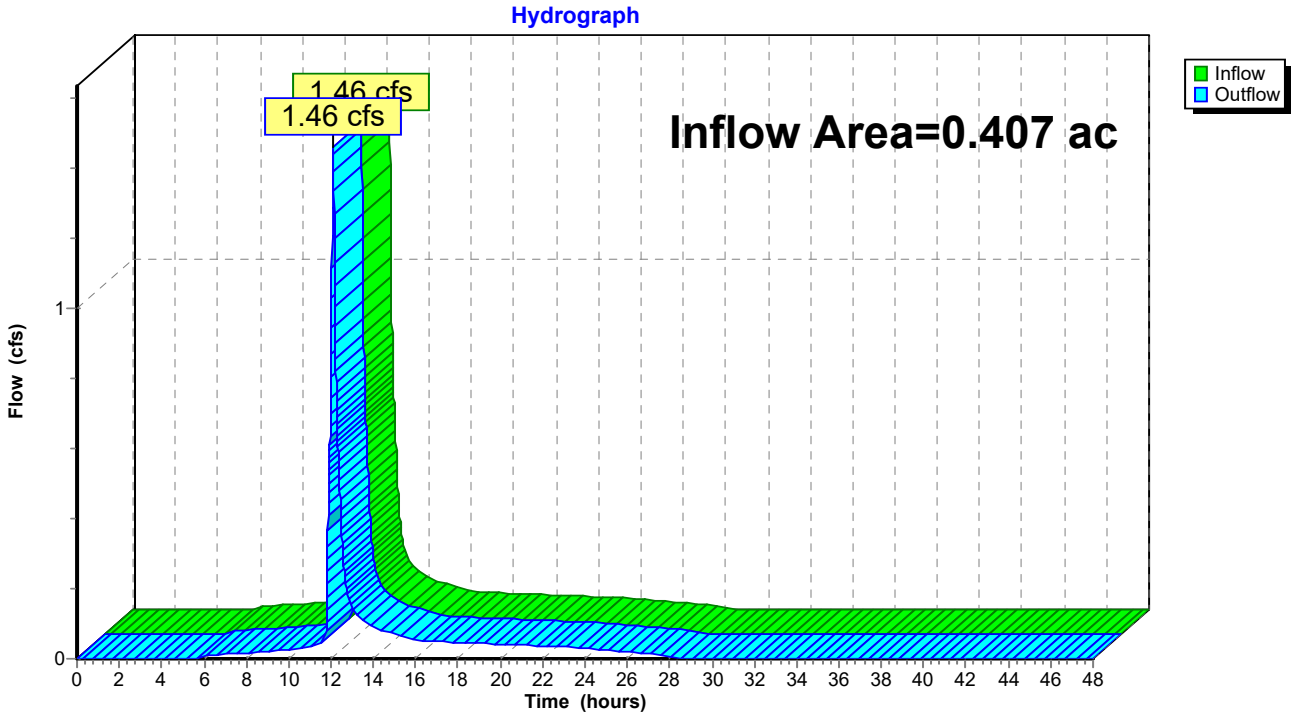


Summary for Reach 99R: POI #99: LANCASTER ST COMBINED SEWER

Inflow Area = 0.407 ac, 65.44% Impervious, Inflow Depth = 3.47" for 25-year event
Inflow = 1.46 cfs @ 12.10 hrs, Volume= 0.118 af
Outflow = 1.46 cfs @ 12.10 hrs, Volume= 0.118 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI #99: LANCASTER ST COMBINED SEWER



Summary for Pond P1: R-TANKS - 2 stack

Inflow Area = 0.257 ac, 93.90% Impervious, Inflow Depth = 5.10" for 25-year event
Inflow = 1.42 cfs @ 12.08 hrs, Volume= 0.109 af
Outflow = 1.38 cfs @ 12.10 hrs, Volume= 0.108 af, Atten= 2%, Lag= 1.1 min
Primary = 1.38 cfs @ 12.10 hrs, Volume= 0.108 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 12.53' @ 12.10 hrs Surf.Area= 364 sf Storage= 944 cf
Flood Elev= 13.50' Surf.Area= 364 sf Storage= 1,012 cf

Plug-Flow detention time= 127.6 min calculated for 0.108 af (99% of inflow)
Center-of-Mass det. time= 119.6 min (889.0 - 769.4)

Volume	Invert	Avail.Storage	Storage Description
#1B	8.43'	414 cf	**14.50'W x 25.11'L x 4.57'H Field B** 1,664 cf Overall - 629 cf Embedded = 1,035 cf x 40.0% Voids
#2B	9.18'	594 cf	**ACF R-Tank HD 2** x 72 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 72 Chambers in 8 Rows
#3	8.84'	4 cf	**4.0" Round Pipe Storage** Inside #1 L= 45.0' S= 0.0100 '/'
		1,012 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	8.74'	**10.0" Round 10" Main Outlet** L= 143.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 8.74' / 8.03' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	8.84'	**1.0" Vert. 1" UNDERDRAIN ORIFICE** C= 0.600
#3	Device 1	11.67'	**10.0" Round 10" OVERFLOW HEADER PIPE** L= 9.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 11.67' / 11.61' S= 0.0067 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#4	Device 3	11.67'	**4.0" Vert. 4" Overflows (4) X 4.00** C= 0.600

Primary OutFlow Max=1.38 cfs @ 12.10 hrs HW=12.53' (Free Discharge)
- **1=10" Main Outlet** (Passes 1.38 cfs of 3.72 cfs potential flow)
  - **2=1" UNDERDRAIN ORIFICE** (Orifice Controls 0.05 cfs @ 9.20 fps)
  - **3=10" OVERFLOW HEADER PIPE** (Barrel Controls 1.33 cfs @ 2.93 fps)
    - **4=4" Overflows (4)** (Passes 1.33 cfs of 1.40 cfs potential flow)

Pond P1: R-TANKS - 2 stack - Chamber Wizard Field B

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

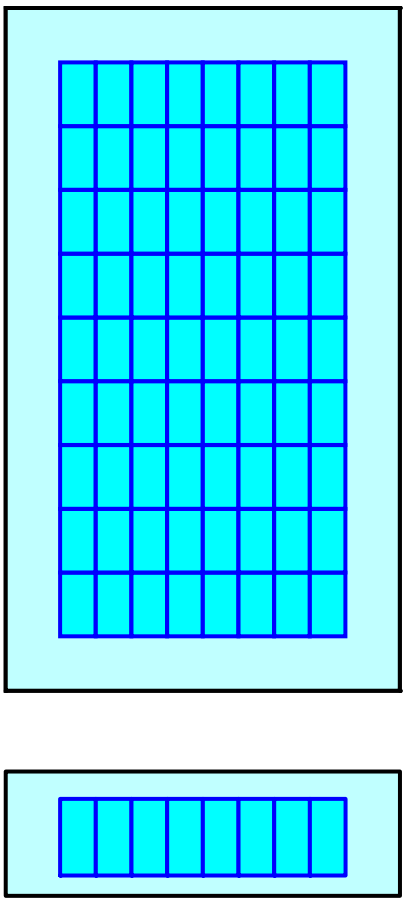
9 Chambers/Row x 2.35' Long = 21.11' Row Length +24.0" End Stone x 2 = 25.11' Base Length
8 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 14.50' Base Width
9.0" Base + 33.9" Chamber Height + 12.0" Cover = 4.57' Field Height

72 Chambers x 8.3 cf = 594.1 cf Chamber Storage
72 Chambers x 8.7 cf = 625.4 cf Displacement

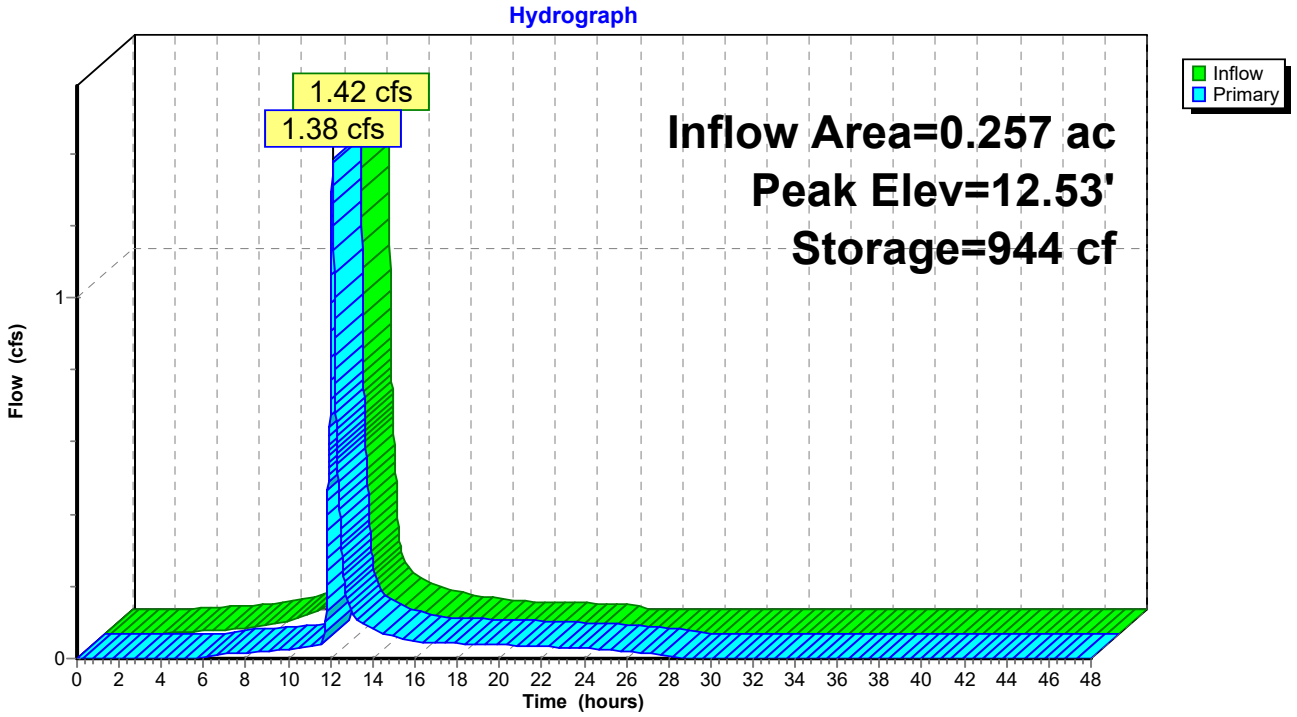
1,664.5 cf Field - 625.4 cf Chambers = 1,039.1 cf Stone x 40.0% Voids = 415.6 cf Stone Storage

Chamber Storage + Stone Storage = 1,009.8 cf = 0.023 af
Overall Storage Efficiency = 60.7%
Overall System Size = 25.11' x 14.50' x 4.57'

72 Chambers
61.6 cy Field
38.5 cy Stone



Pond P1: R-TANKS - 2 stack



Stage-Area-Storage for Pond P1: R-TANKS - 2 stack

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
8.43	0	9.49	194	10.55	478
8.45	3	9.51	200	10.57	483
8.47	6	9.53	205	10.59	489
8.49	9	9.55	211	10.61	494
8.51	12	9.57	216	10.63	500
8.53	15	9.59	221	10.65	505
8.55	17	9.61	227	10.67	510
8.57	20	9.63	232	10.69	516
8.59	23	9.65	237	10.71	521
8.61	26	9.67	243	10.73	526
8.63	29	9.69	248	10.75	532
8.65	32	9.71	253	10.77	537
8.67	35	9.73	259	10.79	542
8.69	38	9.75	264	10.81	548
8.71	41	9.77	269	10.83	553
8.73	44	9.79	275	10.85	558
8.75	47	9.81	280	10.87	564
8.77	50	9.83	285	10.89	569
8.79	52	9.85	291	10.91	574
8.81	55	9.87	296	10.93	580
8.83	58	9.89	302	10.95	585
8.85	61	9.91	307	10.97	590
8.87	64	9.93	312	10.99	596
8.89	67	9.95	318	11.01	601
8.91	70	9.97	323	11.03	607
8.93	73	9.99	328	11.05	612
8.95	76	10.01	334	11.07	617
8.97	79	10.03	339	11.09	623
8.99	82	10.05	344	11.11	628
9.01	85	10.07	350	11.13	633
9.03	88	10.09	355	11.15	639
9.05	91	10.11	360	11.17	644
9.07	94	10.13	366	11.19	649
9.09	97	10.15	371	11.21	655
9.11	100	10.17	376	11.23	660
9.13	103	10.19	382	11.25	665
9.15	106	10.21	387	11.27	671
9.17	109	10.23	393	11.29	676
9.19	113	10.25	398	11.31	681
9.21	118	10.27	403	11.33	687
9.23	124	10.29	409	11.35	692
9.25	129	10.31	414	11.37	698
9.27	135	10.33	419	11.39	703
9.29	140	10.35	425	11.41	708
9.31	146	10.37	430	11.43	714
9.33	151	10.39	435	11.45	719
9.35	156	10.41	441	11.47	724
9.37	162	10.43	446	11.49	730
9.39	167	10.45	451	11.51	735
9.41	173	10.47	457	11.53	740
9.43	178	10.49	462	11.55	746
9.45	184	10.51	467	11.57	751
9.47	189	10.53	473	11.59	756

Stage-Area-Storage for Pond P1: R-TANKS - 2 stack (continued)

Elevation (feet)	Storage (cubic-feet)
11.61	762
11.63	767
11.65	772
11.67	778
11.69	783
11.71	788
11.73	794
11.75	799
11.77	805
11.79	810
11.81	815
11.83	821
11.85	826
11.87	831
11.89	837
11.91	842
11.93	847
11.95	853
11.97	858
11.99	863
12.01	868
12.03	871
12.05	874
12.07	876
12.09	879
12.11	882
12.13	885
12.15	888
12.17	891
12.19	894
12.21	897
12.23	900
12.25	903
12.27	906
12.29	908
12.31	911
12.33	914
12.35	917
12.37	920
12.39	923
12.41	926
12.43	929
12.45	932
12.47	935
12.49	938
12.51	941
12.53	943
12.55	946
12.57	949
12.59	952
12.61	955
12.63	958
12.65	961
12.67	964
12.69	967
12.71	970
12.73	973
12.75	975
12.77	978
12.79	981
12.81	984
12.83	987
12.85	990
12.87	993
12.89	996
12.91	999
12.93	1,002
12.95	1,005
12.97	1,008
12.99	1,010
13.01	**1,012**
13.03	1,012
13.05	1,012
13.07	1,012
13.09	1,012
13.11	1,012
13.13	1,012
13.15	1,012
13.17	1,012
13.19	1,012
13.21	1,012
13.23	1,012
13.25	1,012
13.27	1,012
13.29	1,012
13.31	1,012
13.33	1,012
13.35	1,012
13.37	1,012
13.39	1,012
13.41	1,012
13.43	1,012
13.45	1,012
13.47	1,012
13.49	1,012

SECTION J

STORMWATER MANAGMENT REPORT

Attachment D: USDA Soil Survey

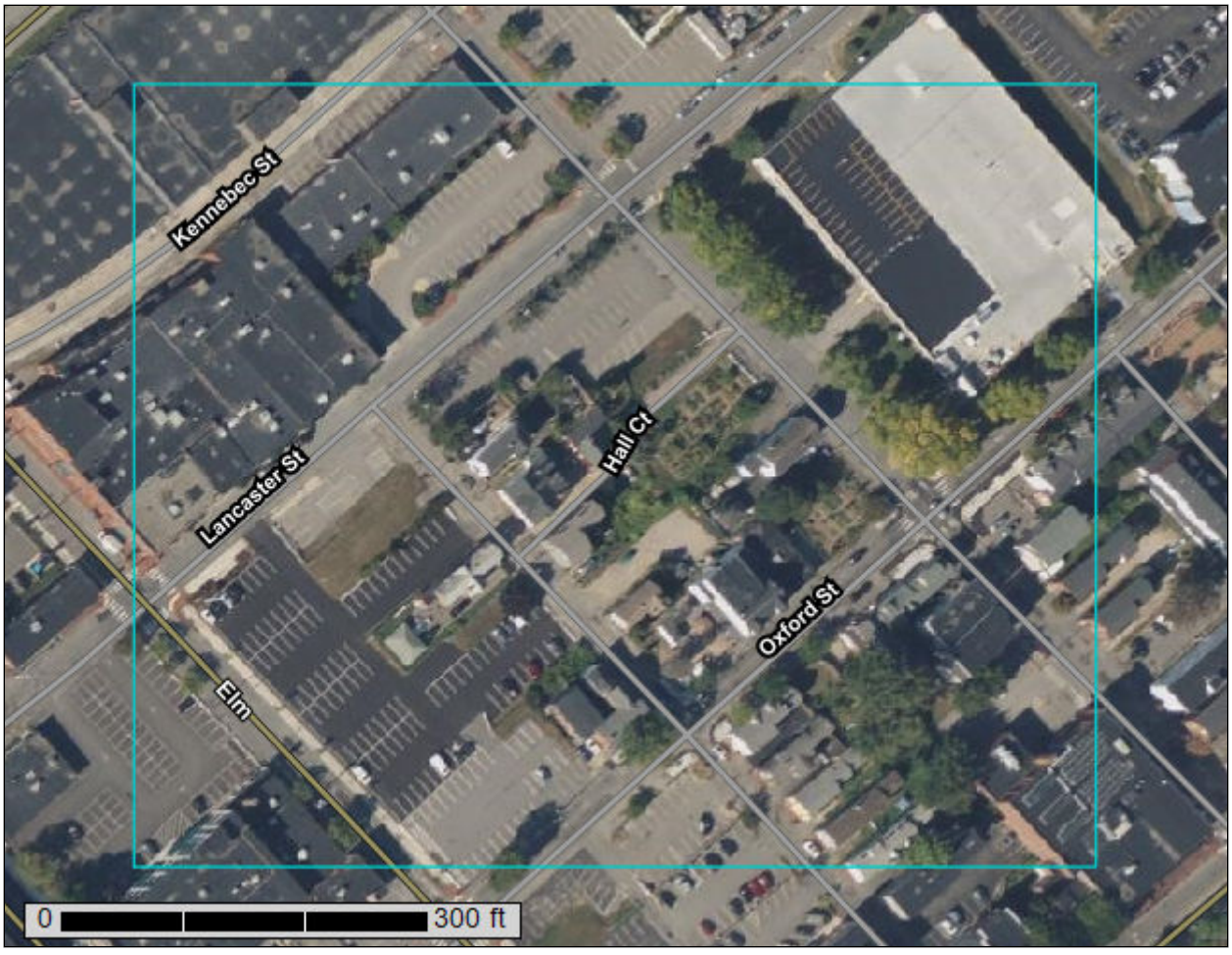
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine



February 22, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


70° 15' 46" W
70° 15' 30" W
43° 39' 41" N
43° 39' 34" N
398190
398220
398250
398280
398310
398340
398370
398400
398430
398460
398490
398520
4835050
4835020
4834990
4834960
4834930
4834900
4834870
4834840
Somerset
Kennebec St
Au
Hall Ct
Oxford St
Lancaster St
HIB
Chestnut St
Elm St
Preble
26
Soil Map may not be valid at this scale.
Map Scale: 1:1,650 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 20 40 80 120
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 20, Sep 5, 2023

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

MAP LEGEND

MAP INFORMATION

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
Au	Au Gres loamy sand	4.6	39.2%
HIB	Hinckley loamy sand, 3 to 8 percent slopes	7.1	60.8%
Totals for Area of Interest		**11.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

Au—Au Gres loamy sand

Map Unit Setting

National map unit symbol: blgr
Elevation: 200 to 1,800 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 90 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Au gres and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Au Gres

Setting

Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits derived from granite and gneiss

Typical profile

H1 - 0 to 10 inches: loamy sand
H2 - 10 to 32 inches: loamy sand
H3 - 32 to 65 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

HIB—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svm8
Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 53 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, kames, kame terraces, moraines, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

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:

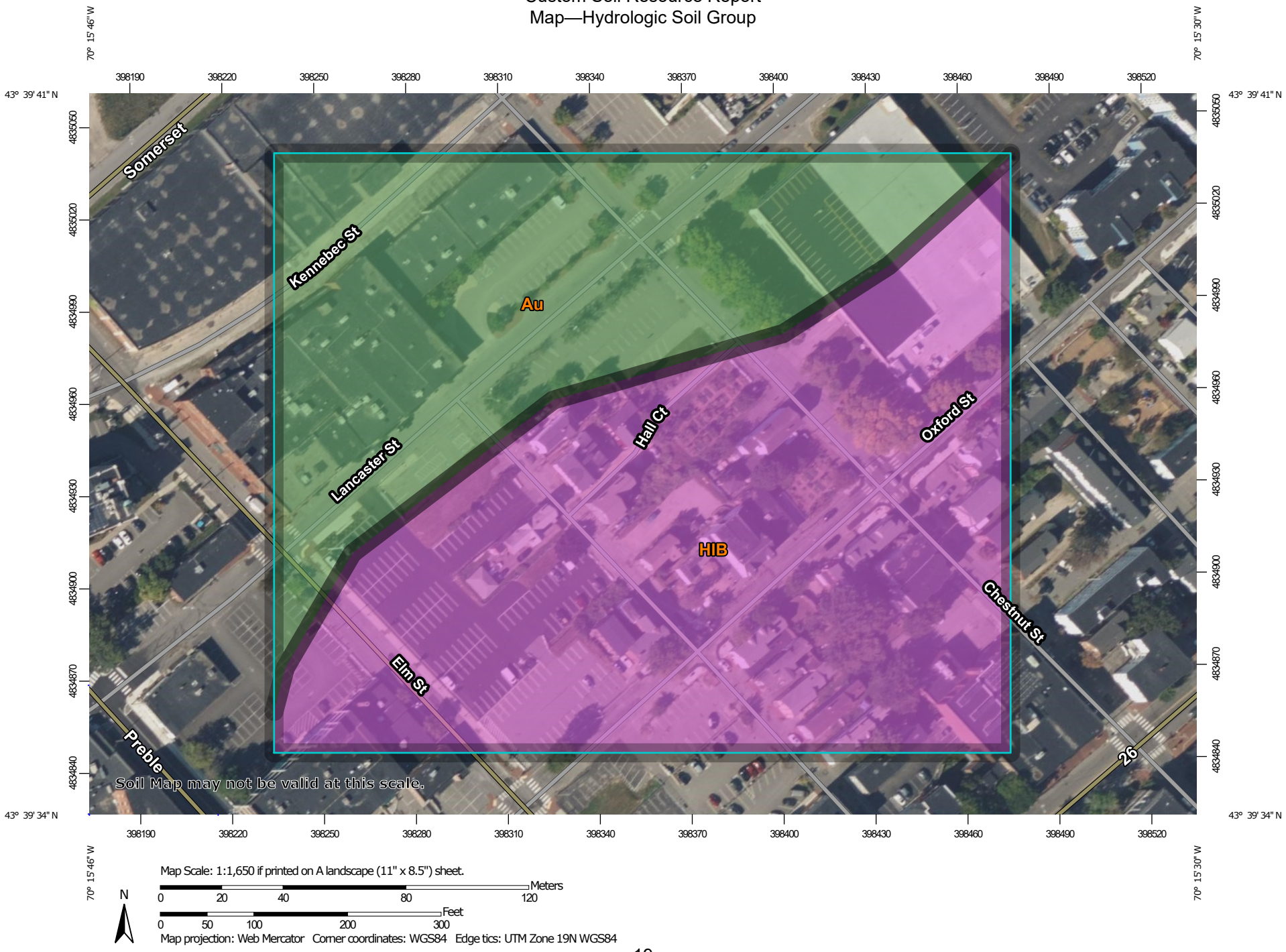
Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

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.



Map Scale: 1:1,650 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

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 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 20, Sep 5, 2023

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

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Au	Au Gres loamy sand	A/D	4.6	39.2%
HlB	Hinckley loamy sand, 3 to 8 percent slopes	A	7.1	60.8%
Totals for Area of Interest			**11.6**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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Att. K

ACORN ENGINEERING, INC.

K. EROSION & SEDIMENTATION CONTROL REPORT

Prepared For:

Avesta Housing & Reveler Development
Joint Site Plan Application

Prepared By:

Acorn Engineering, Inc.
500 Washington Ave.
Portland, Maine 04103



April 2024

INTRODUCTION

Acorn Engineering, Inc. has been retained by Avesta Housing and Reveler Development to provide civil engineering services for the proposed redevelopment of a phased tract of land located within the R-6 Zoning District in Portland, Maine. The existing parking lots and vacant buildings will be redeveloped into 3 multifamily buildings.

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 proposed project site is located at 197 Oxford Street, 50 Cedar, and 158 Lancaster Street. A Boundary & Topographic Survey has been prepared by Owen Haskell, Inc.

The property is in the R-6 Residential Zone. Abutting Uses are all residential in nature with some commercial to the west across Lancaster Street.

The sites are currently vacant or used for parking. All sites feature notable slopes with water draining to the west towards Back Cove. The average slope is approximately 6%.

1.1 Existing 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

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 soil type is listed as Hinckley loamy sand. Hydraulically, this soil type is excessively drained with negligible surface runoff. The erodibility is considered moderate. The contractor will be expected to install erosion and sedimentation controls as shown on sheet C-03, Construction Management & Erosion Control Plan within the civil set plans.

1.2 Existing Erosion Problems

There are no signs of erosion.

1.3 Critical Areas

There are no critical areas that require special attention during construction.

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

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. 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.

2.1.2 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.

2.1.3 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.

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 Adjacent streets 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.

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 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 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 4.1 of this report.

2.2.2 All stormwater devices shall be installed, and tributary areas stabilized prior 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 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:

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 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, 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.

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.

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 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.

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 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.

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. 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.

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.

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. 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 to the municipal storm drain system within Chestnut or Lancaster Street.
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 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.

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.

9.0 ATTACHMENTS

- Temporary 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.

ACORN ENGINEERING, INC.

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

April 11, 2024

Subject: 197 & 207 Oxford Street Redevelopment – Phase I Fire Department Checklist

On behalf of Avesta and Reveler, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   Avesta Housing
   307 Cumberland Avenue
   Portland, Maine 04101
   (207)-553-7777

2. Name, address, telephone number of architect

   CWS Architecture + Interior Design
   264 US Route One, Suite 100-2A
   Scarborough, Maine 04074
   (207) 774-4441

3. Proposed uses of any structures:

   The first floor of the Housing First side is Mixed Use B Business and A-2 Assembly Occupancy dedicated to professional services needed for the Housing First population. The first floor of the Affordable Housing side is Mixed Use R-2 Residential and B Occupancy services for the Affordable Housing tenants. Floors two thru five are R-2 residential on both sides of the building. Fire separation between floors, dwellings, and occupancy types will be designed per IBC requirements.

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

Proposed Building		
Basement	1,469	sf
1st Floor	8,991	sf
Floors 2-4	8,623	sf
5th Floor	7,418	sf
Total	**43,748**	**sf**

5. Elevation of all structures

   The proposed building height, based upon IBC's average grade plane method, is 54.9' which is consistent with the Bayside Height Overlay allowance.

6. Proposed fire protection of all structures

   Sprinkler systems are proposed for each side of the building, each served by a 6" fire service. Each side will have a dedicated sprinkler room. 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. FDC's are anticipated to be provided along the Oxford Street frontage.

7. Hydrant locations

   Hydrants in the vicinity of Phase 1 includes a hydrant on the corner of Oxford and Cedar, directly in front of the proposed building, and a hydrant on the corner of Oxford and Chestnut Street, opposite of the site area. 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

   For Phase 1, each portion of the building will have a separate water connection due to the split management of the building and demising wall without internal connection. Each side will have a 6" fire service extended from the 12" Oxford Street water main to serve separate fire sprinkler systems.

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

   Phase 1 will have access on 3 sides: Cedar, Oxford, and Chestnut Streets.

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:

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. This requirement is satisfied.

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 from 3 sides.

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.

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: All buildings 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: Not applicable given the ample street frontage and lack of non-building site space.

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

A C O R N
ENGINEERING, INC.

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

April 24, 2024

Subject: Phase 2 – 50 Cedar Street Re-Development Fire Department Checklist

On behalf of Avesta and Reveler, the design team is pleased to report the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   Reveler Development
   188 State Street, 3rd Floor
   Portland, Maine 04101
   (207) 939-5432

1. Name, address, telephone number of architect

   Ryan Senatore Architecture
   500 Congress Street, Suite 2
   Portland, ME 04101
   (207) 650-6414

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

   NFPA: Apartments IBC: R2

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

Proposed Building		
Ground	4,796	sf
2nd Floor	4,796	sf
3rd Floor	4,796	sf
Total	**14,388**	**sf**

4. Elevation of all structures

   The proposed building height, based upon IBC's average grade plane method, is approximately 32'.

5. Proposed fire protection of all structures

   A sprinkler system is proposed for the building, served by a 6" fire service. Each building will have a sprinkler room on the ground floor that will be easily accessible by the fire department. 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.

6. Hydrant locations

   For Phase 2 there is a hydrant on the corner of Lancaster and Chestnut, opposite of the site. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

7. Water main size and location

   A new 12" water main will be installed in Lancaster Street as part of this project, directly along its frontage.

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

   Phase 1 will have fire access on two sides, Oxford and Chestnut Street. Phase 2 will have access on three sides, Chestnut Street, Lancaster Street, and the 12.5-foot gravel paved Hall Court. Phase 3 will have access on two sides, Cedar Street and Lancaster Way.

9. 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 site locations are in a densely developed area and are surrounded by four public streets. The following pavement street widths are currently available:

- Lancaster Street: 35.93' wide and 19.93' wide between parking stalls and edge of pavement.
- Cedar Street: 20.7 feet wide and 11.7 feet wide between parking stall and edge of pavement.
- Oxford Street: 31.6 feet and 23.6 feet wide between parking stall and edge of pavement.

- Chestnut Street: 34.08 feet and 16.02 feet wide between parking stall and edge of pavement.

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: All buildings are accessible from at least 2 sides.

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.

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: All buildings 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: The proposed site maintains the required clearance height of nine feet in all cases.

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.

A C O R N
ENGINEERING, INC.

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

October 2, 2024

Subject: Phase 3 –158 Lancaster Street Re-Development Fire Department Checklist

On behalf of Avesta and Reveler, the design team is pleased to report the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   Reveler Development
   188 State Street, 3rd Floor
   Portland, Maine 04101
   (207) 939-5432

1. Name, address, telephone number of architect

   Ryan Senatore Architecture
   500 Congress Street, Suite 2
   Portland, ME 04101
   (207) 650-6414

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

   NFPA: Apartments IBC: R2

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

Proposed Building		
Ground	4,796	sf
2nd Floor	4,796	sf
3rd Floor	4,796	sf
Total	**14,388**	**sf**

4. Elevation of all structures

The proposed building height, based upon IBC's average grade plane method, is approximately 34.79'.

5. Proposed fire protection of all structures

   A sprinkler system is proposed for the building, served by a 6" fire service. Each building will have a sprinkler room on the ground floor that will be easily accessible by the fire department. 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.

6. Hydrant locations

   For Phase 3, there is a hydrant on the corner of Lancaster and Chestnut. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

7. Water main size and location

   A new 12" water main will be installed in Lancaster Street as part of this project, directly along its frontage.

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

   Access is provided directly from Lancaster and Chestnut Streets.

9. 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 site locations are in a densely developed area and are surrounded by four public streets. The following pavement street widths are currently available:

- Lancaster Street: 35.93' wide and 19.93' wide between parking stalls and edge of pavement.
- Cedar Street: 20.7 feet wide and 11.7 feet wide between parking stall and edge of pavement.
- Oxford Street: 31.6 feet and 23.6 feet wide between parking stall and edge of pavement.
- Chestnut Street: 34.08 feet and 16.02 feet wide between parking stall and edge of pavement.

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: All buildings are accessible from at least 2 sides.

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.

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: All buildings 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: The proposed site maintains the required clearance height of nine feet in all cases.

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. Wastewater Capacity

The following tables have been prepared to estimate the existing and proposed flows for each phase.

Table 1: Phase 1 – 207 & 197 Oxford Street - Estimate of Design Flows			
Classification of Water Demand	**Uses and Use Count**	**Gallons per Day per Use**	**Total Gallons per Day**
Existing			
197 Oxford Street & 31 Cedar Street PWD recorded flow data:	-	-	3,215
Proposed			
Studios:	31	120	3,720
One-Bedroom:	17	120	2,040
		Total Existing	**3,215**
		Total Proposed	**5,760**
		Net Change	**2,545**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition			

Table 2: Phase 2 – 50 Cedar Street - Estimate of Design Flows			
Classification of Water Demand	**Uses and Use Count**	**Gallons per Day per Use**	**Total Gallons per Day**
Existing			
Vacant lot	-	-	0
Proposed			
Studios:	8	120	960
One-Bedroom:	16	120	1,920
		Total Existing	**0**
		Total Proposed	**2,880**
		Net Change	**2,880**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition			

Table 3: Phase 3 – 158 Lancaster Street - Estimate of Design Flows			
Classification of Water Demand	**Uses and Use Count**	**Gallons per Day per Use**	**Total Gallons per Day**
Existing			
Vacant lot	-	-	0
Proposed			
Studios:	8	120	960
One-Bedroom:	16	120	1,920
		Total Existing	**0**
		Total Proposed	**2,880**
		Net Change	**2,880**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition			

As requested by DPW, it's anticipated that each phase will offset the new sewer flows by providing on-site stormwater detention. Please refer to the Stormwater Management Report for more information.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103

Date: April, 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: 197 Oxford Street Portland, ME 04101 Chart Block Lot Number: 026-B-012 & B-018

Proposed Use: Residential Building
Previous Use: Vacant Office & Apartment Buildings
Existing Sanitary Flows: 3.215 GPD
Existing Process Flows: GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

18" Combined Sewer within Chestnut Street

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: Matt Grooms Phone:
Owner/Developer Name: Avesta Housing Development
Owner/Developer Address: 307 Cumberland Ave, Portland, ME 04101
Phone: 207-553-7777 Fax: E-mail: celliott@avestahousing.org
Engineering Consultant Name: Sam Lebel, Acorn Engineering
Engineering Consultant Address: 500 Washington Ave, Suite 202, Portland, ME 04103 (P.O. Box: 3372)
Phone: 207-775-2655 Fax: E-mail: slebel@acorn-engineering.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: 5,760 GPD
Peaking Factor/ Peak Times: Diurnal Residential Flow Pattern
Specify the source of design guidelines: *(i.e.* *"Handbook of Subsurface Wastewater Disposal in Maine,"* "*Plumbers and Pipe Fitters Calculation Manual,"* *Portland Water District Records,* *Other (specify)*
State of Maine, Subsurface Wastewater Disposal Rules

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: NA

Size of External Grease Interceptor: NA

Retention Time: NA

Peaking Factor/ Peak Times: NA

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: NA 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.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103

Date: April, 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: 50 Cedar Street Portland, ME 04101

Chart Block Lot Number: 033 - H009

Proposed Use: Residential Building
Previous Use: Surface Parking Lot
Existing Sanitary Flows: 0 GPD
Existing Process Flows: GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

18" Combined Sewer within Cedar Street

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: Matt Grooms Phone:
Owner/Developer Name: Reveler Development
Owner/Developer Address: 188 State Street, 3rd floor, Portland, ME 04101
Phone: 207-939-5432 Fax: E-mail: mbarton@reveler.com
Engineering Consultant Name: Sam Lebel, Acorn Engineering
Engineering Consultant Address: 500 Washington Ave, Suite 202, Portland, ME 04103 (P.O. Box: 3372)
Phone: 207-775-2655 Fax: E-mail: slebel@acorn-engineering.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: 2,880 GPD
Peaking Factor/ Peak Times: Diurnal Residential Flow Pattern
Specify the source of design guidelines: *(i.e.* *"Handbook of Subsurface Wastewater Disposal in Maine,"* *"Plumbers and Pipe Fitters Calculation Manual,"* *Portland Water District Records,* *Other (specify)*
State of Maine, Subsurface Wastewater Disposal Rules

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: NA

Size of External Grease Interceptor: NA

Retention Time: NA

Peaking Factor/ Peak Times: NA

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: NA 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.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103

Date: April, 2024 (Rev. Sept 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: _____

Chart Block Lot Number: 026 - A-001

Proposed Use: Residential Building
Previous Use: Surface Parking Lot
Existing Sanitary Flow 158 Lancaster Street Portland, ME 04101
Existing Process Flows: 0 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

18" Combined Sewer within Chestnut Street

Site Category:

	Commercial *(see part 4 below)*
	Industrial *(complete part 5 below)*
	Governmental
X	Residential
	Other *(specify)*

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: Eric Freeman Phone: _____
Owner/Developer Name: Reveler Development
Owner/Developer Address: 188 State Street, 3rd floor, Portland, ME 04101
Phone: 207-939-5432 Fax: _____ E-mail: mbarton@reveler.com
Engineering Consultant Name: Sam Lebel, Acorn Engineering
Engineering Consultant Address: 500 Washington Ave, Suite 202, Portland, ME 04103 (P.O. Box: 3372)
Phone: 207-775-2655 Fax: _____ E-mail: slebel@acorn-engineering.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: 2,880 GPD
Peaking Factor/ Peak Times: Diurnal Residential Flow Pattern
Specify the source of design guidelines: *(i.e.__"Handbook of Subsurface Wastewater Disposal in Maine,"*
"*Plumbers and Pipe Fitters Calculation Manual,"* __ *Portland Water District Records,* __ *Other (specify)*
State of Maine, Subsurface Wastewater Disposal Rules

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: NA

Size of External Grease Interceptor: NA

Retention Time: NA

Peaking Factor/ Peak Times: NA

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: NA 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.

N. Lighting

Please find the attached photometric plan for Phase 1, 197 Oxford Street. The remaining photometric plans and associated cut sheets of the overall projects proposed site lighting will be uploaded to the City's EPlan system when they become available.

TM 26-B-14
N/F MARY LEE
BENNISON

TM 26-B-7
N/F FRANK E. DIDONATO
DONNA E. COX

CEDAR ST.
ONE-WAY

CHESTNUT ST.
TWO-WAY

OXFORD ST.
ONE-WAY

PROPERTY LINE

PROPOSED 5-STORY BUILDING
48 DWELLING UNITS

PROPOSED: HOUSING FIRST
207 OXFORD STREET
28 DWELLING UNITS

PROPOSED: AFFORDABLE HOUSING
197 OXFORD STREET
20 DWELLING UNITS

WP @ 8'

WP ms Low @ 8'

WP @ 8'

WP @ 10'

WP @ 10'

WP @ 10'

WP ms Low @ 10'

B @ 30'

B @ 30'

B @ 30'

B @ 30'

PM

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Inside Fence & Sidewalk	□	1.5 fc	4.1 fc	0.1 fc	41.0:1	15.0:1
Phase 1	+	0.9 fc	4.1 fc	0.0 fc	N/A	N/A

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	6/10/24

DRAWING NAME: PHASE 1 – SITE PLAN

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

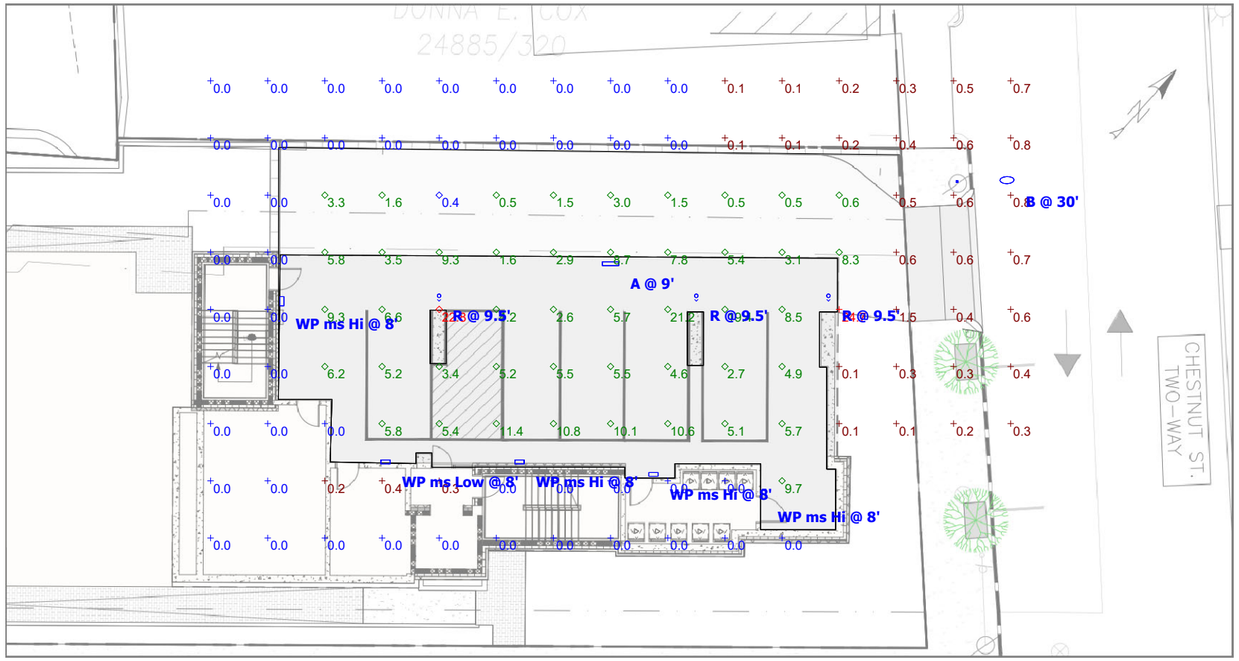
ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ALL MODIFICATIONS SHALL BE NOTED AS TO THE DESIGN'S SOLE RISK AND OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
P.O. BOX 3372, PORTLAND, MAINE 04104
(207) 775-2455

FILE:1212.1_AE_CIVIL-4-4-24
JN: 1212.1
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

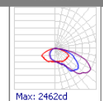
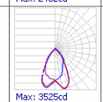
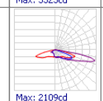
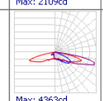
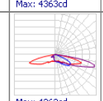
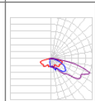
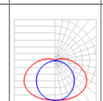
DRAWING NO.
C-11



Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Covered Parking & Drive Aisle	◇	6.1 fc	22.8 fc	0.4 fc	57.0:1	15.3:1

Schedule

Symbol	Label	Image	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot	Notes
	B		Cree Lighting	RSWS-B-HT-3ME-5L-30K7-UL-xx-N CONFIGURED FROM RSWS-B-HT-3ME-7L-40K7-UL-GY-N	CONFIGURED FROM RSW Small Luminaire, Type III Medium Distribution, 7L Lumen Package, 4000K, 70CRI	1	5000	0.9	42		
	R		Lithonia Lighting	LDN6 30/40 LW6WR	6IN LDN WALLWASH, 3000K, 4000LM, WHITE, CRI80	1	3461	0.9	1.1542		
	WP		Holophane	HLWPC2 P10 30K XX T3M	Wallpack Full Cutoff LED, LED Performance Package P10, 3000 series CCT, Voltage, Type III Medium	1	2800	0.9	28		
	WP ms Hi		Holophane	HLWPC2 P20 30K XX T2M	Wallpack Full Cutoff LED, LED Performance Package P10, 3000 series CCT, Voltage, Type II Medium	1	5272	0.9	47		1 MASL and MASH sensors are not allowed with P10 lumen package option selected.
	WP ms Low		Holophane	HLWPC2 P20 30K XX T2M	Wallpack Full Cutoff LED, LED Performance Package P10, 3000 series CCT, Voltage, Type II Medium	1	5272	0.27	14		2 MASL and MASH options reduce luminaire light output to roughly 30% (not full OFF) when no motion is detected. When motion is detected, light output temporarily increases to 100%.
	X-7D		Holophane	ESL3 P20S 30K XXXXX TG2	Esplanade style housings Standard housing, 3000 series CCT Auto-sensing voltage, Type IV, Medium, (Standard) or Type III, Short, (Uplight)	1	11106	0.9	72.77		
	A		Holophane	EMS L24 4000LM LPAFL PGD 80CRI 30K	EMS LED 24", 4,000 lumens, acrylic, low profile frosted lens, parking garage distribtuion, 80 CRI, 3000 K	1	3679	0.9	25.95		

HOLOPHANE®
LEADER IN LIGHTING SOLUTIONS

Catalog Number	HLWPC2 P10 30K T3M MVOLT BZSDP AO
Notes	Type WP

HLWPC2

Wallpack® Full Cutoff LED





Mechanical

- Heavy grade A360 cast aluminum (aluminum with <1% copper)
- Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering
- Mounts to a standard junction box
- Wet location listed
- IP65 rated housing, down light only
- ¾" painted threaded entry(¾" - 14 NPT) on each side and on top, accepts ¾" and ½" conduit
- ¾" threaded plugs are painted on each side
- Vibration tested to 1.5G per ANSI C136.31.

Electrical

- Certified by UL or CSA
- Rated for -40°C (-40°F) minimum ambient
- A programmable electronic driver with 0-10V control leads
- Available in: 120-277V 50/60 Hz and 347-480V 50/60 Hz,
- Standard: 3000K, 4000K and 5000K CCT (>70 CRI)
- Optional >80 CRI (3000K, 4000K and 5000K CCT)
- Internally mounted emergency battery backup for operation in an ambient temperature ranging from -20°C (-4°F) to 30°C (86°F), available with P10 thru P40 performance packages, non CEC compliant
- All surge protection meets ANSI/IEEE C62.41.2 10kV/10kA
- Standard surge protection is 20kV/10kA per ANSI C136.2
- Optional surge protection is 10kV/5kA per ANSI C136.2

Optical

- Light engine housing is IP66 rated
- Acrylic optical system
- Type V: E (entry), M (medium), R (rectangle) & W (wide)
- Asymmetric

Controls

- Field adjustable output (AO)
- Button style photocontrol (PE)
- Motion sensor & ambient photocontrol combination for mounting low (8-15') (MASL) and high (15-30') (MASH) mounting heights

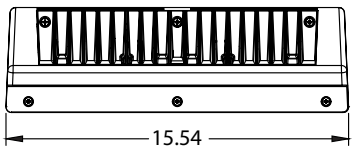
Certification and Standards

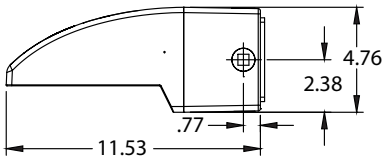
- Luminaire is CSA listed, US and Canada
- Suitable for operation in an ambient temperature up to 40°C/104°F per UL or CSA certification
- Design lights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- LM-79 compliant
- The projected LED Lumen Maintenance shall be based only on IES LM-80-08 and TM-21

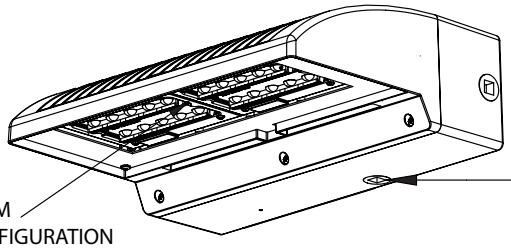
Warranty

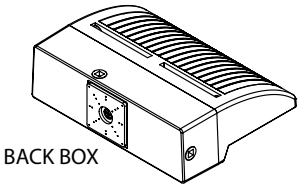
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions.

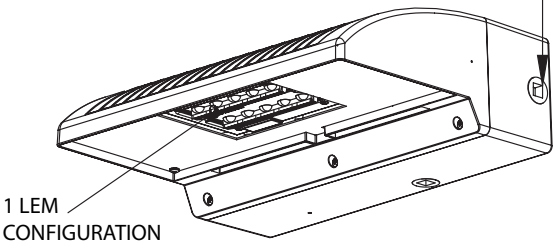
Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.











Note: Maximum weight 22 lbs.

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HLWPC2

Wallpack® Full Cutoff LED

ORDERING INFORMATION

Example: HLWPC2 P20 40K AS T3M BZSDP

Series	Lumen Package	Color Temperature	Voltage	Optics	Color	CRI
HLWPC2 Wallpack Full Cutoff LED	1 LEM Package P10 3,100 lm P20 5,600 lm 2 LEM Package P30 7,800 lm P40 9,900 lm P50 11,700 lm (Nominal Lumens, 4000K)	AMB True Amber 30K 3,000 K CCT 40K 4,000 K CCT 50K 5,000 K CCT	120 120 volts 208 208 volts 240 240 volts 277 277 volts 347 347 volts 480 480 volts HVOLT 347/480 volts MVOLT 120-277 volts	T2S Type 2 Short T2M Type 2 Medium T3S Type 3 Short T3M Type 3 Medium T4M Type 4 Medium TFTM Forward Throw Medium ASYDF Asymmetric Diffuse SYMDF Symmetric Diffuse	BKSDP Black BZSDP Bronze GYSDP Grey WHSDP White	Blank 70 CRI (STD) 80CRI 80 CRI

Options:

Adjustable/Programmable Options

A0 Field Adjustable Output

Circuit Options

2CI 2 Independent Circuits

Control - Motion Sensor Options

MASL[1,2] Motion / Ambient Sensor, 8-15' Mounting Height Ambient Sensor Enabled at 5 FC

MASH[1,2] Motion / Ambient Sensor, 15-30' Mounting Height Ambient Sensor Enabled at 5 FC

Control - Photocontrol Options

PE Button Style Photocontrol

P3 N.E.M.A. Twistlock Receptacle Mount -3 PIN

P7 N.E.M.A. Twistlock Receptacle Mount -7 PIN

PCLL DTL Long Life Twistlock Photocontrol for Solid State

PSC Shorting Cap

Fuse Option

SF Single Fuse

DF Double Fuse

Safety Option

EM Integral Emergency Battery

TP Tamper Resistant Hardware

Surge Protection Option - 20kV/10kA is Standard

10KV 10kV/5kA Surge Protection, in place of 20kV/10kA

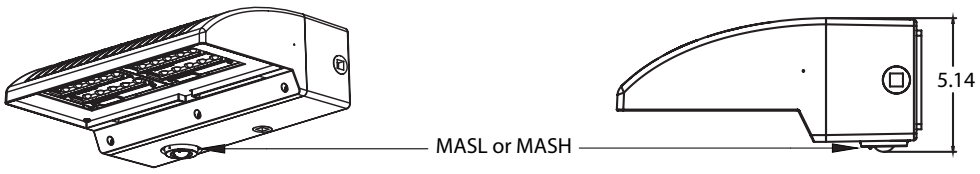
Notes

1 MASL and MASH sensors are not allowed with P10 lumen package option selected.

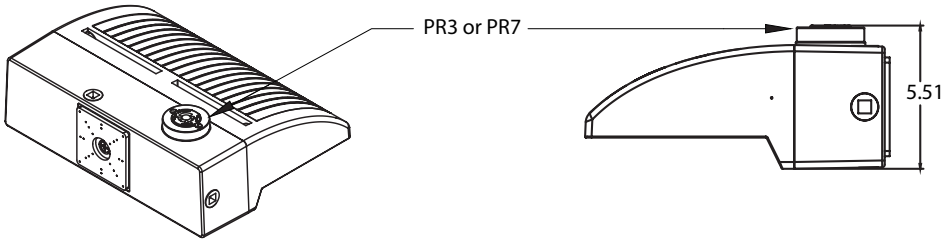
2 MASL and MASH options reduce luminaire light output to roughly 30% (not full OFF) when no motion is detected. When motion is detected, light output temporarily increases to 100%.

Options Location

Motion/Ambient Sensor mount options for Low (8-15') (MASL) and Height (15-30') (MASH) applications

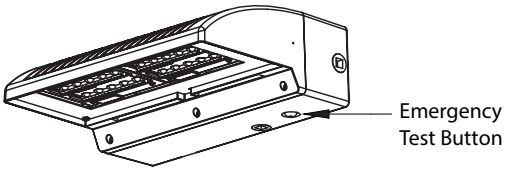


N.E.M.A. Twistlock Receptacle P3 and P7 Options, P7 Shown

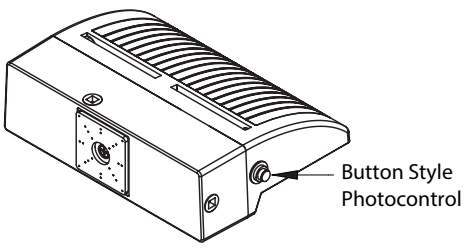


Internal Emergency Battery Test Button - EM Option

Test Button - EM Option



Button Style Photocontrol - PE Option



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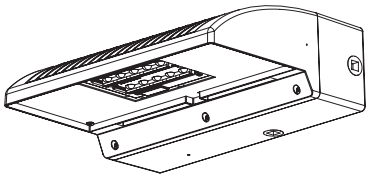
Driver & LEM Configuration Based on Circuit Options

Number of LEMs & Drivers / Circuit		Sinlge Circuit (std.)		Two Circuit (2CI option)	
		LEMs	Drivers	LEMs	Drivers
Lumen Maintenance Factor	P10	1	1	-	-
	P20	1	1	2	2
	P30	2	1	2	2
	P40	2	1	2	2
	P50	2	1	-	-

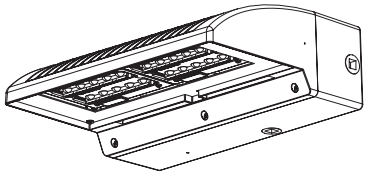
1 LEM Luminaire



SPD Based on Circuit Options

Number of LEMs & Drivers / Circuit		Sinlge Circuit (std.)				Two Circuit (2CI option)			
		LEMs	Drivers	No. of SPDs	SPD	LEMs	Drivers	No. of SPDs	SPD
Lumen Maintenance Factor	P10	1	1	1	20kV/10kA	-	-	-	-
	P20	1	1	1	20kV/10kA	2	2	2	10kV/5kA
	P30	2	1	1	20kV/10kA	2	2	2	10kV/5kA
	P40	2	1	1	20kV/10kA	2	2	2	10kV/5kA
	P50	2	1	1	20kV/10kA	-	-	-	-

2 LEM Luminaire



Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platform noted in a 25°C ambient, based on 6,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

The italicized data is extrapolated beyond the TM-21 standard.

E = (LM) x (CU) x (LAT) x (LLD)
LM and CU are obtained from published photometry.

Operating Hours (Standard)		0	25,000	30,000	36,000	45,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	P10	1	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.92
	P20	1	0.97	0.95	0.94	0.93	0.92	0.90	0.88	0.85
	P30	1	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.92
	P40	1	0.97	0.95	0.94	0.93	0.92	0.90	0.88	0.85

Operating Hours (2CI Option)		0	25,000	30,000	36,000	45,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	P10	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	P20	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	P30	1	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
	P40	1	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Single Circuit Application

Ambient		P10	P20	P30	P40	P50
0°C	32°F	1.02	1.03	1.03	1.04	1.05
10°C	50°F	1.01	1.02	1.02	1.03	1.03
20°C	68°F	1.01	1.01	1.01	1.01	1.01
25°C	77°F	1.00	1.00	1.00	1.00	1.00
30°C	86°F	0.99	0.99	0.99	0.99	0.99
40°C	104°F	0.98	0.97	0.98	0.97	0.97

Optional Two Independent Circuit (2CI) Application

Ambient		P20	P30	P40
0°C	32°F	1.02	1.02	1.02
10°C	50°F	1.01	1.01	1.02
20°C	68°F	1.00	1.01	1.01
25°C	77°F	1.00	1.00	1.00
30°C	86°F	0.99	0.99	0.99
40°C	104°F	0.98	0.98	0.98

Electrical Load

Single Circuit Application

LEDs	Drive Current (mA)	System Watts/ Circuit	Current (A)					
			120	208	240	277	247	480
P10	700	28	0.23	0.13	0.12	0.10	0.08	0.06
P20	1400	47	0.41	0.24	0.20	0.18	0.14	0.10
P30	1050	71	0.63	0.37	0.32	0.29	0.22	0.18
P40	1420	95	0.78	0.45	0.40	0.35	0.27	0.20
P50	1720	115	0.95	0.55	0.48	0.42	0.33	0.24

Optional Two Independent Circuit (2CI) Application

LEDs	Drive Current (mA)	System Watts/ Circuit	Current (A)					
			120	208	240	277	247	480
P10	-	-	-	-	-	-	-	-
P20	700	22	0.10	0.06	0.05	0.04	-	-
P30	1000	32	0.14	0.08	0.07	0.06	-	-
P40	1250	47	0.18	0.10	0.09	0.08	-	-
P50	-	-	-	-	-	-	-	-

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Operating Characteristics

LED Package	Distribution	System Watts	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P10	T2S	28	2,904	104	1	0	1	3,128	112	1	0	1	3,168	113	1	0	1
	T2M	28	2,887	103	1	0	1	3,110	111	1	0	1	3,149	112	1	0	1
	T3S	28	2,964	106	1	0	1	3,194	114	1	0	1	3,234	116	1	0	1
	T3M	28	2,801	100	1	0	1	3,017	108	1	0	1	3,055	109	1	0	1
	T4M	28	2,858	102	1	0	1	3,079	110	1	0	1	3,118	111	1	0	1
	TFTM	28	2,979	106	1	0	1	3,209	115	1	0	1	3,250	116	1	0	1
	SYMDF	28	2,771	99	1	0	1	2,986	107	1	0	1	3,023	108	1	0	1
	ASYDF	28	2,756	98	1	0	1	2,969	106	1	0	1	3,007	107	1	0	1
P20	T2S	47	5,303	113	1	0	1	5,713	122	1	0	1	5,785	123	1	0	1
	T2M	47	5,272	112	1	0	2	5,680	121	1	0	2	5,751	122	1	0	2
	T3S	47	5,414	115	1	0	2	5,832	124	1	0	2	5,906	126	1	0	2
	T3M	47	5,115	109	1	0	2	5,510	117	1	0	2	5,580	119	1	0	2
	T4M	47	5,220	111	1	0	2	5,623	120	1	0	2	5,694	121	1	0	2
	TFTM	47	5,440	116	1	0	2	5,861	125	1	0	2	5,935	126	1	0	2
	SYMDF	47	5,062	108	2	0	2	5,453	116	2	0	2	5,522	117	2	0	2
	ASYDF	47	5,033	107	1	0	1	5,422	115	2	0	1	5,491	117	2	0	1
P30	T2S	71	7,319	103	2	0	2	7,884	111	2	0	2	7,984	112	2	0	2
	T2M	71	7,276	102	2	0	2	7,838	110	2	0	2	7,937	112	2	0	2
	T3S	71	7,472	105	1	0	2	8,049	113	2	0	2	8,151	115	2	0	2
	T3M	71	7,059	99	2	0	2	7,604	107	2	0	2	7,700	108	2	0	2
	T4M	71	7,203	101	2	0	2	7,760	109	2	0	2	7,858	111	2	0	2
	TFTM	71	7,508	106	1	0	2	8,088	114	2	0	2	8,190	115	2	0	2
	SYMDF	71	6,985	98	2	0	2	7,525	106	3	0	3	7,620	107	3	0	3
	ASYDF	71	6,946	98	2	0	2	7,483	105	2	0	2	7,578	107	2	0	2
P40	T2S	95	9,320	98	2	0	2	10,041	106	2	0	2	10,168	107	2	0	2
	T2M	95	9,266	98	2	0	2	9,982	105	2	0	3	10,108	106	2	0	3
	T3S	95	9,515	100	2	0	2	10,251	108	2	0	2	10,381	109	2	0	2
	T3M	95	8,989	95	2	0	2	9,684	102	2	0	2	9,807	103	2	0	2
	T4M	95	9,174	97	2	0	2	9,883	104	2	0	3	10,008	105	2	0	3
	TFTM	95	9,561	101	2	0	2	10,300	108	2	0	2	10,431	110	2	0	2
	SYMDF	95	8,896	94	3	0	3	9,583	101	3	0	3	9,705	102	3	0	3
	ASYDF	95	8,846	93	2	0	2	9,530	100	2	0	2	9,650	102	2	0	2
P50	T2S	115	10,972	95	2	0	2	11,820	103	2	0	2	11,969	104	2	0	2
	T2M	115	10,908	95	2	0	3	11,751	102	2	0	3	11,900	103	2	0	3
	T3S	115	11,202	97	2	0	2	12,067	105	2	0	2	12,220	106	2	0	2
	T3M	115	10,582	92	2	0	2	11,400	99	2	0	3	11,544	100	2	0	3
	T4M	115	10,799	94	2	0	3	11,634	101	2	0	3	11,781	102	2	0	3
	TFTM	115	11,256	98	2	0	2	12,126	105	2	0	2	12,279	107	2	0	2
	SYMDF	115	10,472	91	3	0	3	11,282	98	3	0	3	11,424	99	3	0	3
	ASYDF	115	10,414	91	2	0	2	11,219	98	3	0	2	11,361	99	3	0	2

Use the following to scale 70CRI to 80CRI.

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

All IES files available on product web page

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Operating Characteristics (continued)

LED Package	Distribution	System Watts	30K + 2CI Option (3000K, 70 CRI)					40K + 2CI Option (4000K, 70 CRI)					50K + 2CI Option (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P20	T2S	49	5,015	102	1	0	1	5,402	110	1	0	1	5,471	112	1	0	1
	T2M	49	4,985	102	1	0	2	5,371	110	1	0	2	5,439	111	1	0	2
	T3S	49	5,120	104	1	0	1	5,515	113	1	0	2	5,585	114	1	0	2
	T3M	49	4,837	99	1	0	2	5,210	106	1	0	2	5,276	108	1	0	2
	T4M	49	4,936	101	1	0	2	5,317	109	1	0	2	5,385	110	1	0	2
	TFTM	49	5,144	105	1	0	2	5,542	113	1	0	2	5,612	115	1	0	2
	SYMDF	49	4,786	98	2	0	2	5,156	105	2	0	2	5,222	107	2	0	2
	ASYDF	49	4,760	97	1	0	1	5,127	105	1	0	1	5,192	106	1	0	1
P30	T2S	70	6,769	97	1	0	1	7,293	104	2	0	2	7,385	106	2	0	2
	T2M	70	6,730	96	2	0	2	7,250	104	2	0	2	7,342	105	2	0	2
	T3S	70	6,911	99	1	0	2	7,445	106	1	0	2	7,539	108	1	0	2
	T3M	70	6,529	93	2	0	2	7,033	100	2	0	2	7,123	102	2	0	2
	T4M	70	6,663	95	2	0	2	7,178	103	2	0	2	7,269	104	2	0	2
	TFTM	70	6,945	99	1	0	2	7,481	107	1	0	2	7,576	108	2	0	2
	SYMDF	70	6,461	92	2	0	2	6,960	99	2	0	2	7,049	101	2	0	2
	ASYDF	70	6,425	92	2	0	2	6,922	99	2	0	2	7,009	100	2	0	2
P40	T2S	89	8,370	94	2	0	2	9,017	101	2	0	2	9,131	103	2	0	2
	T2M	89	8,321	93	2	0	2	8,964	101	2	0	2	9,078	102	2	0	2
	T3S	89	8,545	96	2	0	2	9,205	103	2	0	2	9,322	105	2	0	2
	T3M	89	8,073	91	2	0	2	8,696	98	2	0	2	8,807	99	2	0	2
	T4M	89	8,238	93	2	0	2	8,875	100	2	0	2	8,987	101	2	0	2
	TFTM	89	8,586	96	2	0	2	9,250	104	2	0	2	9,367	105	2	0	2
	SYMDF	89	7,989	90	3	0	3	8,606	97	3	0	3	8,715	98	3	0	3
	ASYDF	89	7,944	89	2	0	2	8,558	96	2	0	2	8,666	97	2	0	2

Use the following to scale 70CRI to 80CRI.

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

All IES files available on product web page

LED Package	Distribution	System Watts	AMB (Wavelength)					LED Package	Distribution	System Watts	AMB (Wavelength)				
			Lumens	LPW	B	U	G				Lumens	LPW	B	U	G
P10	T2S	28	1,061	38	0	0	1	P30	T2S	28	1,975	71	0	0	1
	T2M	28	1,054	38	0	0	1		T2M	28	1,964	70	0	0	1
	T3S	28	1,083	39	0	0	1		T3S	28	2,016	72	0	0	1
	T3M	28	1,023	37	0	0	1		T3M	28	1,905	68	0	0	1
	T4M	28	1,044	37	0	0	1		T4M	28	1,944	69	0	0	1
	TFTM	28	1,088	39	0	0	1		TFTM	28	2,026	72	0	0	1
	SYMDF	28	1,012	36	1	0	1		SYMDF	28	1,885	67	1	0	1
	ASYDF	28	1,007	36	0	0	1		ASYDF	28	1,875	67	0	0	1

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Options Matrix

Parameters		LED AMB	Options (Start with SF, DF, 2CI or EM if being used)													
			PE	P3	P7	PSC	PCLL	MASH	MASL	SF	DF	TP	10kV	AO	2CI	EM
LED Performance Package	P10	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	N	Y
	P20	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P30	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P40	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P50	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Voltage	AS	Y	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
	AH	Y	N	Y	Y	Y	N	N	N	N	N	Y	Y	Y	N	N
	12	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	20	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
	24	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
	27	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	34	Y	Y	Y	Y	Y	Y	N	N	Y	N	Y	Y	Y	N	N
	48	Y	N	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	N	N
Options	PE	Y		N	N	N	N	N	N	Y	Y	Y	Y	Y	N	Y
	P3	Y	N		N	M	Y	N	N	Y	Y	Y	Y	N	N	N
	P7	Y	N	N		M	Y	N	N	Y	Y	Y	Y	N	N	N
	PSC	Y	N	M	M		N	N	N	Y	Y	Y	Y	N	N	N
	PCLL	Y	N	Y	Y	N		N	N	Y	Y	Y	Y	N	N	N
	MASH	Y	N	N	N	N	N		N	Y	Y	Y	Y	N	N	N
	MASL	Y	N	N	N	N	N	N		Y	Y	Y	Y	N	N	N
	SF	Y	Y	Y	Y	Y	Y	Y	Y		N	Y	Y	Y	Y	Y
	DF	Y	Y	Y	Y	Y	Y	Y	Y	N		Y	Y	Y	Y	Y
	TP	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y
	10kV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	M	M
	AO	Y	Y	N	N	N	N	N	N	Y	Y	Y	Y		N	N
	2CI	P30	N	N	N	N	N	N	N	Y	Y	Y	M	N		N
	EM	Y	Y	N	N	N	N	N	N	Y	Y	Y	M	N	N	

Notes
I = Included with option
M = Must have: one of these must be installed for the luminaire to operate
N = Combination Not available
P30 = Valid Option Combination, not available with P10 Performance Packabe
Y = Valid Option Combination

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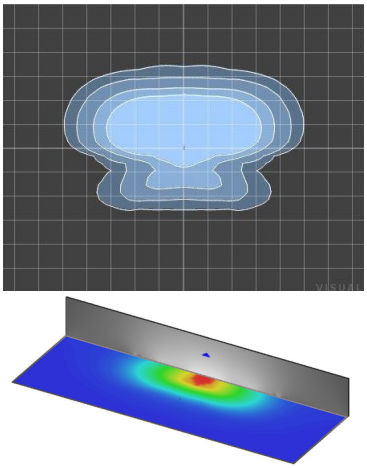
Photometric Diagrams

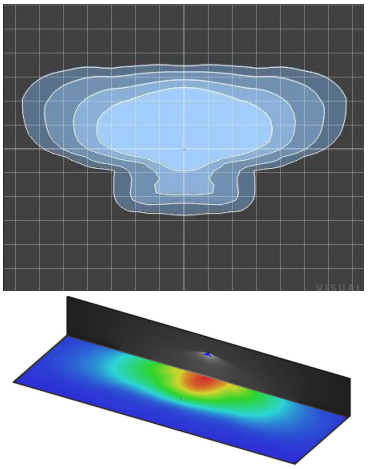
To see complete photometric reports or download .ies files for this product, visit the Holophane's Wallpack FCO LED homepage. Isofootcandle plots for the HLWPC2 P30 40K. Distance are in units of mounting height (12"). Grid is 10'x10'.

0.1 fc	1 fc	0.2 fc	0.5 fc

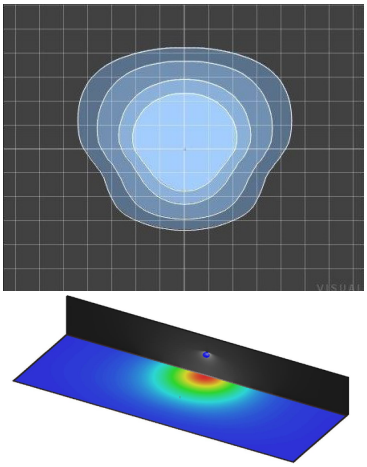
HLWPC2 P30 40K XX T2S



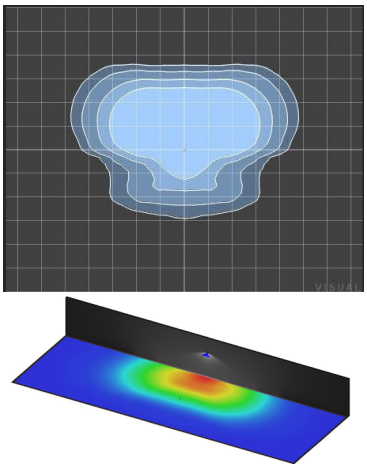
HLWPC2 P30 40K XX T2M



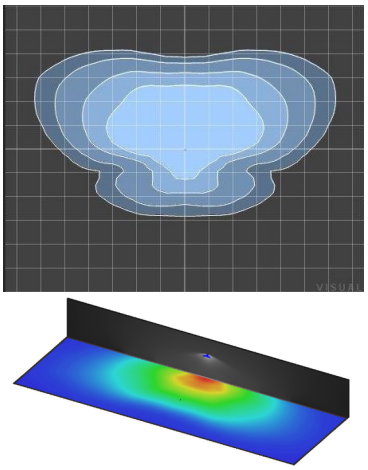
HLWPC2 P30 40K XX ASYDF



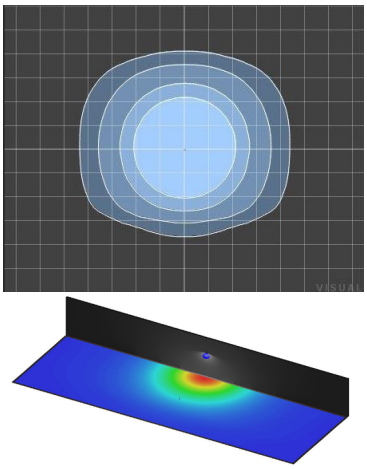
HLWPC2 P30 40K XX T3S



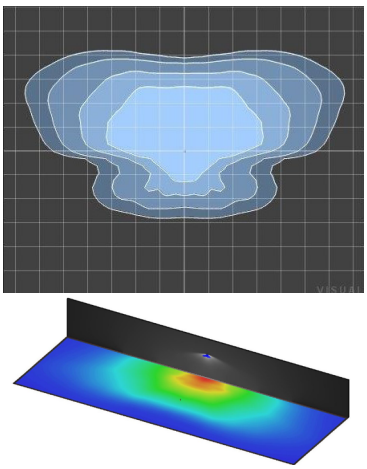
HLWPC2 P30 40K XX T3M



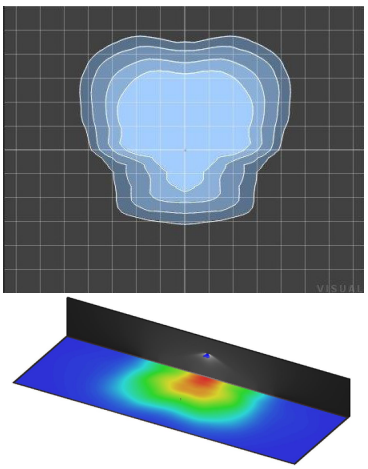
HLWPC2 P30 40K XX SYMDF



HLWPC2 P30 40K XX T4M



HLWPC2 P30 40K XX TFTM



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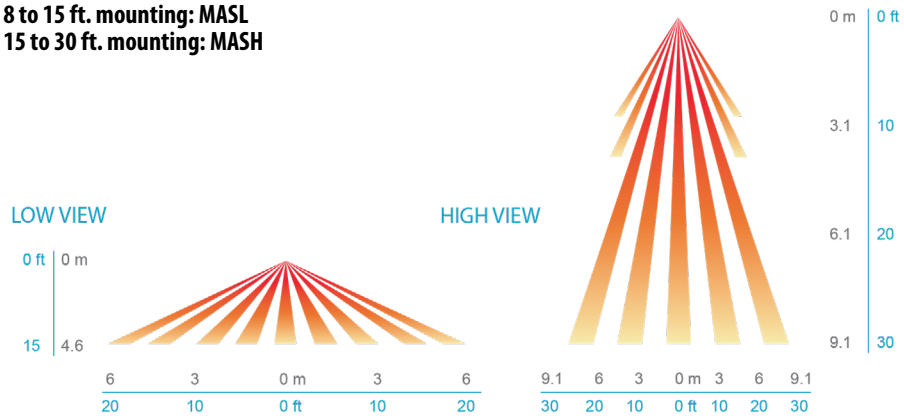
Coverage Pattern

8 to 15 ft. mounting: MASL
15 to 30 ft. mounting: MASH



Control Options

Button Style Photocontrol

PE



N.E.M.A. Receptacle

P3



P7



Motion & Ambient Combined Sensor

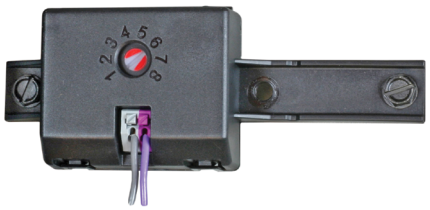
MASL/MASH



MASL and MASH options reduce luminaire light output to roughly 30% (not full OFF) when no motion is detected. When motion is detected, light output increases to 100%.

Field Adjustable Output Module

The Field Adjustable Output (AO) module is an onboard device that adjusts the light output and input voltage to meet specific requirements, allowing a single fixture configuration to be flexibly applied in many different applications. The AO option is available on the HLWPC2 series.



P10 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	94%	95%
6	83%	82%
5	71%	69%
4	59%	57%
3	46%	45%
2	34%	33%
1	21%	21%

P20 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	94%
6	84%	80%
5	73%	67%
4	61%	54%
3	48%	42%
2	35%	30%
1	21%	18%

P30 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	94%
6	84%	80%
5	73%	67%
4	61%	54%
3	48%	42%
2	35%	30%
1	21%	18%

P40 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	95%
6	85%	82%
5	74%	68%
4	62%	55%
3	49%	43%
2	36%	30%
1	21%	17%

P50 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	96%	95%
6	86%	81%
5	75%	68%
4	64%	55%
3	51%	42%
2	37%	29%
1	22%	17%

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Catalog Number	HLWPC2 P10 30K T3M MVOLT BZSDP AO
Notes	Type WP

HLWPC2

Wallpack® Full Cutoff LED





Mechanical

- Heavy grade A360 cast aluminum (aluminum with <1% copper)
- Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering
- Mounts to a standard junction box
- Wet location listed
- IP65 rated housing, down light only
- ¾" painted threaded entry(¾" - 14 NPT) on each side and on top, accepts ¾" and ½" conduit
- ¾" threaded plugs are painted on each side
- Vibration tested to 1.5G per ANSI C136.31.

Electrical

- Certified by UL or CSA
- Rated for -40°C (-40°F) minimum ambient
- A programmable electronic driver with 0-10V control leads
- Available in: 120-277V 50/60 Hz and 347-480V 50/60 Hz,
- Standard: 3000K, 4000K and 5000K CCT (>70 CRI)
- Optional >80 CRI (3000K, 4000K and 5000K CCT)
- Internally mounted emergency battery backup for operation in an ambient temperature ranging from -20°C (-4°F) to 30°C (86°F), available with P10 thru P40 performance packages, non CEC compliant
- All surge protection meets ANSI/IEEE C62.41.2 10kV/10kA
- Standard surge protection is 20kV/10kA per ANSI C136.2
- Optional surge protection is 10kV/5kA per ANSI C136.2

Optical

- Light engine housing is IP66 rated
- Acrylic optical system
- Type V: E (entry), M (medium), R (rectangle) & W (wide)
- Asymmetric

Controls

- Field adjustable output (AO)
- Button style photocontrol (PE)
- Motion sensor & ambient photocontrol combination for mounting low (8-15') (MASL) and high (15-30') (MASH) mounting heights

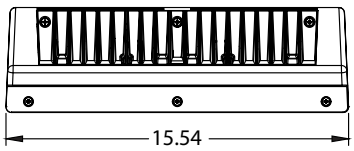
Certification and Standards

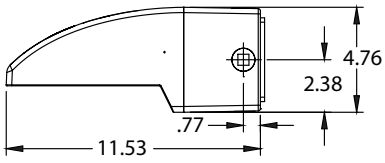
- Luminaire is CSA listed, US and Canada
- Suitable for operation in an ambient temperature up to 40°C/104°F per UL or CSA certification
- Design lights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- LM-79 compliant
- The projected LED Lumen Maintenance shall be based only on IES LM-80-08 and TM-21

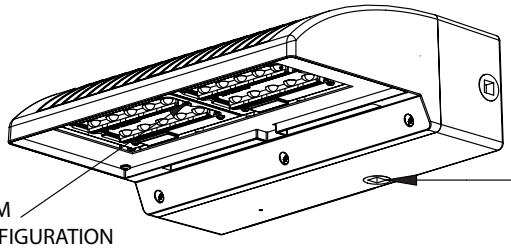
Warranty

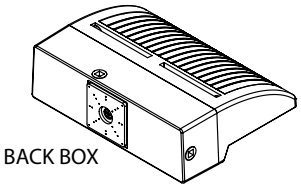
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions.

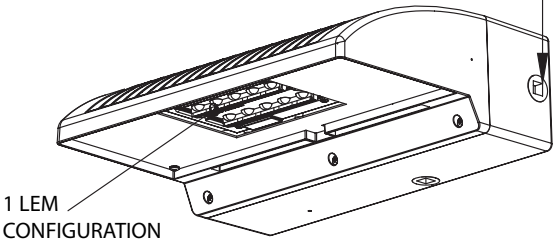
Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.











Note: Maximum weight 22 lbs.

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HLWPC2

Wallpack® Full Cutoff LED

ORDERING INFORMATION

Example: HLWPC2 P20 40K AS T3M BZSDP

Series	Lumen Package	Color Temperature	Voltage	Optics	Color	CRI
HLWPC2 Wallpack Full Cutoff LED	1 LEM Package P10 3,100 lm P20 5,600 lm 2 LEM Package P30 7,800 lm P40 9,900 lm P50 11,700 lm (Nominal Lumens, 4000K)	AMB True Amber 30K 3,000 K CCT 40K 4,000 K CCT 50K 5,000 K CCT	120 120 volts 208 208 volts 240 240 volts 277 277 volts 347 347 volts 480 480 volts HVOLT 347/480 volts MVOLT 120-277 volts	T2S Type 2 Short T2M Type 2 Medium T3S Type 3 Short T3M Type 3 Medium T4M Type 4 Medium TFTM Forward Throw Medium ASYDF Asymmetric Diffuse SYMDF Symmetric Diffuse	BKSDP Black BZSDP Bronze GYSDP Grey WHSDP White	Blank 70 CRI (STD) 80CRI 80 CRI

Options:

Adjustable/Programmable Options

A0 Field Adjustable Output

Circuit Options

2CI 2 Independent Circuits

Control - Motion Sensor Options

MASL[1,2] Motion / Ambient Sensor, 8-15' Mounting Height Ambient Sensor Enabled at 5 FC

MASH[1,2] Motion / Ambient Sensor, 15-30' Mounting Height Ambient Sensor Enabled at 5 FC

Control - Photocontrol Options

PE Button Style Photocontrol

P3 N.E.M.A. Twistlock Receptacle Mount -3 PIN

P7 N.E.M.A. Twistlock Receptacle Mount -7 PIN

PCLL DTL Long Life Twistlock Photocontrol for Solid State

PSC Shorting Cap

Fuse Option

SF Single Fuse

DF Double Fuse

Safety Option

EM Integral Emergency Battery

TP Tamper Resistant Hardware

Surge Protection Option - 20kV/10kA is Standard

10KV 10kV/5kA Surge Protection, in place of 20kV/10kA

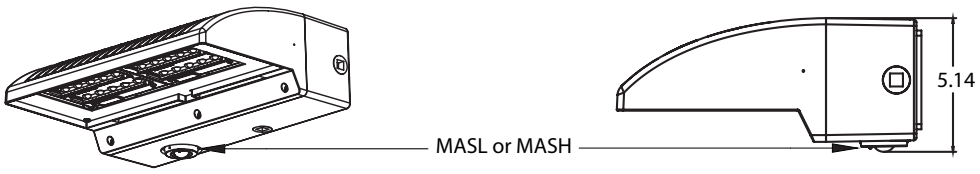
Notes

1 MASL and MASH sensors are not allowed with P10 lumen package option selected.

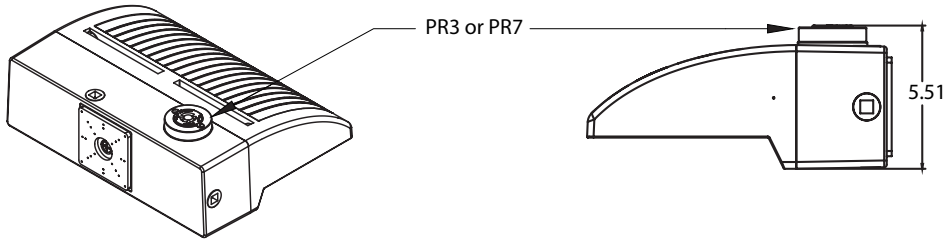
2 MASL and MASH options reduce luminaire light output to roughly 30% (not full OFF) when no motion is detected. When motion is detected, light output temporarily increases to 100%.

Options Location

Motion/Ambient Sensor mount options for Low (8-15') (MASL) and Height (15-30') (MASH) applications

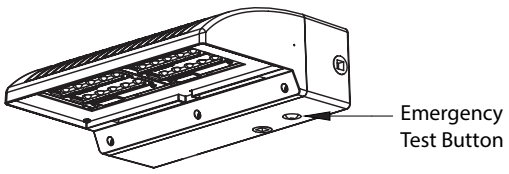


N.E.M.A. Twistlock Receptacle P3 and P7 Options, P7 Shown

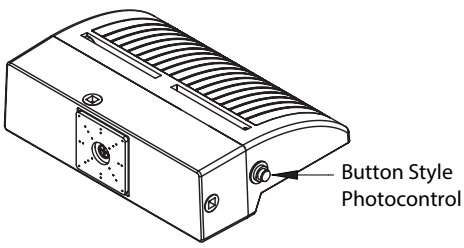


Internal Emergency Battery Test Button - EM Option

Test Button - EM Option



Button Style Photocontrol - PE Option



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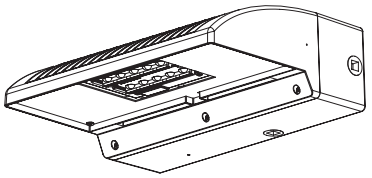
Driver & LEM Configuration Based on Circuit Options

Number of LEMs & Drivers / Circuit		Sinlge Circuit (std.)		Two Circuit (2CI option)	
		LEMs	Drivers	LEMs	Drivers
Lumen Maintenance Factor	P10	1	1	-	-
	P20	1	1	2	2
	P30	2	1	2	2
	P40	2	1	2	2
	P50	2	1	-	-

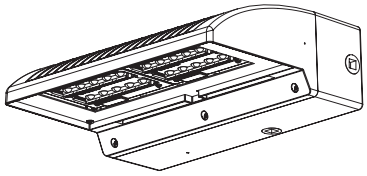
1 LEM Luminaire



SPD Based on Circuit Options

Number of LEMs & Drivers / Circuit		Sinlge Circuit (std.)				Two Circuit (2CI option)			
		LEMs	Drivers	No. of SPDs	SPD	LEMs	Drivers	No. of SPDs	SPD
Lumen Maintenance Factor	P10	1	1	1	20kV/10kA	-	-	-	-
	P20	1	1	1	20kV/10kA	2	2	2	10kV/5kA
	P30	2	1	1	20kV/10kA	2	2	2	10kV/5kA
	P40	2	1	1	20kV/10kA	2	2	2	10kV/5kA
	P50	2	1	1	20kV/10kA	-	-	-	-

2 LEM Luminaire



Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platform noted in a 25°C ambient, based on 6,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

The italicized data is extrapolated beyond the TM-21 standard.

E = (LM) x (CU) x (LAT) x (LLD)
LM and CU are obtained from published photometry.

Operating Hours (Standard)		0	25,000	30,000	36,000	45,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	P10	1	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.92
	P20	1	0.97	0.95	0.94	0.93	0.92	0.90	0.88	0.85
	P30	1	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.92
	P40	1	0.97	0.95	0.94	0.93	0.92	0.90	0.88	0.85

Operating Hours (2CI Option)		0	25,000	30,000	36,000	45,000	50,000	60,000	75,000	100,000
Lumen Maintenance Factor	P10	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	P20	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
	P30	1	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
	P40	1	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Single Circuit Application

Ambient		P10	P20	P30	P40	P50
0°C	32°F	1.02	1.03	1.03	1.04	1.05
10°C	50°F	1.01	1.02	1.02	1.03	1.03
20°C	68°F	1.01	1.01	1.01	1.01	1.01
25°C	77°F	1.00	1.00	1.00	1.00	1.00
30°C	86°F	0.99	0.99	0.99	0.99	0.99
40°C	104°F	0.98	0.97	0.98	0.97	0.97

Optional Two Independent Circuit (2CI) Application

Ambient		P20	P30	P40
0°C	32°F	1.02	1.02	1.02
10°C	50°F	1.01	1.01	1.02
20°C	68°F	1.00	1.01	1.01
25°C	77°F	1.00	1.00	1.00
30°C	86°F	0.99	0.99	0.99
40°C	104°F	0.98	0.98	0.98

Electrical Load

Single Circuit Application

LEDs	Drive Current (mA)	System Watts/ Circuit	Current (A)					
			120	208	240	277	247	480
P10	700	28	0.23	0.13	0.12	0.10	0.08	0.06
P20	1400	47	0.41	0.24	0.20	0.18	0.14	0.10
P30	1050	71	0.63	0.37	0.32	0.29	0.22	0.18
P40	1420	95	0.78	0.45	0.40	0.35	0.27	0.20
P50	1720	115	0.95	0.55	0.48	0.42	0.33	0.24

Optional Two Independent Circuit (2CI) Application

LEDs	Drive Current (mA)	System Watts/ Circuit	Current (A)					
			120	208	240	277	247	480
P10	-	-	-	-	-	-	-	-
P20	700	22	0.10	0.06	0.05	0.04	-	-
P30	1000	32	0.14	0.08	0.07	0.06	-	-
P40	1250	47	0.18	0.10	0.09	0.08	-	-
P50	-	-	-	-	-	-	-	-

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Operating Characteristics

LED Package	Distribution	System Watts	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P10	T2S	28	2,904	104	1	0	1	3,128	112	1	0	1	3,168	113	1	0	1
	T2M	28	2,887	103	1	0	1	3,110	111	1	0	1	3,149	112	1	0	1
	T3S	28	2,964	106	1	0	1	3,194	114	1	0	1	3,234	116	1	0	1
	T3M	28	2,801	100	1	0	1	3,017	108	1	0	1	3,055	109	1	0	1
	T4M	28	2,858	102	1	0	1	3,079	110	1	0	1	3,118	111	1	0	1
	TFTM	28	2,979	106	1	0	1	3,209	115	1	0	1	3,250	116	1	0	1
	SYMDF	28	2,771	99	1	0	1	2,986	107	1	0	1	3,023	108	1	0	1
	ASYDF	28	2,756	98	1	0	1	2,969	106	1	0	1	3,007	107	1	0	1
P20	T2S	47	5,303	113	1	0	1	5,713	122	1	0	1	5,785	123	1	0	1
	T2M	47	5,272	112	1	0	2	5,680	121	1	0	2	5,751	122	1	0	2
	T3S	47	5,414	115	1	0	2	5,832	124	1	0	2	5,906	126	1	0	2
	T3M	47	5,115	109	1	0	2	5,510	117	1	0	2	5,580	119	1	0	2
	T4M	47	5,220	111	1	0	2	5,623	120	1	0	2	5,694	121	1	0	2
	TFTM	47	5,440	116	1	0	2	5,861	125	1	0	2	5,935	126	1	0	2
	SYMDF	47	5,062	108	2	0	2	5,453	116	2	0	2	5,522	117	2	0	2
	ASYDF	47	5,033	107	1	0	1	5,422	115	2	0	1	5,491	117	2	0	1
P30	T2S	71	7,319	103	2	0	2	7,884	111	2	0	2	7,984	112	2	0	2
	T2M	71	7,276	102	2	0	2	7,838	110	2	0	2	7,937	112	2	0	2
	T3S	71	7,472	105	1	0	2	8,049	113	2	0	2	8,151	115	2	0	2
	T3M	71	7,059	99	2	0	2	7,604	107	2	0	2	7,700	108	2	0	2
	T4M	71	7,203	101	2	0	2	7,760	109	2	0	2	7,858	111	2	0	2
	TFTM	71	7,508	106	1	0	2	8,088	114	2	0	2	8,190	115	2	0	2
	SYMDF	71	6,985	98	2	0	2	7,525	106	3	0	3	7,620	107	3	0	3
	ASYDF	71	6,946	98	2	0	2	7,483	105	2	0	2	7,578	107	2	0	2
P40	T2S	95	9,320	98	2	0	2	10,041	106	2	0	2	10,168	107	2	0	2
	T2M	95	9,266	98	2	0	2	9,982	105	2	0	3	10,108	106	2	0	3
	T3S	95	9,515	100	2	0	2	10,251	108	2	0	2	10,381	109	2	0	2
	T3M	95	8,989	95	2	0	2	9,684	102	2	0	2	9,807	103	2	0	2
	T4M	95	9,174	97	2	0	2	9,883	104	2	0	3	10,008	105	2	0	3
	TFTM	95	9,561	101	2	0	2	10,300	108	2	0	2	10,431	110	2	0	2
	SYMDF	95	8,896	94	3	0	3	9,583	101	3	0	3	9,705	102	3	0	3
	ASYDF	95	8,846	93	2	0	2	9,530	100	2	0	2	9,650	102	2	0	2
P50	T2S	115	10,972	95	2	0	2	11,820	103	2	0	2	11,969	104	2	0	2
	T2M	115	10,908	95	2	0	3	11,751	102	2	0	3	11,900	103	2	0	3
	T3S	115	11,202	97	2	0	2	12,067	105	2	0	2	12,220	106	2	0	2
	T3M	115	10,582	92	2	0	2	11,400	99	2	0	3	11,544	100	2	0	3
	T4M	115	10,799	94	2	0	3	11,634	101	2	0	3	11,781	102	2	0	3
	TFTM	115	11,256	98	2	0	2	12,126	105	2	0	2	12,279	107	2	0	2
	SYMDF	115	10,472	91	3	0	3	11,282	98	3	0	3	11,424	99	3	0	3
	ASYDF	115	10,414	91	2	0	2	11,219	98	3	0	2	11,361	99	3	0	2

Use the following to scale 70CRI to 80CRI.

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

All IES files available on product web page

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Operating Characteristics (continued)

LED Package	Distribution	System Watts	30K + 2CI Option (3000K, 70 CRI)					40K + 2CI Option (4000K, 70 CRI)					50K + 2CI Option (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P20	T2S	49	5,015	102	1	0	1	5,402	110	1	0	1	5,471	112	1	0	1
	T2M	49	4,985	102	1	0	2	5,371	110	1	0	2	5,439	111	1	0	2
	T3S	49	5,120	104	1	0	1	5,515	113	1	0	2	5,585	114	1	0	2
	T3M	49	4,837	99	1	0	2	5,210	106	1	0	2	5,276	108	1	0	2
	T4M	49	4,936	101	1	0	2	5,317	109	1	0	2	5,385	110	1	0	2
	TFTM	49	5,144	105	1	0	2	5,542	113	1	0	2	5,612	115	1	0	2
	SYMDF	49	4,786	98	2	0	2	5,156	105	2	0	2	5,222	107	2	0	2
	ASYDF	49	4,760	97	1	0	1	5,127	105	1	0	1	5,192	106	1	0	1
P30	T2S	70	6,769	97	1	0	1	7,293	104	2	0	2	7,385	106	2	0	2
	T2M	70	6,730	96	2	0	2	7,250	104	2	0	2	7,342	105	2	0	2
	T3S	70	6,911	99	1	0	2	7,445	106	1	0	2	7,539	108	1	0	2
	T3M	70	6,529	93	2	0	2	7,033	100	2	0	2	7,123	102	2	0	2
	T4M	70	6,663	95	2	0	2	7,178	103	2	0	2	7,269	104	2	0	2
	TFTM	70	6,945	99	1	0	2	7,481	107	1	0	2	7,576	108	2	0	2
	SYMDF	70	6,461	92	2	0	2	6,960	99	2	0	2	7,049	101	2	0	2
	ASYDF	70	6,425	92	2	0	2	6,922	99	2	0	2	7,009	100	2	0	2
P40	T2S	89	8,370	94	2	0	2	9,017	101	2	0	2	9,131	103	2	0	2
	T2M	89	8,321	93	2	0	2	8,964	101	2	0	2	9,078	102	2	0	2
	T3S	89	8,545	96	2	0	2	9,205	103	2	0	2	9,322	105	2	0	2
	T3M	89	8,073	91	2	0	2	8,696	98	2	0	2	8,807	99	2	0	2
	T4M	89	8,238	93	2	0	2	8,875	100	2	0	2	8,987	101	2	0	2
	TFTM	89	8,586	96	2	0	2	9,250	104	2	0	2	9,367	105	2	0	2
	SYMDF	89	7,989	90	3	0	3	8,606	97	3	0	3	8,715	98	3	0	3
	ASYDF	89	7,944	89	2	0	2	8,558	96	2	0	2	8,666	97	2	0	2

Use the following to scale 70CRI to 80CRI.

CCT	Multiplier
3000K	0.909
4000K	0.886
5000K	0.865

All IES files available on product web page

LED Package	Distribution	System Watts	AMB (Wavelength)					LED Package	Distribution	System Watts	AMB (Wavelength)				
			Lumens	LPW	B	U	G				Lumens	LPW	B	U	G
P10	T2S	28	1,061	38	0	0	1	P30	T2S	28	1,975	71	0	0	1
	T2M	28	1,054	38	0	0	1		T2M	28	1,964	70	0	0	1
	T3S	28	1,083	39	0	0	1		T3S	28	2,016	72	0	0	1
	T3M	28	1,023	37	0	0	1		T3M	28	1,905	68	0	0	1
	T4M	28	1,044	37	0	0	1		T4M	28	1,944	69	0	0	1
	TFTM	28	1,088	39	0	0	1		TFTM	28	2,026	72	0	0	1
	SYMDF	28	1,012	36	1	0	1		SYMDF	28	1,885	67	1	0	1
	ASYDF	28	1,007	36	0	0	1		ASYDF	28	1,875	67	0	0	1

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Options Matrix

Parameters		LED AMB	Options (Start with SF, DF, 2CI or EM if being used)													
			PE	P3	P7	PSC	PCLL	MASH	MASL	SF	DF	TP	10kV	AO	2CI	EM
LED Performance Package	P10	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	N	Y
	P20	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P30	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P40	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	P50	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Voltage	AS	Y	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
	AH	Y	N	Y	Y	Y	N	N	N	N	N	Y	Y	Y	N	N
	12	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	20	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
	24	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
	27	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
	34	Y	Y	Y	Y	Y	Y	N	N	Y	N	Y	Y	Y	N	N
	48	Y	N	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	N	N
Options	PE	Y		N	N	N	N	N	N	Y	Y	Y	Y	Y	N	Y
	P3	Y	N		N	M	Y	N	N	Y	Y	Y	Y	N	N	N
	P7	Y	N	N		M	Y	N	N	Y	Y	Y	Y	N	N	N
	PSC	Y	N	M	M		N	N	N	Y	Y	Y	Y	N	N	N
	PCLL	Y	N	Y	Y	N		N	N	Y	Y	Y	Y	N	N	N
	MASH	Y	N	N	N	N	N		N	Y	Y	Y	Y	N	N	N
	MASL	Y	N	N	N	N	N	N		Y	Y	Y	Y	N	N	N
	SF	Y	Y	Y	Y	Y	Y	Y	Y		N	Y	Y	Y	Y	Y
	DF	Y	Y	Y	Y	Y	Y	Y	Y	N		Y	Y	Y	Y	Y
	TP	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y
	10kV	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	M	M
	AO	Y	Y	N	N	N	N	N	N	Y	Y	Y	Y		N	N
	2CI	P30	N	N	N	N	N	N	N	Y	Y	Y	M	N		N
	EM	Y	Y	N	N	N	N	N	N	Y	Y	Y	M	N	N	

Notes
I = Included with option
M = Must have: one of these must be installed for the luminaire to operate
N = Combination Not available
P30 = Valid Option Combination, not available with P10 Performance Packabe
Y = Valid Option Combination

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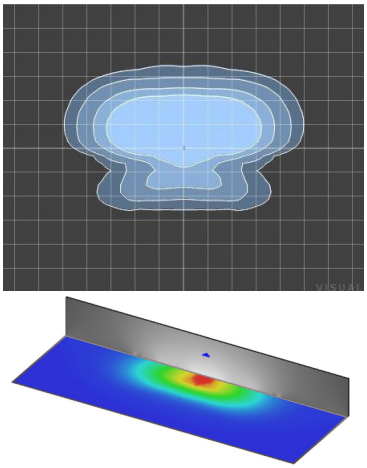
Photometric Diagrams

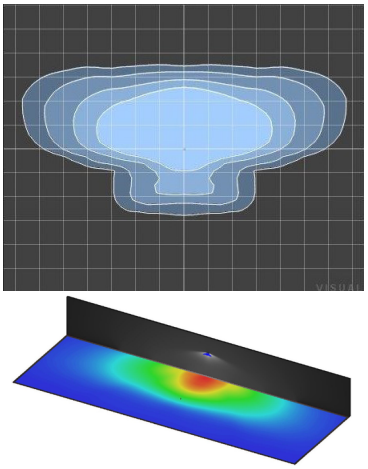
To see complete photometric reports or download .ies files for this product, visit the Holophane's Wallpack FCO LED homepage. Isofootcandle plots for the HLWPC2 P30 40K. Distance are in units of mounting height (12"). Grid is 10'x10'.

0.1 fc	1 fc	0.2 fc	0.5 fc

HLWPC2 P30 40K XX T2S



HLWPC2 P30 40K XX T2M



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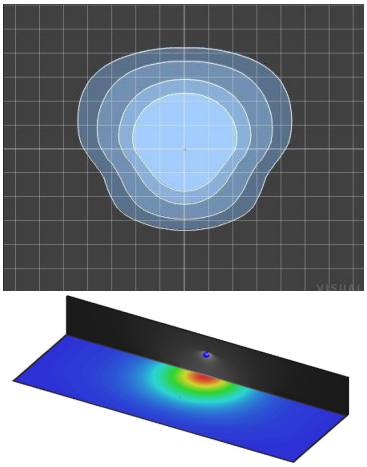
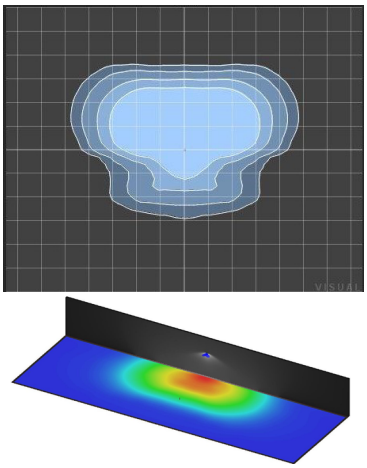
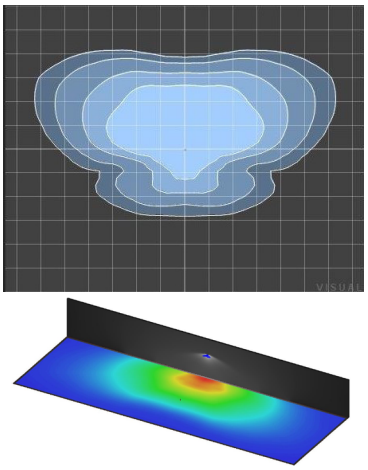


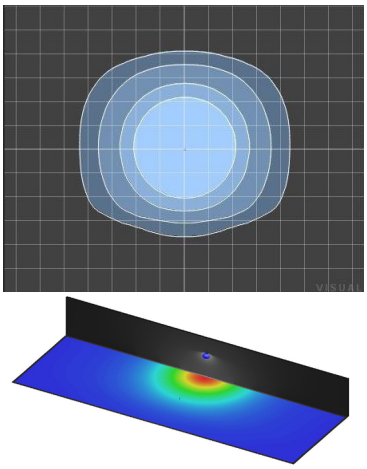
HLWPC2 P30 40K XX T3S



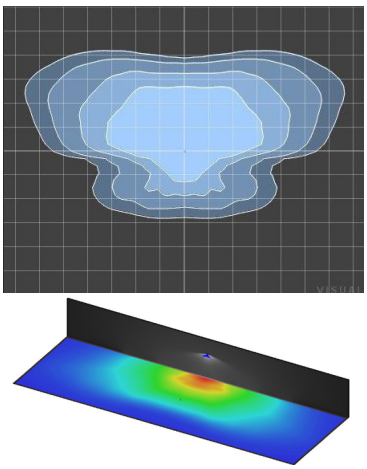
HLWPC2 P30 40K XX T3M



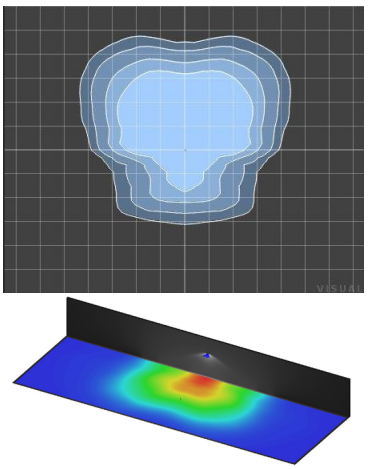
HLWPC2 P30 40K XX SYMDF



HLWPC2 P30 40K XX T4M



HLWPC2 P30 40K XX TFTM



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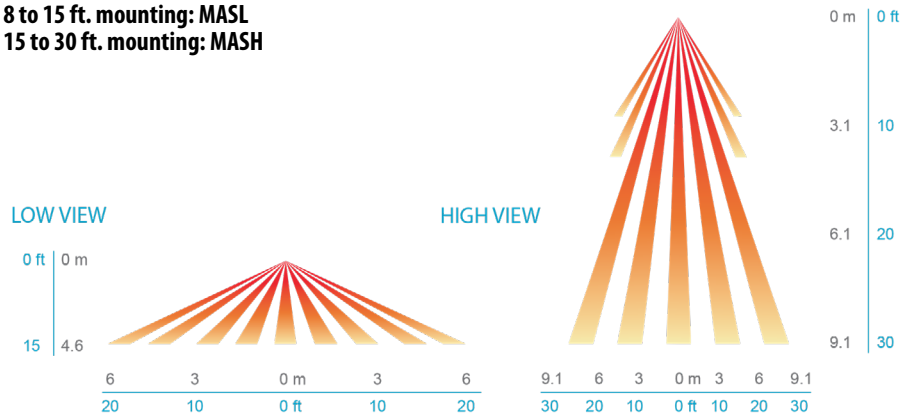
Coverage Pattern

8 to 15 ft. mounting: MASL
15 to 30 ft. mounting: MASH



Control Options

Button Style Photocontrol

PE



N.E.M.A. Receptacle

P3



P7



Motion & Ambient Combined Sensor

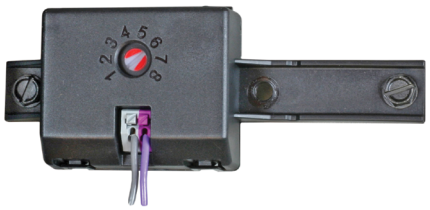
MASL/MASH



MASL and MASH options reduce luminaire light output to roughly 30% (not full OFF) when no motion is detected. When motion is detected, light output increases to 100%.

Field Adjustable Output Module

The Field Adjustable Output (AO) module is an onboard device that adjusts the light output and input voltage to meet specific requirements, allowing a single fixture configuration to be flexibly applied in many different applications. The AO option is available on the HLWPC2 series.



P10 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	94%	95%
6	83%	82%
5	71%	69%
4	59%	57%
3	46%	45%
2	34%	33%
1	21%	21%

P20 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	94%
6	84%	80%
5	73%	67%
4	61%	54%
3	48%	42%
2	35%	30%
1	21%	18%

P30 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	94%
6	84%	80%
5	73%	67%
4	61%	54%
3	48%	42%
2	35%	30%
1	21%	18%

P40 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	95%	95%
6	85%	82%
5	74%	68%
4	62%	55%
3	49%	43%
2	36%	30%
1	21%	17%

P50 - AS and AH		
AO Position	% Lumens	% Wattage
8	100%	100%
7	96%	95%
6	86%	81%
5	75%	68%
4	64%	55%
3	51%	42%
2	37%	29%
1	22%	17%

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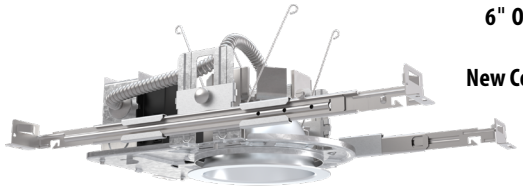
LITHONIA LIGHTING®

Catalog Number	LDN6 30/20 LW6BR
Notes	
Type	R

LDN6 STATIC WHITE

6" Open and Wallwash LED
Non-IC
New Construction Downlight





Open Trim



Wallwash Trim

FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — Galvanized steel mounting/plaster frame; galvanized steel junction box with bottom-hinged access covers and spring latches. Reflectors are retained by torsion springs.

Vertically adjustable mounting brackets with commercial bar hangers provide 3-3/4" total adjustment.

Two combination ½"-3/4" and four ½" knockouts for straight-through conduit runs. Capacity: 8 (4 in, 4 out). No. 12 AWG conductors, rated for 90°C.

Accommodates 12"-24" joist spacing.

Passive cooling thermal management for 25°C standard; high ambient (40°C) option available. Light engine and drivers are accessible from above or below ceiling.

Max ceiling thickness 1-1/2".

OPTICS — LEDs are binned to a 3-step MacAdam Ellipse; 80 CRI minimum. 90 CRI optional.

LED light source concealed with diffusing optical lens.

General illumination lighting with 1.0 S/MH and 55° cutoff to source and source image.

Self-flanged anodized reflectors in specular, semi-specular, or matte diffuse finishes. Also available in white and black painted reflectors.

A+ CAPABLE LUMINAIRE — This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning when used with Acuity Brands controls products. All configurations of this luminaire are calibrated and tested to meet the Acuity Brands' specifications for chromatic consistency – including color rendering, color fidelity and color temperature tolerance around standard CIE chromaticity coordinates. To learn more about A+ standards, specifications, and testing visit www.acuitybrands.com/aplus.

UGR — UGR is zero for fixtures aimed at nadir with a cut-off equal to or less than 60deg, per CIE 117-1996 Discomfort Glare in Interior Lighting.

ELECTRICAL — Multi-volt (120-277V, 50/60Hz) 0-10V dimming drivers mounted to junction box, 10% or 1% minimum dimming level available.

0-10V dimming fixture requires two (2) additional low-voltage wires to be pulled.

LUMEN MAINTENANCE — 70% lumen maintenance at 60,000 hours. L70/60,000 hours

LISTINGS — Certified to US and Canadian safety standards. Wet location standard (covered ceiling). IP55 rated. ENERGY STAR® certified product. Drivers are RoHS compliant

BUY AMERICAN ACT — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

PERFORMANCE DATA

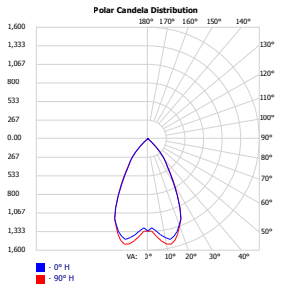
LDN6 3500K AR LSS 80CRI			
Nominal Lumens	**Lumens**	**Wattage**	**Lm/W**
500	527.9	5.8	90.5
750	758.1	8.9	85.1
1000	950.1	10.4	91.0
1500	1514	17.5	86.4
2000	2006	22.5	89.1
2500	2504	28.3	88.6
3000	3021	34.8	86.9
4000	4008	44.3	90.6
5000	4975	57.7	86.3

Notes

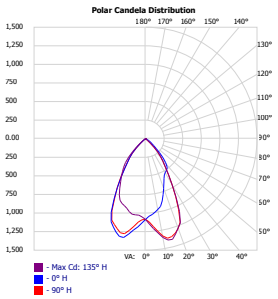
- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical.

battery pack

DISTRIBUTIONS



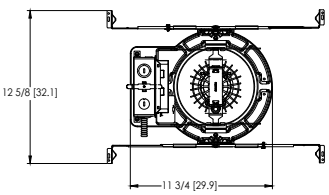
Open

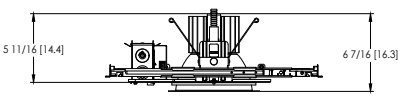


Wallwash

DIMENSIONS

LDN6 500-3000 Lumens





Aperture: Ø 6-1/4" [15.9]
Ceiling Cutout: Ø 7-1/8" [18.1] Self-flanged
Overlap Trim: Ø 7-1/2" [19.1]

See page 4 for other fixture dimensions

Design Select options indicated by this color background.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: LDN6 35/15 LO6 AR LSS MVOLT EZ10

LDN6							
Series	**Color temperature**	**Lumens ‡**	**Trim Style**	**Trim Color**	**Trim Finish**	**Flange Color ‡**	**Voltage**
LDN6 6" round	27/ 2700K 30/ 3000K 35/ 3500K 40/ 4000K 50/ 5000K	05 500 lumens 07 750 lumens 10 1000 lumens 15 1500 lumens 20 2000 lumens 25 2500 lumens 30 3000 lumens 40 4000 lumens 50 5000 lumens	LO6 Downlight LW6 Wallwash	AR Clear WR ‡ White BR ‡ Black TCPC ‡ Custom painted trim TRALTBD ‡ RAL painted trim	LSS Semi-specular LD Matte diffuse LS Specular	TRW White painted flange TRBL Black painted flange FCPC Custom painted flange only FRALTBD RAL painted flange only	MVOLT Multi-volt 120 120V 277 277V 347 ‡ 347V

Driver	**Emergency ‡**	**Control Input ‡**	**Options**
GZ10 0-10V driver dims to 10% GZ1 0-10V driver dims to 1% D10 Minimum dimming 10% driver for use with JOT D1 Minimum dimming 1% driver for use with JOT EZ1 0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 1% EDAB eldoLED DALI SOLDRIVE dim to dark	(blank) No Emergency Needed EL Battery pack (10W constant power), non-T20 compliant, integral test switch ELR Battery pack (10W constant power), non-T20 compliant, remote test switch ELSD Self-diagnostic battery pack (10W constant power), non-T20 compliant, integral test switch ELRSD Self-diagnostic battery pack (10W constant power), non-T20 compliant, remote test switch E10WCP Battery pack (10W constant power), T20 compliant, integral test switch E10WCPR Battery pack (10W constant power), T20 compliant, remote test switch E10WRSTAR Emergency battery pack, 10W with remote test switch and Iota STAR technology	(blank) No Control Input Needed JOT Wireless room control with "Just One Touch" pairing NPP16D nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). NPP16DER nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). ER controls fixtures on emergency circuit. NPS80EZ nLight® dimming pack controls 0-10V eldoLED drivers (EZ1). NPS80EZER nLight® dimming pack controls 0-10V eldoLED drivers (EZ1). ER controls fixtures on emergency circuit. N80 nLight™ Lumen Compensation NLTAIR2 nLight® Air enabled NLTAIRER2 nLight® AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit, not available with battery pack options NLTAIREM2 nLight® AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection. Available with battery pack options.	HAO ‡ High ambient option (40°C) CP ‡ Chicago Plenum RRL__ RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature. Available only in RRLA, RRLB, RRLAE, and RRLC12S. BAA Buy America(n) Act Compliant 90CRI High CRI (90+) SF ‡ Single fuse

‡ Option Value Ordering Restrictions

Option value	Restriction
Lumens	Overall height varies based on lumen package; refer to dimensional chart.
WR, BR	Not available with finishes.
347	Not available with emergency options.
SF	Must specify voltage 120V or 277V.
TRW, TRBL	Available with clear (AR) reflector only.
EL, ELR, ELSD, ELRSD, E10WCP, E10WCPR	12.5" of plenum depth or top access required for battery pack maintenance.
NPP16D, NPP16DER, NPS80EZ, NPS80EZER	Specify voltage. ER for use with generator supply EM power. Will require an emergency hot feed and normal hot feed. See UL 924 Sequence of Operation table.
N80	Fixture begins at 80% light level. Must be specified with NPS80EZ or NPS80EZ ER. Only available with EZ1 drivers.
NLTAIR, NLTAIR2, NLTAIRER2, NLTAIREM2	Not available with CP, NPS80EZ, NPS80EZER, NPP16D, NPP16DER or N80 options. not recommended for metal ceiling installations.
HAO	Fixture height is 6.5" for all lumen packages with HAO.
CP	Must specify voltage for 3000lm and above. 5000lm with marked spacing 24 L x 24 W x 14 H. Not available with emergency battery pack option.
JOT	Must specify D10 or D1 driver. Not available with nLight options. Not available with CP. Not recommended for metal ceiling installation. Not for use with emergency backup power systems other than battery packs.
Reloc® Options	Refer to RRL specification sheet on acuitybrands.com for further details.
RRLAE	Commercial fixtures should disconnect the TSPL before unplugging the RRL so it does not go into discharge mode.
RRLC12S	RRLC12S option is to be used with the OnePass OCU, OCS, OD, OFC and OD for 0-24V integrated single-circuit or 0-10V low voltage controls applications. Not available with integral dimming sensors.
TRALTBD, FRALTBD	RALTBD for pricing only. Replace with applicable RAL number and finish when ready to order. See the RAL BROCHURE for available color options.
TCPC, FCPC	CPC options for pricing only. Custom color chip needs to be sent in to your Customer Resolution specialist before order can be processed. Click HERE for more details
E10WRSTAR	Not available with wet location, EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, ALO3 & ALO4 w/DALI, OR 2000-4500 lumens w/JOT. Top access installation or 17.5" plenum clearance required for roomside installation. Not available with integral test switch

Accessories: *Order as separate catalog number.*

EAC ISSM 375	Compact interruptible emergency AC power system
EAC ISSM 125	Compact interruptible emergency AC power system
GRA68 JZ	Oversized trim ring with 8" outside diameter
SCA6	Sloped Ceiling Adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Ex: SCA6 10D

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

(Maximum order quantity for design select lead times is 112.)

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Emergency Battery Pack Options - Field Installable

Battery Model Number	Wattage	Runtime (Minutes)	Lumen Output* @ 120 Lumens/Watt	Other
ILB CP07 2H A	7W	120	840	Storm Shelter / 2 Hour Runtime
ILB CP10 A	10W	90	1200	
ILBLP CP10 HE SD A+	10W	90	1200	Title 20, Self Diagnostic
ILBLP CP15 HE SD A+	15W	90	1800	Title 20, Self Diagnostic
ILB CP20 HE A	20W	90	2400	Title 20
ILB CP20 HE SD A	20W	90	2400	Title 20, Self Diagnostic
ILBHI CP10 HE SD A+	10W	90	1200	347-480V AC Input, Title 20, Self Diagnostic
ILBHI CP15 HE SD A+	15W	90	1800	347-480V AC Input, Title 20, Self Diagnostic

All the above are UL Listed products that are certified for field install external/remote to the fixture.
*Minimum delivered lumen output to assist in product selection for increased fixture mounting height.
The CP10 delivered emergency illumination outperforms legacy 1400 lumen fluorescent emergency ballast.
Please contact us at techsupport@iotaengineering.com for any Emergency Battery related questions.

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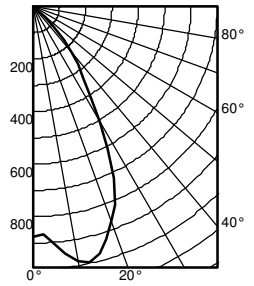
PHOTOMETRY

Distribution Curve	Distribution Data	Output Data	Illuminance Data at 30" Above Floor for a Single Luminaire

LDN6 35/10 LO6AR, input watts: 10.44, delivered lumens: 987.10, LM/W = 94.54, spacing criterion at 0= 1.02, test no. ISF 30716P262.



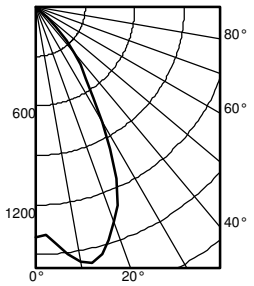
	Ave	Lumens
0	876	
5	905	89
15	971	269
25	720	322
35	330	214
45	110	87
55	1	4
65	1	1
75	0	0
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	680.7	69.0
0° - 40°	895.0	90.7
0° - 60°	986.0	99.9
0° - 90°	987.0	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	987.0	*100.0

*Efficiency

		50% beam - 54.5°		10% beam - 82.2°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	29.0	5.7	14.5	9.6	2.9
10.0	15.6	7.7	7.8	13.1	1.6
12.0	9.7	9.8	4.9	16.6	1.0
14.0	6.6	11.8	3.3	20.1	0.7
16.0	4.8	13.9	2.4	23.6	0.5

LDN6 35/15 LO6AR, input watts: 17.52, delivered lumens: 1572.9, LM/W = 89.77, spacing criterion at 0= 1.02, test no. ISF 30716P265.



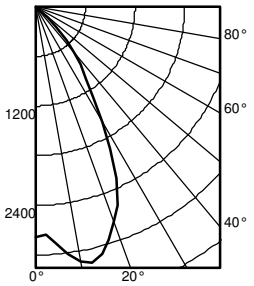
	Ave	Lumens
0	1396	
5	1442	142
15	1547	429
25	1147	514
35	526	342
45	176	139
55	2	6
65	1	1
75	1	1
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	1084.6	69.0
0° - 40°	1426.2	90.7
0° - 60°	1571.3	99.9
0° - 90°	1572.9	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	1572.9	*100.0

*Efficiency

		50% beam - 54.5°		10% beam - 82.2°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	46.2	5.7	23.1	9.6	4.6
10.0	24.8	7.7	12.4	13.1	2.5
12.0	15.5	9.8	7.7	16.6	1.5
14.0	10.6	11.8	5.3	20.1	1.1
16.0	7.7	13.9	3.8	23.6	0.8

LDN6 35/30 LO6AR, input watts: 34.75, delivered lumens: 3138.5, LM/W = 90.31, spacing criterion at 0= 1.02, test no. ISF 30716P274.



	Ave	Lumens
0	2786	
5	2877	284
15	3087	855
25	2289	1025
35	1049	682
45	350	277
55	5	12
65	2	2
75	1	1
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	2164.3	69.0
0° - 40°	2845.9	90.7
0° - 60°	3135.3	99.9
0° - 90°	3138.5	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	3138.5	*100.0

*Efficiency

		50% beam - 54.5°		10% beam - 82.2°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	92.1	5.7	46.1	9.6	9.2
10.0	49.5	7.7	24.8	13.1	5.0
12.0	30.9	9.8	15.4	16.6	3.1
14.0	21.1	11.8	10.5	20.1	2.1
16.0	15.3	13.9	7.6	23.6	1.5

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Ouput power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.

The LPW rating is also available at Designlight Consortium.

LUMEN OUTPUT MULTIPLIERS - FINISH			
	Clear (AR)	White (WR)	Black (BR)
Specular (LS)	1.0	N/A	N/A
Semi-specular (LSS)	0.950	N/A	N/A
Matte diffuse (LD)	0.85	N/A	N/A
Painted	N/A	0.87	0.73

LUMEN OUTPUT MULTIPLIERS - CRI	
80	1.0
90	0.874

LUMEN OUTPUT MULTIPLIERS - CCT					
	2700K	3000K	3500K	4000K	5000K
80CRI	0.950	0.966	1.000	1.025	1.101

Notes

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical.

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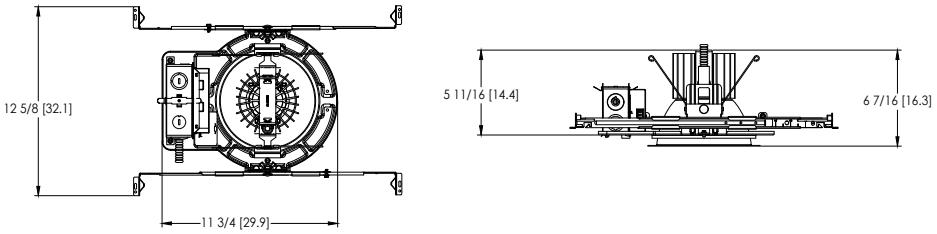
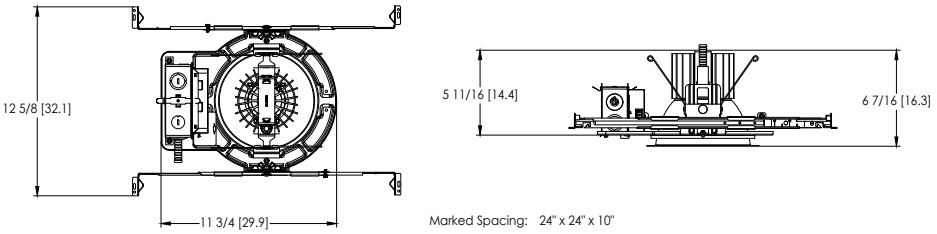
* All dimensions are inches (centimeters) unless otherwise noted.

LDN6 500-3000 Lumens



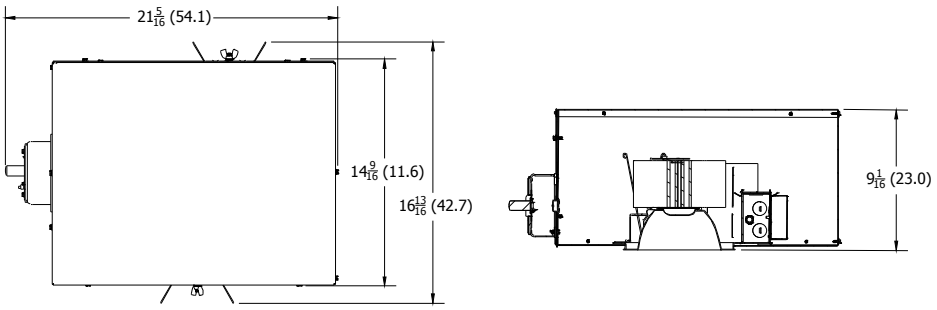
Aperture: Ø 6-1/4" [15.9]
Ceiling Cutout: Ø 7-1/8" [18.1] Self-flanged
Overlap Trim: Ø 7-1/2" [19.1]

LDN6 4000-5000 Lumens



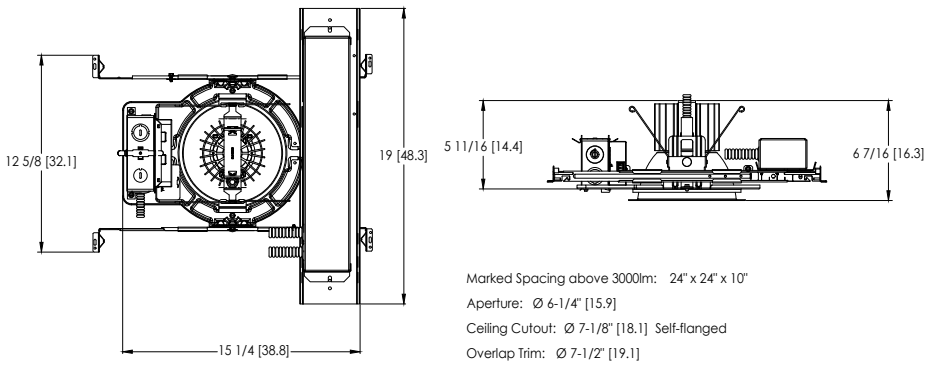
Marked Spacing: 24" x 24" x 10"
Aperture: Ø 6-1/4" [15.9]
Ceiling Cutout: Ø 7-1/8" [18.1] Self-flanged
Overlap Trim: Ø 7-1/2" [19.1]

LDN6 CP



Aperture: 6-1/4 (15.9)
Ceiling Opening: 7-1/8 (18.1)
Overlap Trim: 7-1/2 (19.1)

LDN6 EL



Marked Spacing above 3000lm: 24" x 24" x 10"
Aperture: Ø 6-1/4" [15.9]
Ceiling Cutout: Ø 7-1/8" [18.1] Self-flanged
Overlap Trim: Ø 7-1/2" [19.1]

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ADDITIONAL DATA

JOT
JUST ONE TOUCH

The Sensor Switch JOT enabled solution offers a wireless, app-free approach to single room lighting control. JOT enabled products use Bluetooth® Low Energy (BLE) technology to enable wireless dimming and switching.

Diagram



LDN6 Series



Sensor Switch
WSXA JOT

1. **Power:** Install JOT enabled fixtures and controls as instructed.
2. **Pair:** Insert the pairing tool into the pinhole on the wall switch; press and hold any button for 6 seconds.
3. **Play:** Once paired, each fixture will individually dim down to 10% brightness. All products will be fully functional.

COMPATIBLE 0-10V WALL-MOUNT DIMMERS		
MANUFACTURER	PART NO.	POWER BOOSTER AVAILABLE
Lutron®	Diva® DVTV	
	Diva® DVSCTV	
	Nova T® NTFTV	
	Nova® NFTV	
Leviton®	AWSMT-7DW	CN100
	AWSMG-7DW	PE300
	AMRMG-7DW	
	Leviton Centura Fluorescent Control System	
	IllumaTech® IP7 Series	
Synergy®	ISD BC	RDMFC
	SLD LPCS	
	Digital Equinox (DEQ BC)	
Douglas Lighting Controls	WPC-5721	
Entertainment Technology	Tap Glide TG600FAM120 (120V)	
	Tap Glide Heatsink TGH1500FAM120 (120V)	
	Oasis 0A2000FAMU	
Honeywell	EL7315A1019	EL7305A1010 (optional)
	EL7315A1009	
HUNT Dimming	Preset slide: PS-010-IV and PS-010-WH	
	Preset slide: PS-010-3W-IV and PS-010-3W-WH	
	Preset slide, controls FD-010: PS-IFC-010-IV and PS-IFC-010-WH-120/277V	
	Preset slide, controls FD-010: PS-IFC-010-3W-IV and PS-IFC-010-3W-WH-120/277V	
	Remote mounted unit: FD-010	
Lehigh Electronic Products	Solitaire	PBX
PDM Electrical Products	WPC-5721	
Starfield Controls	TR61 with DALI interface port	RT03 DALInet Router
WattStopper®	LS-4 used with LCD-101 and LCD-103	

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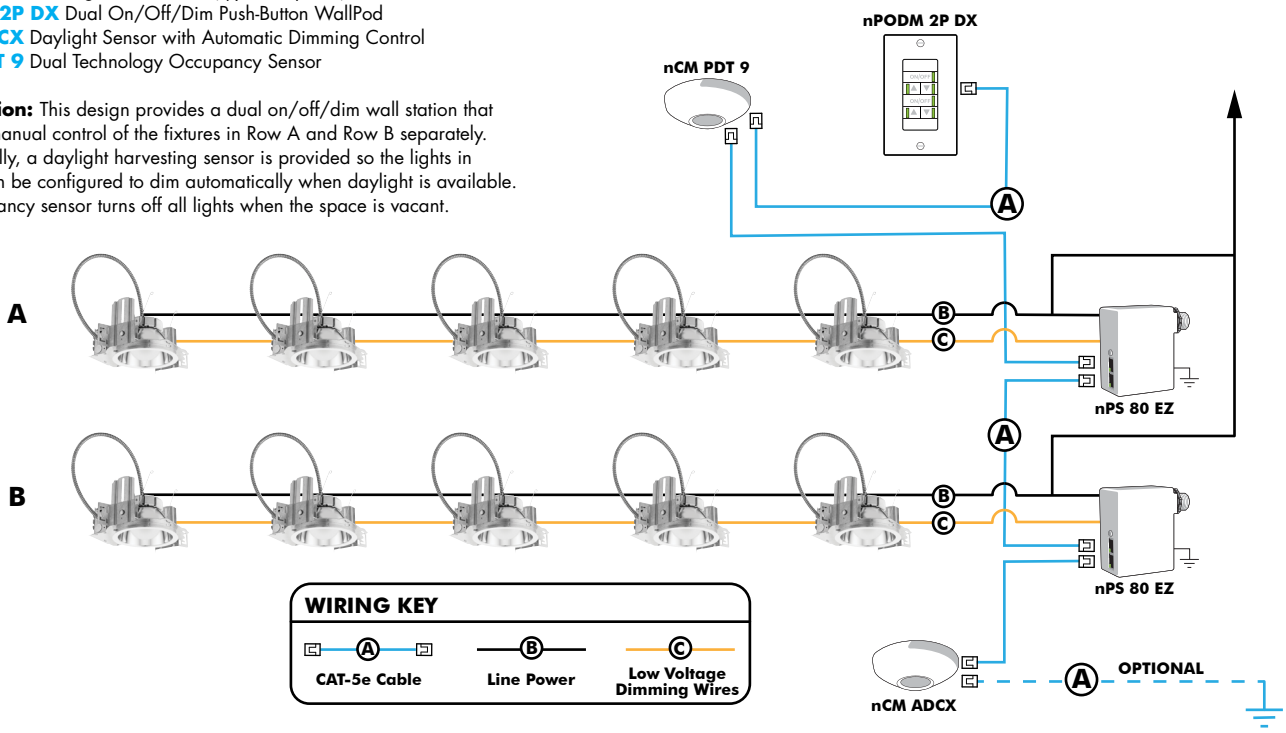
EXAMPLE
Group Fixture Control*
*Appiication diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty: 2 required)
nPODM 2P DX Dual On/Off/Dim Push-Button WallPod
nCM ADCX Daylight Sensor with Automatic Dimming Control
nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in Row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.



Choose Wall Controls

nLight offers multiple styles of wall controls - each with varying features and user experience.



Push-Button Wallpod
Traditional tactile buttons and LED user feedback



Graphic Wallpod
Full color touch screen provides a sophisticated look and feel

nLight® Wired Controls Accessories:			
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlight for complete listing of nLight controls.			
WallPod Stations	**Model number**	**Occupancy sensors**	**Model Number**
On/Off	nPODM (Color)	Small motion 360°, ceiling (PIR/dual Tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPOD DX (Color)	Large motion 360°, ceiling (PIR/dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX (Color)	Wide View (PIR/dual tech)	nWV 16 / nWV PDT 16
Photocell controls	**Model Number**	Wall Switch w/ Raise/Lower (PIR/dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	**Cat-5 cables (plenum rated)**	**Model Number**
		10', CAT5 10FT	CAT5 10FT J1
		15, CAT5 15FT	CAT5 15FT J1

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nLight® AIR Control Accessories:
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlightair.

Wall switches	Model number
On/Off single pole	rPODB [color]
On/Off two pole	rPODB 2P [color]
On/Off & raise/lower single pole	rPODB DX [color]
On/Off & raise/lower two pole	rPODB 2P DX [color]
On/Off & raise/lower single pole	rPODBZ DX WH[1]

Notes
1 Can only be ordered with the RES7Z zone control sensor version.

UL924 Sequence of Operation

The below information applies to all nLight AIR devices with an EM option.

- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the CL**AIR**ITY+ mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.

nLight AIR

nLight AIR is the ideal solution for retrofit or new construction spaces where adding communication is cost prohibitive. The integrated nLight AIR rPP20 Power Pack is part of each Lithonia LDN Luminaire. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.



Simple as 1,2,3

1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With CL**AIR**ITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the desired outcome



nLight AIR rPODB 2P DX

Mobile Device

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O. Architectural Design Narrative

Please see the attached design narratives for each Phase of the project, completed by CWS and RSA architecture firms.

CWS
ARCHITECTURE +
INTERIOR DESIGN

August 17, 2024

City of Portland
Planning & Urban Development Department

Design Narrative for Avesta Oxford St.

The proposed design is for new construction of a 43,280 sq ft, 48-unit apartment building on Oxford Street between Cedar and Chestnut. There is an existing 2 ½ story building and a 1 story building currently located on the site that are to be demolished. The new building is five story with basement level parking. The building will have two internally independent programs that are designed to meet the needs of two different residential populations: a 23,429 sq ft, 28-unit Housing First side and a 19,852 sq ft, 20-unit Affordable Housing side. All Housing First Units are 0-bedroom and the Affordable Housing side has a mix of 0-bedroom units and 1-bedroom units. The two areas of the building are designed to function independently of each other, including building entrances, egress, vertical circulation, and HVAC/mechanical/electrical systems.

The building will be Type IIIB Construction, fully sprinklered. Floors two, three, four and five are Type VB Construction, fully sprinklered. The first floor of the Housing First side is dedicated to social services needed for the Housing First population. The first floor of the Affordable Housing side is a combination of apartments and amenities for the Affordable Housing tenants. Floors two through five are residential on both sides of the building. Fire separation between floors, dwellings, and occupancy types are designed per IBC requirements.

CWS is taking a very intentional approach to the design of this building, intending to be responsive to the existing neighborhood fabric and how it is evolving. The proposed design is something that will be appropriate for this high density, downtown neighborhood. The building will span the entire length of Oxford Street between Chestnut and Cedar, which has been historically underutilized in this growing neighborhood.

The neighborhood is comprised of a range of architecture types, with varying materials and scales. The range of buildings include 6-story multifamily housing, several story mixed use buildings, and single-family homes. The site is also in close proximity to the downtown core as well as City Hall. A response to this evolving place, the rectangular form of the proposed building reflects the urban density of a neighborhood of this type, and the Oxford Street façade as well as the design around Cedar and Chestnut respond to practical challenges of the site, such as the grade change. The architectural detailing emphasizes sustainability for reduced environmental impact and improved resident comfort.

We have selected a preliminary palette of materials that will maintain their beauty and timeless appearance for the life of the building while also providing an opportunity to express the building's program. The levels at grade that serve more public functions are primarily clad with self-finishing materials, consisting of long expanses of storefront and ground-face CMU veneer. The construction on upper floors that are primarily used for housing units are clad with a cementitious lap siding and accented with corrugated metal panels. These materials work to further articulate the fenestration and bring the building into the scale and context of the surrounding character of the neighborhood, as requested during the initial design review. Vertical circulation elements are clad with cementitious panel siding, sized to compliment the scale of these elements while giving the opportunity to incorporate variation in color and texture to the facade.

The building's dimensions are in compliance with the guidelines for both R-6 zoning and the Bayside Height Overlay Map. The roof deck is 55'-0" above the average grade of the site. Floor to floor height is 10'-0" with the exception of the basement parking level at 12'-0". Extra design consideration has been implemented regarding security, noise and pollutant suppression of the Housing First outdoor space, which is proposed to have a solid, 8'-0" cast in place concrete or ground-face CMU wall to match the building's foundation along the entire perimeter, as well as planting to provide even greater acoustical suppression. We have also generated shadow studies that represent the new building's impact on its neighbors and their gardens, and the building will be designed to Passive House standards.

In addition to some of the aesthetic façade revisions mentioned above, CWS has made numerous revisions to the proposed design in response to comments we received from the April Design Workshop. The variations in parapet height have been eliminated in order to address the planning board's request to establish a stronger roof-datum line that continues to Chestnut Street. The windows sizes in question have been refined. The 'minimal fenestration' that was brought into question on the side elevations of the building are windows located within the stairwells at the landings, and are 3'-4" X 3'-4", which compliments the regulating lines established with the reveal siding panels. The dimension of these windows, located at landings within the small footprint of the stairwell will

actually make for a very bright space, full of natural daylight. Each unit features a configuration of paired 3'-4" X 4'-8" (total 6'-8" X 4'-8" opening) windows in the living room spaces and 3'-4" X 3'-4" windows in the more private sleeping spaces, with additional windows incorporated in corner units.

The first floor entrances have been reworked to establish a positive street presence and wayfinding for pedestrians. The Housing First vestibule has been revised to incorporate more glazing and visibility, and is now projecting from the building to meet the front yard setback line. The Affordable Housing entrance has also been revised to better engage pedestrian experience. Relocating the entrance to the furthermost corner of Oxford and Chestnut is not feasible due to the grade change on the site, and would make the basement level parking an impossibility. However, we have articulated the entry with a canopy and we have brought the entry as close as we possibly could to the front yard setback while staying in compliance with accessibility of the egress elements as well as the city's requirements regarding projection in required setback areas that would otherwise force us to eliminate the stairs.

CWS has also provided renderings with this revised submission that include existing context at both Oxford and Cedar and Oxford and Chestnut and represent the developments we've made to the proposed exterior material palette. Please note the updated transformer location shown in the rendering at Oxford and Chestnut. This was brought into question at the first meeting, and staff expressed the desire to move it away from the corner. It has been relocated near the lower landing of the Affordable Housing stair.



Bhen Reed, AIA, NCARB
Architect, CWS Architecture + Interior Design
breed@cwsarch.com

October 1, 2024

Eric Freeman
Planner
City of Portland Maine
389 Congress Street
Portland, Maine 04101

Re: 158 Lancaster Street Apartments - Design Narrative

Dear Eric,

The proposed building to be located at 158 Lancaster Street consists of 24 Market Rate residential apartment units.

The neighborhood is comprised of a diverse palate of Architectural forms, and time periods of design and construction. The surrounding streets contain residential structures with sloped roofs, large commercial buildings with flat roofs, brick exterior walls, lap siding, concrete exterior walls, and metal panel siding.

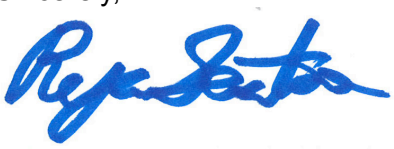
We designed the building using color, massing and texture to scale the building as reflected on the attached elevations. The facades utilize punched openings in pairs and singles with horizontal lap and shiplap siding that references the local residential vernacular Architecture. The facades are broken by projecting bays that work their way along the streets.

The siding materials proposed are factory finished fibercement corrugated siding, in various formats, lap siding, shiplap siding and panel siding. These products were chosen for their crisp appearance and long term durability. The windows proposed are dark in color to compliment the siding colors and also further reinforce the crisp simplicity of the design. The roofing proposed is an EPDM roof membrane.

We did review the stoops on Lancaster Street and would like to keep them as designed, we found many examples of this orientation throughout the City of Portland thus we feel there is precedent for this proposed design.

We look forward to discussing the projects at the upcoming Planning Board workshop.

Sincerely,



Ryan Senatore, AIA LEED AP

Principal

207-747-5159

senatorearchitecture.com

ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101

P. Utilities:

Coordination with respective utility companies is ongoing and Ability to serve requests have been sent. Formal response letters are forthcoming and will be uploaded upon receipt. The proposed re-development project proposes the following utility service to support each phase:

Water:

Phase 1: 197 Oxford Street; Based on the City archive plans, there is an existing 12" water main within Oxford Street, 6" water main within Chestnut Street, and a 4" within Cedar Street. Given the demising wall within the building, we anticipate having a separate domestic and fire service for each side of the building.

It is proposed to connect into the existing 12" water main within Oxford Street with four services to feed the proposed building. The connections include two separate 2" domestic services and two separate 6" fire service lines, which will run to the proposed mechanical/sprinkler rooms on each side of the building (i.e. for both the Housing first and the Affordable Housing portion.)

- Phase 2 and 3: Consistent with the adjacent MDP project, the water main in Lancaster Street will be upgraded to a 12" ductile iron main. Both phases will tap 2" and 6" domestic and sprinkler lines off this main, respectively.

Sewer:

Phase 1: 197 Oxford Street; An existing 18" combined sewer exists in Chestnut Street. It is proposed to connect a new 6" PVC lateral into the Chestnut Street main discharging the domestic sewer, the covered parking oil water separator, and the elevator sumps. A backflow preventer is proposed at the property line, typical of all three phases.

- Phase 2: 50 Cedar Street; It is proposed to tap the sewer lateral into the existing 18" sewer main in Cedar Street.

Phase 3: 158 Lancaster Street: It is proposed to tie into the existing sewer main within Chestnut Street.

Stormwater:

Phase 1: 197 Oxford Street; The project proposes over 1,000 SF of new impervious. Treatment will be accomplished using Storm-filter cartridges which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch across the entire roof area as well as some ancillary impervious ground surfaces, which is a larger volume than the new sewer flows created by the project.

The stormwater will outlet into the combined 18" sewer within Chestnut.

- Phase 2: 50 Cedar Street; The project proposes over 1,000 SF of new impervious. Treatment will be accomplished using Storm-filter cartridges which will discharge into a proposed R-Tank subsurface detention system. The detention system is sized to store an inch of rainfall across the site's impervious area, which exceeds the new sewer flows. The outfall will tie into the previously engineered and approved 89 Elm drainage system which ultimately drains to the upstream end of the MS4 extension that's been designed as part of the MDP (89 Elm being Phase I).

  Phase 3: 158 Lancaster Street: The project will not create more than 1,000 SF of new impervious area and therefore no treatment is proposed. The site will detain the new sewer flows because its volume exceeds an inch across the site's impervious area. The outlet is not high enough to outlet to the MS4 extension in Lancaster Street and therefore will outlet into the 18" combined sewer in Chestnut Street.

Electric/Communications:

- Phase 1: 197 Oxford Street; proposes a new riser pole along Chestnut Street to facilitate routing underground secondary and communications lines to the proposed building. Secondaries are proposed to be routed to a 7'x7' pad mount transformer within the property, to be located along Chestnut Street.

- Phase 2: 50 Cedar Street; proposes a pole mounted transformer along Lancaster Street to facilitate power to the building. Depending on the final service loads, CMP may require an alternative proposal, which will be addressed at that time.

  Phase 3: 158 Lancaster Street; proposes new riser pole along Chestnut Street to facilitate routing underground secondary and communications lines to the proposed building. Secondaries are proposed to be routed to a 9'x9' pad mount transformer within the property, to be located along Chestnut Street. It is possible a pole-mounted transformer may be sufficient to serve these residences.

Gas:

Phase 1: 197 Oxford Street; It is our understanding that a 2" gas main exists within Cedar and Chestnut. It is proposed to connect a new gas line to the 2" gas main from each street, which will service each portion of the co-managed building.

- Phase 2: 50 Cedar Street; proposed to tap a gas service off the Cedar Street gas main due to lack of gas main in Lancaster Street.

  Phase 3: 158 Lancaster Street: proposed to tap a gas service off the Chestnut Street gas main.

Q. Construction Management Plan

Project Address:

Phase I – 197 Oxford Street, Portland Maine, 04101
Phase 2 – 50 Cedar Street, Portland Maine, 04101
Phase 3 – 158 Lancaster Street, Portland Maine, 04101

Project Description:

The project proposes to redevelop the current parcels into multifamily residential buildings.

Project Team Summary:

Owner:	Avesta Housing and Reveler Development
General Contractor:	TBD
Civil & Environmental Engineer:	Acorn Engineering, Inc.
Architect:	CWS Architecture + Interior Design (Phase 1) Ryan Senatore Architecture (Phase 2 and 3)

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 general, high-level measures to be taken during the phased construction. The specific construction managers, in coordination with their subcontractors, who are hired later in the process will develop more detailed details and commitments to construction management including traffic control, site logistics, laydown areas, etc.

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 2026 (Phase 1)
Project End Date:	Fall 2029 (Phase 3)

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 Lancaster, Chestnut, Cedar, and Oxford 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. Due to the existing, sparse landscaping on site, no protection during construction will be necessary.

3. 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 redevelopment:

- Gravel & Stone – 2,500 CY. Earthwork subcontractor(s) pit to project site.
- Hot Mix Asphalt – 300 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 approved 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 and Owner will be responsible for locating the solid waste and recyclable material to the spaces allocated for solid waste storage. Ultimately, a private hauler will be contracted for removal of each phase. The solid waste containers will be fully enclosed and screened from the public view as shown in each Phase's site plan and/or ground floor plan.

Phase I:

Each portion of the building will have a dedicated trash room adjacent to the street to provide easy access to the waste hauler. The Housing First room will be accessed off Cedar Street through a sidewalk. The Affordable Housing room will be accessed off Chestnut Street through a paved access aisle in the basement. Mobile (rolling) totes will be utilized for all solid waste.

Phase 2:

The project will share the solid waste enclosure with the adjacent 89 Elm development. Access to the dumpsters is provided directly off Lancaster Street, or through the sidewalk at the back of the site that leads to an elevated trash chute.

Phase 3:

The project proposes a solid waste enclosure with the parking lot on 158 Lancaster Street. Access to the dumpsters is provided through the parking lot alongside the building.

Please refer to the project plans for more information.

S. Parking Analysis

Per the City of Portland Land Use Code, one parking space is required for every unit minus the first four units, per phase. This requirement is intended to be met through a combination of on-site parking, as well as off-site parking within the Cumberland Avenue parking garage which is owned by the Co-Applicant, Reveler Development, and has a capacity of 595 vehicles.

Phase 1: 5 on-site spaces provided (48 proposed units)

Due to the limited space on site, 5 parking spaces are being provided on site for Staff. If tenants wish to pursue dedicated off-site parking, there is ample capacity within the Cumberland Avenue parking garage (3 minute walk). Vehicle usage within this development is intended to be low as Avesta's current utilization rate for 1-bedroom on-peninsula apartments is about 14%. The Housing First portion of the building is expected to have a utilization rate even lower than that figure.

Phase 2: 3 spaces provided (24 units) & Phase 3: 13 spaces provided (24 units)

16 off-street parking spaces on Phases 2 and 3 are being provided due to the extra available space on site as an option for residents who choose to be closer to their building, including residents who may have a disability. All parking spaces will be unbundled from the base rent, and residents will have the opportunity to reserve a parking space on the subject parcel, or within the garage on Cumberland Ave depending on their individual preference for covered parking without snowplow requirements vs a shorter walking distance to their vehicle. In most cases, it will likely depend on the end user's frequency of vehicle usage. Ample capacity exists at the Cumberland Avenue parking garage (5 minute walk) should tenants wish to secure off-site parking. Reveler Development owns this garage and included supply calculations as part of the previously approved Master Development Plan in 2023.

It should be noted that approximately 43 leased parking spaces on the 50 Cedar and 158 Lancaster Street lot, used for commercial uses. The termination of these leases/agreements as the residential redevelopments occur will be coordinated by the managing entity, Reveler, and if necessary, relocated elsewhere under one of the many parcels under their site control in the immediate vicinity, including the Cumberland Avenue parking garage which has a capacity of 595 vehicles.

ACORN ENGINEERING, INC.

T. Traffic Analysis

The redevelopment project is proposed to be phased. Phase 1 is located along Oxford Street and between Cedar and Chestnut Street. The phase intends to redevelop the existing property located at 197 Oxford Street into 48 Affordable and "Housing Fist" Residential Units. Phase 2 is located at 50 Cedar Street will redevelop the parking lot into 24 market rate residential units (24 bedrooms). Phase 3 intends to redevelop the existing parking lot located at 158 Lancaster Street to provide a total of 24 market rate units. The streets encompassing the phases consist of all local streets being Lancaster, Cedar, Chestnut, and Oxford Streets. Cedar Street and Oxford Street feature one-way traffic patterns, while the remaining streets are two-way traffic. The existing curb cut along Oxford Street is proposed to be closed and replaced with a rebuilt sidewalk in Phase 1. Two of the three existing curb cuts under Phase 2 will be closed (one on Cedar Street and one on Lancaster Street. One curb cut that exists under Phase 3 will remain and be rebuilt to facilitate existing surface parking, a portion of which will remain. The other curb cut along the Phase 3 frontage (on Chestnut Street) will be closed.

Land Use Codes

Given the existing and proposed developments encompass different land uses, the traffic generated from the development has been broken up into various categories. To determine the increase in traffic resulting from the project, the Institute of Transportation Engineers Trip Generation Manual, 11th Edition was utilized.

The Trip Generation Manual does not contain a specific LUC for the Shelter use at 197 Oxford Street and therefore, the office LUC was used in its place for existing trips, based on the square footage recorded in the Portland Accessor Database for Office only. All existing non-office space was not attributed to any existing trips. The existing structures containing office space were modeled using the General Office Building (LUC 710) and the Single-Family Detached use at 50 Cedar (previously existing within 10 years).

- LUC 710 - A general office building houses multiple tenants; it is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building or buildings may contain a mixture of tenants including professional services, insurance companies, investment brokers, and tenant services, such as a bank or savings and loan institution, a restaurant, or cafeteria and service retail facilities. A general office building with a gross floor area of 5,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.
- LUC 223 – All multi-family housing that is rented at below market rate.

The land uses utilized in the calculation of the proposed phases consist of Affordable Housing (Income Limits LUC 223) and Mid-rise Multifamily Housing LUC 223. LUC 223 is a new land use that was introduced in ITE 11.

- LUC 221 - Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (Land Use 225), and mid-rise residential with 1st-floor commercial (Land Use 231) are related land uses.
- LUC 223 – All multi-family housing that is rented at below market rate.

Trip Generation

The trip generation for the proposed project has been estimated using the Institute of Transportation Engineers (ITE) "Trip Generation" 11th Edition publication. Consistent with Maine DOT standards, the existing trip generation for the project was estimated by applying a trip credit accounting for the site conditions in a 10-year window (2014-2024). Utilizing the City's tax maps, google earth history, and information from the owner, it was assumed for Phase 1 that the former sites consists of two buildings with 201 Oxford Street building consisting of a shelter for around 7,000 SF of floor area. 197 Oxford Street also consisted of a shelter with 2,000 SF of floor area. For the purposes of this calculation, 2,714 SF of office space was used for trip generation as a conservative approach, based upon the Assessor's information (page 6). It was assumed the other uses comprising the floor area created negligible trips. If additional credit is to be obtained, a more in depth analysis would need to occur. For phase 2, it is assumed that the former site consists of one single family house with approximately 4,500 sf. Lastly, phase 3, it is assumed that the former site consists of an existing parking lot with no buildings. See the Appendix further in this report for visual representation of the existing buildings. The number of trips were estimated based on the floor areas and residential units provided above.

Proposed development:

- Phase 1: 197 Oxford Street: 48 Affordable and "Housing First" Residential Units
- Phase 2: 50 Cedar Street: 24 Market Rate Residential Units
- Phase 3: 158 Lancaster Street: 24 Market Rate Residential Units

The proposed development use is in tandem with the trip generation rate to project based on the peak hour passenger car equivalent. LUC 223 does not include weekend trip generation data, thus the peak hour PM rate was assumed here. This approach is consistent with previous affordable housing projects.

Rates for the office weekend were estimated due to the 11th edition manual not containing Saturday or Sunday Peak Hour rates for all LUCs. This was modeled based on the existing buildings being utilized shelters that are used 7 days a week.

Land-Use #210: Single Family Detached Housing –
[Setting/Location: General Urban/Suburban]

Weekday AM Peak Hour (Street)	= 0.70 trips/unit
Weekday PM Peak Hour (Street)	= 0.94 trips/unit
Weekday AM Peak Hour (Generator)	= 0.75 trips/unit
Weekday PM Peak Hour (Generator)	= 0.99 trips/unit
Saturday Peak Hour (Generator)	= 0.92 trips/unit
Sunday Peak Hour (Generator)	= 0.83 trips/unit

Land-Use #221: Multifamily Housing – Midrise (Dwelling unit)
[Setting/Location: Dense Multi Use Urban]

Weekday AM Peak Hour (Street)	= 0.28 trips/unit
Weekday PM Peak Hour (Street)	= 0.26 trips/unit
Weekday AM Peak Hour (Generator)	= 0.23 trips/unit
Weekday PM Peak Hour (Generator)	= 0.24 trips/unit
Saturday Peak Hour (Generator)	= 0.25 trips/unit
Sunday Peak Hour (Generator)	= 0.25 trips/unit

Land-Use #223: Affordable Housing – Income Limits (per Bedroom)
[Setting/Location: Dense Multi Use Urban]

Weekday AM Peak Hour (Street)	= 0.25 trips/BR
Weekday PM Peak Hour (Street)	= 0.18 trips/BR
Weekday AM Peak Hour (Generator)	= 0.25 trips/BR
Weekday PM Peak Hour (Generator)	= 0.19 trips/BR
Saturday Peak Hour (Generator)*	= 0.25 trips/BR
Sunday Peak Hour (Generator)*	= 0.25 trips/BR

*Weekend rates not provided in manual thus are estimated

Land-Use #710: General Office Building (per 1000 Sq. Ft.)
[Setting/Location: Dense Multi Use Urban]

Weekday AM Peak Hour (Street)	= 0.84 trips/1000 SQ. FT.
Weekday PM Peak Hour (Street)	= 0.87 trips/1000 SQ. FT.
Weekday AM Peak Hour (Generator)	= 0.84 trips/1000 SQ. FT.

Weekday PM Peak Hour (Generator) = 0.87 trips/1000 SQ. FT.

Saturday Peak Hour (Generator) = 0.50 trips/1000 SQ. FT.

Sunday Peak Hour (Generator)* = 0.50 trips/1000 SQ. FT.

*Sunday rate not provided in manual thus is estimated

Table 1, below, provides a summary of the trip generation for the existing development of two office buildings.

Table 1 – Peak Hour Trip Generation - Existing				
LUC: #710 General Office Building/ LUC #221 Multi-family Housing Mid-Rise (per 1000 SF/Unit/Bedroom)	**Phase 1 197 Oxford Street**	**Phase 2 50 Cedar Street (single family)**	**Phase 3 158 Lancaster Street**	**Peak Hour Trip Generation**
AM Peak Hour (Street)	2 trips	1 trip	0 trips	3 trips
PM Peak Hour (Street)	2 trips	1 trip	0 trips	3 trips
AM Peak Hour (Generator)	2 trips	1 trip	0 trips	3 trips
PM Peak Hour (Generator)	2 trips	1 trip	0 trips	3 trips
Saturday Peak Hour (Generator)*	1 trip	1 trip	0 trips	2 trips
Sunday Peak Hour (Generator)*	1 trip	1 trip	0 trips	2 trips

*Weekend rates were not provided in manual thus are estimated for Phase I, given the facility is not a typical M-F office use.

Table 2, below, provides a summary of the trip generation for the proposed development in phases with a total of 75 market rate units and 48 affordable 1-BR units (48 Bedrooms).

Table 2 – Peak Hour Trip Generation – Proposed				
	Phase 1 Affordable Housing Units (48 Bedrooms) LUC 223	**Phase 2 Market Rate Units (24 Bedrooms) LUC 221**	**Phase 3 Market Rate Units (24 Bedrooms) LUC 221**	**Total Peak Hour Trip Generation**
AM Peak Hour (Street)	12 trips	7 trips	7 trips	26 trips
PM Peak Hour (Street)	9 trips	7 trips	6 trips	22 trips
AM Peak Hour (Generator)	12 trips	6 trips	6 trips	24 trips
PM Peak Hour (Generator)	10 trips	6 trips	6 trips	22 trips
Saturday Peak Hour (Generator)*	12 trips	6 trips	6 trips	24 trips
Sunday Peak Hour (Generator)*	12 trips	6 trips	6 trips	24 trips

*Weekend rates were not provided in manual thus are estimated

Table 3, below, provides a summary of the previous and new trip generation for the proposed development.

Table 3 – Peak Hour Trip Generation – Proposed			
	Existing Peak Hour Trip Generation	**Proposed Peak Hour Trip Generation**	**Net Increase Peak Hour Trip Generation**
AM Peak Hour (Street)	3 trips	26 trips	24 trips
PM Peak Hour (Street)	3 trips	22 trips	20 trips
AM Peak Hour (Generator)	3 trips	24 trips	21 trips
PM Peak Hour (Generator)	3 trips	22 trips	19 trips
Saturday Peak Hour (Generator)*	2 trips	24 trips	26 trips
Sunday Peak Hour (Generator)*	2 trips	24 trips	26 trips

*Weekend rates were not provided in manual, thus are estimated for office use and multifamily affordable.

Analysis

From this analysis, the total trips generated by the project when accounting for the former site credit is 26 trips in the peak hour. It should also be noted that this analysis does not factor in the reduced parking supply on site which will encourage residents to use multi-modal transportation and therefore likely reduce the vehicle trip generation to and from the site. Multimodal options include the various public bus options, bicycling, car-sharing/pooling, or utilizing the newly constructed sidewalks as a pedestrian to access goods and services that are in the vicinity of the site.

Crash Data

The street network in the project vicinity was analyzed for crashes. Lancaster, Cedar, Oxford, and Chestnut Streets have all been classified as local streets by Maine DOT. The following tables represent the crash data on these roads over the past three years.

Along Cedar Street	
Crash Date	**Type of Crash**
1/3/2021	Property Damage
1/6/2022	Pedestrians (Injury)
1/15/2022	Property Damage
4/3/2022	Property Damage
8/17/2022	Property Damage
9/25/2022	Property Damage
2/7/2023	Property Damage
11/28/2023	Property Damage
1/9/2024	Property Damage
1/19/2024	Property Damage

Crash data was obtained from MaineDOT for the most recent available three-year period (2021-2023). There have been 10 crashes near the three project phases. Only one crash along Oxford Street did result in injuries.

Based on the relative minor nature of reported crashes and existing intersection conditions, the net trip generation provided, and proposed traffic calming improvements, it is not anticipated for this project to have a negative impact on the surrounding street network.

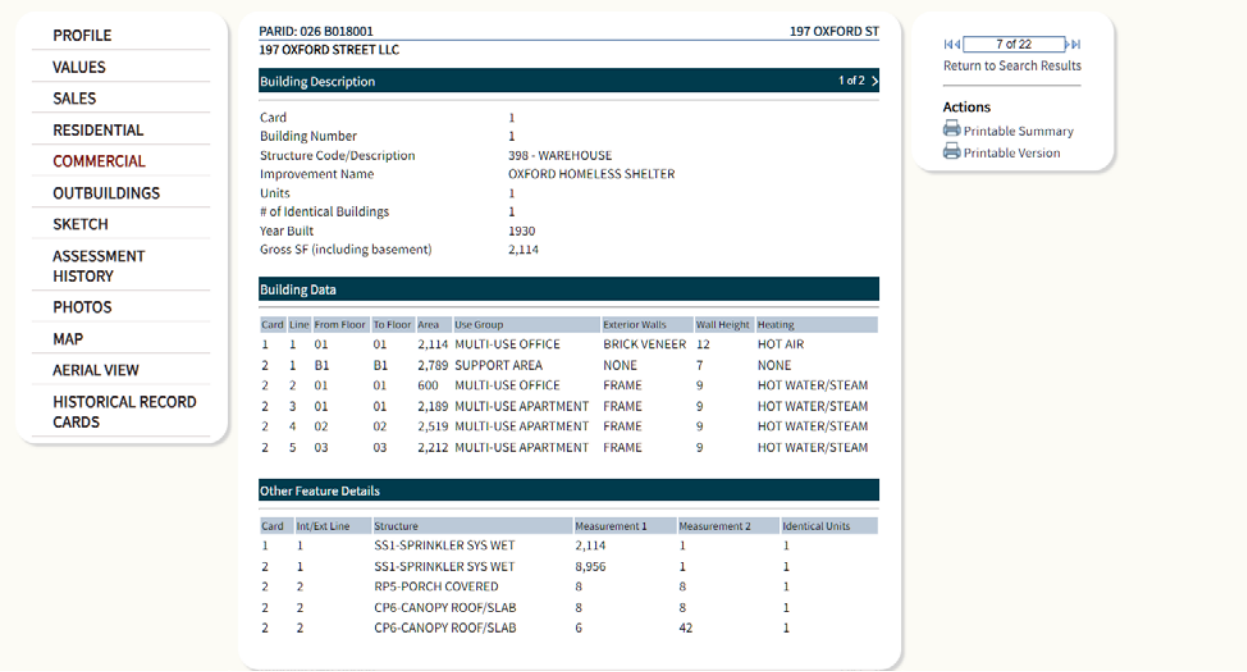
Conclusion

Overall, the project does not anticipate negatively influencing the surrounding street system. Given the site's ideal location with direct access to goods and services, the encouragement of multimodal transportation such as bicycles and buses, and the overall existing context of Portland's downtown street grid, this infill project is expected to be seamlessly incorporated into the neighborhood.

Existing Building Overview Appendix:

Existing Buildings			
Building Number	Number of Stories	Type of Building	Size of Building (SF)
201 Oxford Street	3rd Floor, 2nd Floor, 1st Floor, Basement	Office Building – Low Rise	600 SF
197 Oxford Street	1st Floor	Office Building – Low Rise	2,114 SF
50 Cedar Street	3rd Floor, 2nd Floor, 1st Floor, Basement	Residential – Mid Rise	4,500 SF

Portland Assessor for 197 Oxford Street LLC (201 Oxford Street included)



PROFILE
VALUES
SALES
RESIDENTIAL
COMMERCIAL
OUTBUILDINGS
SKETCH
ASSESSMENT HISTORY
PHOTOS
MAP
AERIAL VIEW
HISTORICAL RECORD CARDS

PARID: 026 B018001 — 197 OXFORD ST
197 OXFORD STREET LLC

Building Description — 1 of 2

Card	1
Building Number	1
Structure Code/Description	398 - WAREHOUSE
Improvement Name	OXFORD HOMELESS SHELTER
Units	1
# of Identical Buildings	1
Year Built	1930
Gross SF (including basement)	2,114

Building Data

Card	Line	From Floor	To Floor	Area	Use Group	Exterior Walls	Wall Height	Heating
1	1	01	01	2,114	MULTI-USE OFFICE	BRICK VENEER	12	HOT AIR
2	1	B1	B1	2,789	SUPPORT AREA	NONE	7	NONE
2	2	01	01	600	MULTI-USE OFFICE	FRAME	9	HOT WATER/STEAM
2	3	01	01	2,189	MULTI-USE APARTMENT	FRAME	9	HOT WATER/STEAM
2	4	02	02	2,519	MULTI-USE APARTMENT	FRAME	9	HOT WATER/STEAM
2	5	03	03	2,212	MULTI-USE APARTMENT	FRAME	9	HOT WATER/STEAM

Other Feature Details

Card	Int/Ext Line	Structure	Measurement 1	Measurement 2	Identical Units
1	1	SS1-SPRINKLER SYS WET	2,114	1	1
2	1	SS1-SPRINKLER SYS WET	8,956	1	1
2	2	RP5-PORCH COVERED	8	8	1
2	2	CP6-CANOPY ROOF/SLAB	8	8	1
2	2	CP6-CANOPY ROOF/SLAB	6	42	1

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Return to Search Results

Actions
Printable Summary
Printable Version



201 Oxford Street



197 Oxford Street



50 Cedar Street

ATTACHED:

Institute of Transportation Engineers (ITE) 11th Edition Excerpts from applicable Land Use Codes (LUC).

Land Use: 210
Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

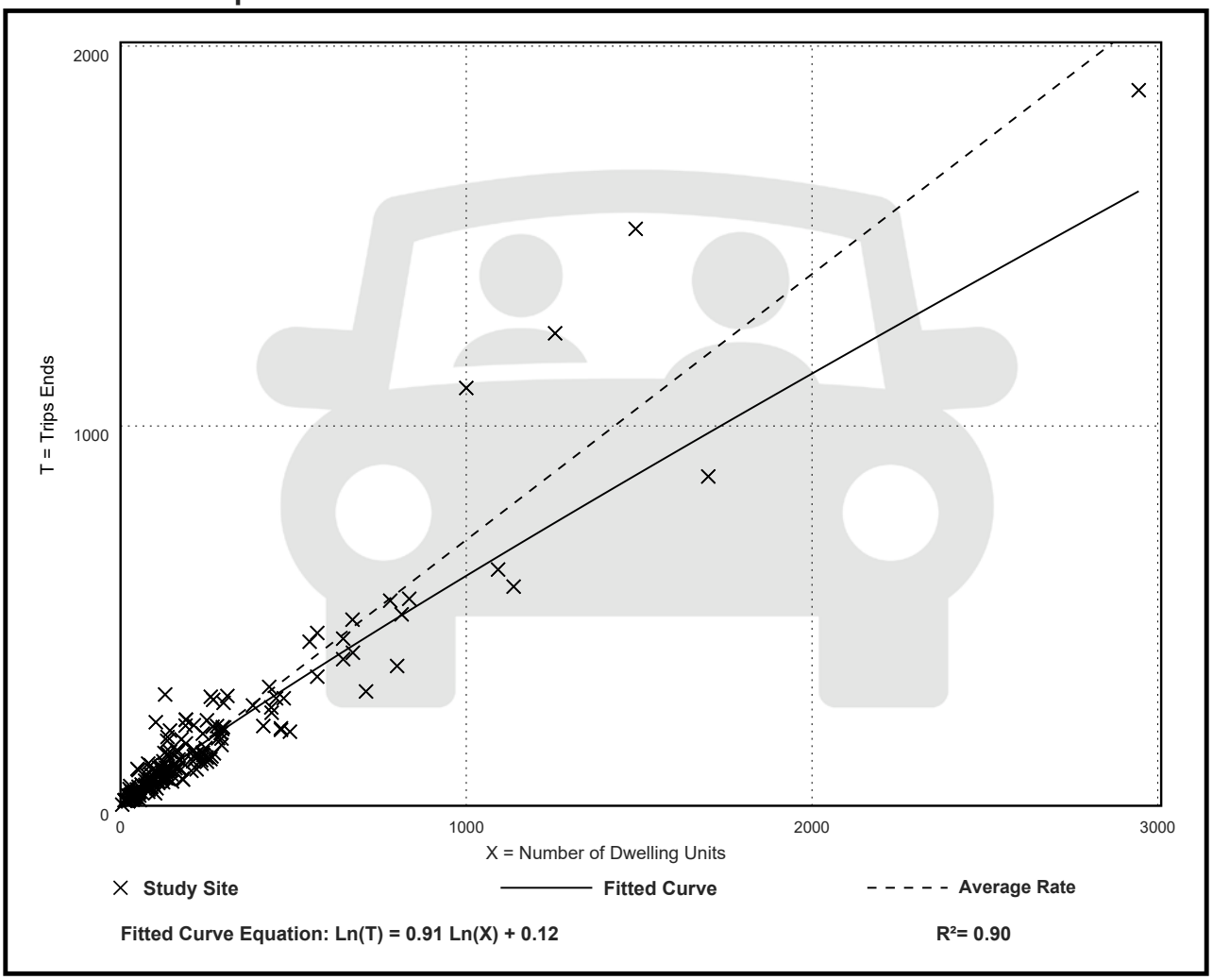
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 192
Avg. Num. of Dwelling Units: 226
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



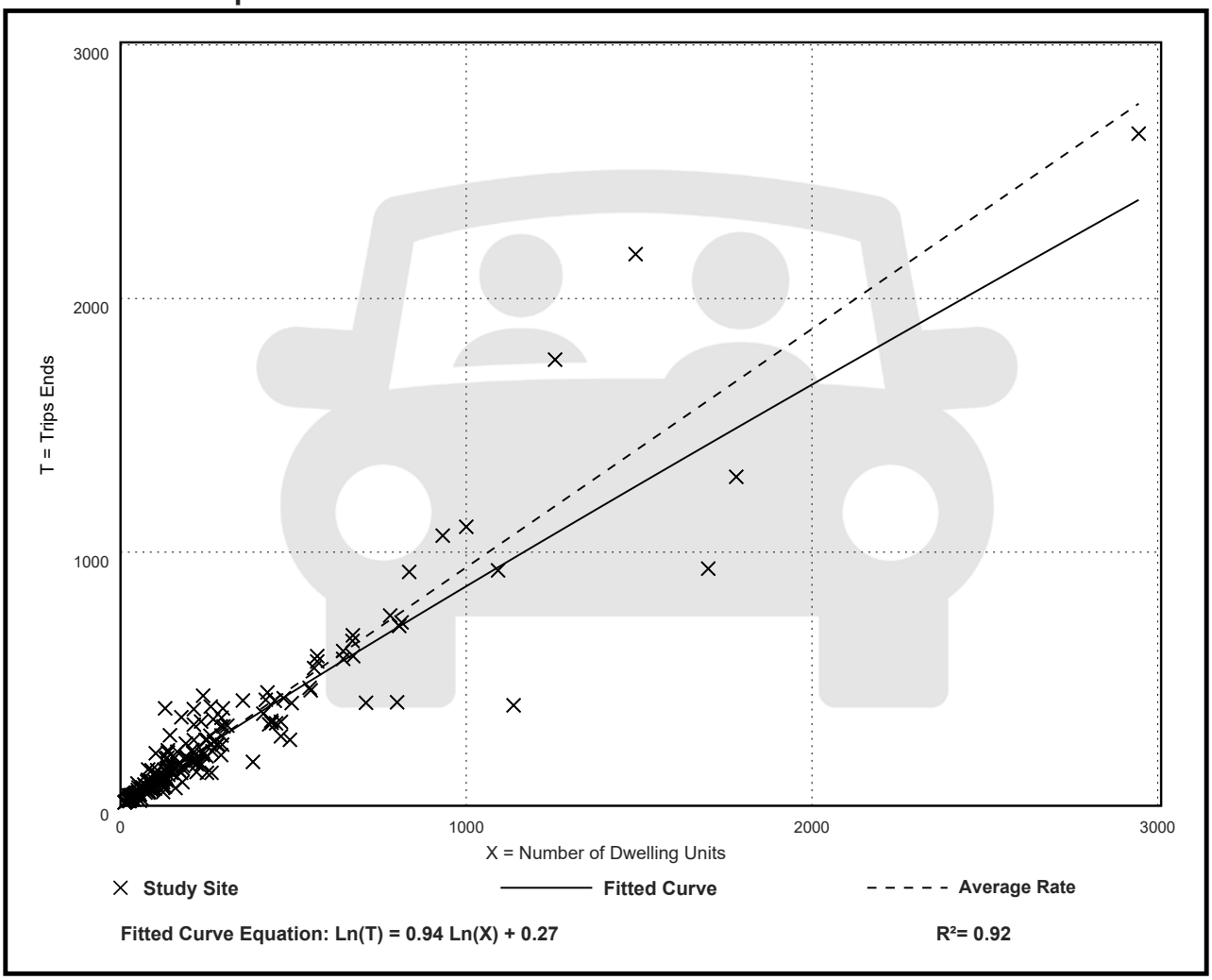
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Single-Family Detached Housing
(210)

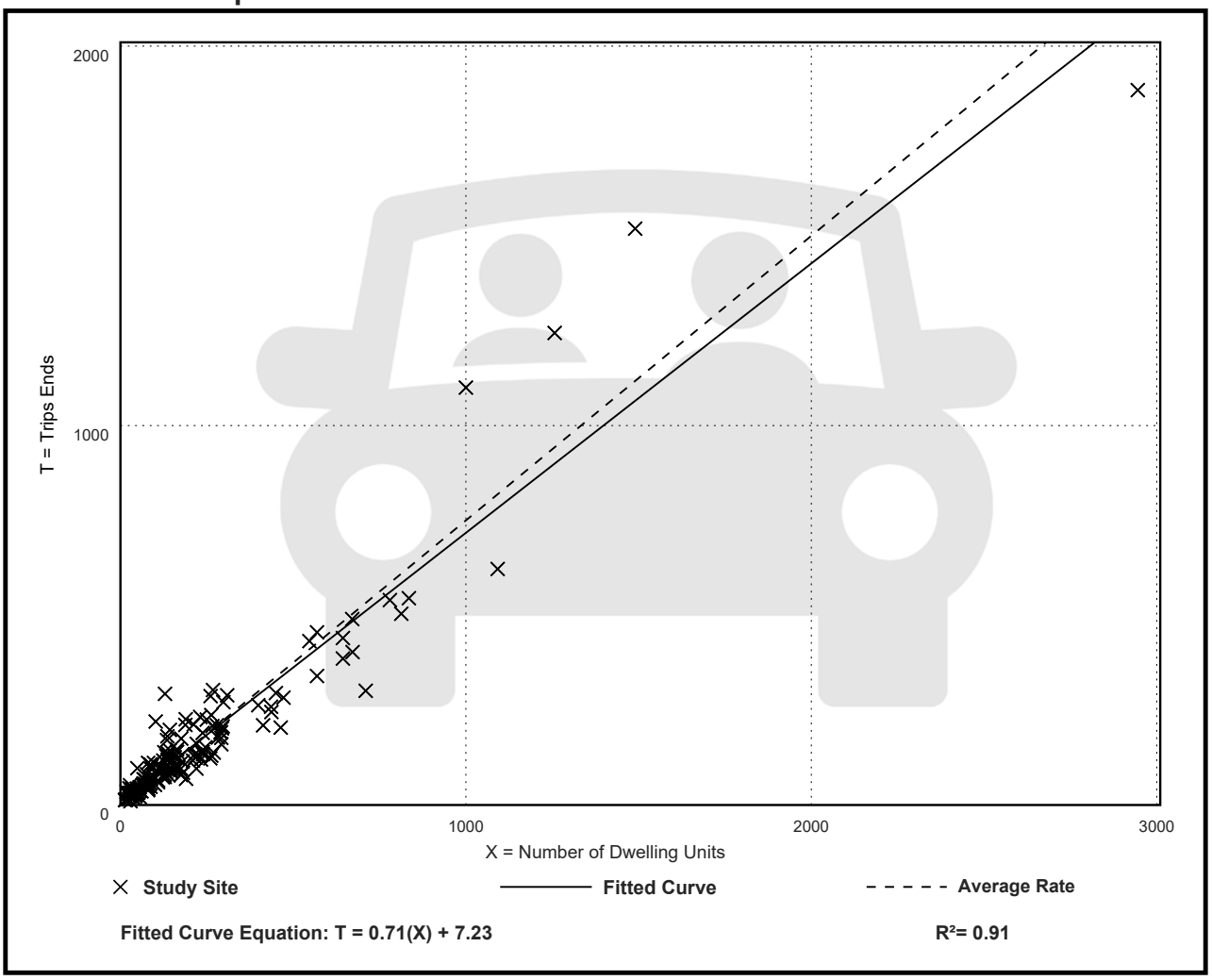
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 169
Avg. Num. of Dwelling Units: 217
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.75	0.34 - 2.27	0.25

Data Plot and Equation



Single-Family Detached Housing
(210)

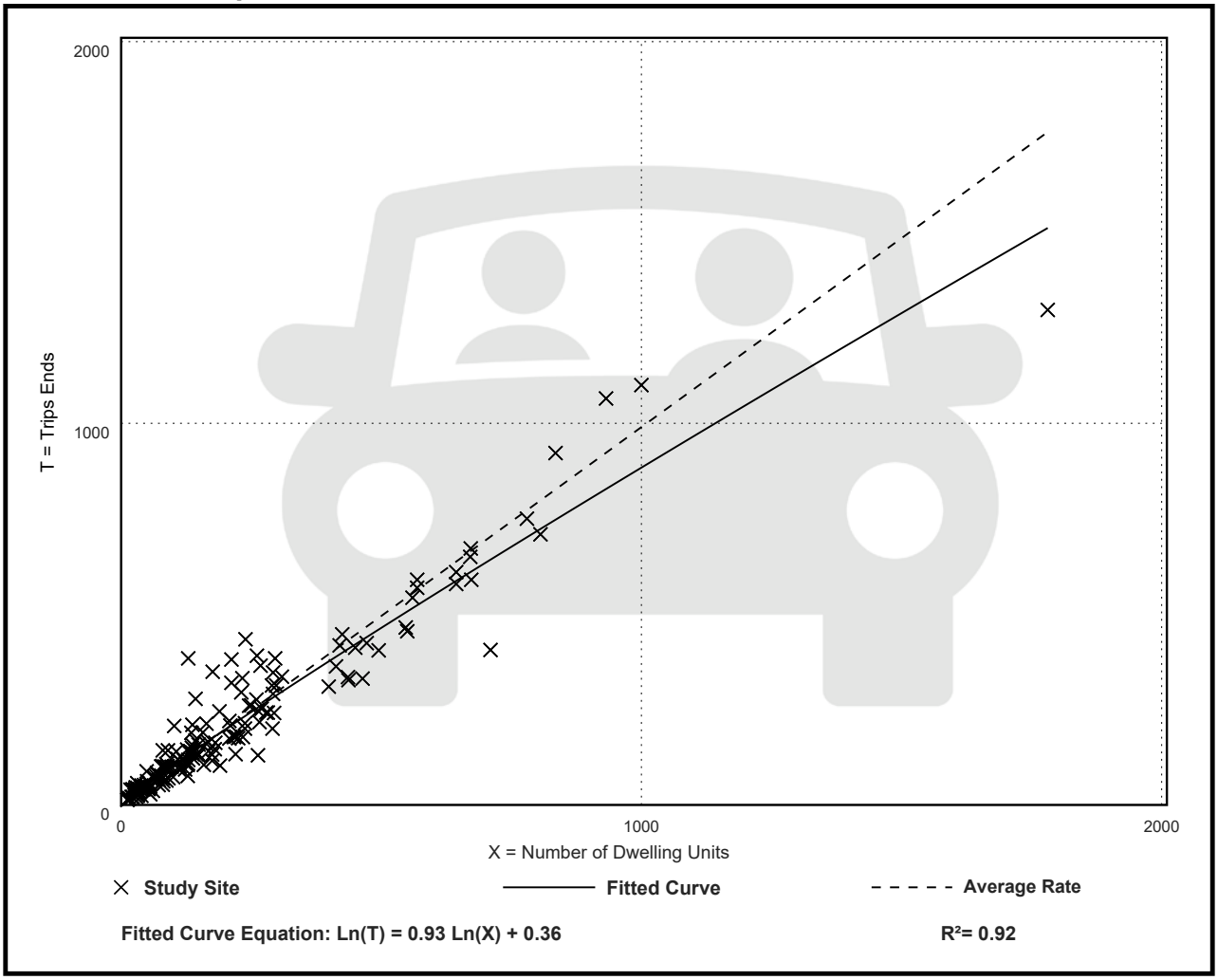
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 178
Avg. Num. of Dwelling Units: 203
Directional Distribution: 64% entering, 36% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.49 - 2.98	0.28

Data Plot and Equation



Single-Family Detached Housing
(210)

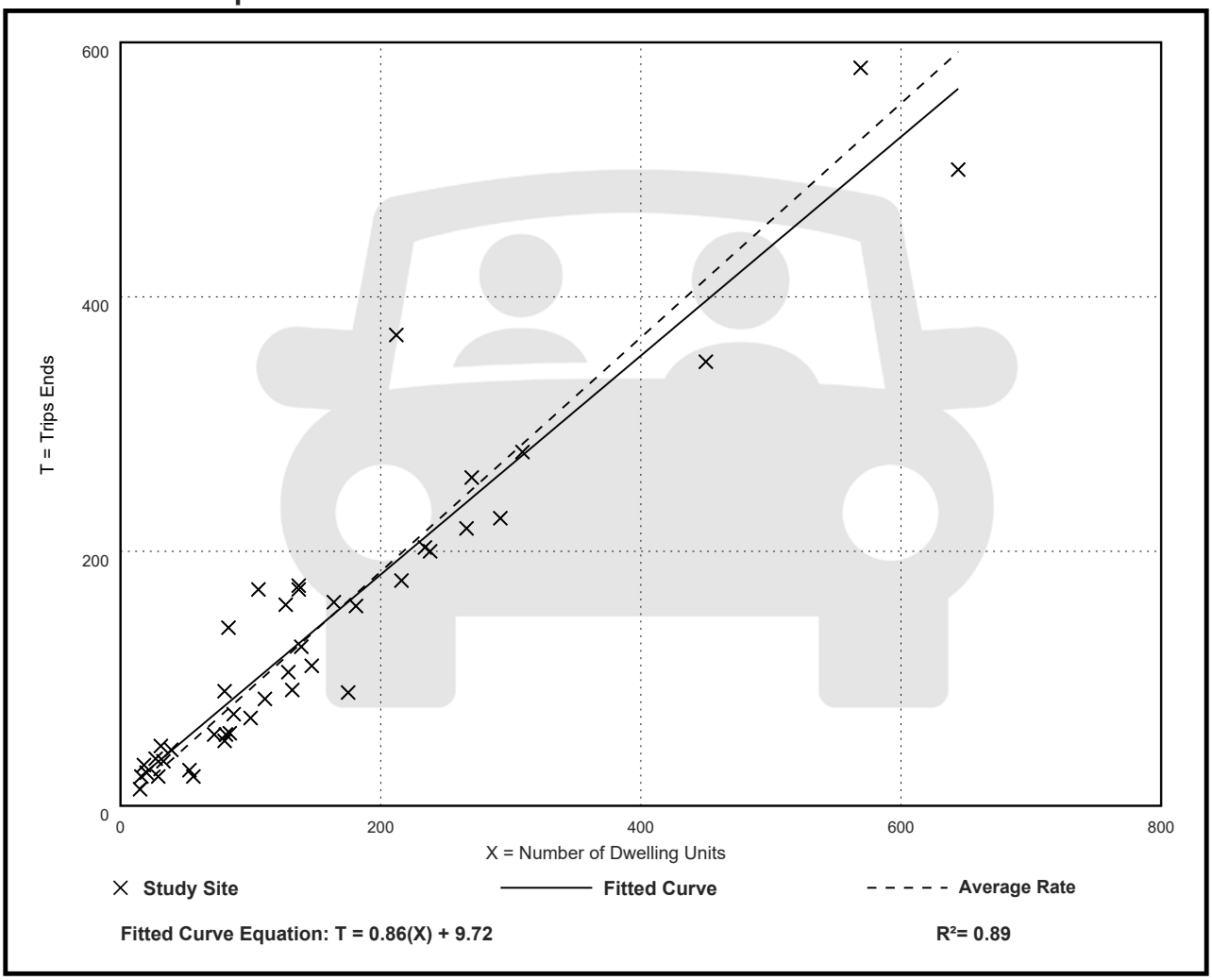
Vehicle Trip Ends vs: Dwelling Units
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 42
Avg. Num. of Dwelling Units: 152
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.92	0.41 - 1.78	0.27

Data Plot and Equation



Single-Family Detached Housing
(210)

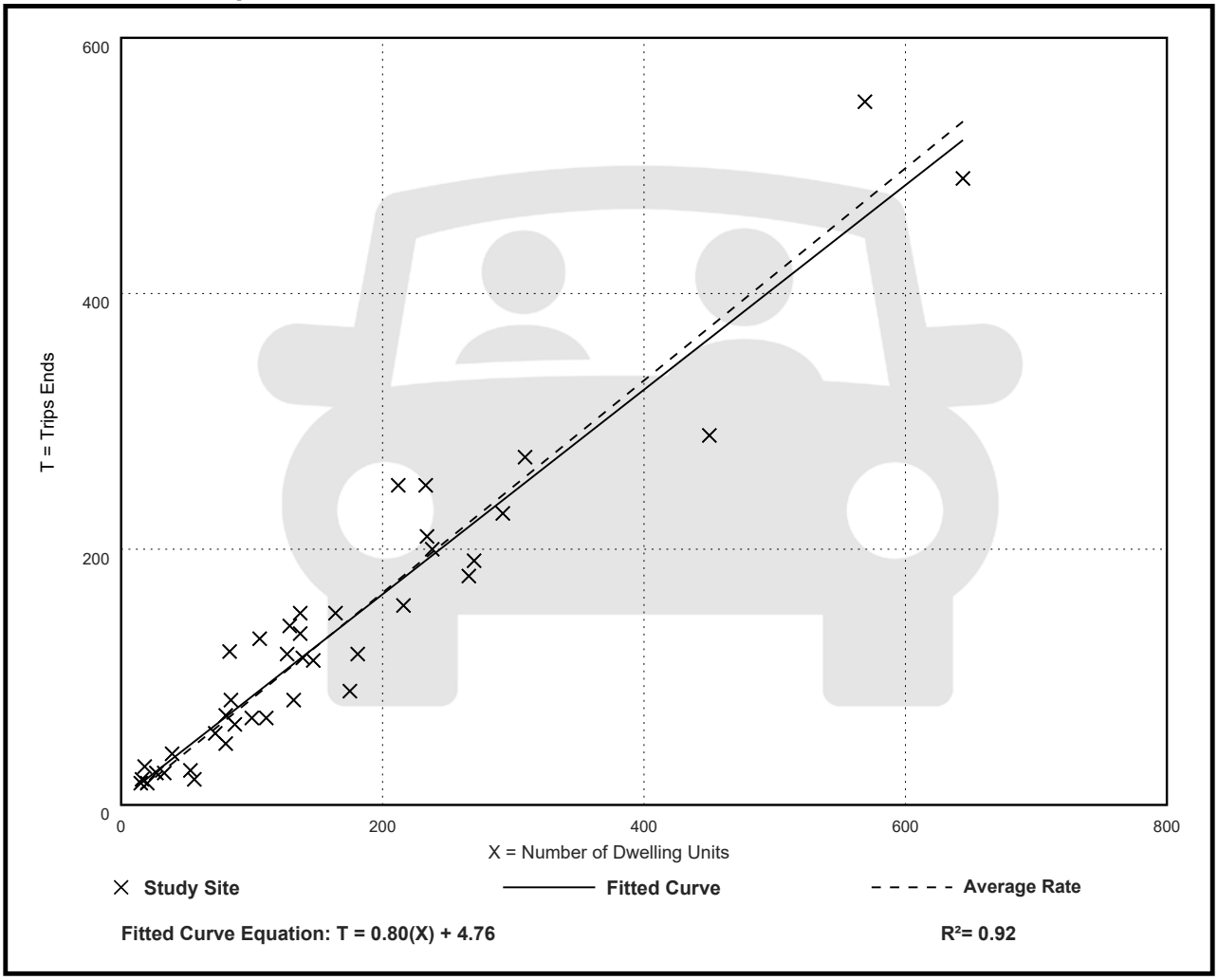
Vehicle Trip Ends vs: Dwelling Units
On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 40
Avg. Num. of Dwelling Units: 162
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.83	0.36 - 1.67	0.19

Data Plot and Equation



Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

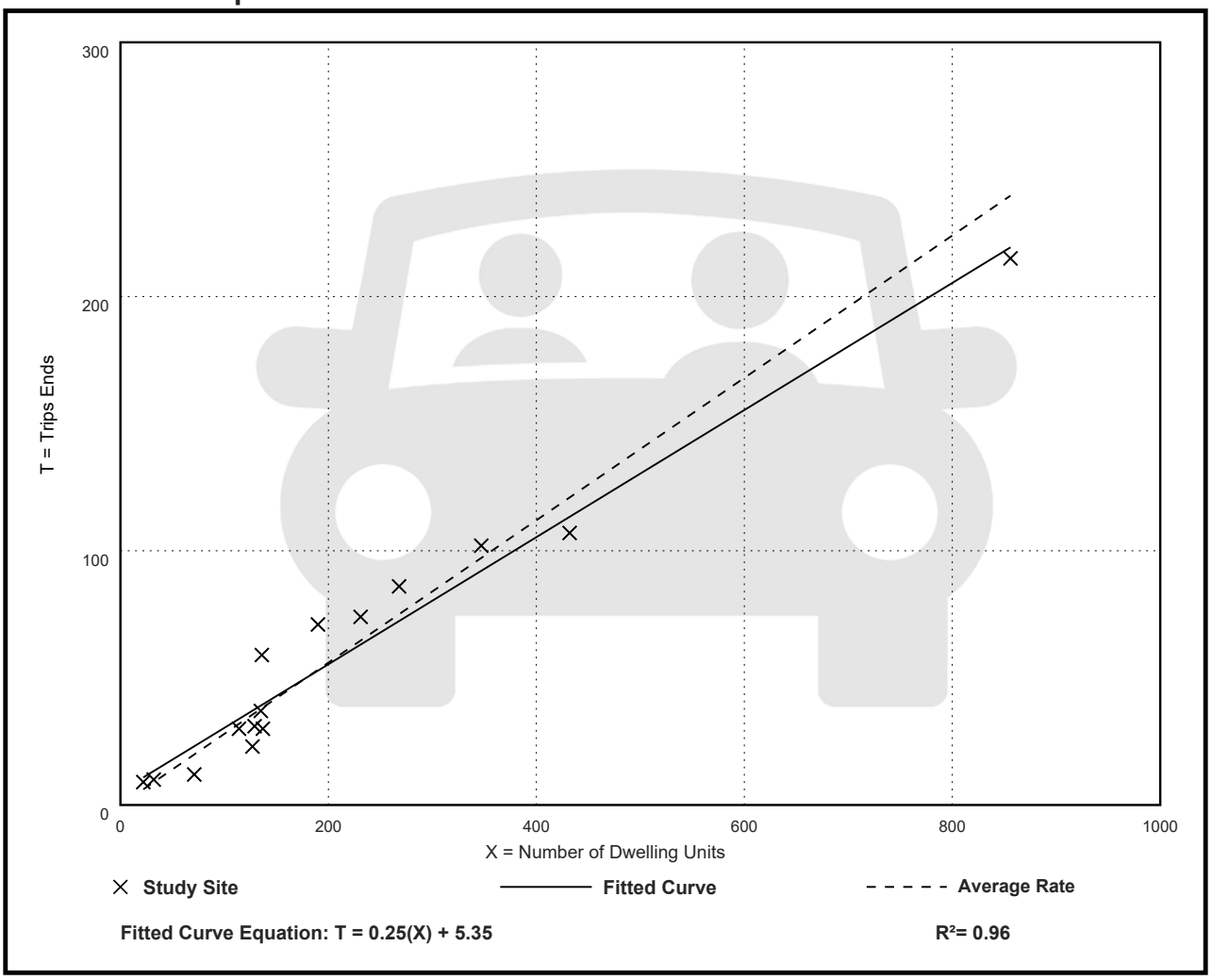
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 15
Avg. Num. of Dwelling Units: 215
Directional Distribution: 15% entering, 85% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.28	0.17 - 0.43	0.06

Data Plot and Equation



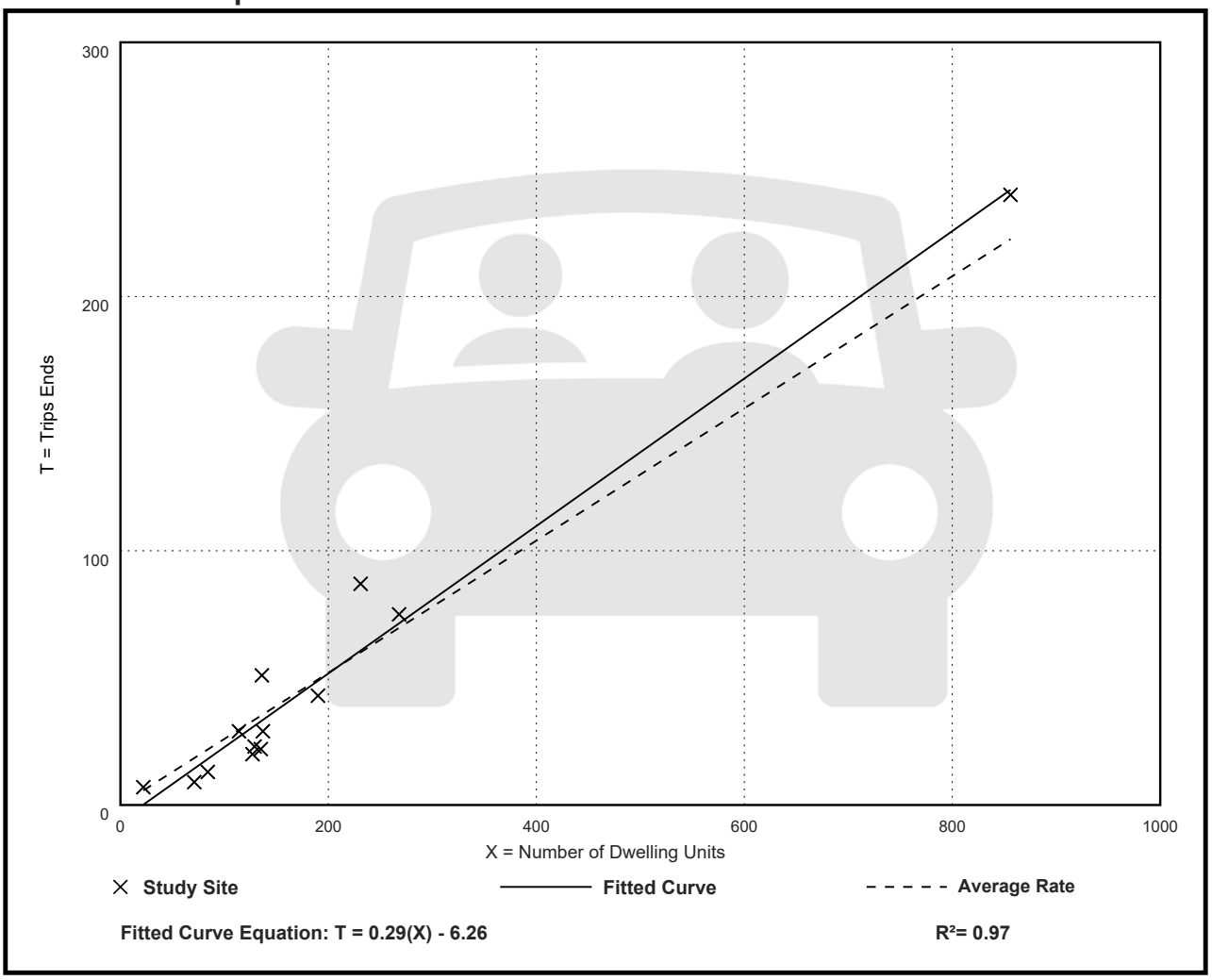
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 13
Avg. Num. of Dwelling Units: 192
Directional Distribution: 73% entering, 27% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.26	0.13 - 0.38	0.07

Data Plot and Equation



Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

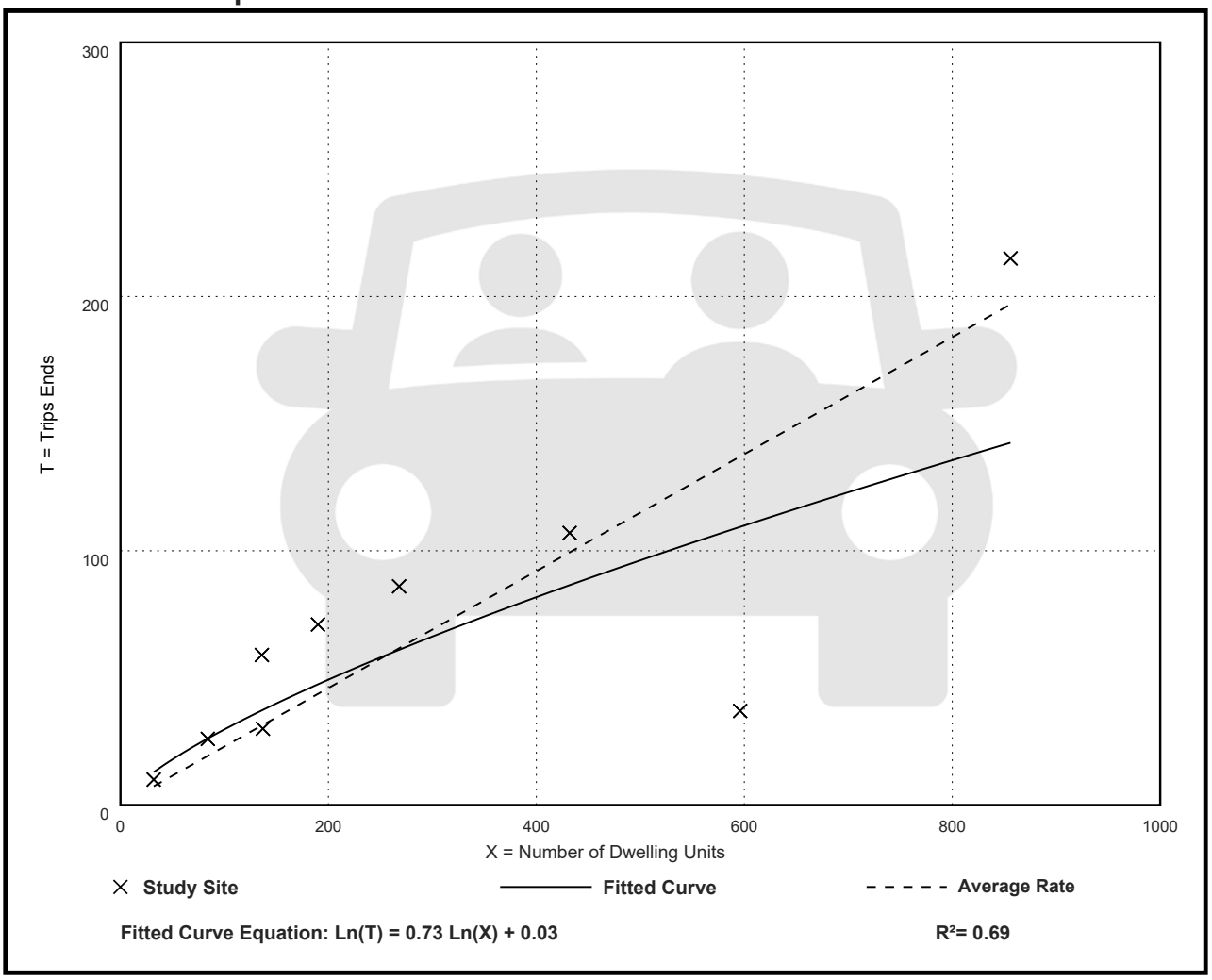
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: Dense Multi-Use Urban
Number of Studies: 9
Avg. Num. of Dwelling Units: 303
Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.23	0.06 - 0.43	0.11

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.73 Ln(X) + 0.03

R^2= 0.69

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

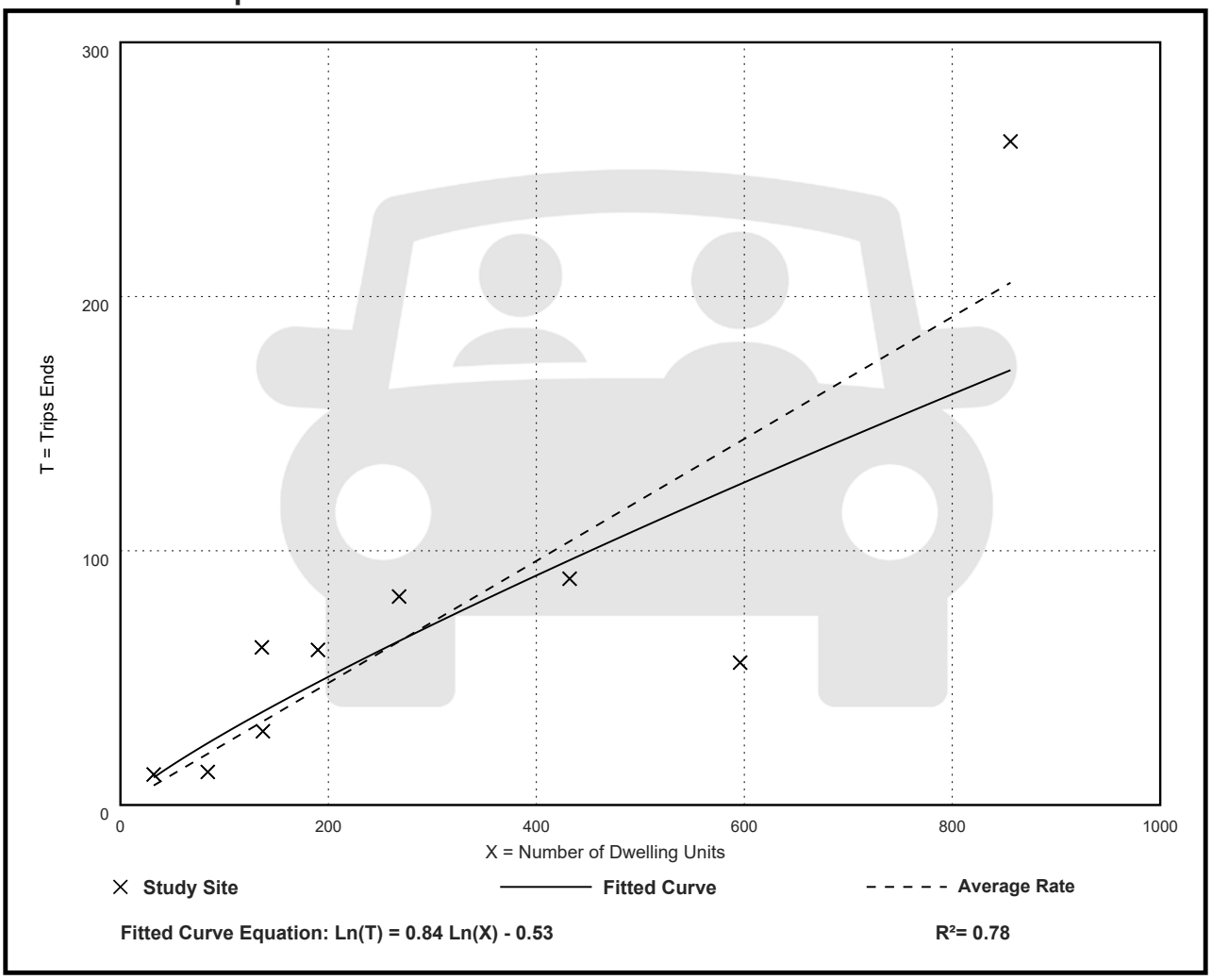
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: Dense Multi-Use Urban
Number of Studies: 9
Avg. Num. of Dwelling Units: 303
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.24	0.09 - 0.46	0.11

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.84 Ln(X) - 0.53

R^2= 0.78

Land Use: 223
Affordable Housing

Description

Affordable housing includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and resident age. Multifamily housing (low-rise) (Land Use 220), multifamily housing (mid-rise) (Land Use 221), and multifamily housing (high-rise) (Land Use 222) are related land uses.

Land Use Subcategory

Data are presented for three subcategories for this land use: (1) sites with income limitations for its tenants (denoted as income limits in the data plots), (2) sites with both minimum age thresholds and income limitations for its tenants (denoted as senior in the data plots), and (3) sites designed for and occupied by residents with special needs, such as persons with physical and mental impairments, single mothers, recovering addicts and others living in a group setting.

Additional Data

For most study sites contained in this land use, all dwelling units in the development are classified as affordable units. For residential study sites that provide a mix of market value and affordable units, the study sites with at least 75 percent of the dwelling units designated as affordable are also included in this land use database.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s and 2010s in California, Ontario (CAN), and New Jersey.

Source Numbers

237, 918, 1003, 1004, 1046, 1057

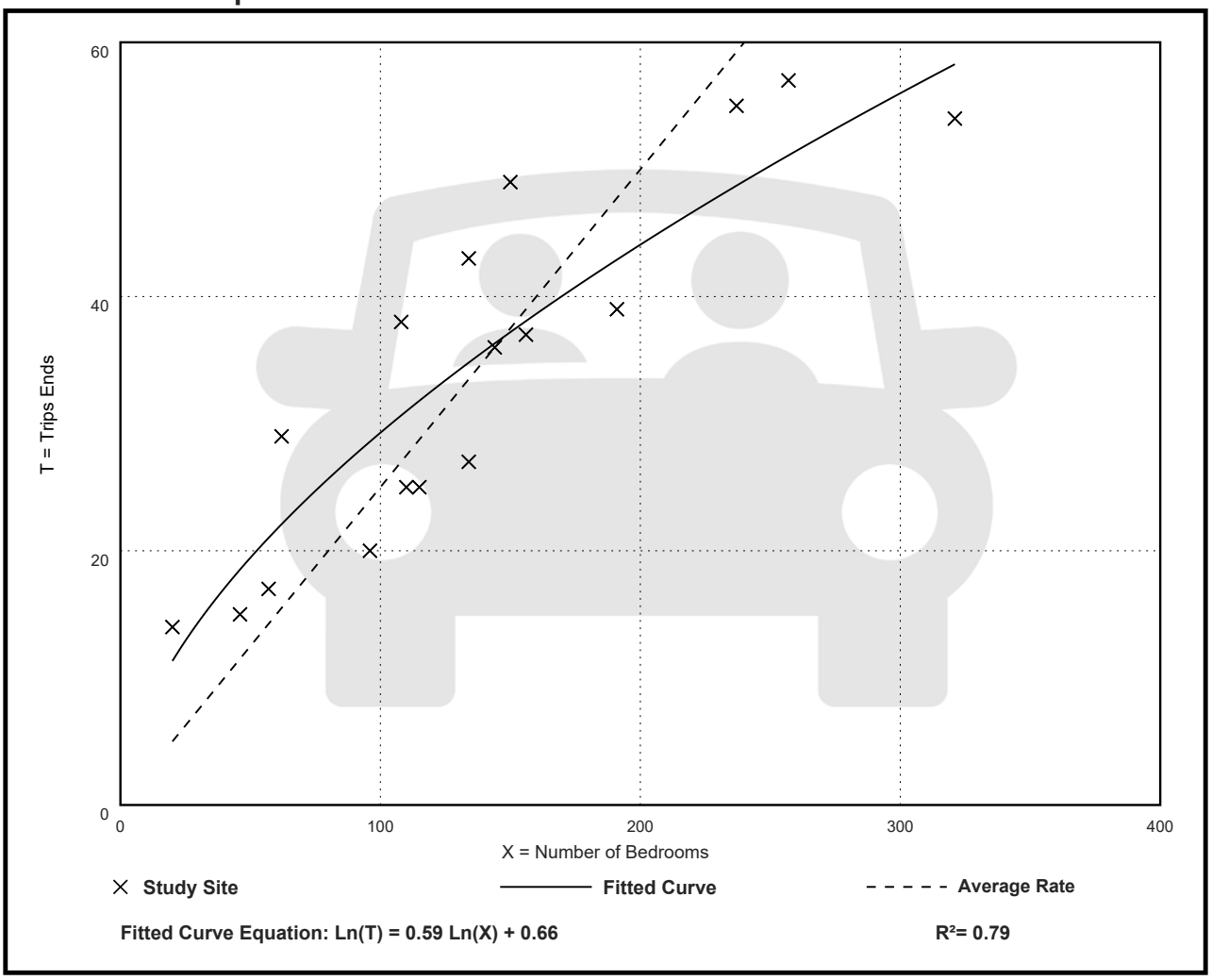
Affordable Housing - Income Limits
(223)

Vehicle Trip Ends vs: Bedrooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 17
Avg. Num. of Bedrooms: 138
Directional Distribution: 33% entering, 67% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.25	0.17 - 0.70	0.08

Data Plot and Equation



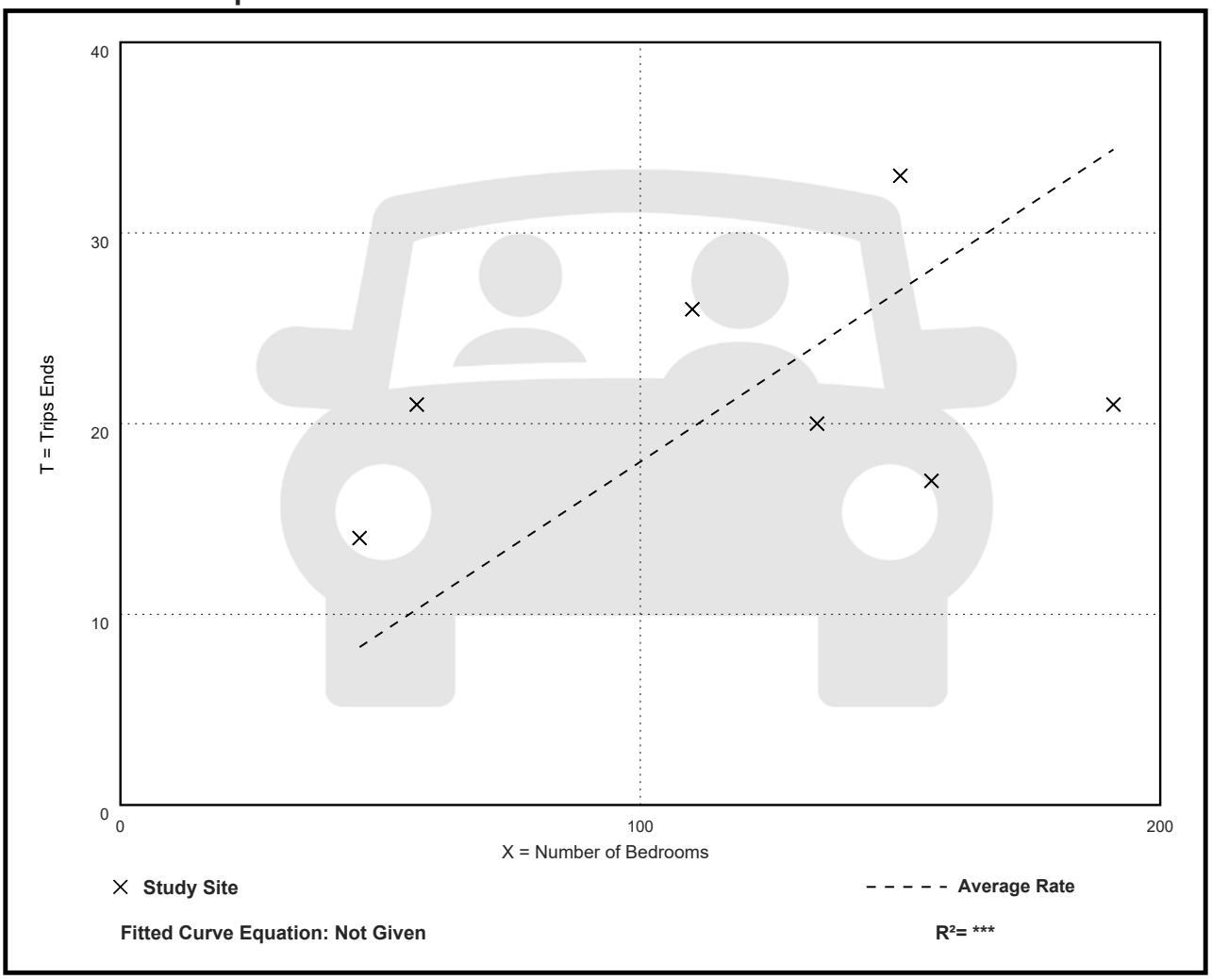
Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Bedrooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 7
Avg. Num. of Bedrooms: 121
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.18	0.11 - 0.37	0.08

Data Plot and Equation



Affordable Housing - Income Limits
(223)

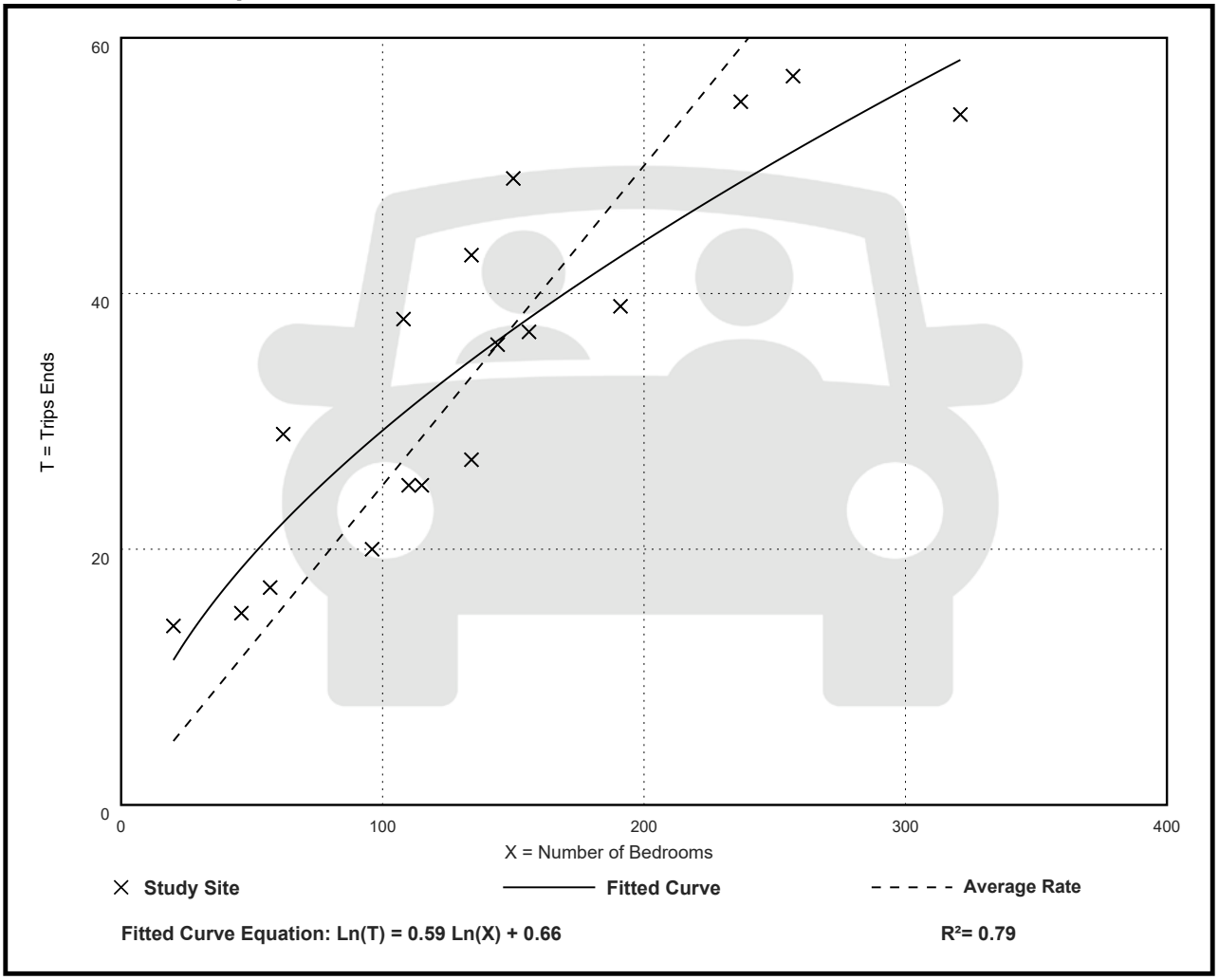
Vehicle Trip Ends vs: Bedrooms
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: Dense Multi-Use Urban
Number of Studies: 17
Avg. Num. of Bedrooms: 138
Directional Distribution: 33% entering, 67% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.25	0.17 - 0.70	0.08

Data Plot and Equation



Affordable Housing - Income Limits
(223)

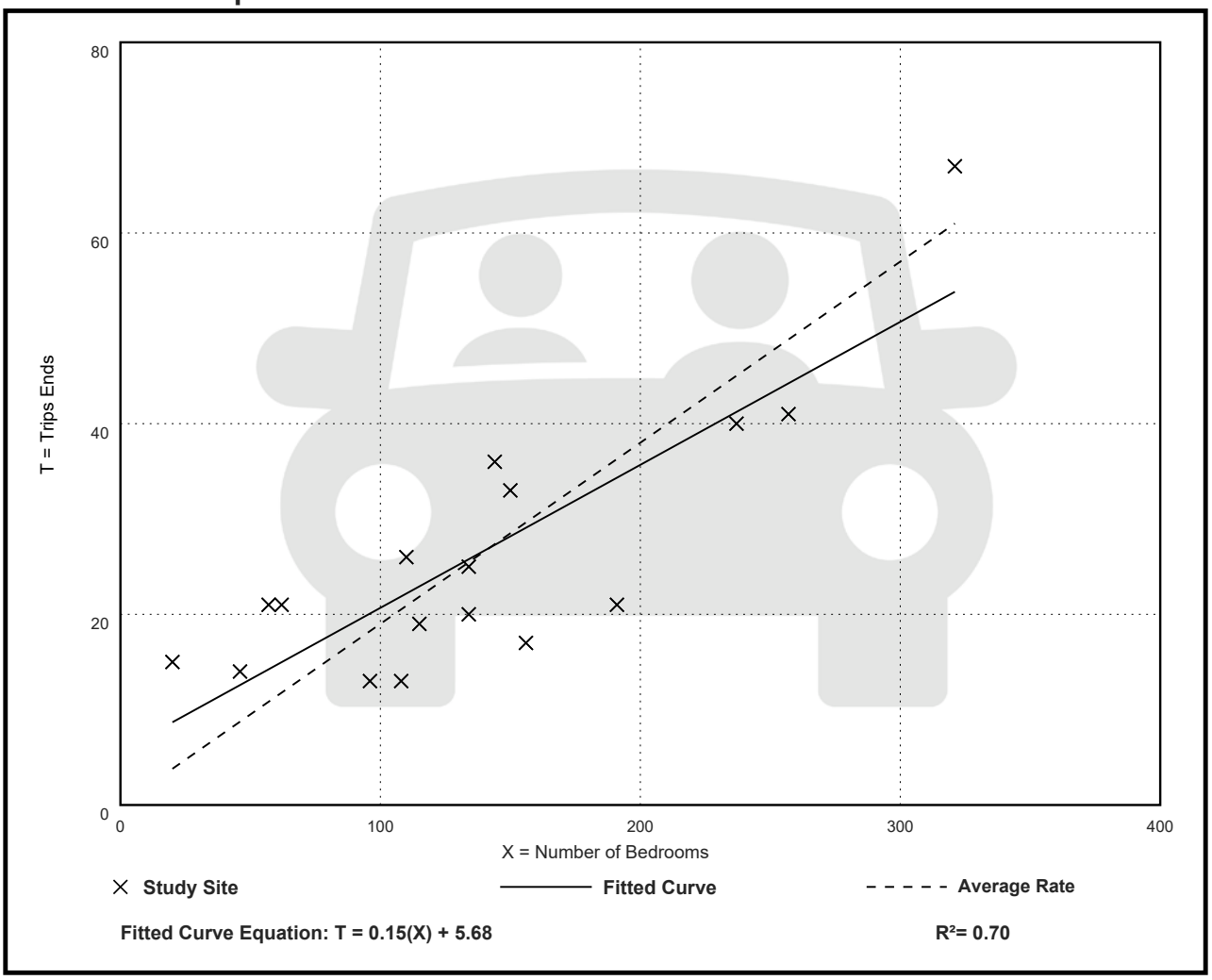
Vehicle Trip Ends vs: Bedrooms
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: Dense Multi-Use Urban
Number of Studies: 17
Avg. Num. of Bedrooms: 138
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.19	0.11 - 0.75	0.08

Data Plot and Equation



Land Use: 710
General Office Building

Description

A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building houses multiple tenants that can include, as examples, professional services, insurance companies, investment brokers, a banking institution, a restaurant, or other service retailers. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), medical-dental office building (Land Use 720), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

Additional Data

If two or more general office buildings are in close physical proximity (within a close walk) and function as a unit (perhaps with a shared parking facility and common or complementary tenants), the total gross floor area or employment of the paired office buildings can be used for calculating the site trip generation. If the individual buildings are isolated or not functionally related to one another, trip generation should be calculated for each building separately.

For study sites with reported gross floor area and employees, an average employee density of 3.3 employees per 1,000 square feet GFA (or roughly 300 square feet per employee) has been consistent through the 1980s, 1990s, and 2000s. No sites counted in the 2010s reported both GFA and employees.

The average building occupancy varies considerably within the studies for which occupancy data were provided. The reported occupied gross floor area was 88 percent for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The average numbers of person trips per vehicle trip at the eight center city core sites at which both person trip and vehicle trip data were collected are as follows:

- 2.8 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 2.9 during Weekday, AM Peak Hour of Generator
- 2.9 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.

- 3.0 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 18 dense multi-use urban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.5 during Weekday, AM Peak Hour of Generator
- 1.5 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.5 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 23 general urban/suburban sites at which both person trip and vehicle trip data were collected are as follows:

- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.3 during Weekday, AM Peak Hour of Generator
- 1.3 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.4 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Ontario (CAN)Pennsylvania, Texas, Utah, Virginia, and Washington.

Source Numbers

161, 175, 183, 184, 185, 207, 212, 217, 247, 253, 257, 260, 262, 273, 279, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 419, 423, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 940, 944, 946, 964, 965, 972, 1009, 1030, 1058, 1061

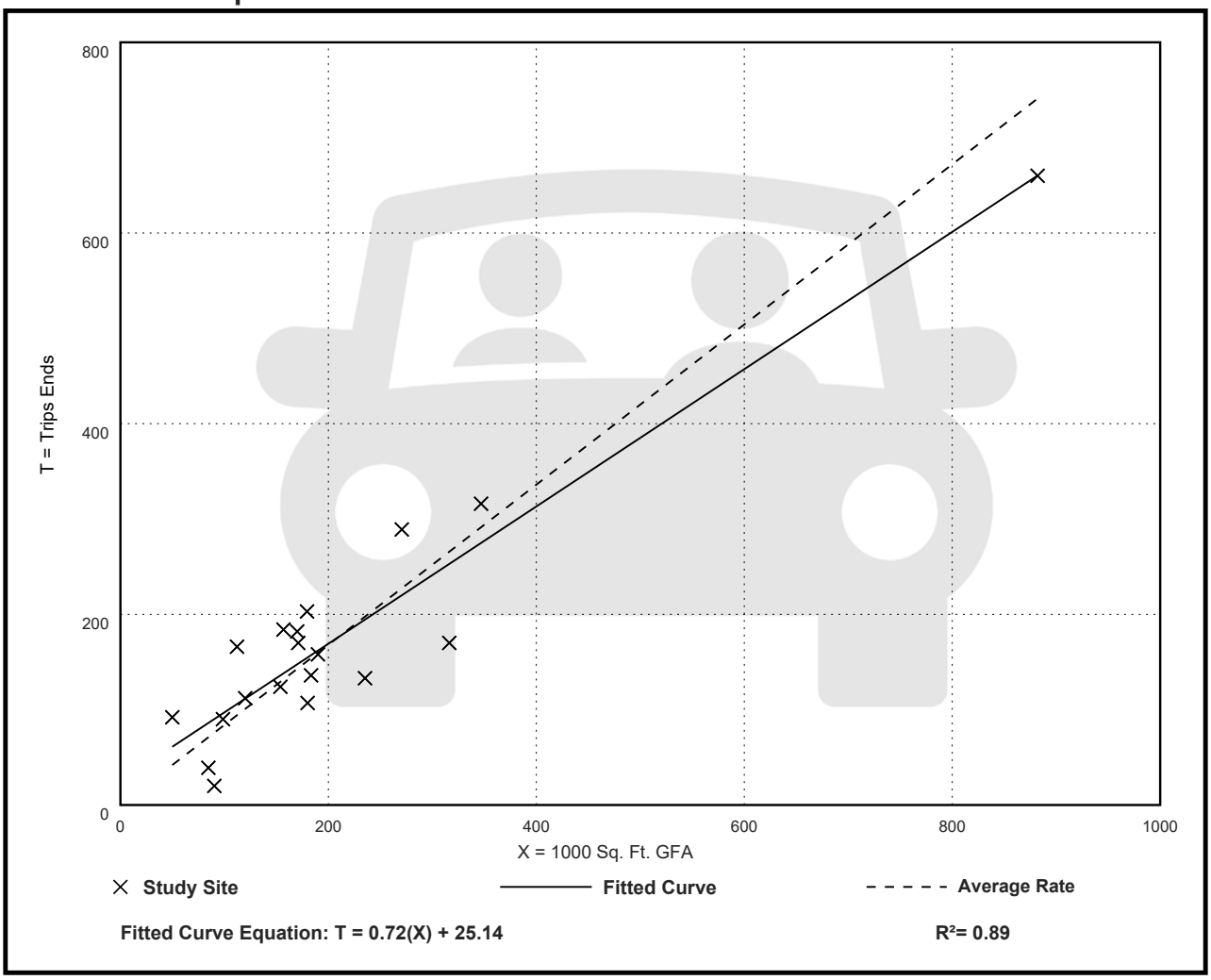
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 19
Avg. 1000 Sq. Ft. GFA: 210
Directional Distribution: 87% entering, 13% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.84	0.22 - 1.84	0.27

Data Plot and Equation



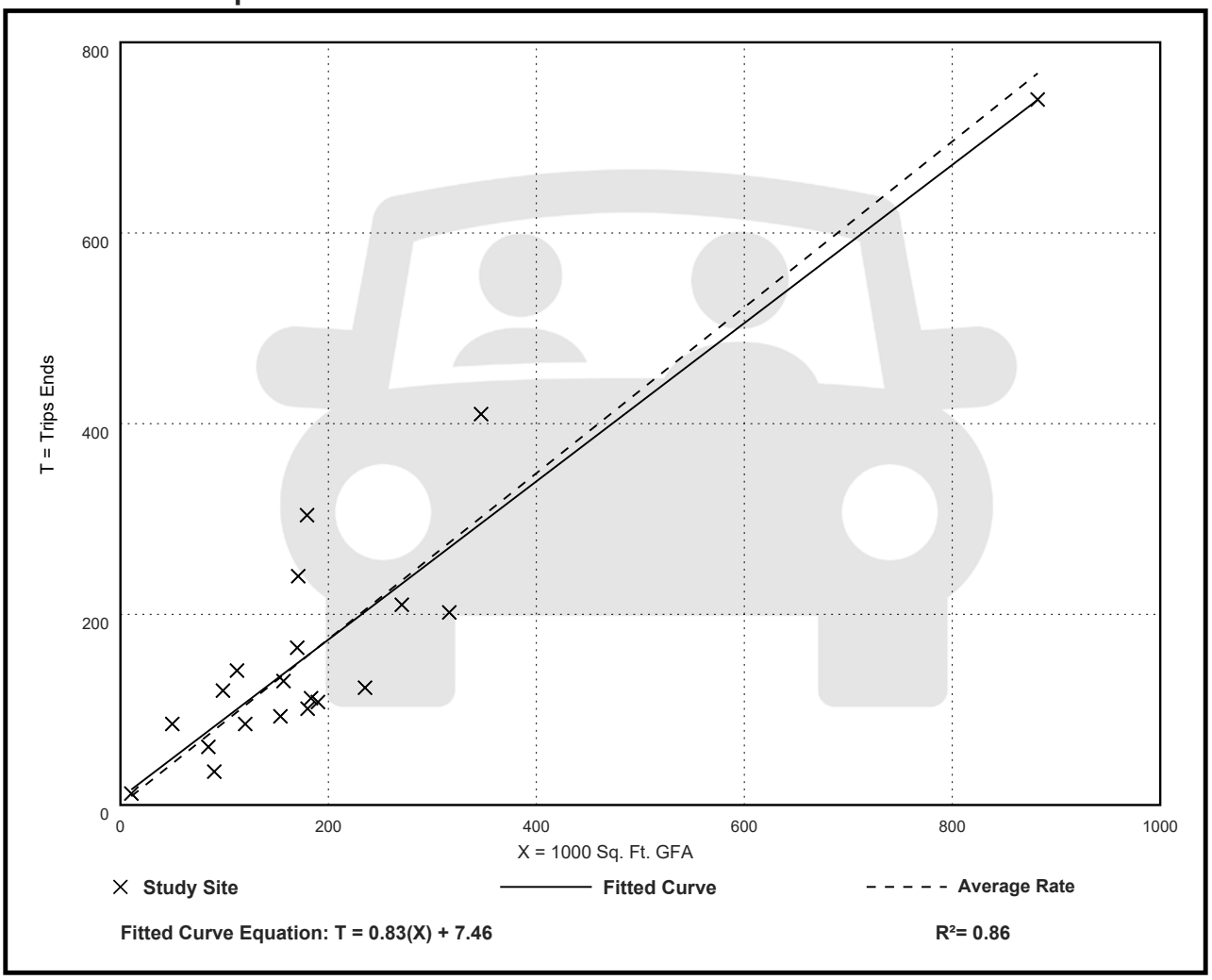
General Office Building
(710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: Dense Multi-Use Urban
Number of Studies: 20
Avg. 1000 Sq. Ft. GFA: 200
Directional Distribution: 16% entering, 84% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.87	0.39 - 1.70	0.33

Data Plot and Equation



ACORN ENGINEERING, INC.

Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

April 11th, 2024

Subject: Phased Oxford Street Redevelopment Neighborhood Meeting

I, Sam Lebel, hereby certify that a neighborhood meeting was held on March 6th, 2024, at 409 Cumberland Ave, Portland, ME 04101, at 5:30 pm.

I also certify that on February 23rd, 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.

The following documents are included with this certification letter:

1. Copy of the invitation letter sent out prior to the neighborhood meeting.
2. Documentation of Public Notice signage posted for the neighborhood meeting and Intent to file Site Plan Review.
3. Meeting sign-in sheet.
4. Copy of the mailing list.

ACORN ENGINEERING, INC.

Dear Neighbor: February 23, 2024

On behalf of Avesta Housing and Reveler, we are pleased to invite you to a neighborhood meeting to discuss the proposed Major Site Plan Application anticipated to be submitted on April 8th, 2024. The proposal features a joint application between Avesta and Reveler and will seek to redevelop several parcels at 197 Oxford, 50 Cedar, and 158 Lancaster Streets into residential buildings. This meeting will be focused on the plans for 197 Oxford Street which proposes a 5-story building with 52 affordable units co-managed by Avesta and Preble Street.

This meeting is required because the project intends to utilize the affordable housing density bonus in Section 18.2.4 of the City Code. At a minimum, a second neighborhood meeting will be held later this year prior to any Planning Board meetings, which you will also receive an invitation to. Please refer to the meeting information below:

Meeting Location: 1st Floor Community Room, 409 Cumberland Ave, Portland, ME 04101
Meeting Date/Time: Wednesday, March 6, 2024, at 5:30pm

Sincerely,

Sam Lebel

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

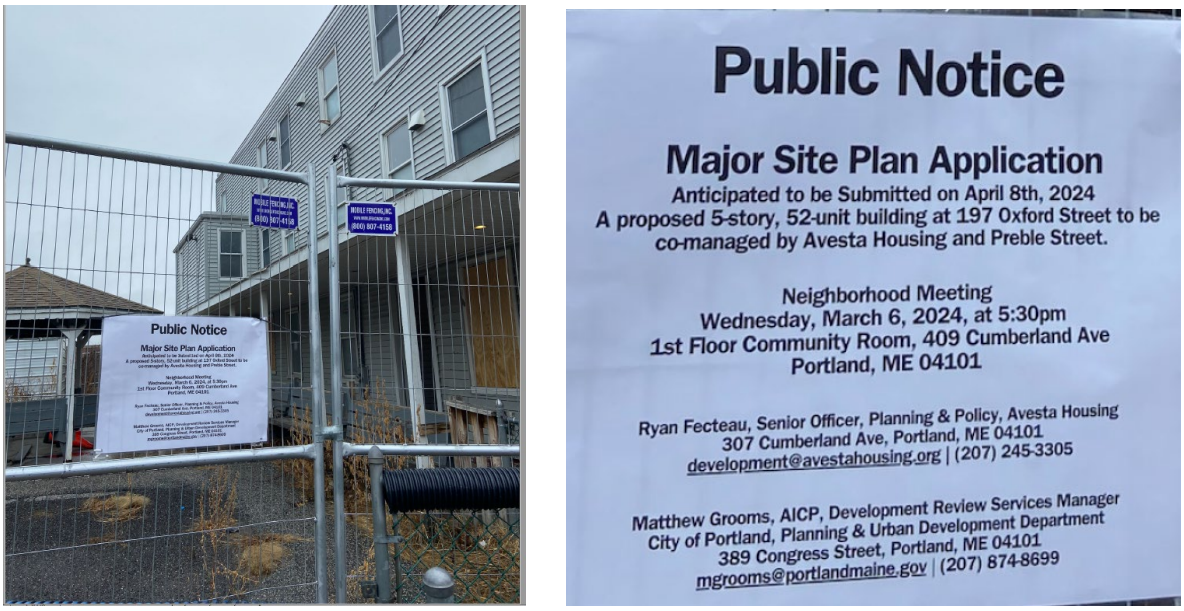
ACORN ENGINEERING, INC.

Planning Division
City of Portland, Maine
Attn: Zach Powell
315 Cumberland Avenue
Portland, ME 04101

April 11th, 2024

Subject: Phased Oxford Street Redevelopment – Notice of Public Meeting & Intent to File Site Plan Application Certification

I, Danielle McGowan, hereby certify that signage was posted for the notice of neighborhood meeting and the intent to file for the Joint Major Site Plan Application. Signs were posted on February 23rd, 2024, prior to filing for the Major Site Plan Application for the proposed project. Photo documentation of sign in-situ:



Public Notice signage posted for Intent to file Site Plan Review

Please note, it is the applicant's responsibility and intention to remove the notice of public meeting sign within three days following the date of the meeting.

Sincerely,

Danielle McGowan, E.I.
Project Engineer
Acorn Engineering, Inc.

Sign-in Sheet **Participants:**

Name	Email
Brittney Dunham	bdunham@preblestreet.org
Andrew Bove	above@preblestreet.org
Sarah Michniewicz	SarahMichniewicz@mac.com
John Dolewa	John.Dolewa@gmail.com
Lenora Dolewa	jdolewa@maine.rr.com
Jed Nitchy	jednitchy@gmail.com
George Arsenault	on file
Christine Arsenault	carsenault3@gmail.com
Heather Latham	
Ryan Fecteau	rfecteau@avestahousing.org
Deborah Fell	dffell@yahoo.com
Andrew Rocenstein	andrew718@mac.com
C.neal.milneil@gmail.com	Christian Milneil

Sign-in Sheet **Participants:**

Name	Email
Dwoan McCloskey	dmccloskey@maine.rr.com
Jim Hall	Jim@ModernU1.com
John Laliberte	jlaliberte@reveler.com

COMPANY	FIRST NAME	LAST NAME	ADDRESS	CITY	STATE	ZIP
114 PREBLE BLOCK LLC			26 SHAW AVE	ROCKLAND	ME	04841
125 KENNEBEC STREET CONDO			125 KENNEBEC ST	PORTLAND	ME	04101
141 PLEASANT STREET LLC			307 MAIN ST	HANOVER	MA	02339
149 LANCASTER STREET LLC			82 HANOVER ST	PORTLAND	ME	04101
150 PEARL STREET LLC			225 CUMBERLAND AVE	PORTLAND	ME	04101
197 OXFORD STREET LLC			82 HANOVER ST	PORTLAND	ME	04101
198 OXFORD STREET PORTLAND LLC			62 PORTLAND RD STE 25A	KENNEBUNK	ME	04043
200 OXFORD STREET PORTLAND LLC			62 PORTLAND RD STE 25A	KENNEBUNK	ME	04043
21 CEDAR STREET PORTLAND LLC			62 PORTLAND RD STE 25A	KENNEBUNK	ME	04043
25 CEDAR STREET PORTLAND LLC			62 PORTLAND RD STE 25A	KENNEBUNK	ME	04043
38-40 ALDER LLC			2120 COLORADO AVE STE 160	SANTA MONICA	CA	90404
41 CHESTNUT LLC			PO BOX 805	BRUNSWICK	ME	04011
54 CHESTNUT STREET LLC			450 BAXTER BLVD	PORTLAND	ME	04103
55 CHESTNUT STREET LLC			450 BAXTER BLVD	PORTLAND	ME	04103
56-58 CHESTNUT STREET LLC			450 BAXTER BLVD	PORTLAND	ME	04103
57 CHESTNUT STREET LLC			450 BAXTER BLVD	PORTLAND	ME	04103
60 ELM STREET LLC			82 HANOVER ST	PORTLAND	ME	04101
73 ELM STREET LLC			82 HANOVER ST	PORTLAND	ME	04101
75 CHESTNUT STREET OWNER LLC			35 VILLAGE RD STE 702	MIDDLETON	MA	01949
89 ELM STREET LLC			82 HANOVER ST	PORTLAND	ME	04101
	PETER	AMES	69 ROCK RIDGE RUN	CUMBERLAND	ME	04021
AMWELL GROUP LLC			5 ROLLINS FARM RD	STRATHAM	NH	03885
	EVAN	ANDERSON	21 CHESTNUT ST # 2W	PORTLAND	ME	04101
	DAVID	ANGEL	85 GOUNOD RD	WESTERLY	RI	02891
ASHBY TEAM LLC			415 CONGRESS ST STE 204	PORTLAND	ME	04101
AVESTA HOUSING DEVELOPMENT CORPORATION			307 CUMBERLAND AVE	PORTLAND	ME	04101
AVESTA PEARL STREET ONE LP			307 CUMBERLAND AVE	PORTLAND	ME	04101
AVESTA UNITY VILLAGE LP			307 CUMBERLAND AVE	PORTLAND	ME	04101
	PIERRE	AVIGNON	723 ISLAND AVE	LONG ISLAND	ME	04050
	ABDUL	AZIMI	98 SAWYER ST	SOUTH PORTLAND	ME	04106
	JANET	BAER	411 WALNUT ST # 15658	GREEN COVE SPRINGS	FL	32043
	DONALD	BAILEY	21 CHESTNUT ST # 406	PORTLAND	ME	04101
	NICHOLAS	BARNES	31 BOGASTOW BROOK RD	SHERBORN	MA	01770
	PRUDENCE	BARRY	21 CHESTNUT ST # 6W	PORTLAND	ME	04101
BAYSIDE CONDO			164 PEARL ST	PORTLAND	ME	04101
	MARY	BENNISON	33 CEDAR ST	PORTLAND	ME	04101
	THOMAS	BLACK	8910 HIGHWAY 17 SOUTH	LOUISVILLE	GA	30434
	THOMAS	BLACK	973 FOREST AVE # 2	PORTLAND	ME	04103
	TANIA	BOWEN	164 PEARL ST # B	PORTLAND	ME	04101
BOYS & GIRLS CLUBS OF SOUTHERN MAINE			PO BOX 7830	PORTLAND	ME	04112
	ALBERT	BRESETTE	3 MECHANIC ST	WINDHAM	ME	04062
	REBECCA	BROOKS	80 ACADEMY DR	WOLFEBORO	NH	03894
	PETER	BUSQUE	21 CHESTNUT ST # 08W	PORTLAND	ME	04101
C58ALDER LLC			3375 EAST MAULE AVE	LAS VEGAS	NV	89120
	CLAUDIA	CASAVECCHIA	1011 CLINTON ST # 4	PHILADELPHIA	PA	19107
CASTANEA PRIME LLC			PO BOX 24	FRIENDSHIP	ME	04547
CHESTNUT STREET GARAGE LLC			120 EXCHANGE ST	PORTLAND	ME	04101
CHESTNUT STREET LOFTS			21 CHESTNUT ST	PORTLAND	ME	04101
CHESTNUT STREET LOFTS LLC			58 HANNAFORD COVE RD	CAPE ELIZABETH	ME	04107
CHESTNUT STREET PARKING CONDO			134 LANCASTER ST	PORTLAND	ME	04101
	LOUIS	CHRISTEN	239 CUMBERLAND AVE	PORTLAND	ME	04101
	JENEPHER	CLIFFE	75 CHESTNUT ST # 701	PORTLAND	ME	04101
	KELLEY	COLLACCHI	125 MORNING ST E 2	PORTLAND	ME	04101
	STEPHANIE	COTSIRILOS	21 CHESTNUT ST # 8N	PORTLAND	ME	04101
	TERESA	CURTIN	21 CHESTNUT ST # 5W	PORTLAND	ME	04101
DAYMARK CONDO			75 CHESTNUT ST	PORTLAND	ME	04101
	EMILY	DEGRAY	172 BOYCE ST	AUBURN	MA	01501
	KATHLEEN	DENOIA	4 CEDARWOOD DR	FALMOUTH	ME	04105
	FRANK	DIDONATO	72 CHESTNUT ST	PORTLAND	ME	04101
	CRAIG	DIGIOVANNI	75 CHESTNUT ST # 402	PORTLAND	ME	04101
	DENNIS	DIXON	295 SUMMER ST	MANCHESTER	MA	01944
	MARK	DOLAN	740 ORANGE BELT LOOP	WINTER GARDEN	FL	34787
	JOHN	DOLEWA	75 CHESTNUT ST # 410	PORTLAND	ME	04101
DOWTOWN LODGING LLC			PO BOX 10250	PORTLAND	ME	04104
EAST END CORP			PO BOX 10291	PORTLAND	ME	04101
	AVNER	EISENBERG	29 CITY POINT RD	PEAKS ISLAND	ME	04108
FEDEQ DV005 LLC			PO BOX 191887	MIAMI	FL	33119
FEDERAL STREET PHOENIX LLC			PO BOX 15372	PORTLAND	ME	04112
	DANIEL	FITZPATRICK	PO BOX 143	WESTBROOK	ME	04098
	ROSEMARY	FLACH	21 CHESTNUT ST # 503	PORTLAND	ME	04101
	LORINDA	FRAZER	123 HOPE RD	LINCOLNVILLE	ME	04849
	GIOVANNI	FRISONE	22 LANCESTER RD	CROMWELL	CT	06416
	JULIA	GAULKE	60 BOLTON ST	PORTLAND	ME	04102
	MICHAEL	GUIGLI	21 CHESTNUT ST # 701	PORTLAND	ME	04101
HAIR ETC LLC			705 WEBBS MILLS RD	RAYMOND	ME	04071
HAL LLC			65 HANOVER ST	PORTLAND	ME	04101
	JAMES	HALL	47 CEDAR ST	PORTLAND	ME	04101
	LARRY	HAMM	1800 JONATHAN WAY # 115	RESTON	VA	20190
	ALICIA	HARDING	21 CHESTNUT ST	PORTLAND	ME	04101
HELM PROPERTY GROUP LLC			4420 GIBBONS ST # D	VANCOUVER	WA	98661
	MARCO	HERNANDEZ	43 ALDER ST	PORTLAND	ME	04101
	MARY	HERSTAM	75 CHESTNUT ST # 201	PORTLAND	ME	04101
	ADAM	HILL	PO BOX 4242	PORTLAND	ME	04101
	JANNA	HOBBS	33 BACK SHORE RD	CHEBEAGUE ISLAND	ME	04017
HOLLYDAY MULTI LLC ETAL JTS			PO BOX 1610	COCKEYSVILLE	MD	21030
HOWLES CORPORATION			PO BOX 938	PORTLAND	ME	04104
	CURTIS	HUSSEY	156 OXFORD ST	PORTLAND	ME	04101
	ROBERT	HYDE	39 CEDAR ST	PORTLAND	ME	04101
J2 MAINE LLC			55 CARROLL AVE	NEWPORT	RI	02840
	CARA	JORDAN	9 MITCHELLWOOD DR	FALMOUTH	ME	04105
	LAUREN	JOY	250 BEACON ST # 12	BOSTON	MA	02116
	CHARLES	KAUFMANN	21 CHESTNUT ST # 4S	PORTLAND	ME	04101
	MARILYN	KELLY	21 CHESTNUT ST # 702	PORTLAND	ME	04101
	JOAN	KHEDER	75 CHESTNUT ST # 403	PORTLAND	ME	04101
KINGSLEY ENTERPRISES			225 CUMBERLAND AVE	PORTLAND	ME	04101
	AMELIA	LABRECK	87 MUNJOY ST	PORTLAND	ME	04101
	ANN	LEES	31 WHITE RD	GEORGETOWN	ME	04548
	ALAN	LERMAN	3 VAN CARLL CIR	SCARBOROUGH	ME	04074
	CONOR	MAHON	21 CHESTNUT ST # 5SE	PORTLAND	ME	04101
	NATHANIEL	MALONE	75 CHESTNUT ST # 202	PORTLAND	ME	04101
	SCOTT	MCMULLIN	75 CHESTNUT ST # 206	PORTLAND	ME	04101
	THOMAS	MICHAUD	50 MYRTLE ST	PORTLAND	ME	04101
	MARGARET	MINISTER	75 CHESTNUT ST # 708	PORTLAND	ME	04101
MOJO PROPERTIES LLC			536 WASHINGTON AVE	PORTLAND	ME	04103
	VICTOR	MORREL	21 CHESTNUT ST # 202	PORTLAND	ME	04101
	JEAN	MURPHY	PO BOX 10045	PORTLAND	ME	04104
	CHRISTINE	NICKERSON	60 HARVARD AVE # 2	BROOKLINE	MA	02446
	DAVID	NOWLIN	360 PLEASANT HILL RD	SCARBOROUGH	ME	04074

	DANTON	NYGAARD	21 CHESTNUT ST # 401	PORTLAND	ME	04101
OUELLETTE INVESTMENTS LLC			195 LANE AVE	PORTLAND	ME	04103
PD2 LLC			6 PHANTOM FARM RD	CAPE ELIZABETH	ME	04107
PEARL MANOR LLC			225 CUMBERLAND AVE	PORTLAND	ME	04101
	MEREDITH	PERKINS	213 SILVER MOSS DR	VERO BEACH	FL	32963
PERRY E IRON & METAL CO			115 LANCASTER ST	PORTLAND	ME	04101
	HIKA	PETROVIC	75 CHESTNUT ST # 204	PORTLAND	ME	04101
	HOLLY	PICOTTE	75 CHESTNUT ST # 310	PORTLAND	ME	04101
	SARAH	PLUCK	53 OLD NECK RD	SCARBOROUGH	ME	04074
PORTLAND ARCITECTURAL SALVAGE INC			125 KENNEBEC ST	PORTLAND	ME	04101
PORTLAND BOYS CLUB ASSOC			277 CUMBERLAND AVE	PORTLAND	ME	04101
PREBLE STREET RESOURCE CENTER INC			331 CUMBERLAND AVE	PORTLAND	ME	04101
PYC LLC			PO BOX 17916	PORTLAND	ME	04112
	JORDAN	RICHARDSON	19 PORT VIEW LN	KENNEBUNK	ME	04043
	SETH	ROBERTSON	75 CHESTNUT ST # 505	PORTLAND	ME	04101
	LAURA	ROWLEY	20 WINN WAY	SCARBOROUGH	ME	04074
SALVATION ARMY THE			88 PREBLE ST	PORTLAND	ME	04101
SALVATION ARMY THE			440 WEST NYACK RD	NYACK	NY	10960
	WILLIAM	SAVAGE	18 THOMPSON INN RD	SOUTH BRISTOL	ME	04568
	JESSE	SAWYER	21 CHESTNUT ST # 302	PORTLAND	ME	04101
SCHLOTTERBECK BLOCK LLC			82 HANOVER ST STE 5	PORTLAND	ME	04101
	JAMES	SCHWELLENBACH	21 CHESTNUT ST # 602	PORTLAND	ME	04101
	AURELIA	SCOTT	21 CHESTNUT ST # 6N	PORTLAND	ME	04101
	STEPHEN	SEARS	95 AMBROSE COVE	BELGRADE	ME	04917
	THOMAS	SEPULVERES	43 MYRTLE ST	PORTLAND	ME	04101
	THOMAS	SEPULVERES	51 MYRTLE ST	PORTLAND	ME	04101
	DOUGLAS	SMITH	21 CHESTNUT ST # 2N	PORTLAND	ME	04101
	JAMES	SMITH	75 CHESTNUT ST # 507	PORTLAND	ME	04101
STATE OF MAINE			16 STATE HOUSE STATION	AUGUSTA	ME	04330
	PAUL	SUITTER	75 CHESTNUT ST # 306	PORTLAND	ME	04101
	PATRICIA	TAYLOR	6 E GLENDALE AVE	ALEXANDRIA	VA	22301
	PATRICK	THERRIAULT	75 CHESTNUT ST # 303	PORTLAND	ME	04101
	GARRETT	TILTON	21 CHESTNUT ST # 3N	PORTLAND	ME	04101
	JEFFREY	TITCOMB	PO BOX 835	FRYEBURG	ME	04037
	TAMSEN	TOWLE	75 CHESTNUT ST # 305	PORTLAND	ME	04101
	ANNIES	TRASK	50 ALDER ST	PORTLAND	ME	04101
	JOHN	VANHOEWYK	21 CHESTNUT ST # 301	PORTLAND	ME	04101
	JULIA	WAECHTER	75 CHESTNUT ST # 301	PORTLAND	ME	04101
WARDS CAPITAL LLC			973 FOREST AVE STE 2	PORTLAND	ME	04103
WBP COMMERCIAL LLC			100 MIDDLE ST	PORTLAND	ME	04101
WBP COMMERCIAL LLC			82 HANOVER ST	PORTLAND	ME	04101
WBP GARAGE LLC			82 HANOVER ST STE 5	PORTLAND	ME	04101
	THOMAS	WELSH	75 CHESTNUT ST # 502	PORTLAND	ME	04101
	JAN	WILLIAMS	21 CHESTNUT ST # 8S	PORTLAND	ME	04101
	SARA	YINDRA	21 CHESTNUT ST # 5N	PORTLAND	ME	04101
YOUTH AND FAMILY OUTREACH			331 CUMBERLAND AVE	PORTLAND	ME	04101

ACORN ENGINEERING, INC.

Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

May 17th, 2024

Subject: 197 Oxford Street Neighborhood Meeting

I, Sam Lebel, hereby certify that a neighborhood meeting was held on May 16th, 2024, at 409 Cumberland Avenue, Portland, ME 04101, at 5:30 pm.

I also certify that on May 3rd, 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 letter sent prior to the neighborhood meeting
2. Meeting Sign-in sheet
3. Meeting minutes
4. Neighborhood Meeting #2 Presentation

ACORN ENGINEERING, INC.

Dear Neighbor: May 6, 2024

On behalf of Avesta Housing and Reveler Development, we are pleased to invite you to a neighborhood meeting to discuss the proposed Major Site Plan Application that was recently submitted to the Planning Board. The project is split into three phases with a total of 123 new apartments. The first phase proposes 28 Housing First and 20 affordable units at 197 Oxford Street, managed by Avesta and Preble Street. The second and third phases propose 24 and 51 market rate units at 50 Cedar and 158 Lancaster Street, respectively, both managed by Reveler.

Meeting Location: 1st Floor Community Room, 409 Cumberland Ave, Portland, ME 04101
Meeting Date/Time: Thursday, May 16, 2024, at 5:30pm

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.
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.

Sign-in Sheet

Presenters:

Name	Email
Applicant Team	
Michael Barton	mbarton@reveler.com
Ryan Fecteau	RFecteau@avestahousing.org
Sam Lebel	slebel@acorn-engineering.com
Brad Kaden	bkaden@acorn-engineering.com
George Lavigne	glavigne@cwsarch.com
Bhen Reed	Breed@cwsarch.com
Jessica James	Jessica@longfellocomms.com
Reid Tozier	reid@senatorearchitecture.com
Andrew Bove	above@preblestreet.org

Sign-in Sheet **Presenters:**

Name	Email
Deborah Van Hoewyk	dvhoewyk@umich.edu
WELSH	hbwelsh@ige.org
ANNE PRINCE	ANNE.PRINCE.ME@GMAIL.COM
George Rheault	george.rheault@gmail.com
THOMAS BLACKBURN	Tblackburn1948@GMAIL.com
Duncan McCluskey	smccluskey@maine.rr.com
Christina Arsenault	carsenault3@gmail.com
Alicia Harding	aliciadharding@gmail.com Please note the "d"
Avery Yale Kamila	avery.kamila@gmail.com
John Dolewa	John.Dolewa@gmail.com
Lenora Dolewa	JDolewa@maine.rr.com
Andrew Bove (Preblestreet)	above@preblestreet.org
Jim Hall	MTJIMHALL@GMAIL.COM
Sarah MICHNIEWICZ	SARAHMICHNIEWICZ@Mac.com
Ned Payne	NedPayne@gmail.com

Sign-in Sheet **Participants:**

Name	Email
Laura Underkuffler	lu27@cornell.edu
Deborah Fell	dcfell@yahoo.com

197 Oxford Street Neighborhood Meeting

Neighborhood Meeting Minutes
May 16, 2024 / 5:30 pm
409 Cumberland Avenue, Portland Maine

Project Team Attendees:

Michael Barton (MB): Applicant/Presenter (Reveler)

Ryan Fecteau (RF): Applicant/Presenter (Avesta)

Andrew Bove (AB): Vice President of Social Work (Preble Street)

George Lavigne (GL): Architect (CWS)

Bhen Reed (BR): Architect/Presenter (CWS)

Jessica James (JJ): Client Team (Longfellow Communications)

Reid Tozier (RT): Architect/Presenter (Ryan Senatore Architecture)

Sam Lebel (SL): Civil Engineer /Presenter (Acorn Engineering)

Brad Kaden (BK): Civil Engineer/Note Taker (Acorn Engineering)

The meeting started at approximately 5:35 pm.

Presentation:

MB & RF:
- Team Introduction
- Overview of Meeting
- Project Introduction

SL:
- Project Timeline
- Existing and Proposed Conditions – Overall
- Proposed Site Plan Overview – Phase I

BR:
- Reviewed the floor layouts and renderings of the building
- Provided voluntary shadow analysis per request at 1st neighborhood meeting

SL:
- Proposed Site Plan Overview – Phase 2

RT:

- Reviewed the floor layouts and renderings of the Phase 2 Building

SL:

- Proposed Site Plan Overview – Phase 3

RT:

- Reviewed the floor layouts and renderings of the Phase 3 Building

Comments, Questions & Answers:

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 that were pertinent to the project application.

Neighbor: What is the city involvement with this project regarding funding? Are there limitations on the amount of low income units?

RF: We will likely seek additional funding support from the City in order to cover gaps in our financing.

MB: Phase 2 and 3 will be privately funded.

Question (Q): What is the timing of this project and the timing of the MDP?

RF: Avesta will submit an application to Maine housing in September. If we receive funding through Maine Housing then Phase 1 can begin construction mid 2025. If we don't receive funding this year, then everything would push a year.

MB: Phase 2 and 3 will be trailing phase 1 and would most likely commence in the spring of 2026. The 89 Elm project (MDP Phase 1.A) is to begin construction in early 2025.

Q: Where will people park?

MB: There is the Public Market parking garage located nearby which we own. Tenants can utilize this if they wish, along with on street parking around the sites.

RF: Vehicle usage among Housing First units is about 1%. Roughly 14% of people own vehicles in the studios and 1 bedroom apartments for Avesta's conventional affordable housing units on the peninsula.

Q: Does the presented timeline reflect the requested expedited approval mentioned in the application?

SL: Yes, our timeline presented earlier is consistent with the request for an expedited review for affordable housing projects as allowed in the Ordinance. The

review is not meant to be sacrificed in quality, but to prioritize affordable projects.

Q: How are the unit numbers calculated for market rate and affordable?

SL: The LD 2003 amendment allows up to a density bonus of 2.5 if over 50% of the units are affordable. Phase 1 as a standalone project meets that criteria. Then in the aggregate, the affordability is over 30% for the entire project which equates to a 1.3X density bonus for the project as a whole.

Q: Bedrooms are only 1 bedroom or studios. Is there a possibly to do 2 or 3 bedrooms for families?

RF: Avesta has done projects that have 2 and 3-bedrooms, but with this site we have too many constraints regarding the size of the building. We tried to maximize the number of units based on our bonuses.

MB: Market rate units need to be aligned with the affordable units in order to comply with the IZ regulations.

Q: How will this affect the children that are going to the elementary school near by? How does children come into the planning process when discussing these projects?

RF: Tenants will have a lease agreement. Avesta has 3 Housing First sites that have proven to be successful.

Q: How are the services for housing first different than Preble Street's emergency shelters?

AB: There is a good staff to client ratio so staff is able to support the people in an individual experience more often. It is a relatively slow pace environment in Preble Street's existing housing-first programs. Many of the challenges that exist in a congregate setting like an emergency shelter are not present in housing-first given that individuals have their own apartments.

Comment (C): There are hundreds of emergency calls a year into similar housing types such as the Florence House. There should be a balance for the need for housing first and what the neighborhood needs. Not all the calls are for the same exact type of housing as Housing First, but it shows the high level of need.

Q: Are there structured social services for housing first facilities?

AB: This facility will have full time social work staff 24/7. Mental health clinicians and medical providers are not located onsite or employed by Preble Street but are regularly connecting with clients in other housing-first programs and will be an important part of this project.

C: It's going to be challenging for Housing First to deal with the outside forces in the public areas.

C: Homelessness is at an all time high. Many are located along Preble street. It needs to be your job to manage what happens outside the building.

Q: Several retaining walls exist along the property line in phase 3. How will they be incorporated into the site?

> **MB/SL: We are proposing a few different approaches depending on the wall/property line in question including reconstruction and grading/landscaping. Some of the conclusions are still in early stages depending on a geotechnical evaluation.**

C: We recommend that the choke cherry tree behind the retaining wall remain.

> **SL: That tree will be close to retaining wall reconstruction so may be difficult to preserve, but would be happy to walk the property edge to discuss the various edge conditions.**

Q: What are your thoughts on the small 4'x4' "gore" portion of the lot that no owner has title over? We would prefer to not have that space left impervious.

- **SL: We can look into that condition more closely for permission to integrate it into the landscaping.**

Q: Congresswoman Pingree was presented the Housing First concept in March 2023. Does she know the project is at this site? Doesn't she have an obligation to weigh in to putting this new building at the former shelter site?

> **RF: The project meets the goals of the Housing First funding initiative. The project is not a done deal and has to go through the planning board process.**

Q: For a tenant, what are the screen processes for the housing first people? What would not be allowed for housing first?

> **RF: We have previously shared the draft lease agreement and can provide more details about the process to you after tonight. Overall, we do perform a background check for each person.**
>
> **AB: Being on the sex offender registry would disqualify someone from renting a unit.**

Q: What is the status of the existing bathrooms? Will be they be relocated or replaced?

> **MB: We can get back in touch with you regarding their relocation.**

Q: Will our comments make any difference in the project?

> **RF/MB: We do take the feedback seriously and consider your comments. We also look to balance these comments with feedback from Staff and the Planning Board.**

Q: Has there been consideration for water flooding around the site for phase 3 where the site is low-lying?

SL: We are planning to elevate the building on site over a foot from the sidewalk elevation to provide resiliency against flooding, in alignment with the ReCode language.

Q: Can you provide more renderings for phase 3 as it progresses?

MB: We are still in the early stages, but can create updated renderings for the site and share them as they become available.

Q: Are the proposed green spaces going to actually be grass and tree areas?

MB: We do have a high ratio of impervious to landscape area in Phase 2, but overall are considering as much green space area as we can especially in Phase 3.

Q: Are you open to changing the colors of the building?

MB: Yes, we would be willing to explore options with you and find a happy medium.

Q: Is there a reason you are not connecting into the sewer along Lancaster instead of Cedar Street?

SL: We initially intended to discharge the sewer lateral into the Lancaster sewer main, but in reviewing DPW's comments from the MDP process, we were reminded that they prefer to limit the amount of taps into the Lancaster main due to its age, material, and condition.

Q: Can we revisit the sidewalk and street trees along Cedar?

MB/SL: Overview of 3 street trees on private property along the Phase 2 Cedar frontage to provide adequate sidewalk width and shade tree canopy. On the Phase 3 side, minimal street frontage, but proposing to maintain the two existing street trees and replace some of the sloped pavement that exists today with more green space.

Q: What is the plan for the retaining wall behind the Phase 1 site?

BR: The intention is to layer a freestanding block wall along the property line with vegetative screening to provide buffering and noise reduction from the patio space behind the building.

Q: What is the timeline of the woonerf plans in the MDP?

MB: This would occur under Phase 1.B. of the MDP. Once Phase 1.A moves forward, we would advance Phase 1.B and the woonerf design.

Q: Will the transportation aspect of the MDP be included with this project? We don't agree with the statement that the project will have a minimal effect on the neighborhood and street network.

MB: We plan to discuss the transportation aspect of this project and its relation to the MDP further with the City in the coming weeks.

The meeting concluded at approximately 7:30 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

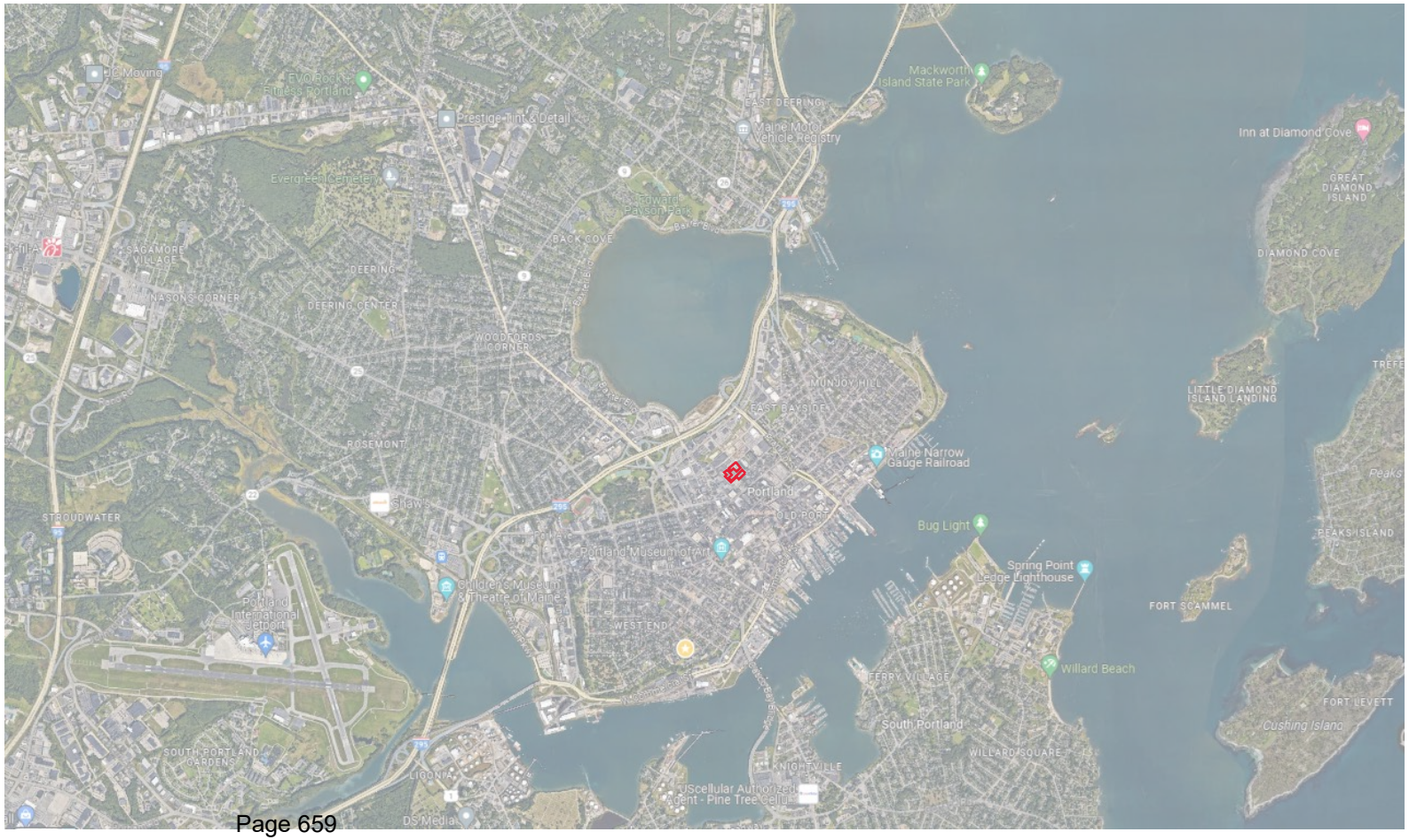
NEIGHBORHOOD MEETING #2:

May 16th 2024

PHASED OXFORD STREET REDEVELOPMENT; JOINT MAJOR SITE PLAN APPLICATION

Area of Interest:

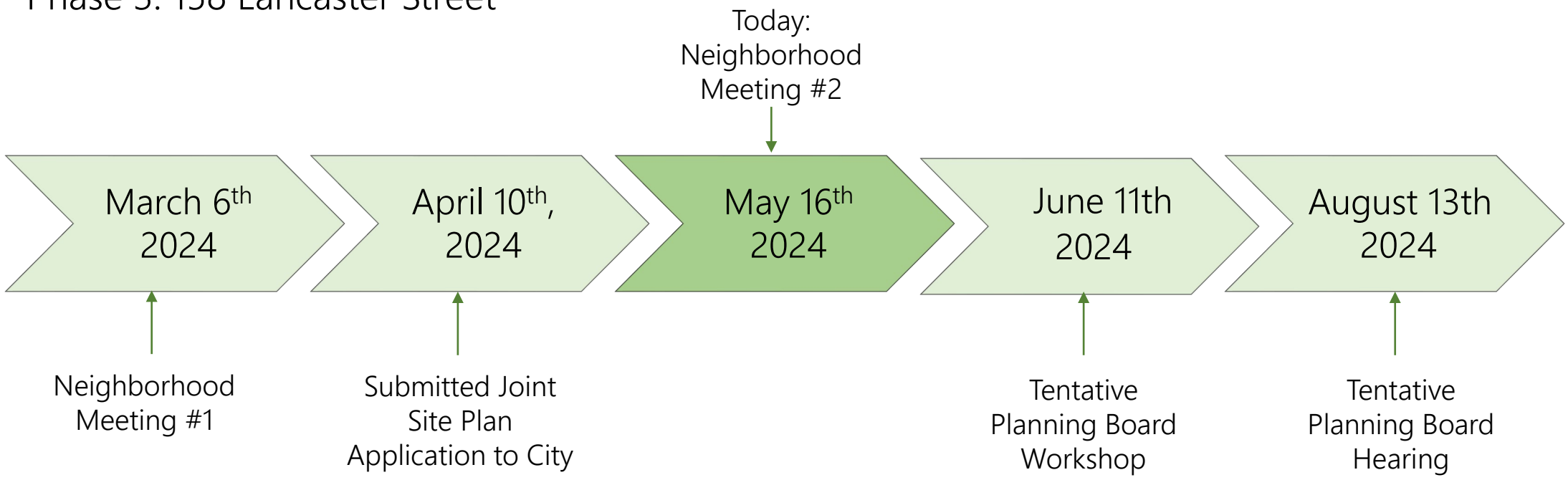
- Phase 1: 197 Oxford Street
- Phase 2: 50 Cedar Street
- Phase 3: 158 Lancaster Street



NEIGHBORHOOD MEETING #2: May 16th 2024

PHASED OXFORD STREET REDEVELOPMENT; JOINT MAJOR SITE PLAN APPLICATION

- Phase 1: 197 Oxford Street
- Phase 2: 50 Cedar Street
- Phase 3: 158 Lancaster Street



OVERALL SITE PLAN

LANCASTER ST.
TWO–WAY

ZONE B7
ZONE B3
ZONE R6

89 ELM STREET

PHASE 2:
50 CEDAR STREET
LOT AREA= 0.53 ACRES
PR. UNITS: 24 (MR)

PHASE 3:
158 LANCASTER STREET
LOT AREA= 0.41 ACRES
PR. UNITS: 51 (MR)

ELM ST
ONE–WAY

CEDAR ST.
ONE–WAY

HALL COURT

CHESTNUT ST.
TWO–WAY

78 CHESTNUT STREET
LOT AREA=0.29 ACRES

PHASE 1:
207 & 197 OXFORD STREET
LOT AREA= 0.35 ACRES
PR. UNITS: 48 (IZ)

2 STORY BRICK
THRESH=49.73

20 0 20 40
SCALE: 1"=20'

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OVERALL SITE PLAN

LANCASTER ST.
TWO–WAY

ZONE B7
ZONE B3
ZONE R6

89 ELM STREET

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ELM ST
ONE–WAY

CEDAR ST.
ONE–WAY

CHESTNUT ST.
TWO–WAY

2 STORY BRICK
THRESH=49.73

LEGEND:

AVESTA HOUSING DEVELOPMENT PROJECTS

REVELER DEVELOPMENT PROJECTS

CONTRIBUTING LAND (NOT TO BE REDEVELOPED UNDER THIS APPLICATION)

20 0 20 40
SCALE: 1"=20'

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OVERALL SITE PLAN

LANCASTER ST.
TWO–WAY

ZONE B7

ZONE B3

ZONE R6

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PR. UNITS: 48 (IZ)

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THRESH=49.73

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AVESTA HOUSING DEVELOPMENT PROJECTS

REVELER DEVELOPMENT PROJECTS

CONTRIBUTING LAND (NOT TO BE REDEVELOPED UNDER THIS APPLICATION)

20 0 20 40

SCALE: 1"=20'

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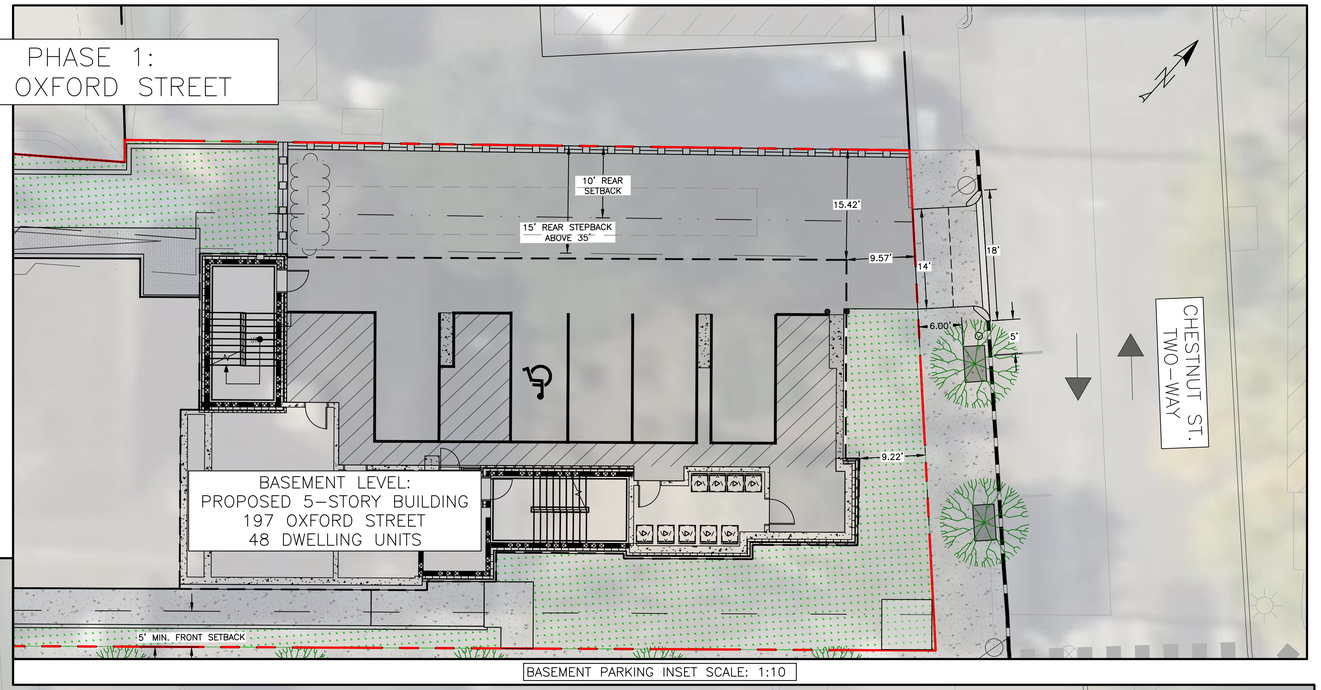
ACORN ENGINEERING, INC

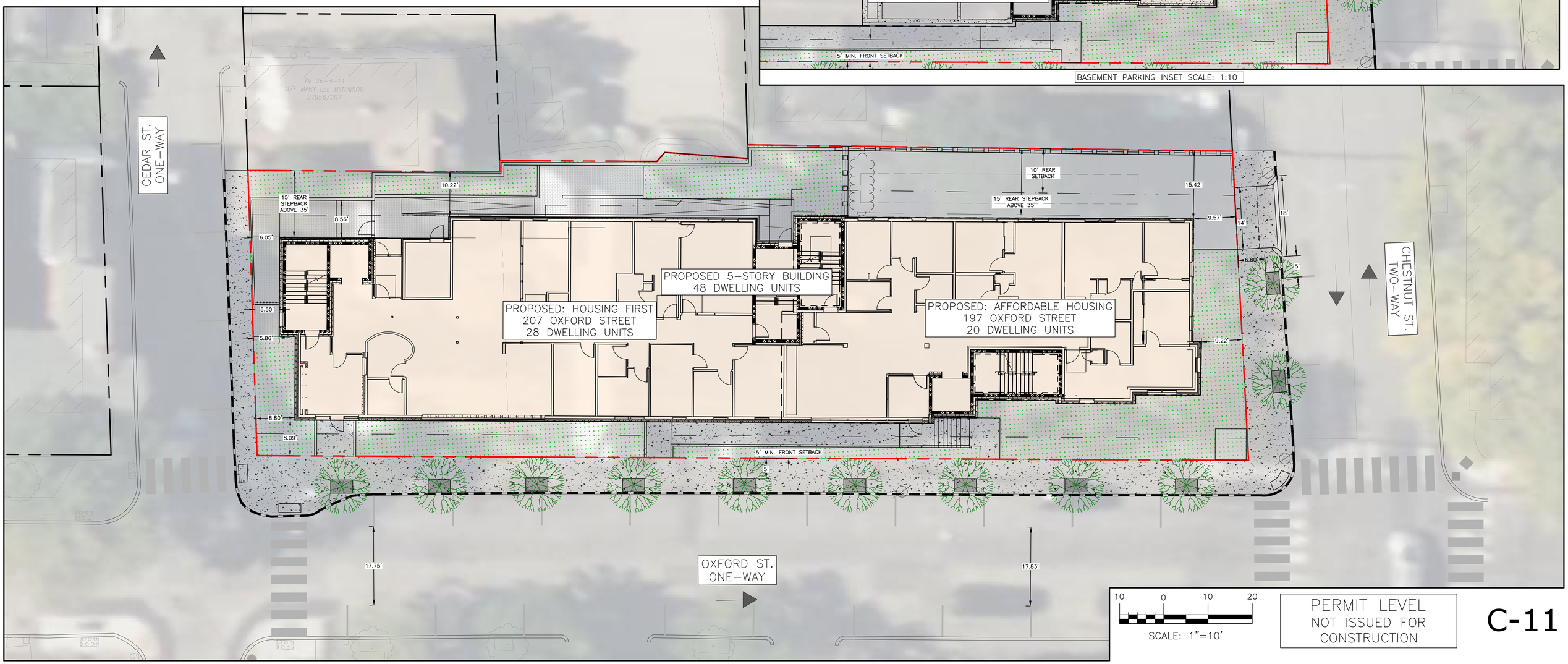
AVESTA HOUSING

CWS ARCHITECTURE + INTERIOR DESIGN

PHASE 1:
197 OXFORD STREET



BASEMENT PARKING INSET SCALE: 1:10



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SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

C-11



197 OXFORD STREET LANDSCAPE PLAN

5.16.2024 Neighborhood Meeting

A C O R N Engineering, Inc.
Portland & Kingfield, ME

AVESTA OXFORD

PORTLAND, MAINE



TOTAL SQ FT CALCULATIONS FOR BUILDING

BUILDING GROSS TOTAL	43,748.18 SQ FT
HOUSING FIRST GROSS TOTAL	23,825.78 SQ FT
AFFORDABLE HOUSING GROSS TOTAL	19,922.40 SQ FT

TOTAL UNIT COUNTS FOR BUILDING

TOTAL BUILDING UNIT COUNT	48 UNITS
HOUSING FIRST	TWENTY-EIGHT (28) UNITS [(28) 0-BDRM]
AFFORDABLE HOUSING	TWENTY (20) UNITS [(3) 0-BDRM + (17) 1-BDRM]

BUILDING OWNER:	ARCHITECT:	CONSTRUCTION MANAGER:	STRUCTURAL ENGINEER:	CIVIL ENGINEER / LANDSCAPE ARCHITECT:	MECHANICAL / PLUMBING ENGINEER:	ELECTRICAL ENGINEER:
AVESTA	CWS ARCHITECTS ARCHITECTURE | INTERIOR DESIGN CWS ARCHITECTURE + INTERIOR DESIGN 264 US ROUTE 1, BOX 6, SUITE 100-2A SCARBOROUGH, MAINE 04074	TBD	TBD	ACORN ENGINEERING, INC ACORN ENGINEERING 500 WASHINGTON AVE SUITE 202 PORTLAND, ME 04103 TEL: (207) 775-2655	BENNETT (PRELIMINARY DESIGN)	BENNETT (PRELIMINARY DESIGN)

CWS ARCHITECTURE + INTERIOR DESIGN

PLANNING + DESIGN
CONSTRUCTION SERVICES

DESIGNER

CWS ARCHITECTURE + INTERIOR DESIGN
264 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, ME 04074
207 774 4441
CWSARCH.COM

OWNER

AVESTA

OWNER ADDRESS

PROJECT

AVESTA OXFORD

PROJECT ADDRESS

DRAWING

COVER PAGE

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

CP

SCALE:

DATE: ISSUE DATE

PROJECT STATUS

3/15/2024 3:33:10 PM

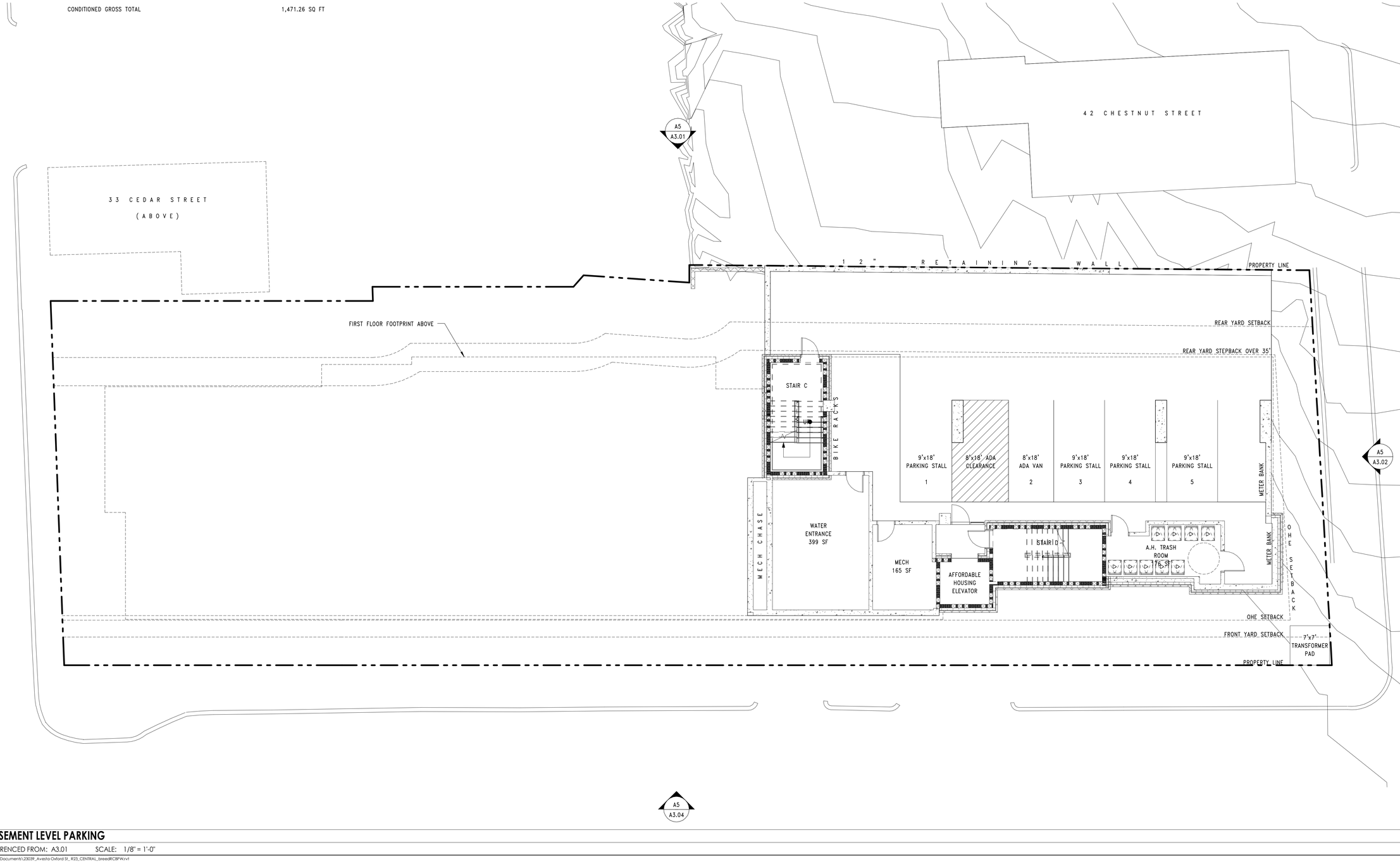
C:\Users\Bhen Reed\Documents\23039_Avesta Oxford St_R23_CENTRAL_breedRC8PW.rvt

BASEMENT PARKING LEVEL

TOTAL PARKING STALLS — FIVE (5)
(INCLUDES 1 ADA VAN STALL)

SQ FT CALCULATIONS

CONDITIONED GROSS TOTAL — 1,471.26 SQ FT



A5 BASEMENT LEVEL PARKING

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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CWS ARCHITECTURE + INTERIOR DESIGN
PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER
CWS ARCHITECTURE + INTERIOR DESIGN
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SCARBOROUGH, ME 04074
207 774 4441
CWSARCH.COM

OWNER
AVESTA
OWNER ADDRESS

PROJECT
AVESTA OXFORD
PROJECT ADDRESS

DRAWING
BASEMENT PARKING LEVEL
CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER
A1.00

SCALE: 1/8" = 1'-0"
DATE: ISSUE DATE

PROJECT STATUS

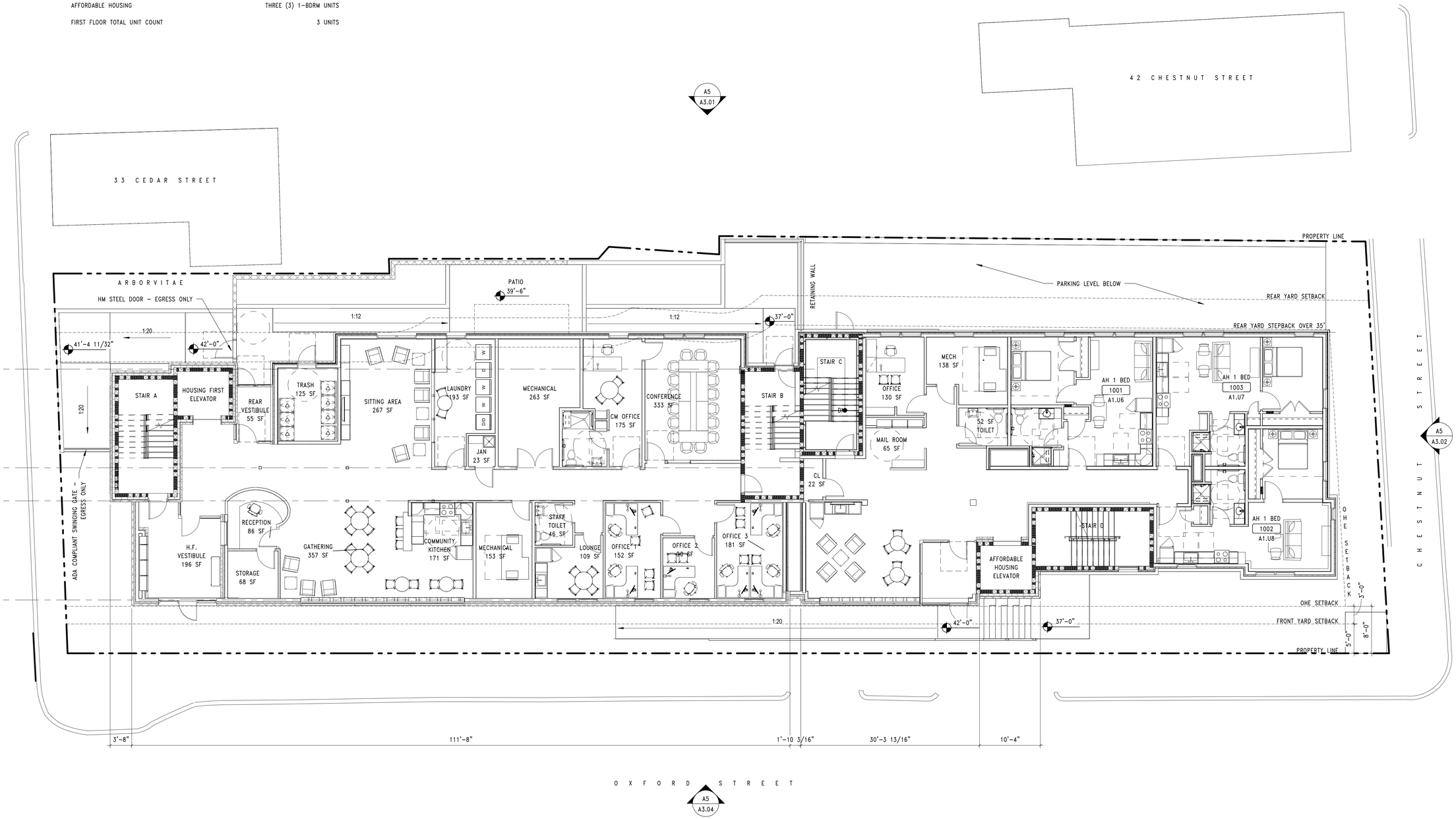
3/15/2024 3:35:11 PM

FIRST FLOOR SQ FT CALCULATIONS

FIRST FLOOR GROSS TOTAL	8,991.25 SQ FT
HOUSING FIRST GROSS TOTAL	5,059.82 SQ FT
AFFORDABLE HOUSING GROSS TOTAL	3,931.43 SQ FT

FIRST FLOOR UNIT COUNTS

HOUSING FIRST	0 UNITS
AFFORDABLE HOUSING	THREE (3) 1-BDRM UNITS
FIRST FLOOR TOTAL UNIT COUNT	3 UNITS



A5 **FIRST FLOOR**

SCALE: 1/8" = 1'-0"

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PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER

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SCARBOROUGH, ME 04074
207.774.4441
CWSARCH.COM

OWNER

AVESTA

OWNER ADDRESS

PROJECT

AVESTA OXFORD

PROJECT ADDRESS

DRAWING

FIRST FLOOR PLAN

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

A1.10

SCALE: 1/8" = 1'-0"

DATE: ISSUE DATE

PROJECT STATUS

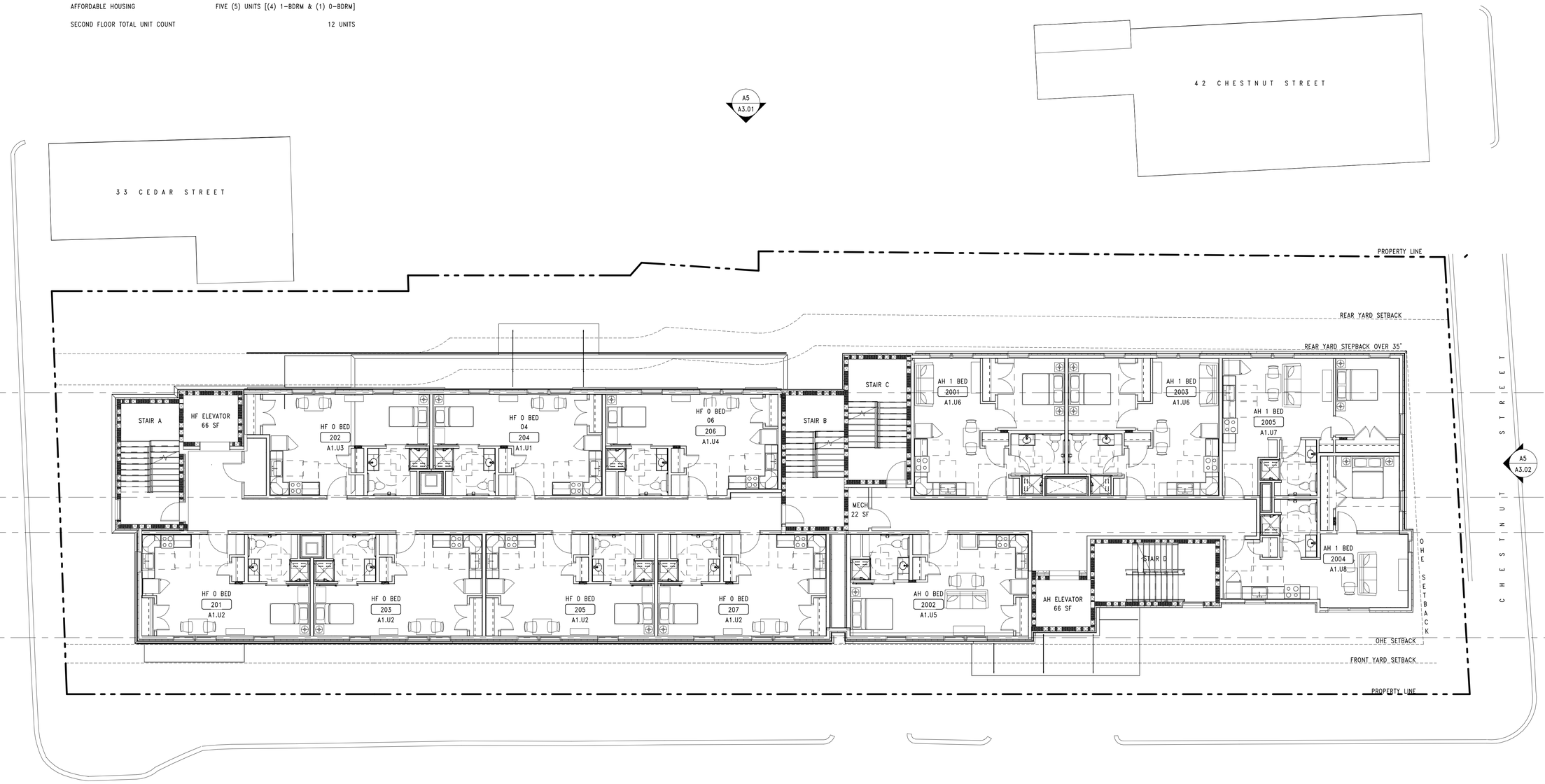
3/15/2024 3:30:12 PM

SECOND FLOOR SQ FT CALCULATIONS

SECOND FLOOR GROSS TOTAL	8,623.05 SQ FT
HOUSING FIRST GROSS TOTAL	4,691.49 SQ FT
AFFORDABLE HOUSING GROSS TOTAL	3,931.56 SQ FT

SECOND FLOOR UNIT COUNTS

HOUSING FIRST	SEVEN (7) 0-BDRM UNITS
AFFORDABLE HOUSING	FIVE (5) UNITS [(4) 1-BDRM & (1) 0-BDRM]
SECOND FLOOR TOTAL UNIT COUNT	12 UNITS



1 **SECOND FLOOR**

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER

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SCARBOROUGH, ME 04074
207.774.4441
CWSARCH.COM

OWNER

AVESTA

OWNER ADDRESS

PROJECT

AVESTA OXFORD

PROJECT ADDRESS

DRAWING

SECOND FLOOR PLAN

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

A1.20

SCALE: 1/8" = 1'-0"

DATE: ISSUE DATE

5/15/2024 3:33:21 PM

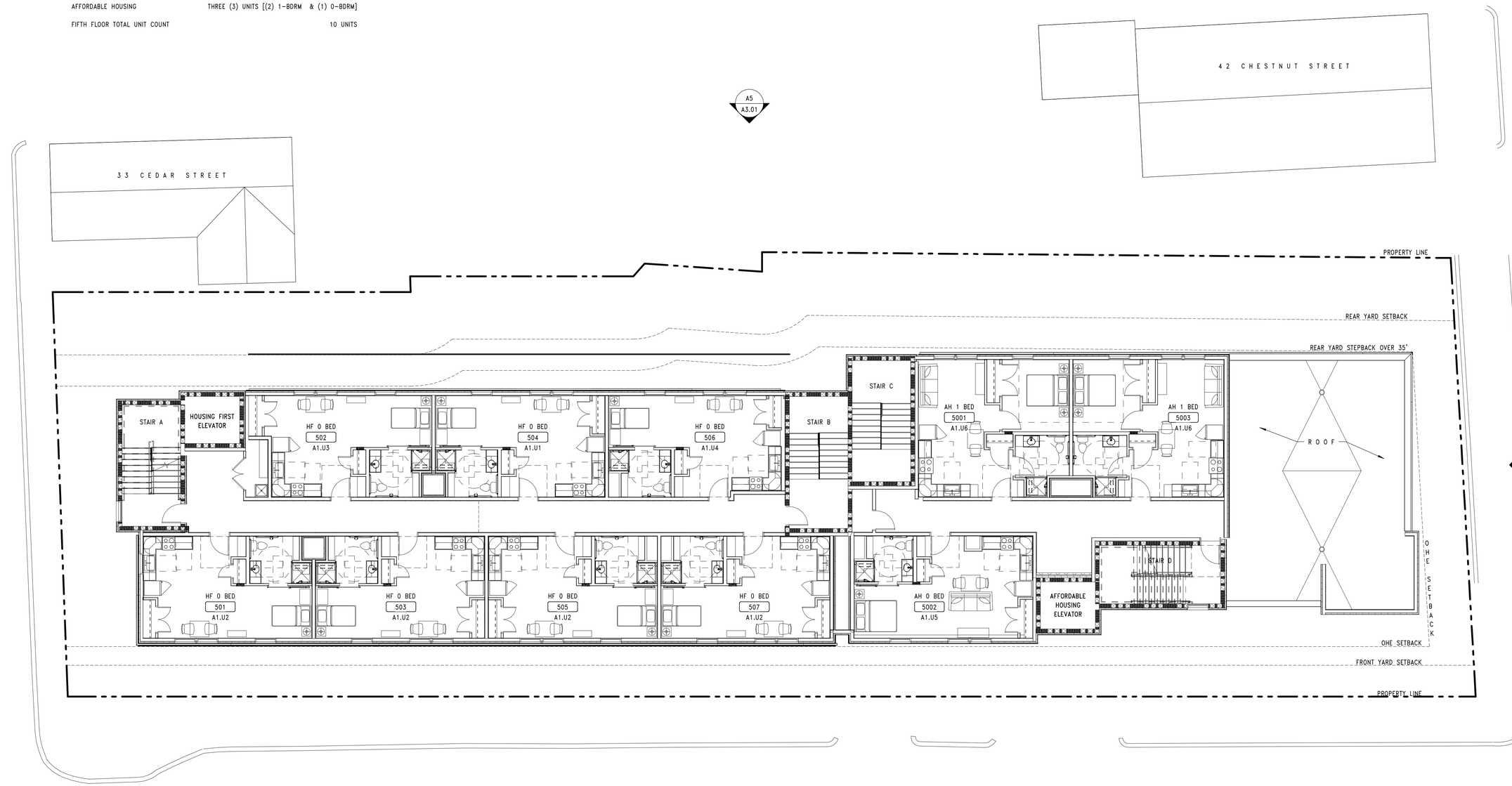
PROJECT STATUS

FIFTH FLOOR SQ FT CALCULATIONS

FIFTH FLOOR GROSS TOTAL	7,418.29 SQ FT
HOUSING FIRST GROSS TOTAL	4,691.49 SQ FT
AFFORDABLE HOUSING GROSS TOTAL	2,726.80 SQ FT

FIFTH FLOOR UNIT COUNTS

HOUSING FIRST	SEVEN (7) 0-BDRM UNITS
AFFORDABLE HOUSING	THREE (3) UNITS [(2) 1-BDRM & (1) 0-BDRM]
FIFTH FLOOR TOTAL UNIT COUNT	10 UNITS



CWS ARCHITECTURE + INTERIOR DESIGN

PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER

CWS ARCHITECTURE + INTERIOR DESIGN
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FIFTH FLOOR PLAN

CWS PROJECT NUMBER: 23039

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DRAWING NUMBER

A1.50

SCALE: 1/8" = 1'-0"

DATE: ISSUE DATE

PROJECT STATUS

5/15/2024 3:33:36 PM

A5 FIFTH FLOOR

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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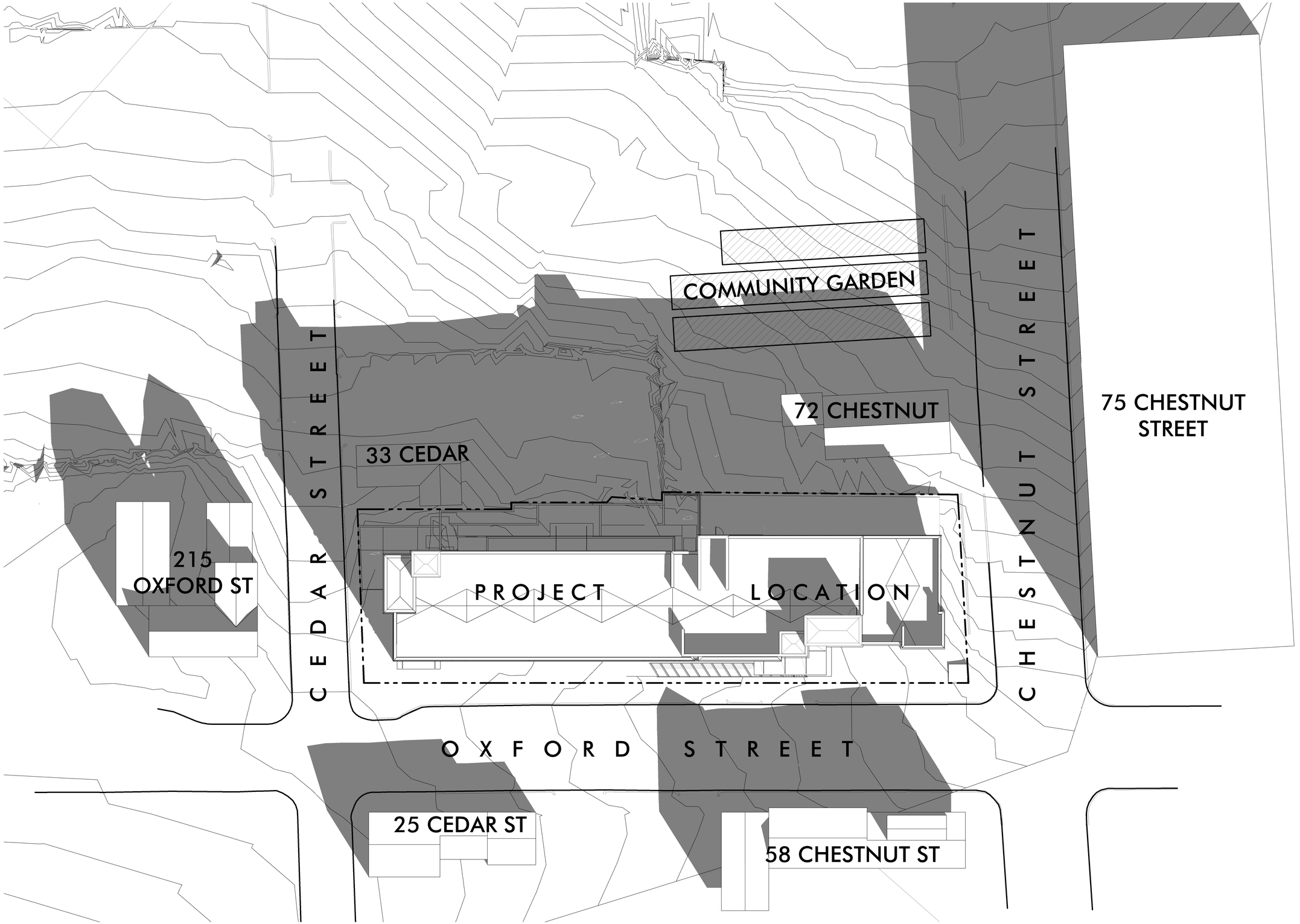

A5 **SOLAR STUDY - APRIL 15 8 AM**

REFERENCED FROM: SCALE: 1/16" = 1'-0"

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PROJECT NORTH / TRUE NORTH

DRAWING **SPRING 8**

SCALE: 1/16" = 1'-0"

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PROJECT STATUS

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8.00

CWS PROJECT No. 23039

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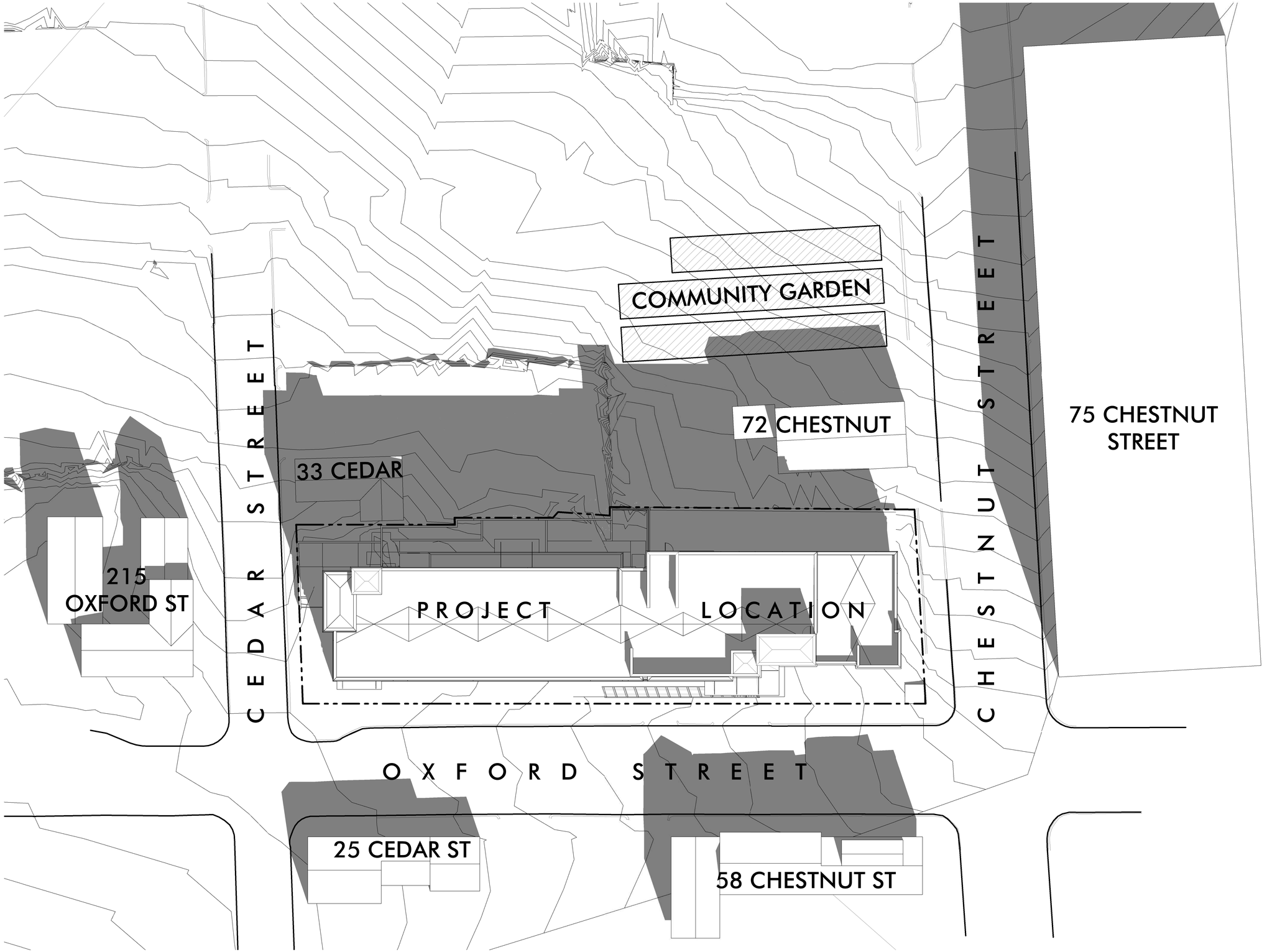

A5 **SOLAR STUDY - APRIL 15 9 AM**

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PROJECT NORTH / TRUE NORTH

DRAWING **SPRING 9**

SCALE: 1/16" = 1'-0"

DATE: ISSUE DATE

5/15/2024 9:30:44 PM

PROJECT STATUS

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APRIL 15
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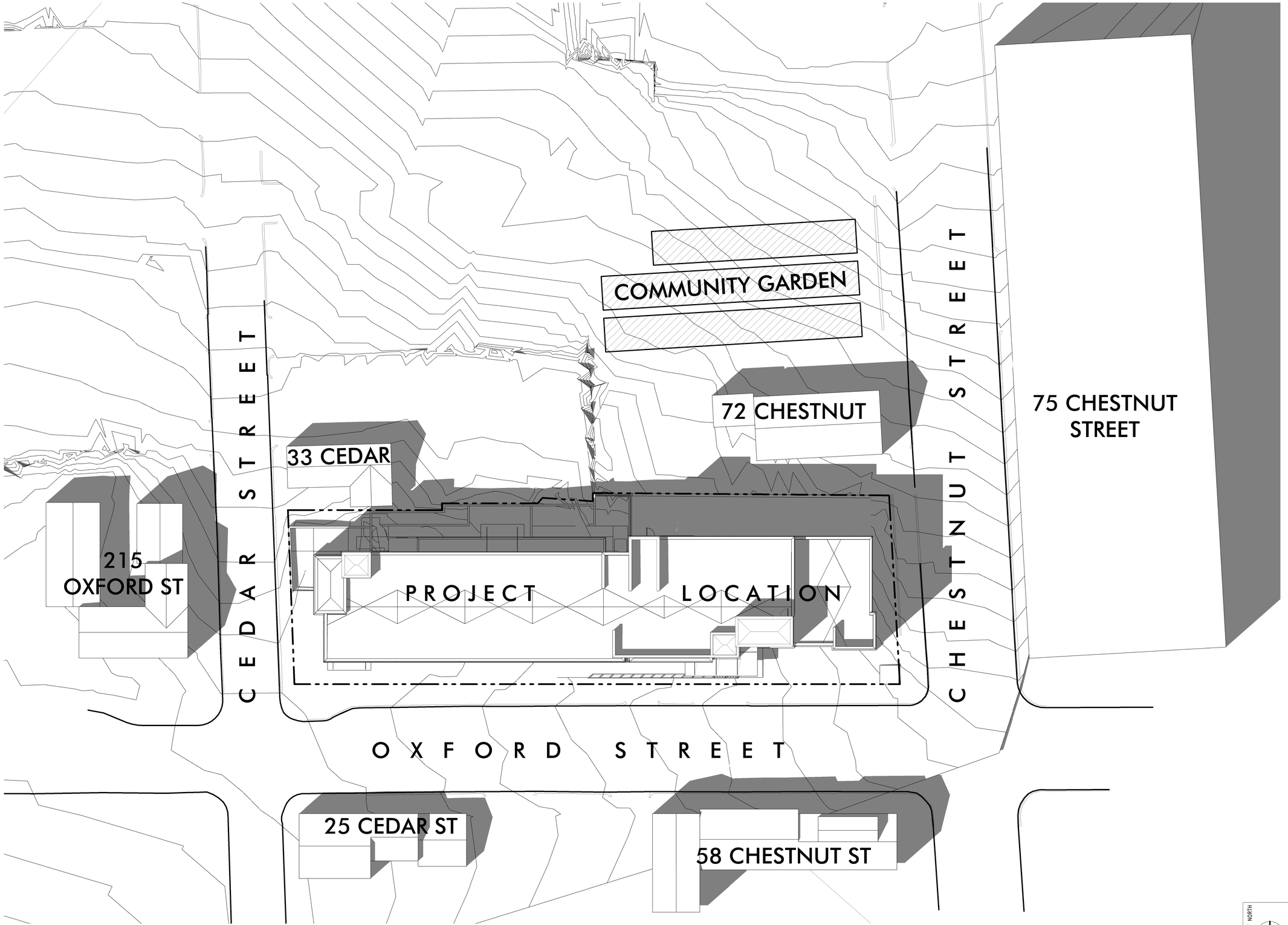

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APRIL 15
12.00

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PROJECT NORTH
TRUE NORTH

DRAWING
SPRING 12

SCALE: 1/16" = 1'-0"
DATE: ISSUE DATE

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PROJECT STATUS

A5 SOLAR STUDY - APRIL 15 NOON
REFERENCED FROM: SCALE: 1/16" = 1'-0"

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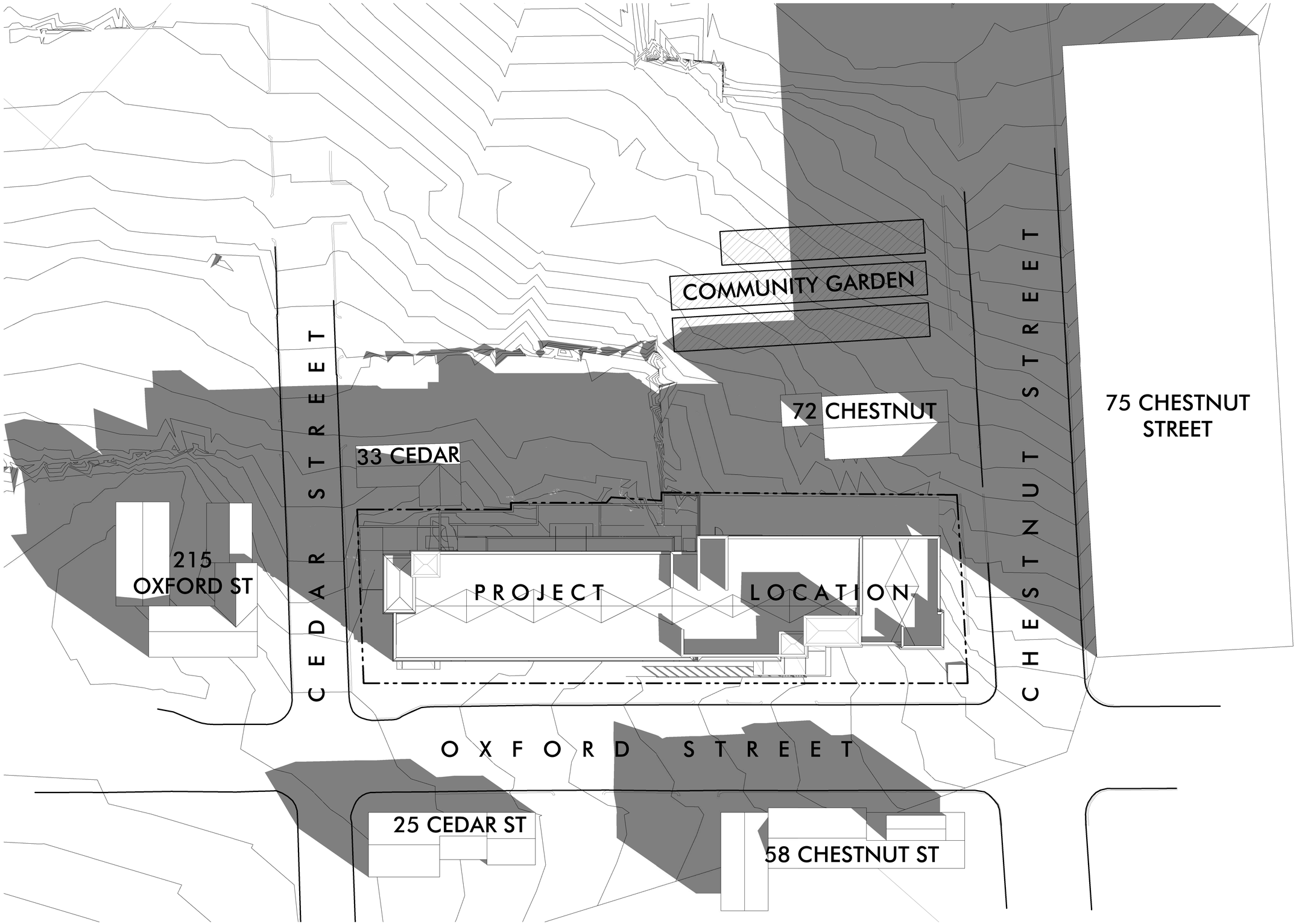

A5 **SOLAR STUDY - JUNE 21 7 AM**

REFERENCED FROM: SCALE: 1/16" = 1'-0"

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JUNE 21
7.00
CWS PROJECT No. 23039

REVISIONS

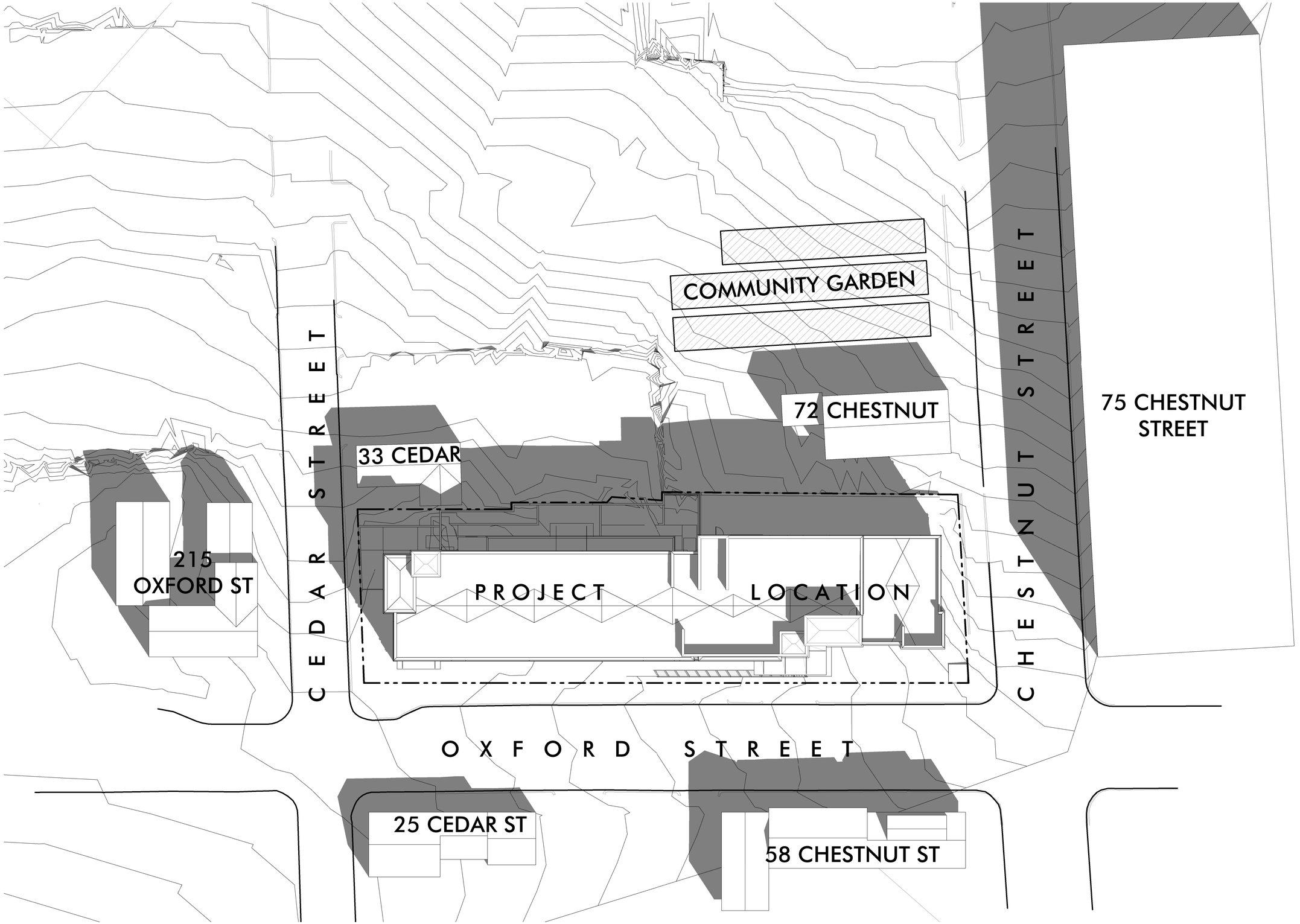
PROJECT NORTH
TRUE NORTH

DRAWING
SUMMER 7

SCALE: 1/16" = 1'-0"
DATE: ISSUE DATE

5/15/2024 9:38:54 PM

PROJECT STATUS



A5 **SOLAR STUDY - JUNE 21 9 AM**

REFERENCED FROM: SCALE: 1/16" = 1'-0"

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JUNE 21
9.00

CWS PROJECT No. 23039

REVISIONS

PROJECT NORTH
TRUE NORTH

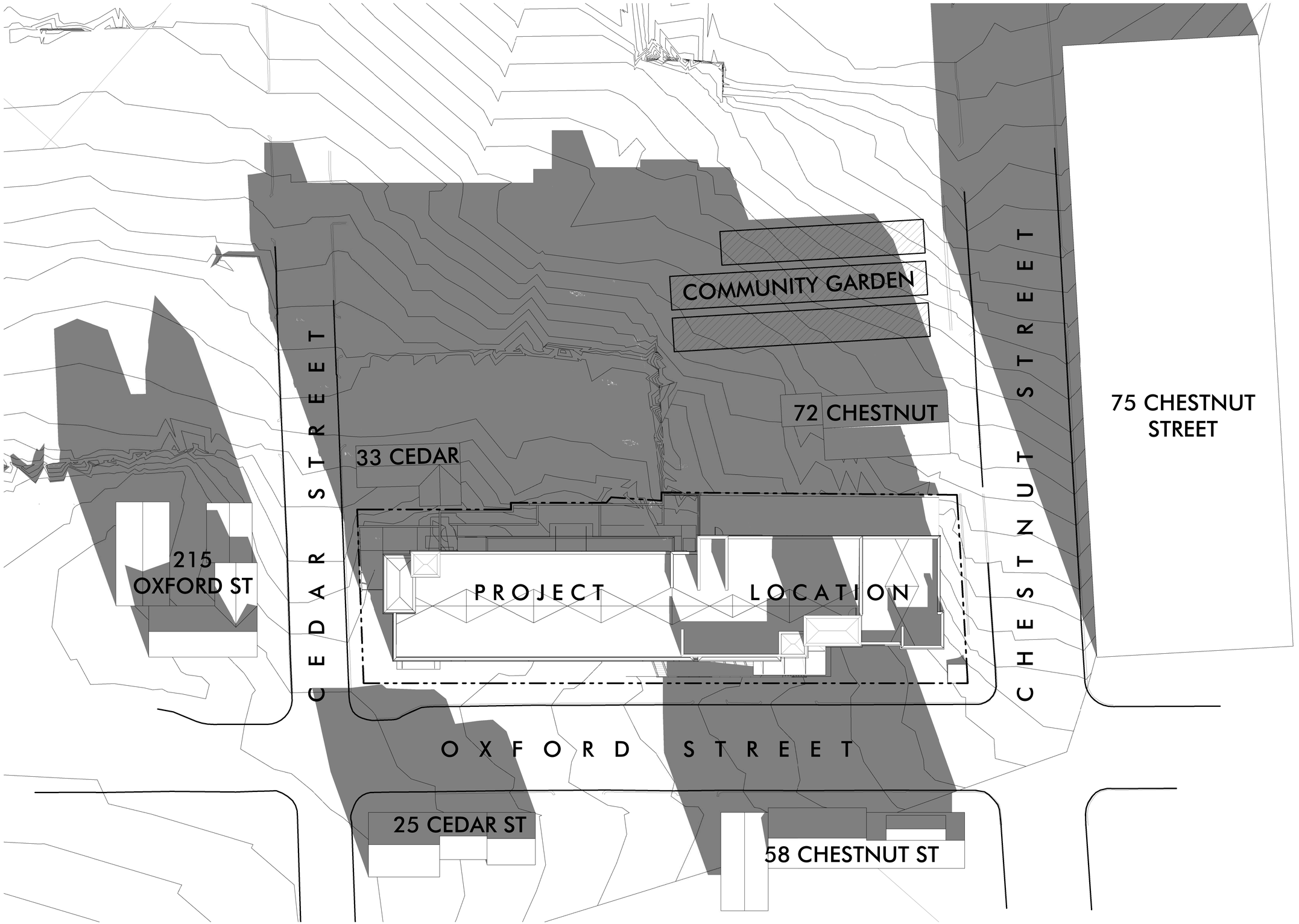
DRAWING
SUMMER 9

SCALE: 1/16" = 1'-0"

DATE: ISSUE DATE

3/15/2024 3:33:38 PM

PROJECT STATUS



A5 **SOLAR STUDY - OCTOBER 1 8 AM**

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PROJECT NORTH / TRUE NORTH

DRAWING **AUTUMN 8**

SCALE: 1/16" = 1'-0"

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PROJECT STATUS

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DRAWING

OCTOBER 1
8.00

CWS PROJECT No. 23039

REVISIONS

COMMUNITY GARDEN

72 CHESTNUT

75 CHESTNUT STREET

33 CEDAR

215 OXFORD ST

CEDAR ST

PROJECT LOCATION

CHESTNUT STREET

OXFORD STREET

25 CEDAR ST

58 CHESTNUT ST

A5 SOLAR STUDY - OCTOBER 1 10.30 AM

REFERENCED FROM: SCALE: 1/16" = 1'-0"

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OCTOBER 1
10.30

CWS PROJECT No. 23039

REVISIONS

PROJECT NORTH
TRUE NORTH

DRAWING

AUTUMN10.5

SCALE: 1/16" = 1'-0"

DATE: ISSUE DATE

PROJECT STATUS

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A5	**OXFORD & CEDAR**
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PERSPECTIVE VIEW
OXFORD & CEDAR

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER
3D.1

SCALE:

DATE: ISSUE DATE

PROJECT STATUS

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CWS ARCHITECTURE + INTERIOR DESIGN

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PERSPECTIVE VIEW
OXFORD & CHESTNUT

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

3D.2

SCALE:

DATE: ISSUE DATE

PROJECT STATUS

A5 **OXFORD & CHESTNUT**

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CONSTRUCTION SERVICES

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PROJECT ADDRESS

DRAWING

BIRDS EYE REAR ELEVATION

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

3D.3

SCALE:

DATE: ISSUE DATE

PROJECT STATUS

A5 **BIRDS EYE REAR ELEVATION**

REFERENCED FROM: SCALE:

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3/15/2024 3:34:35 PM

OVERALL SITE PLAN

LANCASTER ST.
TWO–WAY

ELM ST
ONE–WAY

89 ELM STREET

PHASE 2:
50 CEDAR STREET
LOT AREA= 0.53 ACRES
PR. UNITS: 24 (MR)

CEDAR ST.
ONE–WAY

PHASE 3:
158 LANCASTER STREET
LOT AREA= 0.41 ACRES
PR. UNITS: 51 (MR)

HALL COURT

CHESTNUT ST.
TWO–WAY

78 CHESTNUT STREET
LOT AREA=0.29 ACRES

PHASE 1:
207 & 197 OXFORD STREET
LOT AREA= 0.35 ACRES
PR. UNITS: 48 (IZ)

LEGEND:

AVESTA HOUSING DEVELOPMENT PROJECTS

REVELER DEVELOPMENT PROJECTS

CONTRIBUTING LAND (NOT TO BE REDEVELOPED UNDER THIS APPLICATION)

20 0 20 40

SCALE: 1"=20'

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PHASE 2:
50 CEDAR STREET

LANCASTER STREET
TWO-WAY

ZONE B7

ZONE B3

ZONE R6

ELM STREET
ONE-WAY

CEDAR STREET
ONE-WAY

PROPOSED BUILDING:
50 CEDAR STREET
24-UNITS
(4,837 SF)

21.46'

15.23'

4.73'

5.00'

22.83'

12.54'

9.00'

5.51'

10.87'

15.01'

N/F AMELIA A. LABRECK
37970/11

TM 26-A-9,10
N/F PETER P. & ALICE
D. AMES
7926/278

HALL COURT

ACORN
ENGINEERING, INC

reveler
DEVELOPMENT

RSA

10 0 10 20

SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

C-12

PLANTING NOTES

1. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
2. PLANT MATERIAL PROVIDED BY THE CONTRACTOR IS TO CONFORM TO THE HIGHEST STANDARD AS ADOPTED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (ANSI). PLANT MATERIAL IS TO BE HEALTHY SPECIMENS, FREE FROM DISEASE OR DAMAGE.
3. THE CONTRACTOR IS TO FURNISH PLANTS AND SOD SHOWN ON THE DRAWINGS. PLANTS ARE TO CONFORM WITH THE BOTANICAL IDENTIFICATIONS. PLANTS ARE TO BE SOURCED FROM A NURSERY WITHIN THE SAME CLIMATIC ZONE AS THE SITE LOCATION. NO SUBSTITUTIONS OF PLANT SPECIES ARE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE & THE LANDSCAPE ARCHITECT.
4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, TIME OF BLOOM & CLIMATIC LOCATION AS APPROVED BY LANDSCAPE ARCHITECT.
5. LOCATE AND VERIFY EXISTING & PROPOSED UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM PLANTING AREAS.
7. THE CONTRACTOR IS TO VERIFY SITE LAYOUT & GRADES & INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR CHANGES IN LAYOUT AND/OR GRADING PRIOR TO CONSTRUCTION. NO PLANTING IS TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
9. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE. PLANT AND STAKES ARE TO BE SET PLUMB UNLESS OTHERWISE NOTED. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
10. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
11. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN PLANT MATERIALS INCLUDING SOD/SEED AREAS IN A HEALTHY STATE DURING CONSTRUCTION AND DURING REQUIRED WARRANTY PERIODS. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
12. REPAIR DAMAGE DUE TO LANDSCAPE INSTALLATION OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK.
13. SOAK ALL PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION.
14. A LIST OF PLANTS INCLUDING BOTANICAL NAMES, SIZES, AND SPACING ARE SHOWN ON THE DRAWINGS. QUANTITIES ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE AND ARE TO BE VERIFIED. IN THE EVENT THAT QUANTITIES OR OMISSIONS OCCUR THE PLAN DRAWINGS ARE TO BE FOLLOWED.
15. IRRIGATION: A TEMPORARY UNDERGROUND DRIP AND SPRINKLER IRRIGATION SYSTEM IS TO BE PROVIDED FOR ALL PLANT MATERIAL AND SOD OR SEEDED AREAS.
16. DISTURBED SITE AREAS ARE TO BE DRESSED WITH 6" MIN. OF AMENDED TOPSOIL FOR LAWNS AND 12" MIN. FOR PLANT BEDS. TOPSOIL FOR SEEDED AND/OR SEEDED AREAS IS TO BE TWO PARTS SHARP SAND, ONE PART LOAM AND ONE PART ORGANIC COMPOST.
17. PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 5' DIA.
18. TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
19. ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

PLANTING SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
	DECIDUOUS TREES					
MI	*Malus "Ivory Spear"*	Ivory Spear Crabapple	1	1.75-2" cal	as shown	
LS	*Liquidambar styraciflua 'Slender Silhouette'*	Slender Silk Sweet Gum	4	2.75-3" cal	as shown	
QP	*Quercus paulustris*	Pin Oak	2	2.5-3" cal	as shown	
ZS	*Zelkova Serrata*	City Sprite Zelkova	1	2.75-3" cal	as shown	
	DECIDUOUS SHRUBS					
HH	*Hypericum 'Hidcote'*	St. John's Wort	5	24"-36" ht.	36" O.C.	
	EVERGREEN SHRUBS					
IXSH	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	7	30"-36" ht.	60" O.C.	

SITE SOIL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF STOCKPILE AREAS FOR STRIPPED TOPSOIL AND PLANTING SOIL PRODUCTS. CONTRACTOR SHALL ENSURE AREA IS PROTECTED AND CONTAMINATION OR DISTURBANCE OF STORED PRODUCTS IS NOT ALLOWED.
2. CONTRACTOR SHALL ENSURE SUBGRADE IS SCARIFIED PRIOR TO INSTALLING PLANTING SOIL AND BLEND WITH INITIAL LIFT OR PLACEMENT OF PROPOSED PLANTING SOIL.
3. COORDINATE PLACEMENT OF PLANTING SOIL WITH OTHER WORK, ESPECIALLY UTILITIES. PLACEMENT SHOULD OCCUR AFTER INSTALLATION OF ALL HARDSCAPE IMPROVEMENTS, IRRIGATION SYSTEM, UTILITIES, ETC. AND BEFORE INSTALLATION OF PLANTS.
4. SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

PLANTING LEGEND

EXISTING TREE

PROPOSED DECIDUOUS TREE

PROPOSED SHRUB

SITE LANDSCAPING & BUFFERS

PARKING & SCREENING:

THE SITE HAS 3 PROPOSED PARKING SPACES WHICH REQUIRE THE PLANTING OF TWO TREES (OR ONE TREE AND THREE SHRUBS) PER FIVE PARKING SPACES.

PROPOSED TREES & SHRUBS = 1 TREES, 6 SHRUBS.

PLANTING REQUIREMENTS PER FRONTAGE:

THE SITE HAS 190 FEET OF FRONTAGE IN THE R-6 DISTRICT, WHICH REQUIRES THE 6 SHADE TREES OR THE EQUIVALENT OF A SHADE TREE VIA 6 PLANTINGS (1 PER 30 FEET)

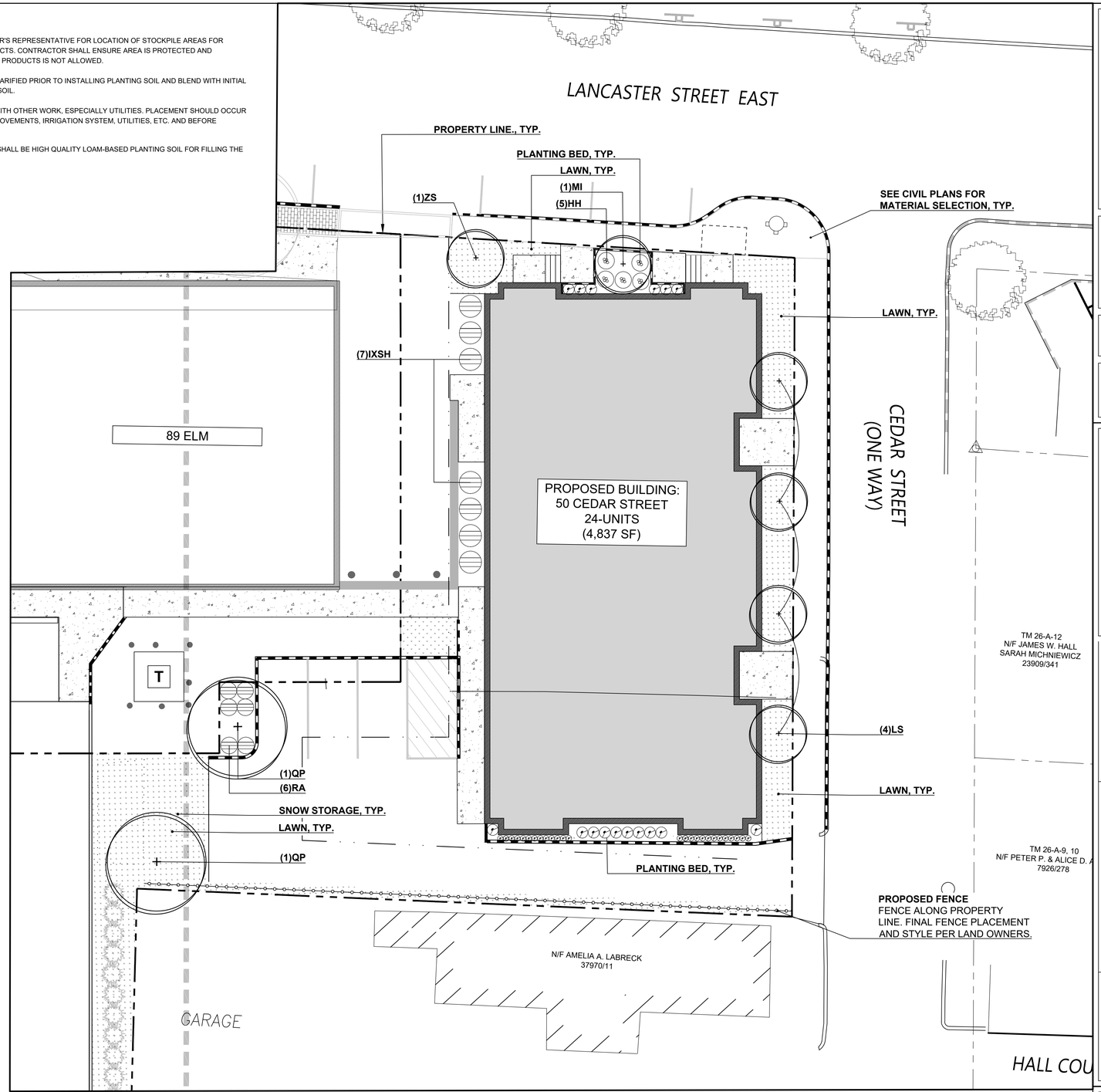
PROPOSED STREET TREES = 8
TOTAL STREET TREES = 8

TREE PLANTING REQUIREMENTS:

REQUIREMENT - ONE STREET TREE IS REQUIRED PER DWELLING UNIT (24),

PROPOSED TREES = 8
TOTAL TREES = 8

THE REMAINING STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.



NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:

REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 17, 2023

Issued For:
PERMITTING DOCUMENTS

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Title: PLANTING PLAN

50 Cedar Street

PHASE 2

Portland ME 04103

Revisions:

REGISTERED LANDSCAPE ARCHITECT
BRADEN DRYPOLCHER
No.RLA 504.3
4/17/23
STATE OF MAINE

North:

Sheet No.: L2

Scale: 1" = 20'-0"

0 10 20 40

C:\Users\DRY-L\OneDrive\Documents\Onedrive\DRY-LA\Projects\50 Cedar+ 188 Lancaster\CAD\50 Cedar dwg dry 4/17/2024

CEDAR STREET

LANCASTER STREET

4,796 SF FLOOR PLATE

SLAB STEPS UPHILL AT MIDPOINT OF BUILDING

ONE BEDROOM UNIT 101 567 SF

TYPE A STUDIO UNIT 103 436 SF

STUDIO UNIT 105 436 SF

TYPE A ONE BEDROOM UNIT 107 567 SF

ONE BEDROOM UNIT 102 575 SF

UTILITY ROOM 110 109 SF

STUDIO UNIT 104 419 SF

STUDIO UNIT 106 419 SF

UTILITY ROOM 111 109 SF

ONE BEDROOM UNIT 108 575 SF

TRANSOM WINDOW

2'-0" | 22'-3¾" | 8'-10¼" | 33'-5" | 8'-10¼" | 22'-3¾" | 2'-0"

99'-9"

2'-6" | 11'-2" | 12'-6" | 25'-0" | 10'-0" | 50'-0"

2'-0" | 22'-1" | 25'-9½" | 25'-9" | 22'-1½" | 2'-0"

0 4' 8' 16' 32'

1 FIRST FLOOR PLAN
1/4" = 1'-0"

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MULTI-FAMILY BUILDING

50 CEDAR STREET
PORTLAND, MAINE

RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET, SUITE 2
PORTLAND, MAINE 04101
O: 207-747-5159
C: 207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:

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APRIL 09, 2024

DATE:

PROJECT No. 2312

DRAWN BY: RRT

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
FIRST FLOOR PLAN

A1-1

CEDAR STREET

4,796 SF FLOOR PLATE

LANCASTER STREET

SLAB STEPS UPHILL AT MIDPOINT OF BUILDING

ONE BEDROOM UNIT 201 575 SF

STUDIO UNIT 203 436 SF

STUDIO UNIT 205 436 SF

ONE BEDROOM UNIT 207 575 SF

ONE BEDROOM UNIT 202 575 SF

ONE BEDROOM UNIT 204 547 SF

ONE BEDROOM UNIT 206 547 SF

ONE BEDROOM UNIT 208 575 SF

DECK

DECK

UP

UP

DN

DN

DW

WD

2'-0" 22'-3¾" 8'-10¼" 33'-5" 8'-10¼" 22'-3¾" 2'-0"

99'-9"

2'-6" 11'-2" 2'-6" 22'-8" 2'-6" 12'-6" 25'-0" 10'-0" 10'-0" 25'-0" 12'-6" 2'-6" 50'-0"

2'-0" 22'-1" 25'-9½" 25'-9" 22'-1½" 2'-0"

N TRUE NORTH

0 4' 8' 16' 32'

1 SECOND FLOOR PLAN
1/4" = 1'-0"

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MULTI-FAMILY BUILDING

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PORTLAND, MAINE

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C: 207-650-6414
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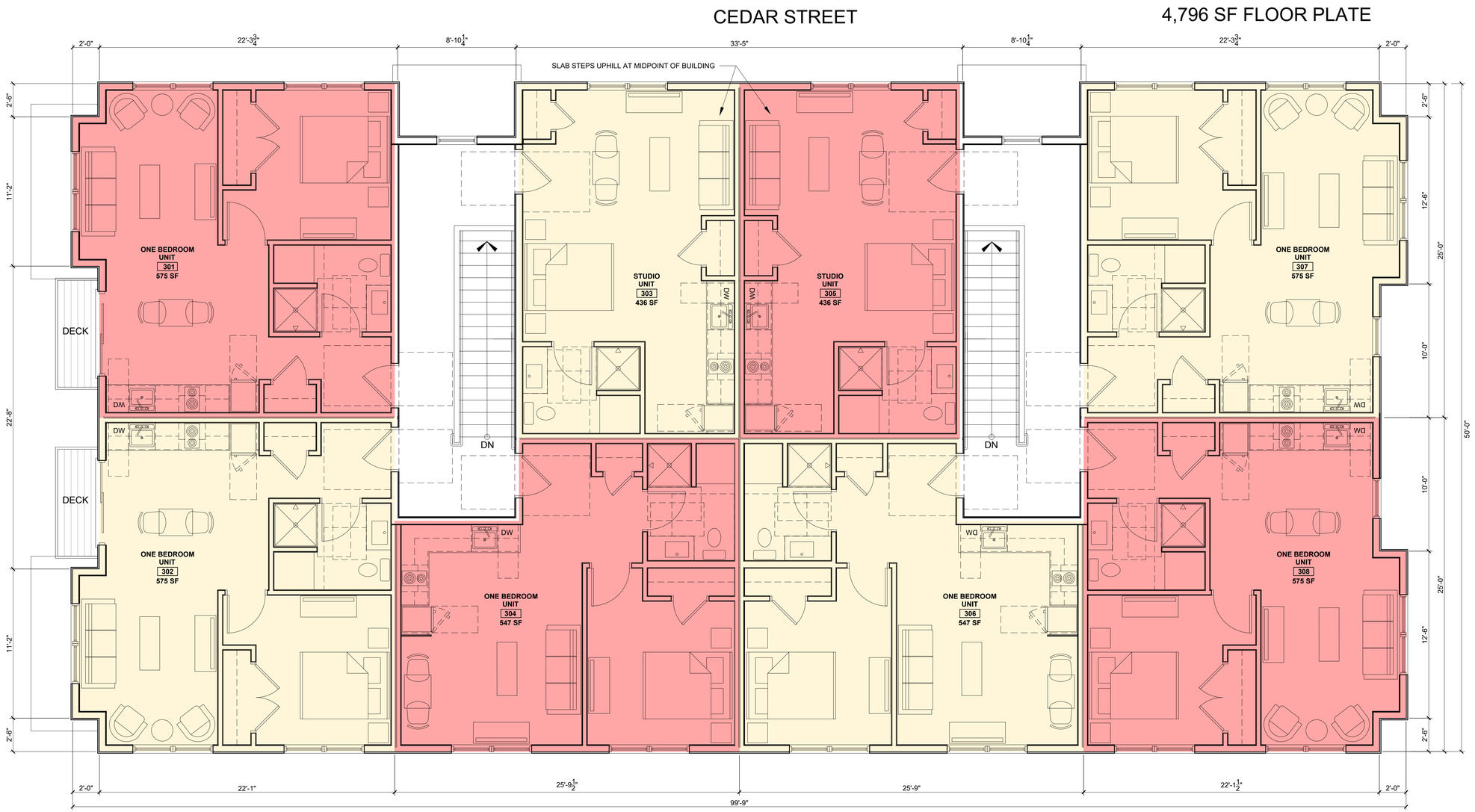
APRIL 09, 2024

REVISIONS:

DATE:	
PROJECT No.	2312
DRAWN BY:	RRT
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
SECOND FLOOR PLAN

A1-2



N
TRUE NORTH

0 4' 8' 16' 32'

1 THIRD FLOOR PLAN
1/4" = 1'-0"

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MULTI-FAMILY BUILDING

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RSA
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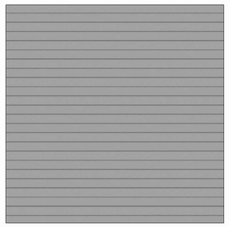
SHEET TITLE:
THIRD FLOOR PLAN

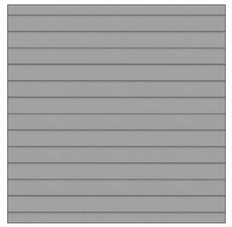
A1-3



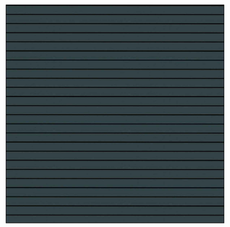
COLOR #1 (WHITE)
5” LAP SIDING



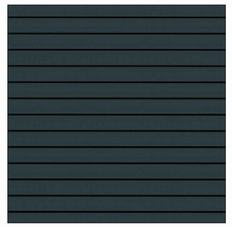
COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



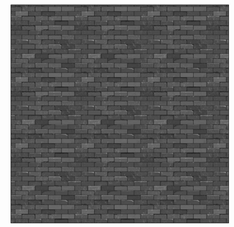
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 WEST ELEVATION
1/4" = 1'-0"

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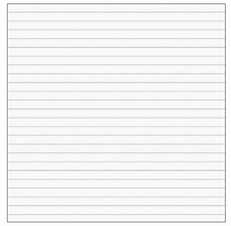
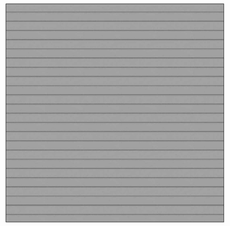
SCALE:	AS NOTED

SHEET TITLE:
WEST ELEVATION

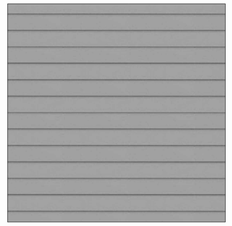
A2-0



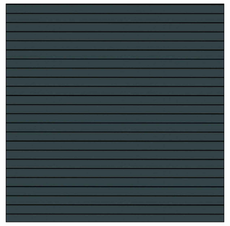
COLOR #1 (WHITE)
5” LAP SIDING



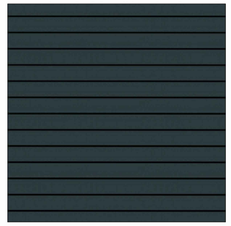
COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



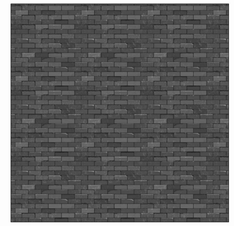
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 NORTH ELEVATION
1/4" = 1'-0"

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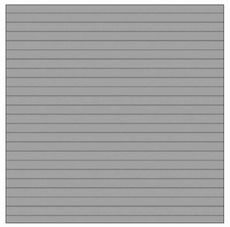
SCALE:	AS NOTED

SHEET TITLE:
NORTH
ELEVATION

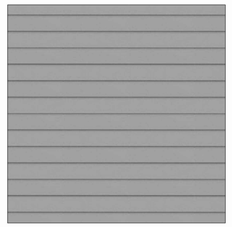
A2-1



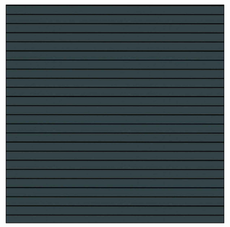
COLOR #1 (WHITE)
5” LAP SIDING



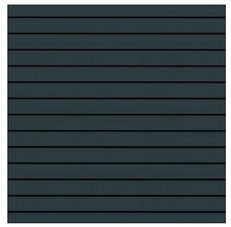
COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



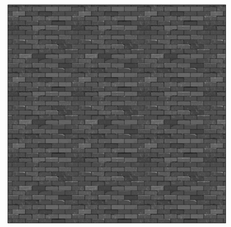
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 EAST ELEVATION
1/4" = 1'-0"

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PROJECT No.	2312
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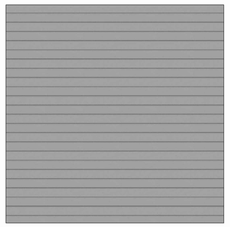
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
EAST ELEVATION

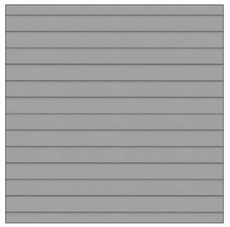
A2-2



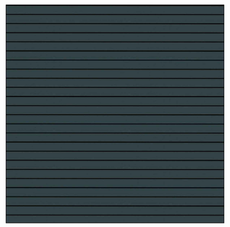
COLOR #1 (WHITE)
5” LAP SIDING



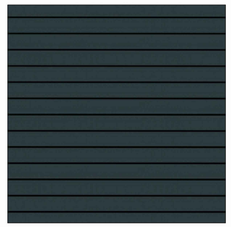
COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



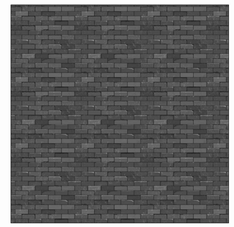
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 SOUTH ELEVATION
1/4" = 1'-0"

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PROJECT No.	2312
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SCALE:	AS NOTED

SHEET TITLE:
SOUTH ELEVATION

A2-3



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SHEET TITLE:
PERSPECTIVE 1

P1



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SHEET TITLE:
PERSPECTIVE 2

P2



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SHEET TITLE:
PERSPECTIVE 3

P3



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SHEET TITLE:
PERSPECTIVE 4

P4



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SCALE:	AS NOTED

SHEET TITLE:
PERSPECTIVE 5

P5



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SCALE:	AS NOTED

SHEET TITLE:
PERSPECTIVE 6

P6



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SCALE:	AS NOTED

SHEET TITLE:
PERSPECTIVE 7

P7



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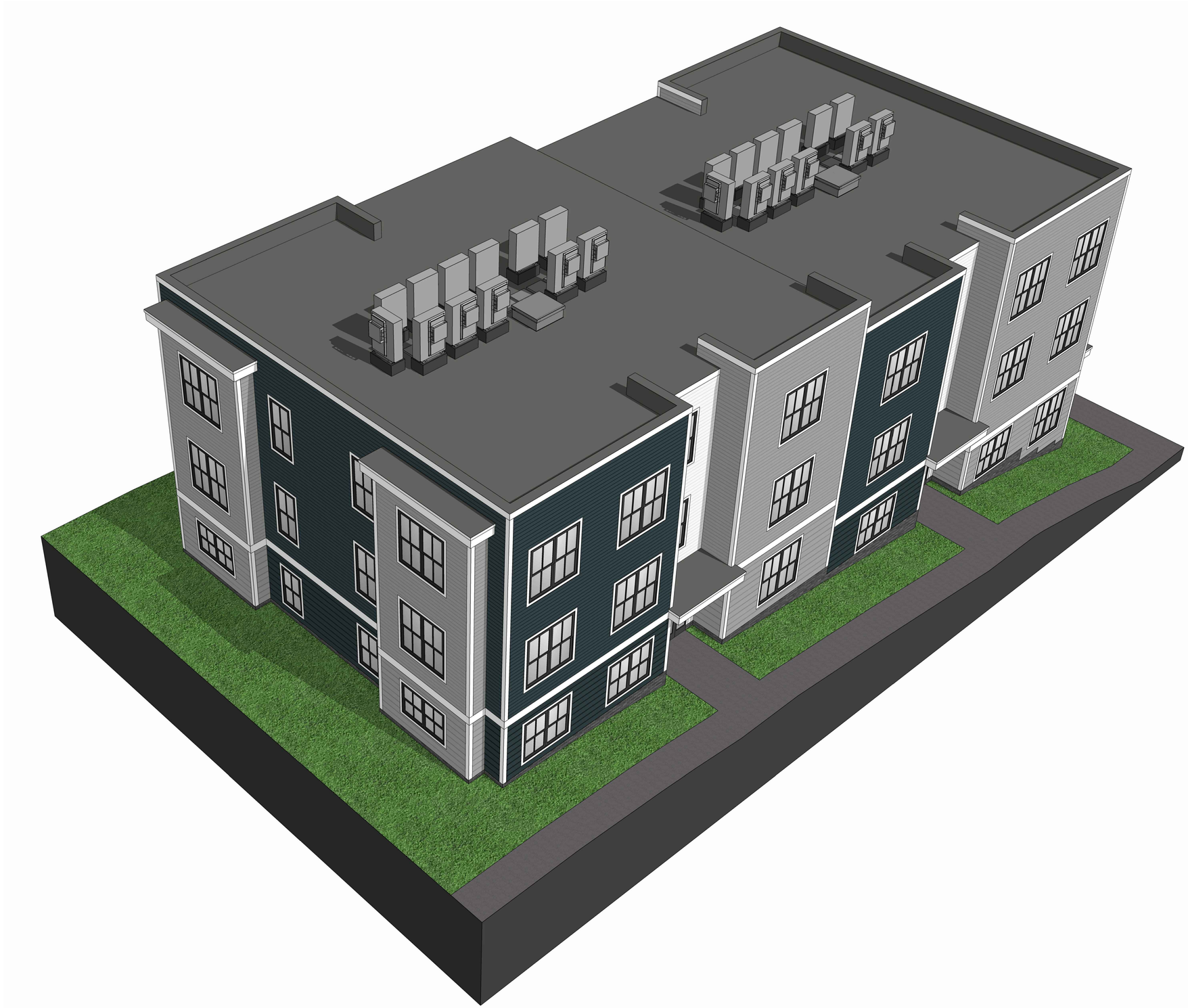
SCALE:	AS NOTED

SHEET TITLE:
PERSPECTIVE 8

P8



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CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
PERSPECTIVE 9

P9

Lancaster Street - Looking towards 50 Cedar Street & 89 Elm



158 Lancaster Street + 50 Cedar Street
Portland, ME

OVERALL SITE PLAN

LANCASTER ST.
TWO–WAY

ZONE B7

ZONE B3

ZONE R6

89 ELM STREET

PHASE 2:
50 CEDAR STREET
LOT AREA= 0.53 ACRES
PR. UNITS: 24 (MR)

PHASE 3:
158 LANCASTER STREET
LOT AREA= 0.41 ACRES
PR. UNITS: 51 (MR)

ELM ST
ONE–WAY

CEDAR ST.
ONE–WAY

HALL COURT

CHESTNUT ST.
TWO–WAY

78 CHESTNUT STREET
LOT AREA=0.29 ACRES

PHASE 1:
207 & 197 OXFORD STREET
LOT AREA= 0.35 ACRES
PR. UNITS: 48 (IZ)

2 STORY BRICK

THRESH=49.73

LEGEND:

AVESTA HOUSING DEVELOPMENT PROJECTS

REVELER DEVELOPMENT PROJECTS

CONTRIBUTING LAND (NOT TO BE REDEVELOPED UNDER THIS APPLICATION)

20 0 20 40

SCALE: 1"=20'

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PHASE 3:
158 LANCASTER STREET

LANCASTER ST.
TWO–WAY

CEDAR ST.
ONE–WAY

CHESTNUT ST.
TWO–WAY

HALL COURT

8.58'
16.00'
7.80'
5.00' FRONT SETBACK
5.25'
13.72'
18.00'
9.00'
R5.00'
15.00'
12.41'
10.00'
5.00'
9.00'
12.00'
9.00'
9.00'

PROPOSED BUILDING
158 LANCASTER STREET
BUILDING FOOTPRINT:
7,002 SF

10.00' SIDE YARD STEPBACK
5.00' SIDE YARD SETBACK
10.00' REAR YARD SETBACK
15.00' REAR YARD
STEPBACK OVER 35'
10.13
69.10'
21.47'

TM 26–A–12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26–A–8
N/F ALBERT
BRESETTE
7951/275

TM 26–A–9,10
N/F PETER P. & ALICE D. AMES
7926/278

ACORN ENGINEERING, INC

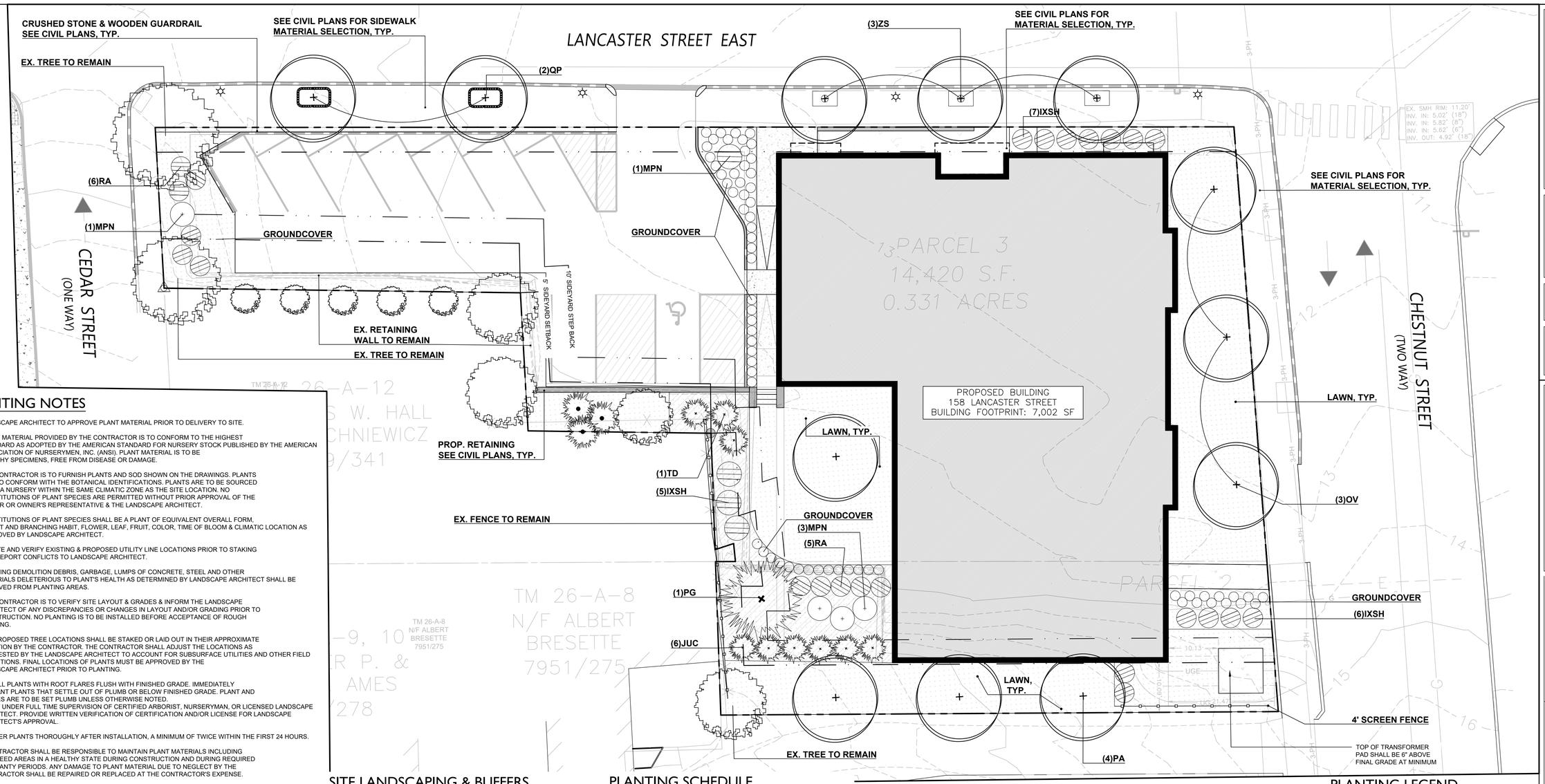
reveler DEVELOPMENT

RSA

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

C-13



PLANTING NOTES

1. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
2. PLANT MATERIAL PROVIDED BY THE CONTRACTOR IS TO CONFORM TO THE HIGHEST STANDARD AS ADOPTED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (ANSI). PLANT MATERIAL IS TO BE HEALTHY SPECIMENS, FREE FROM DISEASE OR DAMAGE.
3. THE CONTRACTOR IS TO FURNISH PLANTS AND SOD SHOWN ON THE DRAWINGS. PLANTS ARE TO CONFORM WITH THE BOTANICAL IDENTIFICATIONS. PLANTS ARE TO BE SOURCED FROM A NURSERY WITHIN THE SAME CLIMATIC ZONE AS THE SITE LOCATION. NO SUBSTITUTIONS OF PLANT SPECIES ARE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE & THE LANDSCAPE ARCHITECT.
4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, TIME OF BLOOM & CLIMATIC LOCATION AS APPROVED BY LANDSCAPE ARCHITECT.
5. LOCATE AND VERIFY EXISTING & PROPOSED UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM PLANTING AREAS.
7. THE CONTRACTOR IS TO VERIFY SITE LAYOUT & GRADES & INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR CHANGES IN LAYOUT AND/OR GRADING PRIOR TO CONSTRUCTION. NO PLANTING IS TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
9. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE. PLANT AND STAKES ARE TO BE SET PLUMB UNLESS OTHERWISE NOTED. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
10. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
11. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN PLANT MATERIALS INCLUDING SOD/SEED AREAS IN A HEALTHY STATE DURING CONSTRUCTION AND DURING REQUIRED WARRANTY PERIODS. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
12. REPAIR DAMAGE DUE TO LANDSCAPE INSTALLATION OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK.
13. SOAK ALL PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION.
14. A LIST OF PLANTS INCLUDING BOTANICAL NAMES, SIZES, AND SPACING ARE SHOWN ON THE DRAWINGS. QUANTITIES ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE AND ARE TO BE VERIFIED. IN THE EVENT THAT QUANTITIES OR OMISSIONS OCCUR THE PLAN DRAWINGS ARE TO BE FOLLOWED.
15. IRRIGATION: A TEMPORARY UNDERGROUND DRIP AND SPRINKLER IRRIGATION SYSTEM IS TO BE PROVIDED FOR ALL PLANT MATERIAL AND SOD OR SEEDED AREAS.
16. DISTURBED SITE AREAS ARE TO BE DRESSED WITH 6" MIN. OF AMENDED TOPSOIL FOR LAWNS AND 12" MIN. FOR PLANT BEDS. TOPSOIL FOR SEEDED AND/OR SEEDED AREAS IS TO BE TWO PARTS SHARP SAND, ONE PART LOAM AND ONE PART ORGANIC COMPOST.
17. PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 5' DIA.
18. TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
19. ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

SITE SOIL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF STOCKPILE AREAS FOR STRIPPED TOPSOIL AND PLANTING SOIL PRODUCTS. CONTRACTOR SHALL ENSURE AREA IS PROTECTED AND CONTAMINATION OR DISTURBANCE OF STORED PRODUCTS IS NOT ALLOWED.
2. CONTRACTOR SHALL ENSURE SUBGRADE IS SCARIFIED PRIOR TO INSTALLING PLANTING SOIL AND BLEND WITH INITIAL LIFT OR PLACEMENT OF PROPOSED PLANTING SOIL.
3. COORDINATE PLACEMENT OF PLANTING SOIL WITH OTHER WORK, ESPECIALLY UTILITIES. PLACEMENT SHOULD OCCUR AFTER INSTALLATION OF ALL HARDSCAPE IMPROVEMENTS, IRRIGATION SYSTEM, UTILITIES, ETC. AND BEFORE INSTALLATION OF PLANTS.
4. SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

SITE LANDSCAPING & BUFFERS

PARKING & SCREENING:

THE SITE HAS 3 PROPOSED PARKING SPACES WHICH REQUIRE THE PLANTING OF TWO TREES (OR ONE TREE AND THREE SHRUBS) PER FIVE PARKING SPACES.

PROPOSED TREES & SHRUBS = 1 TREES, 7 SHRUBS.

PLANTING REQUIREMENTS PER FRONTAGE:

THE SITE HAS 369 FEET OF FRONTAGE IN THE R-6 DISTRICT, WHICH REQUIRES THE 12 SHADE TREES OR THE EQUIVALENT OF A SHADE TREE VIA 6 PLANTINGS (1 PER 30 FEET)

PROPOSED STREET TREES = 8
EXISTING STREET TREES = 2
TOTAL STREET TREES = 10
THE REMAINING TWO STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.

TREE PLANTING REQUIREMENTS:

REQUIREMENT - ONE STREET TREE IS REQUIRED PER DWELLING UNIT (40),

PROPOSED TREES = 16
EXISTING TREES = 6
TOTAL TREES = 22
THE REMAINING 29 STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.

PLANTING SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
DECIDUOUS TREES						
PA	*Prunus 'accolade'*	Accolade Cherry	4	2.5-3" cal	as shown	
OV	*Ostrya virginiana*	American Hophorn	3	2.5-3" cal	as shown	
QP	*Quercus paulustris*	Pin Oak	2	2.5-3" cal	as shown	
ZS	*Zelkova Serrata*	City Sprite Zelkova	3	2.5-3" cal	as shown	
EVERGREEN TREES						
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
PG	*Picea glauca*	White Spruce	1	8-10'	as shown	
TD	*Thuja occidentalis "Degroots Spire"*	Degroot's Spire Arborvitae	3	8-10'	as shown	
DECIDUOUS SHRUBS						
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
HH	*Hypericum 'Hidcote'*	St. John's Wort	7	24"-36" ht.	48" O.C.	
MPN	*Myrica pensylvanica*	Northern Bayberry	5	24"-30" ht.	60" O.C.	
RA	*Rhus aromatica*	Lo-gro Sumac	11	24"-30" ht.	48" O.C.	
EVERGREEN SHRUBS						
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
IXSH	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	10	30"-36" ht.	48" O.C.	
JUC	*Juniperus conferta 'Emerald Sea*	Emerald Sea Shore Juniper	6	18"-24" ht.	48" O.C.	

PLANTING LEGEND

- EXISTING TREE
- EXISTING EVERGREEN TREE
- PROPOSED DECIDUOUS TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUB

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:
REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:
Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 16, 2024

Issued For:
PERMITTING DOCUMENTS

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Title: PLANTING PLAN

158 Lancaster Street
PHASE 3
Portland ME 04103

Revisions:

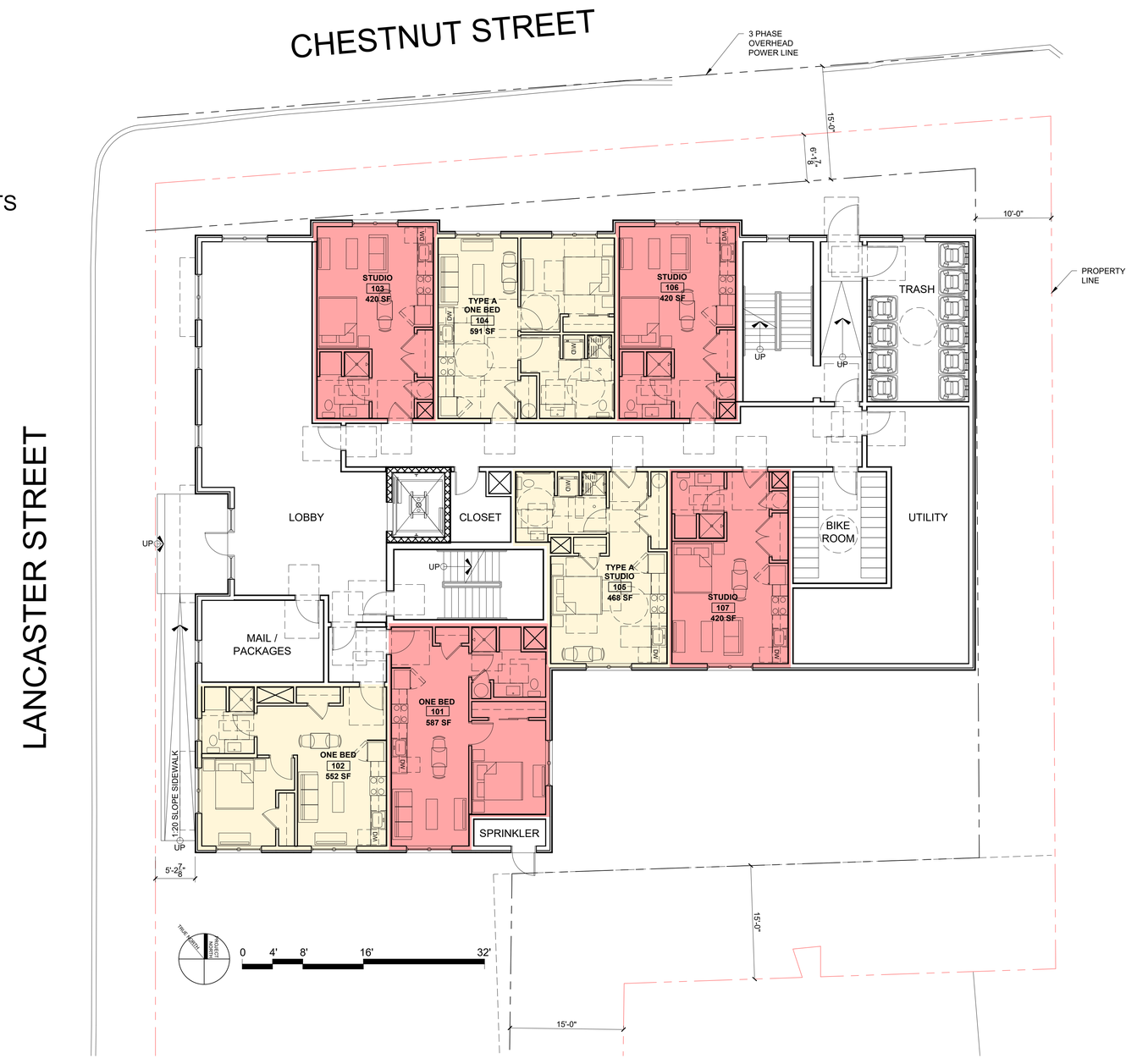
REGISTERED LANDSCAPE ARCHITECT
BRADEN DRYPOLCHER
No.RLA 5043
4/17/23
STATE OF MAINE

North:

Sheet No.: L3

Scale: 1" = 10'-0"
0 5 10 20

6,960 SF FLOOR PLATE
4 STUDIO APARTMENTS
3 ONE BEDROOM APARTMENTS



1 FIRST FLOOR PLAN
1/8" = 1'-0"

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APARTMENTS

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senatorearchitecture.com

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REVISIONS:

DATE:	
PROJECT No.	2418
DRAWN BY:	RRT
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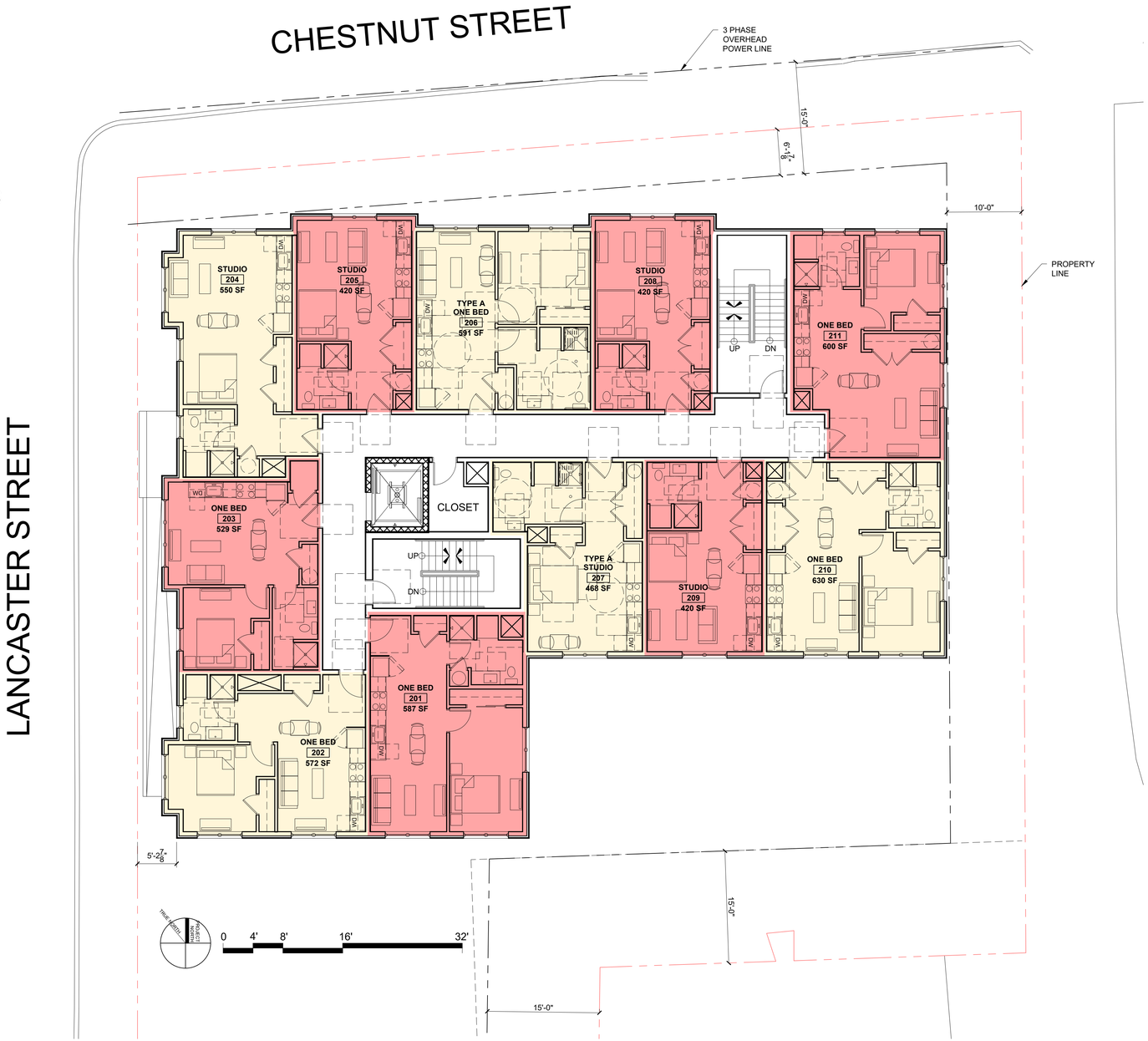
SCALE:	AS NOTED

SHEET TITLE:
FIRST FLOOR PLAN

A1-1

7,072 SF FLOOR PLATE
5 STUDIO APARTMENTS
6 ONE BEDROOM APARTMENTS



1 SECOND FLOOR PLAN
1/8" = 1'-0"

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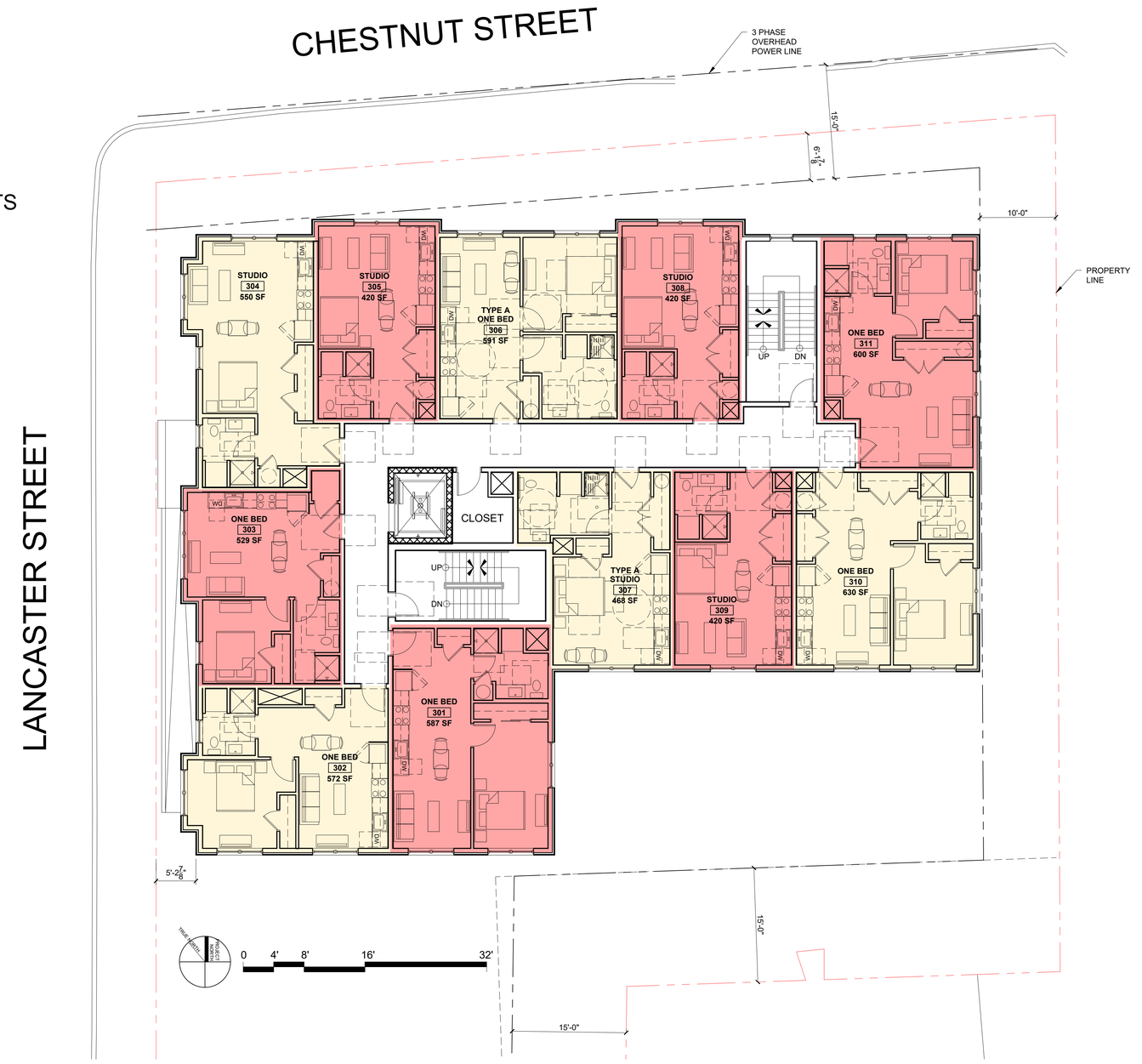
SHEET TITLE:
SECOND FLOOR PLAN

A1-2

7,072 SF FLOOR PLATE
5 STUDIO APARTMENTS
6 ONE BEDROOM APARTMENTS



1 THIRD FLOOR PLAN
1/8" = 1'-0"

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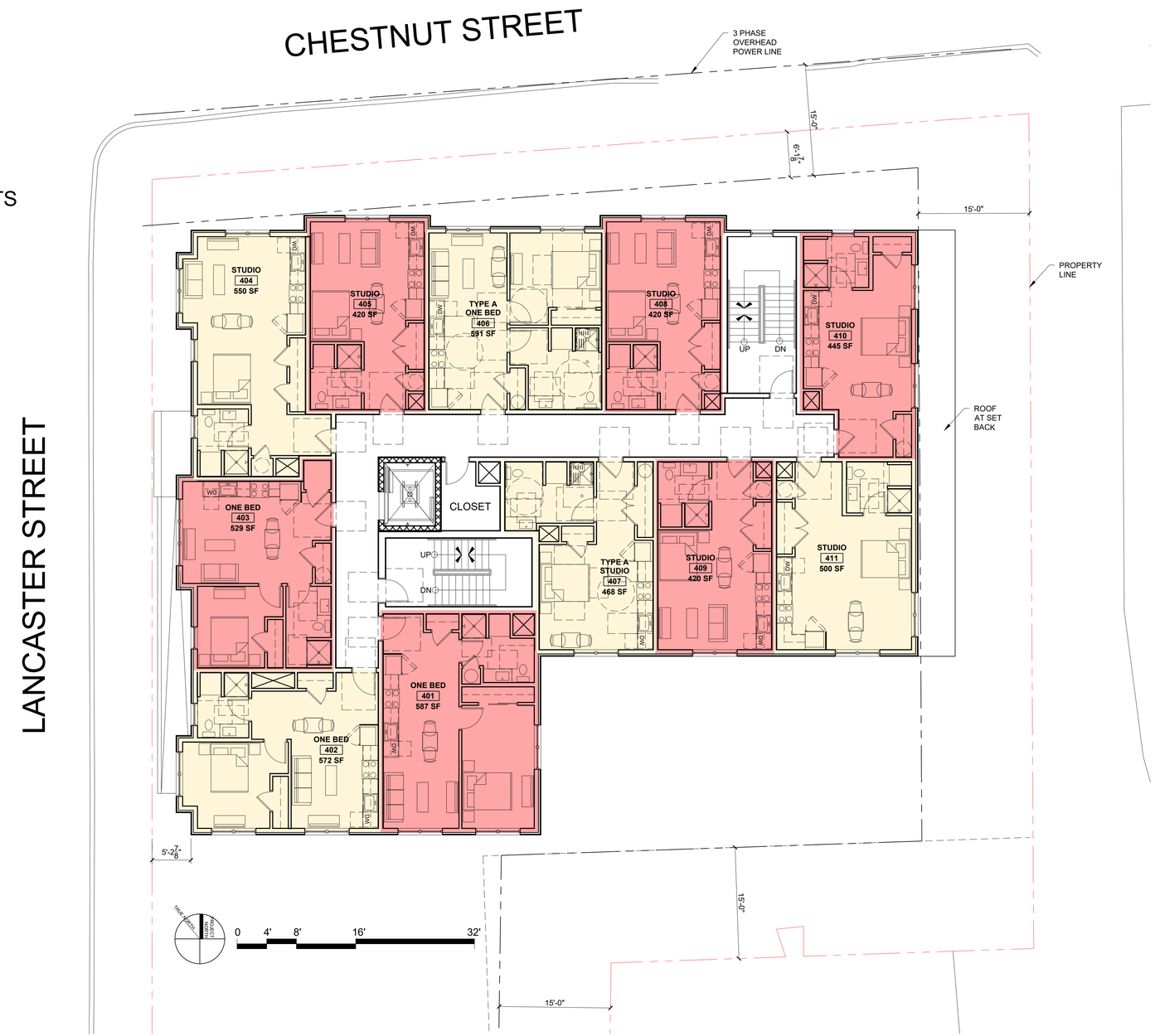
SHEET TITLE:
THIRD FLOOR PLAN

A1-3

6,788 SF FLOOR PLATE
7 STUDIO APARTMENTS
4 ONE BEDROOM APARTMENTS



1 FOURTH FLOOR PLAN
1/8" = 1'-0"

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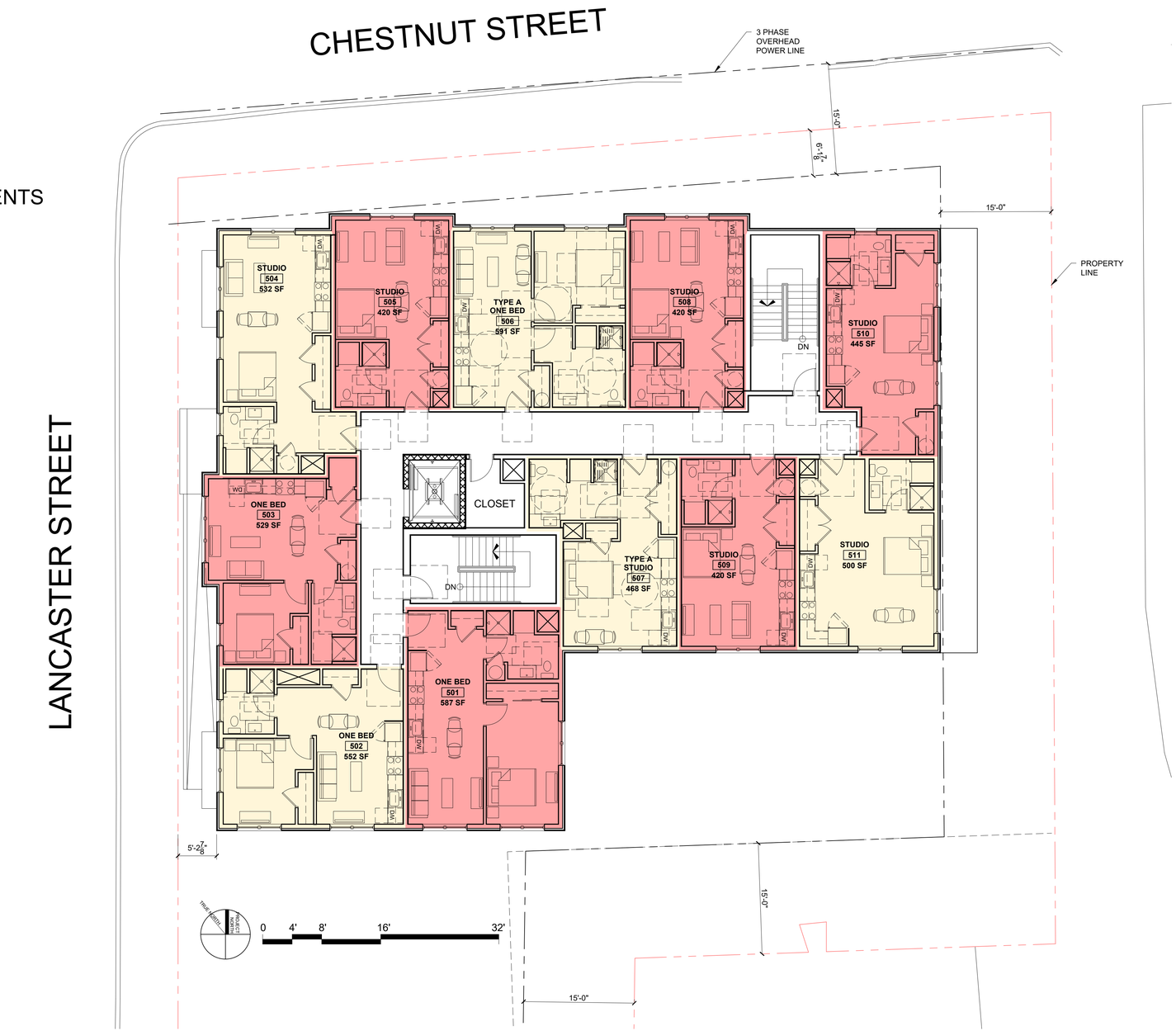
SHEET TITLE:
FOURTH FLOOR PLAN

A1-4

6,788 SF FLOOR PLATE
7 STUDIO APARTMENTS
4 ONE BEDROOM APARTMENTS



1 FIFTH FLOOR PLAN
1/8" = 1'-0"

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SHEET TITLE:
FIFTH FLOOR PLAN

A1-5

COLOR #1 (WHITE)
5” LAP SIDING

COLOR #2 (LIGHT GRAY)
5” LAP SIDING

COLOR #3 (DARK GRAY)
9” ARTISAN SQURE

COLOR #4 (BLACK)
DOORS / WINDOWS

COLOR #5 (ACCENT)
FIBER CEMENT PANEL



1 WEST ELEVATION
1/4" = 1'-0"

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SHEET TITLE:
WEST ELEVATION

A2-0

COLOR #1 (WHITE)
5" LAP SIDING

COLOR #2 (LIGHT GRAY)
5" LAP SIDING

COLOR #3 (DARK GRAY)
9" ARTISAN SQURE

COLOR #4 (BLACK)
DOORS / WINDOWS

COLOR #5 (ACCENT)
FIBER CEMENT PANEL



1 NORTH ELEVATION
1/4" = 1'-0"

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SHEET TITLE:
NORTH ELEVATION

A2-1

COLOR #1 (WHITE)
5" LAP SIDING

COLOR #2 (LIGHT GRAY)
5" LAP SIDING

COLOR #3 (DARK GRAY)
9" ARTISAN SQURE

COLOR #4 (BLACK)
DOORS / WINDOWS

COLOR #5 (ACCENT)
FIBER CEMENT PANEL



1 EAST ELEVATION
1/4" = 1'-0"

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SHEET TITLE:
EAST ELEVATION

A2-2

COLOR #1 (WHITE)
5" LAP SIDING

COLOR #2 (LIGHT GRAY)
5" LAP SIDING

COLOR #3 (DARK GRAY)
9" ARTISAN SQURE

COLOR #4 (BLACK)
DOORS / WINDOWS

COLOR #5 (ACCENT)
FIBER CEMENT PANEL



1 SOUTH ELEVATION
1/4" = 1'-0"

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SHEET TITLE:
SOUTH ELEVATION

A2-3



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PERSPECTIVE 1

P1



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PERSPECTIVE 2

P2



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PERSPECTIVE 3

P3



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PERSPECTIVE 4

P4



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P5



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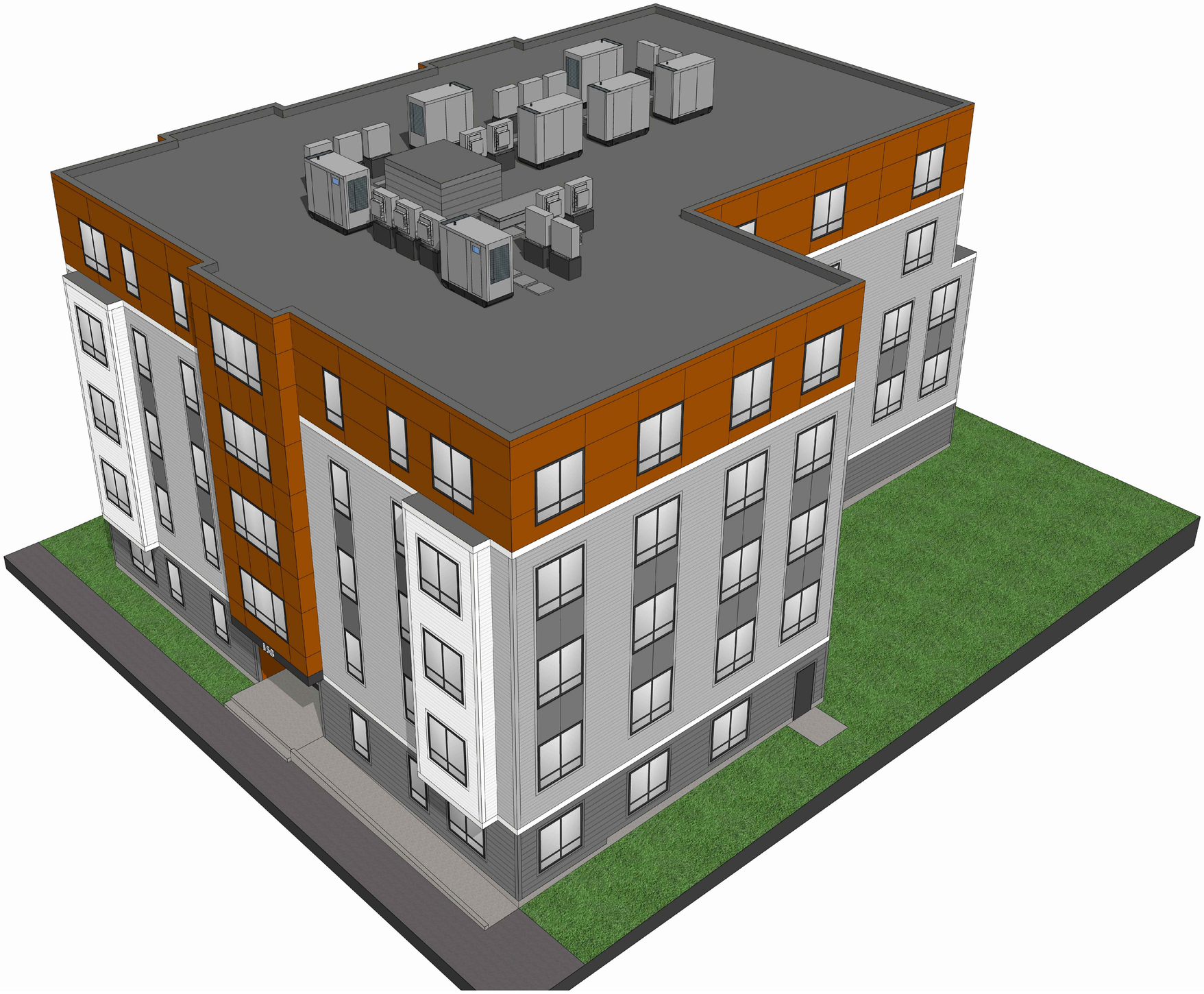
PERSPECTIVE 6

P6



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SHEET TITLE:
PERSPECTIVE 7

P7



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PERSPECTIVE 8

P8

158 Lancaster Street - Looking towards 50 Cedar Street



** Note: see architectural sheets for building treatments , material color, and selections*

158 Lancaster Street + 50 Cedar Street
Portland, ME

dry landscape architecture l.l.c.

dry landscape architecture l.l.c.

31 Miller Avenue
Biddeford, ME 04005
Tel: 603.496.8020
Email: dry-la@outlook.com

Eric Freeman
City Planner - City of Portland Maine
389 Congress Street
Portland, ME 04101
September 30, 2024

Subject:
Joint Site Plan Application Open Space Narrative
197 Oxford Street, 50 Cedar Street, and 158 Lancaster Street

Dear Eric,

This joint site plan application for 197 Oxford Street, 50 Cedar Street, and 158 Lancaster Street reflects a coordinated effort to enhance not only the individual lots but also the surrounding neighborhood. The proposed developments aim to improve urban green space, sidewalk accessibility, and community connections, with a focus on creating open spaces that benefit both residents and the wider public.

Throughout the planning process, the design team engaged in productive public outreach to ensure the project aligns with community needs. On June 26th, 2024, the design team met with abutters on site, conducting a walking tour of each lot to gather direct feedback and insights from the neighboring community. This meeting provided valuable perspectives that informed the design, which we hoped would foster a collaborative approach to the open space and site improvements.

In addition to this on-site engagement, multiple meetings were held with City staff and community members to refine the plans for each property, addressing both functional and aesthetic considerations. The project also includes enhancements to the Cedar Street sidewalk, promoting pedestrian access and safety. Furthermore, the plans recognize and support the existing community garden on Cedar Street and Hall Court, ensuring that the proposed developments complement this valuable green space and contribute to the neighborhood's ecological health.

The collaborative effort between the design team, abutters, and City staff has resulted in a thoughtful site plan that not only improves the individual lots but also enhances the overall character and connectivity of the neighborhood.

197 Oxford Street

Open space: 20%

The open space plan for 197 Oxford Street includes a landscaped courtyard on the northern side of the building that will serve as a shared green space for both residents and visitors. The design emphasizes passive use with seating areas, decorative plantings, and hardscaped surfaces. Native and drought-resistant plants will be used to ensure low-maintenance landscaping and promote local biodiversity. Pathways will be integrated to provide ease of access while also creating a sense of flow throughout the space. The Oxford Street streetscape will be treated with native and drought-resistant plants to ensure low-maintenance landscaping while adding a strong foundation planting - elevating the user experience and reducing heat island effect. Grade changes along Oxford Street and building entrances are being addressed by a ramping condition that allow universal access to the building's main entrances. The Oxford, Chestnut, and Cedar Street streetscapes adjacent the proposed building will be planted with a

dry landscape architecture l.l.c.

31 Miller Avenue
Biddeford, ME 04005
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Email: dry-la@outlook.com

total of 18 street trees - aligning with the City of Portland standards and creating vibrant and robust improvements.

50 Cedar Street

Open space: 21.8%

The proposed development on this tight urban lot has been designed to maximize open space and enhance the visual appeal through strategic plantings and landscaping, with special attention given to the building's prominent location at the corner of Cedar and Lancaster Streets. Due to the proximity of the structure to the street corner, our open space strategy focuses on creating a welcoming, green edge that not only softens the building's urban footprint but also enhances the pedestrian experience and contributes to the overall streetscape.

The overall goal is to use these visual and plant-based improvements to maximize the perceived open space on a lot with tight spatial constraints. By thoughtfully placing greenery at key points, enhancing building facades, and improving the surrounding sidewalk and corner transitions, the design aims to create an attractive and functional urban open space that not only benefits building residents but also enhances the visual and social fabric of the Cedar and Lancaster Street corner.

158 Lancaster Street

Open space: 41.9%

The proposed open space plan for this small urban lot, located next to a community garden, maximizes its green potential by creating a wildflower meadow designed to support and enhance the garden's productivity while adding a unique amenity for residents. The meadow will feature a diverse mix of native wildflowers and grasses, providing crucial habitat for pollinators such as bees and butterflies, directly benefiting the adjacent farm plot through increased pollination and ecological health.

Additionally, the lot's perimeter along Halls Court, Chestnut Street and Lancaster Street will be flanked by flowering street trees. These trees will provide shade, improve air quality, and add a natural buffer between the building, parking area, and the sidewalk. Together, the wildflower meadow and street trees create a cohesive, ecologically rich open space that enhances the community garden while contributing to a greener, more sustainable urban environment.

We look forward to presenting the updates at the next public hearing.
Thank you for your attention to this matter.

Sincerely,



Braden Drypolcher, Principal
Dry Landscape Architecture

ACORN ENGINEERING, INC.

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

September 30, 2024

Subject: Comment Response Letter
197 Oxford Street Phased Redevelopment – Joint Major Site Plan Application

On behalf of Reveler Development and Avesta Housing Development Corporation d/b/a Avesta Oxford Street LP, Acorn Engineering is pleased to respond to the following comments from the City of Portland Planning Department review of the 197 Oxford Street Phased Redevelopment Project, Joint Major Site Plan Application (PL-002885-2024).

The following material provided below outlines the comments that were "Not Met", according to the City Staff findings. City Staff Comments were received on May 28th, 2024, followed by a Planning Board meeting on June 25, 2024.

As referenced in this document, the project design team held the following meetings to discuss and receive clarification on the comments received.

- Density and Zoning conversation with the City; held on June 3rd, 2024.
- Google Meets Discussion with City Staff, DPW, and the transportation team; held on June 11th, 2024.
- Neighborhood Site Walk; held on June 26th, 2024.
- Meeting with the City to Discuss the overall density and design; held on June 28th, 2024.
- Meeting with the City to discuss the design changes and steps moving forward, held on August 20th, 2024.

Additionally, in the absence of a formal written comment from Staff, it should be noted that based upon a review of Hall Court's status and the requirement for each parcel to stand on its own meeting space and bulk requirements, the Phase 3 portion of the project has been reduced from 51 units to 24 units. The project now contains a total of 96 units, 48 of which will be affordable and constructed as Phase 1. Please consider this letter to supersede the original cover letter.

Site Plan Worksheet - City Comments:

Site Plan Review Standards (Sec. 14.6)

- **Transportation Standards (Sec. 14.6.1)**

Impact on Surrounding Street Systems Comment:

Overview:

Phase 1 is bordered by Oxford, Chestnut and Cedar Streets
Phase 2 is located at the southwest corner of Cedar and Lancaster Streets
Phase 3 is located at the southwest corner of Chestnut and Lancaster streets
All three phases share frontages along Cedar Street and Hall Court, A private Row.
The applicant proposes to install a curb extension at the intersection of Oxford and Boyd Streets. The curb extension would extend approximately feet along 20 Boyd Street, removing one on-street parking space.

Updates Requested:

- *Comment: The applicant shall provide all back up calculations for their trip generation methodology.*

Response: Please refer to the revised Section T. Traffic Analysis for this information.

Access & Circulation Comment:

Updates Requested:

- *Comment: 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. Callout tip downs.*

Response: Please refer to the revised Civil Plan set which includes more detailed callouts for the proposed spot grades and grade breaks. The level of detail will continue to progress for the final submission later this year, and ultimately construction.

- *Comment: Show Street Centerlines, callout & dimension limits of ROW*
- *Comment: Reconstructed Sidewalk ramps should be constructed such that they are facing the direction of pedestrian travel*
- *Comment: When a detail is referenced ie. "per detail" provide a sheet# for said detail*

Response: Please refer to the revised Civil Plan set which includes more detailed callouts for the proposed site grading, the street centerlines and dimensions of the ROW, and provides sheet #'s for each of the referenced details.

- *Comment: The City's Technical Manual has been recently updated and approved. The applicant shall update all proposed details (Site, Sewer, Stormwater, Landscape, ... details) to meet the requirements of the recently approved technical manual update.*

Response: **All details included with the Civil package are proposed to meet the requirements outlined in the City of Portland Technical Manual.**

- *Comment: Existing conditions and proposed Improvements in the ROW shall be dimensioned on the plan view sheets. For example ROW, street, lanes sidewalk, esplanade driveways (and other improvements) widths as well as when a width changes.*

Response: **Please refer to the revised Civil Plan set which includes more detailed dimensions on the existing conditions and proposed improvements within the City Right of Way.**

- *Phase 1*
  - *Comment: The Bayside Transportation Master Plan contains a recommendation to convert Oxford Street to a two-way street. The proposed curb lines, as shown on the plan, would make such a conversion difficult without eliminating parking on one side of the street. Applicant shall construct a six-foot wide sidewalk along their frontage, thus affecting a slight widening of the roadway.*

Response: **After further discussion with Planning and DPW, it was agreed upon that maintenance of the existing ~8.5' wide sidewalk was appropriate. Some of the reasoning includes:**

- **The 8.5' wide sidewalk facilitates strong tree growth while maintaining 5' clearance at the tree wells for ADA accessibility**
- **Moving the curbline out towards the subject parcel would require the utility poles, overhead electrical and telecommunications lines to be relocated incurring additional costs and disruption.**
- **It allows the building to maintain its required separation from electrical conductors per Maine State Statute. The subject parcels is limited in depth and the building can not move further towards to the rear lot line to accommodate a decreased sidewalk and pole relocation.**
- **There is adequate width within Oxford Street to allow for 2-way traffic and maintain on-street parking on both sides of the street, either with limited use in the winter, or an adjustment to curbline on the opposite side of the street where the sidewalk is in substandard condition and does not currently meet the sidewalk policy. A more formal study is forthcoming as outlined in the 89 Elm Street/Traffic Movement Permit condition of approvals, prior to the occupancy of Phase 1B of the MDP (196 Lancaster Street which has not yet been submitted to the Planning Board).**

- *Comment: C-11 - Street Signage shall be replaced as all other streetscape features are being replaced.*

Response: **All street signage to be removed is intended to be replaced, as noted on the plans.**

- *Comment: C-11 - Dimension sidewalk width from edge of ROW to back of curb on Chestnut St and Cedar St.*

Response: **Please refer to the revised Site Plan for more information on the proposed sidewalk widths.**

- *Comment: C-31 - Show drainage direction arrows.*
- *Comment: C-31 - Provide additional spot grades around the building to better indicate positive drainage away from the building.*

Response: **Please refer to the revised Grading and Drainage Plan for more information on the proposed grades and corresponding directional drainage arrows.**

- *Phase 2*
  - *Comment: The Phase 2 site plan shall include a driveway width dimension at the property line.*

Response: **Please refer to the revised Site Plan which now includes the driveway width dimension at the property line.**

- *Comment: C-12 - Dimension sidewalk width from ROW to Curb on Cedar St & Lancaster St, Minimum 6' Sidewalk must be provided.*

Response: **The existing sidewalk widths that do not meet the 6' standard occur along the Phase 2 Lancaster frontage as well as the entirety of Cedar Street**

The existing Cedar Street sidewalks are approximately 5 – 5.5' wide. As part of this redevelopment project, the Cedar Street sidewalks are proposed to be replaced as part of each project phase. Please refer to the overall site plan which depicts the extent of the improvements associated with each phase. The improvements propose to increase the sidewalk along the North side of Cedar Street by 1', to provide a 6' sidewalk on the North side of the street which also allows 3' wide tree grates to be installed with a 4' clear passing zone (a portion of which is provided by the grate), meeting ADA requirements. Note that we are seeking guidance from DPW on curb treatments along Cedar Street, specifically at existing curb cuts. The width of the sidewalk will not allow for the preferred design where the back 5' of width stays elevated and the remaining sidewalk width is used as a ramp to bridge the elevation between the gutterline and the elevated sidewalk. Given the existing homes, we also do not want to provide 15' long tipdown/ramps at each curb cut which may undermine or expose existing foundations. It would appear the most appropriate design solution is one that mimics the recent Chestnut Street work where a partial tipdown is provided to transition from a 7" reveal to a 4"-5" reveal at the bugs. The bugs are then used as a transition area with pavement to provide the 4" "bridge" between gutterline and elevated sidewalk. If this approach is acceptable to DPW, please confirm and we will advance the engineering of the Cedar Street off-site sidewalk improvements for the final submission.

Along the Phase 2 Lancaster frontage, the proposed sidewalk width is 4' which would occur for 40 linear feet before the width tapers into a larger sidewalk. This condition is based upon continuity of the Lancaster St curb line that was designed as part of the MDP and subsequent 89 Elm Street Site Plan. 89 Elm Street contemplates a public access easement to effectively provide a wider pedestrian width on private property; however, 50 Cedar (Phase 2 of the JSPA) does not have an opportunity to offer that easement due

to site constraints and the building typology. Please provide guidance if the preference is to maintain this 4' sidewalk width for this 40 linear feet, or decrease the 36' curb to curb width in Lancaster Street which would require the curbline to taper to the northeast of the 89 Elm service driveway, and potentially affect the two on-street parking spaces in front of the Phase 2 parcel.

- *Comment: C-12 - Show the limits of curb that is being removed and relocated along Lancaster.*

<u>Response:</u> Please refer to the revised Construction Management Plan which now includes the limits of curbs that are to be removed as part of this redevelopment project.

- *Comment: C-12 - Need Clarity on what the curb cuts are encompassing.*

<u>Response:</u> Please refer to the revised Construction Management Plan and Site Plan, which provides more information on the curb cuts affected on the parcel.

- *Comment: C-12 - Call out all paving that is being removed and replaced.*

<u>Response:</u> Please refer to the revised Construction Management Plan and Site Plan which identifies the pavement that is to be removed and replaced.

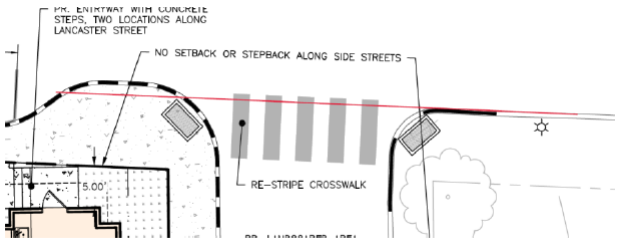
- *Comment: C-12 - Parallel on street parking spaces must be 20' in length.*

<u>Response:</u> All on street parking spaces have been revised to reflect the traditional 20' long on street parallel parking stall.

- *Comment: C-12 - Show how this site plan ties into site plan from 89 Elm St. site plan.*

<u>Response:</u> Please refer to the Phase 2 Civil Plans for more information on how 50 Cedar Street is proposed to tie into the 89 Elm Street Site Plan.

- *Comment: C-12 - Curb extension must align with existing curb line from opposite side of Chestnut St.at the location shown below*



Response: **Please refer to the revised Site Plan which includes this modification to the existing and proposed curbline.**

- *Phase 3*
    - *Comment: C-13 - Keep Light poles out of accessible ramps*

Response: **All proposed light poles are to be located out of the accessible ramps. Please refer to the revised Civil Plans and the Phase 3 Photometric Plan for more information.**

    - *Comment: C-13 - Tree wells must be shown on Site plan, with sidewalk widths dimensioned. Provide 6' Sidewalk clear width must be maintained at all locations.*

Response: **Please refer to the revised Site Plan which includes the proposed locations of the tree wells within the sidewalk and the associated sidewalk dimensions.**

    - *Comment: C-33 - Provide additional spot grades around building to better indicate positive drainage away from the building*

Response: **Please refer to the revised Grading and Drainage Plan which provides more detail on the proposed grades and overall site drainage.**

    - *Comment: C-33 - Show sawcut limits for utilities in ROW*

Response: **Please refer to the revised Construction Management Plan and Site Plan which identifies the pavement that is to be removed and replaced.**

Parking Comment:
Updates Requested:

- *Comment: The parking analysis notes that off-street parking needs will be accommodated in the Cumberland Avenue garage on an as needed basis.*
- *Comment: The applicant shall provide a narrative regarding the need for the small surface level parking lots for phases 2 and 3*

Response: **The off-street parking spaces on Phases 2 and 3 are being provided due to the extra available space on site as an option for residents who choose to be closer to their building, including residents who may have a disability. All parking spaces will be unbundled from the base rent, and residents will have the opportunity to reserve a parking space on the subject parcel, or within the garage on Cumberland Ave depending on their individual preference for covered parking without snowplow requirements vs a shorter walking distance to their vehicle. In most cases, it will likely depend on the end user's frequency of vehicle usage.**

- *Phase 1*
    - *Comment: The Phase 1 site plan shall include the parking aisle width.*

Response: **Please refer to the revised Site Plan which includes the parking aisle width.**

- *Comment: Provide more clarification regarding proposed parking along Oxford street frontage. DPW suggests all parking except the space closest to the entrance near the corner of Cedar and Oxford be either one-hour or two-hour parking from 9-5. The space closest to the corner should be an accessible space as it is closest to the entrance and to the curb ramps.*

Response: Please refer to the revised Site Plan which provides the locations and proposed signage intended to be replaced and reset.

Water Quality, Stormwater Management and Erosion Control Comment:

Updates Requested:

- *The project is required to comply with MaineDEP Chapter and City 500 of Portland Technical Manual Section 5 standards for stormwater management.*
  - *Basic Standards - The project is required to provide for erosion and sedimentation control per the Basic Standard. Erosion control measures are shown on the Construction Management Plans that have been provided for each of the three phases.*
    - *Comment: It is recommended that consistency in line types and designations of erosion control measures be used. For example, a different line type is used for silt fence on Phase 3 compared to the other two drawings.*

Response: Please refer to the revised Construction Management Plans which provides a consistent line type style throughout the three phases.

    - *Comment: Catch basins requiring inlet protection should be specifically designated on the plans. Current notation is inconsistent across the different phases.*

Response: Please refer to the revised Civil Plan Set for more information on the locations downgradient of the development which propose catch basin inlet protection.

  - *General/Redevelopment Standards - The Applicant has divided the project into three phases, and has evaluated the requirements for stormwater treatment for each. Within Phases 1 and 2, greater than 1,000 SF of new impervious surface has been created and treatment has been provided. In Phase 3, the amount of impervious surface has been reduced. None of the phases will result in the redevelopment of greater than 5,000 SF of non-roof redeveloped impervious area - redeveloped areas are primarily roof, and there are areas that are not considered to be "redeveloped" as they are not being regraded. Subsurface stormfilter systems have been provided for Phases 1 and 2.*
  - *Flooding Standards - For each modeled phase, the project will reduce flows from the pre-development to the post development condition in all modeled storm, meeting the Flooding Standard.*
- *I have the following comments on the proposed stormwater system:*
    - *Comment: The Phase 1 roof drainage should be clarified - the plan notes that the stormfilter vault will collect and treat 25% of the roof, while the inset notes that this percentage is 50%.*

Response: **The proposed Stormfilter vault on Phase 1 is intended to treat runoff from 25% of the roof area. Please refer to the revised Grading and Drainage plan for more information.**

- *Comment: The proposed stormfilter structure provided on the Phase 2 Grading plan does not include any structure rim or invert information.*

Response: **Please refer to the revised Grading and Drainage plan which now includes more information on the proposed rim and invert information for the stormfilter vault.**

- *Comment: For Phase 3, a solid cover is provided on the structure at the northern corner of the site. Based on the site grades, it appears this will allow for stormwater flow across the sidewalk onto the ramp area, and then into the catch basin on Chestnut Street. I'd suggest that a grated cover be considered for this structure to reduce flow across the ramp*

Response: **This structure is now proposed with a grate.**

- *Comment: The Applicant should also evaluate the layout of the existing catch basin at the corner of Lancaster and Chestnut Streets in Phase 3 to ensure that it can be installed within the proposed ramped area of the sidewalk.*

Response: **The existing catch basin at the Lancaster and Chestnut Street corner is to remain, but be retrofitted with a cascade grate in lieu of a headstone.**

- *Comment: I would recommend, for the R-Tank table of values provided with the detail, noting that finished grades are per the grading plans. The finished grades listed, in particular for Phase 1 and Phase 2, are low compared to the grading plans. I believe this will just result in a greater amount of fill over the system, which shouldn't be a design issue, but could cause confusion with review for construction.*

Response: **Please refer to the revised R-Tank Detail on sheet C-45 which includes the proposed grades associated with each phase. These details will continue to be refined as the project approaches approval and ultimately construction.**

- *Comment: The overflow/header pipe layout should be consistently called out on all three R-tank systems. Phase 1 identifies the 4" overflow pipes to the 10" header pipe. A similar level of detail is needed for Phases 2 and 3.*

Response: **Please refer to the revised Civil Plan Set for more information on the proposed stormwater systems design.**

- *Comment: The Applicant has noted that they are coordinating with utilities and confirmation of ability to serve will be provided.*

Response: **Confirmation letters from each respective utility company will be uploaded to**

the City's EPlan, when available.

- *Comment: The Applicant should clarify when the installation of the water main in Lancaster Street will be taking place - notes on different plans vary, so it is unclear. If this work is to be completed as part of this project, the full extent of the impact with repaving of the trench in Lancaster Street should be shown.*

Response: As discussed in the meeting with City staff, the Lancaster Street water main replacement and MS4 Extension, as proposed in part of the West Bayside Master Development Plan (MDP) in April 2023, is intended to be constructed as part of the 89 Elm Street Redevelopment project, Phase 1A of the MDP which will be commencing construction in the coming months. The water main extension has been broken into two phases. The first phase will occur during the 89 Elm construction. The second phase of the water main extension will occur between Cedar and Chestnut Street during the 158 Lancaster redevelopment (Phase 3 of the JSPA). Due to topographical and invert constraints, the MS4 can not be extended beyond its current upstream terminus and therefore the entire project will occur as one phase during the 89 Elm Street redevelopment. The abovementioned sequencing has been coordinated with Planning and DPW staff.

- *Comment: The plans should be consistent in how pavement repair for utility installation is represented. This has only been shown on the Phase 2 utility plan.*

Response: Please refer to the revised utility plans which represents the pavement repairs anticipated to facilitate the construction of the proposed utilities by project phase.

Site Landscaping and Buffers Comment:

Updates Requested:
Phase 2:

- *Comment: The applicant should provide a narrative for the three off-street parking spaces. Staff would be supportive of removing these spaces in favor of the creation of private open space for residents.*

Response: The off-street parking spaces on Phases 2 and 3 are being provided due to the extra available space on site as an option for residents who choose to be closer to their building, including residents who may have a disability. All parking spaces will be unbundled from the base rent, and residents will have the opportunity to reserve a parking space on the subject parcel, or within the garage on Cumberland Ave depending on their individual preference for covered parking without snowplow requirements vs a shorter walking distance to their vehicle. In most cases, it will likely depend on the end user's frequency of vehicle usage.

- *Comment: The applicant should demonstrate how the open space is being 20% determined.*

Response: Please refer to the individual Site Plans as well as Document W. Open Space

Narrative which provides the open space and associated calculations. The open space is derived from any ground cover that is proposed as vegetation. Hardscaping that may function towards open space use was not counted towards the 20% minimum requirement.

Public Utilities Comment:

Updates Requested:

- *Phases 1and 3:*
  - *Comment: Water resources had previously directed the west bayside master plan development group to extend the City's separated storm drain system up Chestnut Street from the intersection of Somerset Street and Chestnut Street to provide drainage for the eastern end of the overall redevelopment program. It appears the design and implementation of that storm drain extension should happen as part of 197 Oxford Street Phase# 1 project. Subsequent phases of development (Phase# 3 of this site plan review, and other west bayside MDP projects) should then utilize this extended storm drain for their respective storm drain connections. Water resources is asking the developer to design the storm drain, including a plan and profile, and submit it to water resources review and approval as part of this site plan process.*

Response: After discussion with the City and DPW, it has been agreed upon the potential MS4 extension within Chestnut Street is not necessary for Phase 1 of the Oxford Street Redevelopment project. The design for the MS4 extension within Lancaster Street as proposed as part of the West Bayside Master Development Plan, approved in 2023, has been generally approved by PWD and DPW, with some minor edits to be made prior to construction. The MS4 in Lancaster Street will be constructed during the redevelopment of 89 Elm Street which is slated for construction in Fall 2024.

- *It appears the applicant has satisfied DPW's stormwater detention volume and flow control requirements for project phases #1 and #3.*
- *Phase 2*
  - *Comment: As part of the 89 Elm Street site plan approval PL-002403-2023 (West Bayside MDP Phase#1) the applicant committed to extending the City's separated storm drain in Lancaster Street from Preble Street to the project site. A condition of approval was added to that project which requires the final design of the Lancaster stormwater system to be submitted as part of a subsequent MDP site plan application for 196 Lancaster Street. This proposed project (197 Oxford Street Ph #2) is proposing to outlet it's stormwater into the proposed adjacent stormwater system for the 89 Elm Street project. Water resources supports this connection and ultimate discharge into the proposed Lancaster Street Storm Drain (see easement notes below), but the design of this Lancaster Street storm drain extension will need to be finalized and approved by water resources as part of this site plan review process before we sign off on the connection.*

Response: The Lancaster Street MS4 will be constructed prior to the Phase 2 of the Phased Joint Site Plan Application.

Comment: An easement agreement should be set up and recorded between these two properties for the

proposed shared stormwater system. The applicant should comment on proposed phasing and coordination of utility work between the two projects.

Response: We are in agreement. Reveler owns both parcels and plans to develop a mutual easement agreement for access, maintenance, and utilities.

Design Review:

Comment: Phase 3 – Staff recommends the building placement move to align with Chestnut Street to respond to the existing structures located directly at or within close proximity to the street. Furthermore, the Applicant is requested to find an alternative location for the transformer proposed at Chestnut Street.

Response: The building placement is driven by Maine State Statute and CMP requirements. This results in a minimum 16' setback from the existing overhead electrical wires. Therefore, the building can not move closer to Chestnut Street. The padmount transformer is located as such due to CMP requirement for crane access. Given the reduction in unit count from 51 to 24, it's possible that a pole-mounted transformer may be sufficient to energize this building. Both options are being shown on the utility plan. The transformer type will be dictated by the final electrical loading.

Comment: Staff requests that the Applicant provide a written narrative to identify the proposed open space for the proposed three-phased site plan, with a description to provide access for people with limited mobility. Staff will need to evaluate shared open space, communal open space per property and/or private open for residential units to meet this design standard. Open space functions may include, but not limited to buffers and screening, yard space, play areas, and planting around the perimeter of the proposed building, in addition to communal or private open space within the building footprint (such as roof-level terraces or balconies incorporated within the building façade).

Response: We have provided this document per request as Document V. which demonstrates each phase meets the 20% requirement. We are not aware of any additional R-6 requirements within the ordinance requiring communal open space.

Comment: Phase 1 – Staff recommends a building location closer to the street along Oxford Street and Chestnut Street to reduce the lawn areas proposed along the front property adjacent to the public sidewalk and relocate the transformer at the corner that Staff finds is not contextually appropriate. Staff recommends greater activation along the street with pedestrian amenities such as seating, building entry articulations and planting areas for screening around the building.

Response: The location of the building in relation to Oxford Street is once again drive by State and Utility regulations on setbacks from aerial electrical conductors. We have removed a large portion of lawn area and replaced it with landscaping. Additionally, the building redesign has accommodated space to allow the padmount transformer to be relocated away from the intersection per request. Lastly, greater articulation and screening has been improved where feasible.

Comment: Phase 2 – Staff recommends the Applicant replace the lawn areas along the property frontages for shrub planting material as a more contextually appropriate landscape buffer adjacent to the public sidewalk. In addition, the Applicant is requested to consider additional open space for

communal use, either within the building footprint or as a shared driveway (also known as paseo or woonerf) at the paved areas leading into the parking area at the rear of the property.

Response: Where appropriate, lawn areas have been replaced with more interesting plantings. The current site and building program is not able to accommodate communal open space due to site constraints and the lack of owner interest in encouraging gathering areas within travel areas, particularly given its immediate adjacency to a neighboring residence.

Comment: Staff finds the Phase 1 – 197 Oxford Street development parking is located in a garage and requests additional information for the proposed retaining wall at the rear of the property to evaluate proper screening for vehicles from the adjacent property at 72 Chestnut Street.

Response: A safety/privacy fence will be provided on top of the retaining wall that will provide fall protection and a visual barrier between the parking area and property line. Please refer to the plan set for more information.

Comment: Staff finds the Phase 3 – 158 Lancaster Street development parking is not appropriately arranged and landscaped to properly screen vehicles from Lancaster Street. Staff recommends:

- *a reduction in surface parking area;*
- *moving the building closer to Chestnut Street;*
- *expanding the building along Lancaster Street; and*
- *adding a garage door to allow for parking at the rear of the property or within the building footprint as structured parking.*

Response:

- **The applicant does not wish to reduce the surface parking area. These parking spaces will provide value to the future residents within the 48 units that span between Phase 2 and 3, particularly for those with a disability, or who prefer to be closer to their apartment than the parking garage can provide.**
- **As previously described, the building can not move closer to Chestnut Street**
- **The limitation of 24 units does not result in a building massing large enough to provide the opportunity to span a greater length along Lancaster Street.**
- **A garage door or structured parking does not logically work with the current program and building design. A larger structure may have been able to support this recommendation, but the current design now resembles the Phase 2 building with a stepped townhouse style design and is not conducive to a garage door or structured parking.**

For responses specific to the architectural design review, please refer to the revised architectural drawings and design narratives which address these comments in tandem with several meetings with City Staff. Note that:

- The Phase 1 building has been significantly redesigned in response to Staff and Board feedback.
- The Phase 2 building has not undergone any changes.
- The Phase 3 building has been significantly redesigned, based upon feedback from Staff that the 158 Lancaster parcel can not obtain additional density from contributing parcels within

the JSPA. Therefore, the unit count has been reduced from 51 units to 24 units. The proposed building is now similar to the Phase 2 building design.

Please refer to the attachment outline below for the supplemental materials provided as part of this resubmission. Thank you for your review – we look forward to being placed on the next available Planning Board agenda for a second workshop.

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

Sincerely,

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

Danielle McGowan, E.I.
Project Engineer
Acorn Engineering, Inc.

New Documents:

- **Section W. Open Space Narrative**
- **Section X. Turning Templates**
- **Section Y. Comment Response Letter**

Revised Documents:

- **Section D.3 Zoning Analysis – Phase 3**
- **Section D.4 Density Overview**
- **Section F. Waivers**
- **Section I. Conformity with Land Use Ordinance**
- **Section J. Stormwater Management Report**
- **Section L.3 Fire Department Letter – Phase 3**
- **Section M. Wastewater Capacity Letter**
- **Section M.3 Wastewater Capacity Form – Phase 3**
- **Section O. Architectural Design Narratives**
- **Section R. Solid Waste**
- **Section S. Parking Analysis**
- **Section T. Traffic Analysis**

New or Revised Drawings:

- **Civil Plan Set**
- **Landscape Plan Set**
- **Architectural Plan Sets**

PHASED OXFORD STREET REDEVELOPMENT

AVESTA HOUSING & REVELER DEVELOPMENT
PORTLAND, MAINE

LEGEND

EXISTING

REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION

PROPOSED

	UNDERDRAIN
	GREEN SPACE
	UTILITY PAVEMENT CUTS
	STRIPING
	SEDIMENTATION BARRIER
	EDGE OF EX. PAVEMENT
	CURB
	SIGN
	LAMP OR LIGHT POLE
	UTILITY POLE
	GUY WIRE
	WATER VALVE
	FIRE HYDRANT
	SEWER MANHOLE
	CATCH BASIN
	DRAIN MANHOLE
UE UE	UNDERGROUND ELECTRIC LINE
W W	UNDERGROUND WATER LINE
64	MINOR CONTOURS (1 FT)
65	MAJOR CONTOURS (5 FT)
G G	GAS LINE
SD SD	STORM DRAIN LINE
S S	SEWER LINE
	EXISTING/PROPOSED BUILDING
OHE/T/C	OVERHEAD ELECTRICAL/TELEPHONE/CABLE
	PROPERTY LINE
	SETBACKS

UTILITIES

SEWER

DEPARTMENT OF PUBLIC WORKS (DPW)
250 CANCO ROAD
PORTLAND, MAINE 04101
CONTACT: BRAD 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: JAMIE COUGH
(207) 828–2882

TELEPHONE

CONSOLIDATED COMMUNICATIONS
(FORMERLY FAIRPOINT)
45 FOREST AVENUE
PORTLAND, MAINE 04101
CONTACT: PAT MORRISON
(207) 745–9363

CABLE

CHARTER COMMUNICATIONS
444 PERRY ROAD
BANGOR, MAINE, 04401
CONTACT: STEVEN HOLMES
(207) 631–1618

FIRST LIGHT FIBER
14 RESILIENT CIRCLE
BRUNSWICK, MAINE, 04011
CONTACT: JONATHAN ROVILLARD
(207) 631–1618

NATURAL GAS

UNITIL SERVICE CORP
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: SCOTT CARPENTER
(207) 541–2543

PROJECT TEAM

DEVELOPER (PHASE 1)

AVESTA HOUSING
307 CUMBERLAND AVE
PORTLAND, ME 04101
CONTACT: CATHERINE ELLIOT
(207) 553–7777

DEVELOPER (PHASE 2 & 3)

REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101
CONTACT: MIKE BARTON
(207) 939–5432

ARCHITECT

RYAN SENATORE ARCHITECTURE
PORTLAND, MAINE
CONTACT: RYAN SENATORE, R.A.
(207) 650–6414

SURVEYOR

OWEN HASKEL, INC.
FALMOUTH, MAINE
CONTACT: RANDY R. LOUBIER, P.L.S.
(207) 774–0424

CIVIL ENGINEER

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: SAM LEBEL, P.E.
(207) 775–2655

LANDSCAPE ARCHITECT (PHASE 1)

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: ALEX DEL VECCHIO
(207) 775–2655

LANDSCAPE ARCHITECT (PHASE 2 & 3)

DRY LANDSCAPE ARCHITECT
PORTLAND, ME
CONTACT: BRADEN DRYPOLCHER, RLA
(603) 496–8020

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

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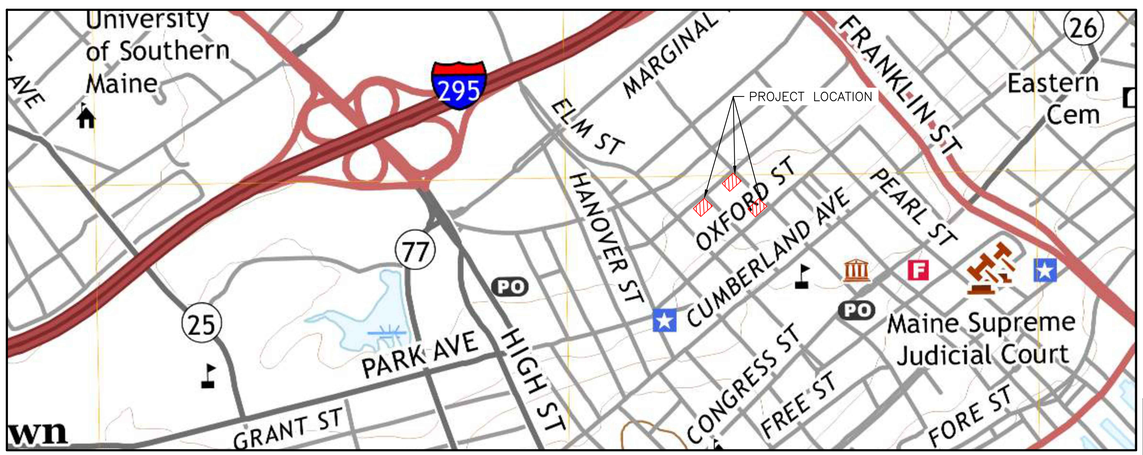

VICINITY MAP
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1–888–344–7233

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	9/30/24

COVER SHEET & LEGEND
PHASED OXFORD STREET REDEVELOPMENT
CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND ANY UNAUTHORIZED USE OF THIS PLAN SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC
307 CUMBERLAND AVE, PORTLAND, MAINE 04104
PO BOX 3422 PORTLAND, ME 04104
(207) 775–2655

FILE: 1212_AE_CIVIL
JN: 1212.1
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
Sam Lebel
SAMUEL J. LEBEL
No. 16505
PROFESSIONAL ENGINEER
LICENSED
9/30/24

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. EXISTING CONDITIONS, BOUNDARY SURVEY, AND TOPOGRAPHY FROM THE PLAN TITLED **TOPOGRAPHIC SURVEY, BAYSIDE PARCELS** BY **OWEN HASKEL, INC. DATED 2/17/23, LAST REVISED 3/22/24.**

8. SUBSURFACE DATA WILL BE OBTAINED BY THE PROJECT GEOTECHNICAL ENGINEER AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ALSO REVIEW THE REPORT PRIOR TO SUBMITTING A BID.

9. 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.

10. **CONSTRUCTION MANAGEMENT PLAN AND SITE LOGISTICS NARRATIVE WILL BE PROVIDED BY THE CONTRACTOR AND** SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

11. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.

12. 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.

13. 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.

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 PERMIT 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. **SEE BORING LOGS FOR ADDITIONAL INFORMATION.**

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 1.0% 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. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST **GEOTECHNICAL REPORT PREPARED BY THE PROJECT GEOTECHNICAL ENGINEER.**

6. CONTRACTOR TO REVIEW EXISTING SOIL CONDITIONS, TEST PITS, AND BORINGS. THERE WILL BE NO ADDITIONAL PAYMENT FOR UNSUITABLE SOILS.

7. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

9. 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.

10. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT **GEOTECHNICAL** ENGINEER, IF APPLICABLE.

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 TO BYPASS EXISTING SEWER FLOW CONTROL AT CONNECTION TO EXISTING SYSTEM AT NO ADDITIONAL COST.**

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.

4. **THE CLIENT HAS NOT REQUESTED NOR HAS ACORN COMPLETED A PHASE I – ENVIRONMENTAL SITE ASSESSMENT FOR THE PROPERTY.**

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	5/30/24

DRAWING NAME: **GENERAL NOTES**

PROJECT NAME: **PHASED OXFORD STREET REDEVELOPMENT**

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
ENGINEERING, PLANNING, SURVEYING

ALL DRAWINGS, INFORMATION AND DESIGNS INDICATED ON THESE PLANS ARE NOT TO BE USED IN ANY WAY FOR ANY PROJECT OTHER THAN THAT SPECIFICALLY PLANNED AND INTENDED FOR THE CLIENT AND SITE AS INDICATED. ANY REUSE WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PINE POINT ROAD, SCARBOROUGH, MAINE 04104
PO BOX 3434 PORTLAND, ME 04104
(207) 775–2655

FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
5/30/24

DRAWING NO.
C-02

MATCH LINE SHT. 2

LANCASTER STREET EAST (50' WIDE)

PREBLE STREET (56.5' WIDE)

ELM STREET (49.5' WIDE)

CEDAR STREET (33' WIDE)

CHESTNUT STREET (49.5' WIDE)

OXFORD STREET (49.5' WIDE)

HALL COURT PRIVATE-GRAVEL

PORTLAND ST.

CUMBERLAND AVE.

196 LANCASTER STREET LLC
39779/232
28,591 S.F. ±
0.66 ACRES ±

89 ELM STREET LLC
39779/246
4,691 S.F. ±

89 ELM STREET LLC
39779/236
38,462 S.F. ±
0.88 ACRES ±

WBP COMMERCIAL LLC.
39779/227
38,301 S.F. ±
0.88 ACRES ±

73 ELM STREET LLC
39779/234
14,879 S.F. ±
0.34 ACRES ±

60 ELM STREET LLC
39779/230
11,535 S.F. ±
0.26 ACRES ±

WBP COMMERCIAL LLC
39779/229
14,526 S.F. ±
0.33 ACRES ±

WBP COMMERCIAL LLC
39773/225
14,307 S.F. ±
0.33 ACRES ±

WBP COMMERCIAL LLC
39779/221
3,442 S.F. ±
0.08 ACRES ±

197 OXFORD STREET LLC
39779/243
12,721 S.F. ±
0.30 ACRES ±

197 OXFORD STREET LLC
39779/241
3,674 S.F. ±
0.08 ACRES ±

197 OXFORD STREET LLC
39779/239
11,550 S.F. ±
0.265 ACRES ±

TM 33-M-4
N/F
WBP GARAGE LLC
39746/216
PARKING GARAGE

TM 26-A-9,10
N/F PETER P. & ALICE D. AMES
7926/278

TM 26-A-8
N/F ALBERT BRESETTE
7951/275

TM 26-B-1
N/F ROBERT HYDE
27470/68

TM 26-B-2,3
N/F ALBERT BRESETTE

TM 26-B-14
N/F MARY LEE BENNISON
27956/297

TM 26-B-7
N/F FRANK E. DIDONATO
DONNA E. COX
24885/320

TM 33-H-16,17
N/F
DAVID B. NOWLIN
25148/336

N/F AMELIA A. LABRECK
37970/11

TM 26-A-12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

OWNERS UNKNOWN

LEGEND

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- EM/GM ELECTRIC/GAS METER
- MB MAILBOX
- SIGN
- PM PARKING METER
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- LIGHT POLE
- GAS VALVE
- DECIDUOUS TREE
- FENCE
- CURB
- OHW OVERHEAD WIRES
- UGE UNDERGROUND POWER
- W WATER LINE
- G GAS LINE
- T TELEPHONE
- SD STORM DRAIN
- SS SANITARY SEWER
- 100 1' CONTOUR
- IPF/IRF IRON PIPE/ROD FOUND
- N/F NOW OR FORMERLY
- 000/000 DEED BOOK / PAGE
- TM TAX MAP–BLOCK–LOT
- CONC. CONCRETE
- RPP RIBBED PLASTIC PIPE

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. *ALTA/NSPS LAND TITLE SURVEYS, BAYSIDE I, LLC, BAYSIDE II, LLC, BAYSIDE III, LLC, BAYSIDE IV, LLC, CEDAR ST., LANCASTER ST. EAST, CHESTNUT ST., PREBLE ST. & OXOFRD ST., PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR BUSH–WATSON SEPT. 2022 BY OWEN HASKELL, INC.*
2. *"PREBLE, KENNEBEC, SOMERSET SEWER SEPERATION PREBLE STREET PLAN AND PROFILE CITY OF PORTLAND, MAINE PUBLIC WORKS DEPARTMENT WATER RESOURCES DIVISION" VAULT PLAN NUMBER 01038_007R DATED JAN. 2019.*
3. *"NORTH SIDE INTERCEPTING SEWER AND APPURTENANCES WILMOT ST. TO PREBLE ST. SHEET 4" ON FILE AT THE CITY OF PORTLAND.*

GENERAL NOTES

1. *OWNERS OF RECORD: AS NOTED ON PLAN*
2. *BEARINGS ARE BASED ON MAINE STATE GRID WEST ZONE PER COORDINATES ON CONTROL POINTS PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.*
3. *ELEVATIONS BASED ON NGVD 1929. CITY BENCHMARK TBM 307 MDOT DISK "612–(1)–10 1983" IN CONCRETE BASE OF LIGHT POLE AT NORTHEAST CORNER ELM/SOMERSET ELEVATION = 9.02.*
4. *STREET LINES SHOWN ARE BASED ON MONUMENTATION FOUND AND TIES TO BUILDINGS PER SURVEYED BY E.C. JORDAN CO.*
5. *OWNERSHIP OF FENCES AND RETAINING WALLS ALONG PROPERTY LINES HAS NOT BEEN DETERMINED.*

STATE OF MAINE
RANDY R. LOUBIER
2407
PROFESSIONAL LAND SURVEYOR

SCALE : 1" = 30'
0' 15' 30' 60'

REV.5	03/22/2024	ADDITIONAL TOPOGRAPHY, LOCATION
REV.4	09/06/2023	REVISE OWNER TM 26-A-9,10; OXFORD ST. INVERT ELEV.
REV.3	03/29/2023	ADDED MISC. UTILITIES PER CITY COMMENT
REV.2	03/09/2023	REVISED ABUTTER NAME LOCATION
REV.1	02/22/2023	MISC. REVISIONS PER CLIENT COMMENT.

Topographic Survey
Bayside Parcels
Lancaster, Preble, Elm, Cedar, Chestnut and Oxford Streets, Portland, Maine
Made for
Bush-Watson
188 State Street, 3rd Floor, Portland, Maine

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424

DRAWN BY:	RS / JLW	DATE: FEB. 17, 2023	JOB NO. 2022-162 P
CHECKED BY:	RRL	SCALE: 1" = 30'	DRWG. NO. 1

LEGEND:

- PROPERTY LINE
- EROSION CONTROL BARRIER
- CONSTRUCTION FENCE — X —
- EX. BUILDING TO BE REMOVED
- EX. PAVEMENT TO BE REMOVED
- EX. SIDEWALK TO BE REMOVED/REPLACED
- TRENCHING EXTENT

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. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM THE FOLLOWING:
    - 12.1. REQUEST AND REVIEW RELEVANT DOCUMENTS THAT SUMMARIZE FINDINGS FROM INITIAL ENVIRONMENTAL DUE DILIGENCE ACTIVITIES COMPLETED AT THE SITE PERFORMED BY TRC COMPANIES INC.
    - 12.2. DETERMINE WHAT, IF ANY, RECOGNIZED ENVIRONMENTAL CONDITIONS (RECs) IDENTIFIED SUBSEQUENT TO ENVIRONMENTAL DUE DILIGENCE ACTIVITIES MAY AFFECT THE CONTRACTOR'S WORK.
    - 12.3. DETERMINE IF THE SITE IS/HAS BEEN IDENTIFIED AS A STATE &/OR FEDERAL HAZARDOUS SUBSTANCE SITE, OR SIMILARLY REGULATED SITE. IF SO, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMMUNICATE AND COORDINATE WITH AN ENVIRONMENTAL PROFESSIONAL (EP) TO UNDERSTAND WHAT CONTAMINANTS &/OR HAZARDS HAVE BEEN IDENTIFIED FOR THE SITE AND HOW THEIR RESPECTIVE IMPACTS MAY AFFECT THE CONTRACTOR'S WORK. THE EP SHALL BE EMPLOYED BY THE CLIENT. SHOULD THE CLIENT REQUIRE ACORN'S EP SERVICES IT SHALL BE REQUESTED IN WRITING.
    - 12.4. COMMUNICATE AND COORDINATE WITH AN EP TO REQUEST, REVIEW AND ADHERE TO RELEVANT DOCUMENTS PREPARED FOR THE SITE DESCRIBING BEST MANAGEMENT PRACTICES FOR IMPACTED OR POTENTIALLY IMPACTED MEDIA THAT MAY BE ENCOUNTERED AS PART OF THE CONTRACTOR'S WORK INCLUDING BUT NOT LIMITED TO THE SOIL MANAGEMENT PLAN & EMMP.
    - 12.5. ENSURE THE APPROPRIATE STATE &/OR FEDERAL REGULATORY AGENCY(IES) HAVE BEEN NOTIFIED OF THE CONTRACTOR'S PLANNED WORK ACTIVITIES.

78 CHESTNUT STREET

CEDAR ST. ONE-WAY

TM 26-B-14
N/F MARY LEE BENNISON
27956/297

TM 26-B-7
N/F FRANK E. DIDONATO
DONNA E. COX
24885/320

CHESTNUT ST. TWO-WAY

OXFORD ST. ONE-WAY

EX. FENCE AND SHRUBS TO BE REMOVED. SEE C-11 FOR PR. SITE IMPROVEMENTS

APPROX. EXTENT OF SIDEWALK AND CURBING TO BE TEMPORARILY REMOVED AND REPLACED. SEE SHEET C-11 FOR MORE INFORMATION.

EX. 4" CAST IRON WATER MAIN (1886)

PROPERTY LINE.

SIDEWALK ABUTTING PROPERTY TO REMAIN OPEN TO THE GREATEST EXTENT POSSIBLE. SHOULD SIDEWALK CLOSURE BE NECESSARY TO CONSTRUCT PORTIONS OF THE BUILDING, CONTRACTOR TO COORDINATE WITH DPW ON TIMING, SIGNAGE, AND PEDESTRIAN DETOUR AND PROVIDE TRAFFIC AND PEDESTRIAN CONTROL PLAN TO DPW PRIOR TO ISSUANCE OF BUILDING PERMIT.

EX. UTILITY POLE TO REMAIN

EX. 2" PLASTIC GAS MAIN (2020)

CONTRACTOR TO ENSURE EX. BUILDINGS ON ABUTTING PROPERTIES REMAIN PROTECTED AND UNDISTURBED DURING CONSTRUCTION. TYP. OF ALL EX. STRUCTURES ABUTTING THE PROPERTY.

BASED ON PWD RECORDS, THERE IS AN EX. SANITARY SEWER LINE THAT RUNS THROUGH THE REAR YARD OF THIS PROPERTY SERVICING THE EX. BUILDING TO BE DEMOLISHED. CONTRACTOR TO FIELD VERIFY EX. UTILITY AND COORDINATE ABANDONMENT AND PLUGGING IN COORDINATION WITH DPW.

APPROX. LOCATION OF EXISTING SEWER AND UNDERGROUND UTILITY LINES TO BE REMOVED AS PART OF DEMOLITION OF EX. BUILDINGS.

COORDINATE WITH OWNER ON DEMOLITION OF EX. SHEDS.

EXISTING BUILDINGS TO BE DEMOLISHED

REMOVE LANDSCAPING WITHIN SUBJECT PARCEL AND COORDINATE WITH OWNER ON REMAINING PERMANENT LANDSCAPE ELEMENTS AT 78 CHESTNUT STREET

EX. CONCRETE PAD TO BE REMOVED.

EX. BUILDING STEPS WITHIN ROW TO BE REMOVED.

EX. STREET TREE TO BE REMOVED AS PART OF CONSTRUCTION

EX. FIRE HYDRANT TO REMAIN

EX. 12" CAST IRON WATER MAIN (1886)

EX. 2" PLASTIC GAS MAIN (2020)

APPROX. LOCATION OF EX. WATER SERVICE TO BE LOCATED, SHUT CORPORATION, REMOVE SERVICE BOX AND ROD, AND CUT SERVICE AT MAIN IN COORDINATION WITH PWD. TYP. OF APPROX. 3 EX. WATER SERVICES.

EX. ON-STREET SIGNAGE TO BE TEMPORARILY REMOVED AND REPLACED AS PART OF CONSTRUCTION AND IN COORDINATION WITH DPW. SEE C-10 FOR PROPOSED RELOCATED SIGNAGE LOCATIONS. TYP. OF ALL EX. SIGNAGE

RETIRE EX. GAS SERVICE TO BUILDING IN COORDINATION WITH UNITIL.

EX. UT POLE #31 TO REMAIN

EX. "1HR PARKING 9AM-5PM & PHS ZONE", SIGN TO REMAIN.

EXISTING RETAINING WALL TO BE REMOVED AND REBUILT. CONTRACTOR AND OWNER TO COORDINATE WITH ABUTTER ON RETAINING WALL REPLACEMENT. SEE SHEET C-11 AND C-31 FOR PROPOSED SITE MODIFICATIONS.

EX. OVERHEAD SINGLE PHASE LINE TO REMAIN.

APPROX. LOCATION OF EX. SEWER LATERALS

ALL EX. TREES ONSITE TO BE REMOVED.

EXISTING GRANITE CURB TO BE REMOVED AND REBUILT. SEE SITE PLAN FOR MORE INFORMATION ON PROPOSED CURB CUT.

INSTALL STABILIZED CONSTRUCTION ENTRANCE (PER DETAIL) DURING INITAL EARTHWORK. MAINTAIN UNTIL SITE STABILIZED AND REFRESH STONE AS NECESSARY.

TEMP. CONSTRUCTION FENCE WITH GATED ACCESS. FENCE TO BE PLACED ALONG PROPERTY LINE WHERE FEASIBLE. FENCE PLACEMENT IS OFFSET FROM PROPERTY LINE FOR VISUAL PURPOSES.

TEMPORARY EROSION CONTROL BARRIER, PER DETAIL ON SHEET C-46, ALONG PROPERTY LINE AND DOWN GRADIENT OF ANY SOIL DISTURBANCE, TYP. DURING CONSTRUCTION. FILTER SOCK TO BE UTILIZED AT CONSTRUCTION ENTRANCES.

EX. CONCRETE PAD TO BE REMOVED.

EX. STOP SIGN, "NO RIGHT TURN", "NO PARKING ANYTIME", AND "NO PARKING 2ND & 4TH WEDNESDAY" SIGN TO REMAIN OR BE RESET IN PLACE AFTER NEW SIDEWALK IS INSTALLED. TYP., OF ALL EX. SIGNS

EX. STOP SIGN & ONE WAY SIGN TO REMAIN

INSTALL CATCH BASIN INLET PROTECTION PER DETAIL, TYP. OF ALL STRUCTURES DOWN GRADIENT OF CONSTRUCTION.

26.65'

31.78'

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/11/24
COMMENT RESPONSE	SJL	5/30/24

DRAWING NAME: PHASE 1 – CONSTRUCTION MANAGEMENT PLAN
PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT
CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
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. ANY ALTERATIONS AUTHORIZED WITHOUT LIABILITY TO ACORN ENGINEERING, INC. SOLE RISK AND

FILE:	1212.1_AE_CIVIL_PH1 BASE
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-03

LEGEND:

- PROPERTY LINE
- EROSION CONTROL BARRIER
- CONSTRUCTION FENCE — X —
- EX. PAVEMENT TO BE REMOVED
- EX. SIDEWALK TO BE REMOVED/REPLACED
- TRENCHING EXTENT

LANCASTER STREET
TWO-WAY

ELM STREET
ONE-WAY

CEDAR STREET

HALL COURT

POTENTIAL LOCATION OF STABILIZED CONSTRUCTION ENTRANCE (PER DETAIL) DURING INITAL EARTHWORK. MAINTAIN UNTIL SITE STABILIZED AND REFRESH STONE AS NECESSARY. TYP. OF 2 LOCATIONS.

EX. CURB CUT TO BE REMOVED. SEE C-11 FOR PR. SITE IMPROVEMENTS.

SIDEWALK ABUTTING PROPERTY TO REMAIN OPEN TO THE GREATEST EXTENT POSSIBLE. SHOULD SIDEWALK CLOSURE BE NECESSARY TO CONSTRUCTION OF POTIONS OF THE BUILDING, CONTRACTOR TO COORDINATE WITH DPW ON TIMING, SIGNAGE, AND PEDESTRIAN DETOUR AND PROVIDE TRAFFIC AND PEDESTRIAN CONTROL PLAN TO DPW PRIOR TO ISSUANCE OF BUILDING PERMIT.

EX. PAVEMENT, PARKING, AND SIGNAGE TO BE REMOVED.

TEMP. CONSTRUCTION FENCE WITH GATED ACCESS. FENCE TO BE PLACED ALONG PROPERTY LINE WHERE FEASIBLE. FENCE PLACEMENT IN PLANS ARE OFFSET FOR VISUAL PURPOSES.

TEMPORARY EROSION CONTROL BARRIER ALONG PROPERTY LINE AND DOWN GRADIENT OF ANY SOIL DISTURBANCE, TYP. DURING CONSTRUCTION. FILTER SOCK TO BE UTILIZED AT CONSTRUCTION ENTRANCES.

STATUS OF EX. UTILITY POLE TO BE COORDINATED FURTHER WITH CMP AND RESPECTIVE UTILITY COMPANIES.

EX. 4" CAST WATER MAIN (1886)

EX. CURB CUT TO BE REMOVED. SEE C-11 FOR PR. SITE IMPROVEMENTS.

EX. 2" PLASTIC GAS MAIN (2020)

EX. PAVEMENT TO BE REMOVED, SEE SHEET C-12 FOR THE PR. SITE IMPROVEMENTS.

89 ELM STREET LLC
39779/236

N/F AMELIA A. LABRECK
37970/11

TM 26-A-12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26-A-8
N/F ALBERT
BRESETTE
7951/275

TM 26-A-9,10
N/F PETER P. & ALICE
D. AMES
7926/278

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. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM THE FOLLOWING:
    - 12.1. REQUEST AND REVIEW RELEVANT DOCUMENTS THAT SUMMARIZE FINDINGS FROM INITIAL ENVIRONMENTAL DUE DILIGENCE ACTIVITIES COMPLETED AT THE SITE PERFORMED BY TRC COMPANIES.
    - 12.2. DETERMINE WHAT, IF ANY, RECOGNIZED ENVIRONMENTAL CONDITIONS (RECs) IDENTIFIED SUBSEQUENT TO ENVIRONMENTAL DUE DILIGENCE ACTIVITIES MAY AFFECT THE CONTRACTOR'S WORK.
    - 12.3. DETERMINE IF THE SITE IS/HAS BEEN IDENTIFIED AS A STATE &/OR FEDERAL HAZARDOUS SUBSTANCE SITE, OR SIMILARLY REGULATED SITE. IF SO, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMMUNICATE AND COORDINATE WITH AN ENVIRONMENTAL PROFESSIONAL (EP) TO UNDERSTAND WHAT CONTAMINANTS &/OR HAZARDS HAVE BEEN IDENTIFIED FOR THE SITE AND HOW THEIR RESPECTIVE IMPACTS MAY AFFECT THE CONTRACTOR'S WORK. THE EP SHALL BE EMPLOYED BY THE CLIENT. SHOULD THE CLIENT REQUIRE ACORN'S EP SERVICES IT SHALL BE REQUESTED IN WRITING.
    - 12.4. COMMUNICATE AND COORDINATE WITH AN EP TO REQUEST, REVIEW AND ADHERE TO RELEVANT DOCUMENTS PREPARED FOR THE SITE DESCRIBING BEST MANAGEMENT PRACTICES FOR IMPACTED OR POTENTIALLY IMPACTED MEDIA THAT MAY BE ENCOUNTERED AS PART OF THE CONTRACTOR'S WORK INCLUDING BUT NOT LIMITED TO THE SOIL MANAGEMENT PLAN & EMMP.
    - 12.5. ENSURE THE APPROPRIATE STATE &/OR FEDERAL REGULATORY AGENCY(IES) HAVE BEEN NOTIFIED OF THE CONTRACTOR'S PLANNED WORK ACTIVITIES.

10 0 10 20
SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	5/20/24

DRAWING NAME: PHASE 2 – CONSTRUCTION MANAGEMENT PLAN

PROJECT NAME: PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

ALL PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE BY ANYONE OTHER THAN THE USER'S OWN ENGINEER, OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
FALMOUTH, MAINE 04104
PO BOX 3257 (207) 775-2655

FILE:	1212.2_AE_CIVIL
JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-04

LEGEND:

- PROPERTY LINE
- EROSION CONTROL BARRIER
- CONSTRUCTION FENCE
- EX. PAVEMENT TO BE REMOVED
- EX. SIDEWALK TO BE REMOVED/REPLACED
- TRENCHING EXTENT

LANCASTER ST.
TWO–WAY

CEDAR ST.
ONE–WAY

CHESTNUT ST.
TWO–WAY

HALL COURT

TM 26–A–12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26–A–8
N/F ALBERT
BRESETTE
7951/275

TM 26–A–9,10
N/F PETER P. & ALICE D. AMES
7926/278

EX. LIGHT/UTILITY POLES ALONG LANCASTER STREET TO BE REMOVED AS PART OF THE 158 LANCASTER STREET REDEVELOPMENT PROJECT, IN COORDINATION WITH CMP.

PRIOR TO APPLICATION OF BUILDING PERMIT, EXISTING 12" DBH BARTLETT PEAR TREE IS TO BE INSPECTED FOR HEALTH AND FUNCTION BY CITY ARBORIST AND PROJECT LANDSCAPE ARCHITECT, IN COORDINATION WITH ABUTTER AT TM 26–A–12. DEPENDING ON HEALTH AND FUNCTION, TREE MAY BE REPLACED WITH FLOWERING SHADE TREE TO BE AGREED UPON BY ABUTTER, PROJECT LA, AND CITY ARBORIST.

PRIOR TO APPLICATION OF BUILDING PERMIT, EXISTING 15" DBH BARTLETT PEAR TREE IS TO BE INSPECTED FOR HEALTH AND FUNCTION BY CITY ARBORIST AND PROJECT LANDSCAPE ARCHITECT, IN COORDINATION WITH ABUTTER AT TM 26–A–12. DEPENDING ON HEALTH AND FUNCTION, TREE MAY BE REPLACED WITH FLOWERING SHADE TREE TO BE AGREED UPON BY ABUTTER, PROJECT LA, AND CITY ARBORIST.

REMOVE EX. PARKING METERS, TYP.

REMOVE EX. PAVEMENT, PROTECT EX. SIDEWALK

REMOVE EX. PAVEMENT. PARKING LOT TO BE RECONSTRUCTED PER C–13 AND C–33

PROTECT EX. GUARD RAIL AND LANDSCAPED AREA, UNLESS OTHERWISE EVALUATED BY GEOTECHNICAL ENGINEER

REMOVE EX. SITE SIGNAGE, TYP.

REMOVE EX. TREES, 6 TOTAL

CONSTRUCTION ENTRANCE PER DETAIL, TYP.

INSTALL INLET PROTECTION ON ALL CATCH BASINS WITHIN THE PROJECT VICINITY

INSTALL SILT FENCE OR EROSION CONTROL BERM AT DOWN GRADIENT AREAS OF THE PARCEL

PROTECT EXISTING STREET TREES ON CHESTNUT STREET, TYP. OF 2

REMOVE PARKING AREA

RETAINING WALL TO BE DEMOLISHED AND REBUILT

EX. FENCE TO REMAIN IN COORDINATION WITH ABUTTER

TREE TO BE PROTECTED TO THE GREATEST EXTENT FEASIBLE

REMOVE PARKING AREA

EX. CURB CUT TO BE REMOVED AND REPLACED WITH CURBING PER C–13.

EX. FENCE TO BE REMOVED

REMOVE SUPPORT EX. POLE IN COORDINATION WITH CMP

EX. 15" DBH TREE TO REMAIN IF UNDAMAGED BY CONSTRUCTION

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.
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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.
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    - 12.2. DETERMINE WHAT, IF ANY, RECOGNIZED ENVIRONMENTAL CONDITIONS (RECs) IDENTIFIED SUBSEQUENT TO ENVIRONMENTAL DUE DILIGENCE ACTIVITIES MAY AFFECT THE CONTRACTOR'S WORK.
    - 12.3. DETERMINE IF THE SITE IS/HAS BEEN IDENTIFIED AS A STATE &/OR FEDERAL HAZARDOUS SUBSTANCE SITE, OR SIMILARLY REGULATED SITE. IF SO, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMMUNICATE AND COORDINATE WITH AN ENVIRONMENTAL PROFESSIONAL (EP) TO UNDERSTAND WHAT CONTAMINANTS &/OR HAZARDS HAVE BEEN IDENTIFIED FOR THE SITE AND HOW THEIR RESPECTIVE IMPACTS MAY AFFECT THE CONTRACTOR'S WORK. THE EP SHALL BE EMPLOYED BY THE CLIENT. SHOULD THE CLIENT REQUIRE ACORN'S EP SERVICES IT SHALL BE REQUESTED IN WRITING.
    - 12.4. COMMUNICATE AND COORDINATE WITH AN EP TO REQUEST, REVIEW AND ADHERE TO RELEVANT DOCUMENTS PREPARED FOR THE SITE DESCRIBING BEST MANAGEMENT PRACTICES FOR IMPACTED OR POTENTIALLY IMPACTED MEDIA THAT MAY BE ENCOUNTERED AS PART OF THE CONTRACTOR'S WORK INCLUDING BUT NOT LIMITED TO THE SOIL MANAGEMENT PLAN & EMMP.
    - 12.5. ENSURE THE APPROPRIATE STATE &/OR FEDERAL REGULATORY AGENCY(IES) HAVE BEEN NOTIFIED OF THE CONTRACTOR'S PLANNED WORK ACTIVITIES.

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
JOINT SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: PHASE 3 – CONSTRUCTION MANAGEMENT PLAN
PROJECT NAME: PHASE 3 – PHASED OXFORD STREET REDEVELOPMENT
CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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

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	1212_AE_CIVIL
JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-05

LEGEND:

- PROPERTY LINE
- SETBACK
- PH 1 – ROW LIMIT OF WORK LINE
- PH 2 – ROW LIMIT OF WORK LINE
- PH 3 – ROW LIMIT OF WORK LINE
- RECENTLY RECONSTRUCTED SIDEWALK TO REMAIN AS IS
- FLUSH GRANITE CURB
- VERTICAL GRANITE CURB
- PROPERTY MARKER (TO BE SET)
- PROPERTY MARKER (FOUND)
- PR. PAVEMENT
- PR. BUILDING
- PR. CONCRETE
- PR. BRICK
- PR. STREET TREE
- EX. STREET TREE

ELM ST
ONE–WAY

89 ELM STREET

2 STORY BRICK
THRESH=49.73

ZONE B7
ZONE B3
ZONE R6

LANCASTER ST.
TWO–WAY

PHASE 2:
50 CEDAR STREET
LOT AREA= 0.53 ACRES
PR. UNITS: 24 (MR)

PHASE 3:
158 LANCASTER STREET
LOT AREA= 0.41 ACRES
PR. UNITS: 24 (MR)

CEDAR ST.
ONE–WAY

HALL COURT

CHESTNUT ST.
TWO–WAY

78 CHESTNUT STREET
LOT AREA=0.29 ACRES

PHASE 1:
207 & 197 OXFORD STREET
LOT AREA= 0.35 ACRES
PR. UNITS: 48 (IZ)

OXFORD ST.
ONE–WAY

PROPOSED TIPDOWN CURBING AND RAMP. SEE DRIVEWAY APRON DETAIL FOR THE SOUTH SIDE OF CEDAR STREET OFFSITE IMPROVEMENTS PROVIDED ON SHEET C–40.

EXISTING TREE TO REMAIN

PROPOSED SIDEWALK UPGRADE ALONG CEDAR STREET; APPROX. 315 LF OF EXISTING SIDEWALK AND RESET CURB. SIDEWALK RECONSTRUCTION AS PART OF PHASE 2.

PROPOSED STREET TREE AS PART OF PHASE 2 CONSTRUCTION.

PROPOSED SIDEWALK UPGRADE ALONG CEDAR STREET TO MATCH INTO EX. CONCRETE SIDEWALK, AS PART OF PHASE 2 OFFSITE IMPROVEMENTS.

RECENTLY RECONSTRUCTED SIDEWALK TO REMAIN

PROPOSED STREET TREE AS PART OF PHASE 3 CONSTRUCTION.

PROPOSED SIDEWALK UPGRADE ALONG CEDAR STREET, APPROX. 158 LF OF EXISTING SIDEWALK AND RESET CURB FROM HALL COURT TO LANCASTER STREET. SIDEWALK RECONSTRUCTION AS PART OF PHASE 3.

PAVEMENT TRANSITION

PROPOSED STREET TREE AND FLUSH GRATE AS PART OF PHASE 1 CONSTRUCTION.

PROPOSED GRANITE BUG AND 2" BITUMINOUS PAVEMENT STRIP. SEE DRIVEWAY APRON DETAIL FOR THE NORTH SIDE OF CEDAR STREET OFFSITE IMPROVEMENTS PROVIDED ON SHEET C–40.

PROPOSED SIDEWALK UPGRADE ALONG CEDAR STREET, APPROX. 180 LF OF EXISTING SIDEWALK AND RESET CURB FROM OXFORD STREET TO HALL COURT. SIDEWALK RECONSTRUCTION AS PART OF PHASE 1.

RECENTLY RECONSTRUCTED SIDEWALK AND STREET TREE TO REMAIN

RECENT IMPROVEMENTS ON 78 CHESTNUT STREET ABUTTING 33 CEDAR STREET (TM 26–B–14) TO REMAIN

20 0 20 40
SCALE: 1"=20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	9/30/24

DRAWING NAME: OVERALL SITE PLAN

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

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

FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-10

SPACE AND BULK STANDARDS

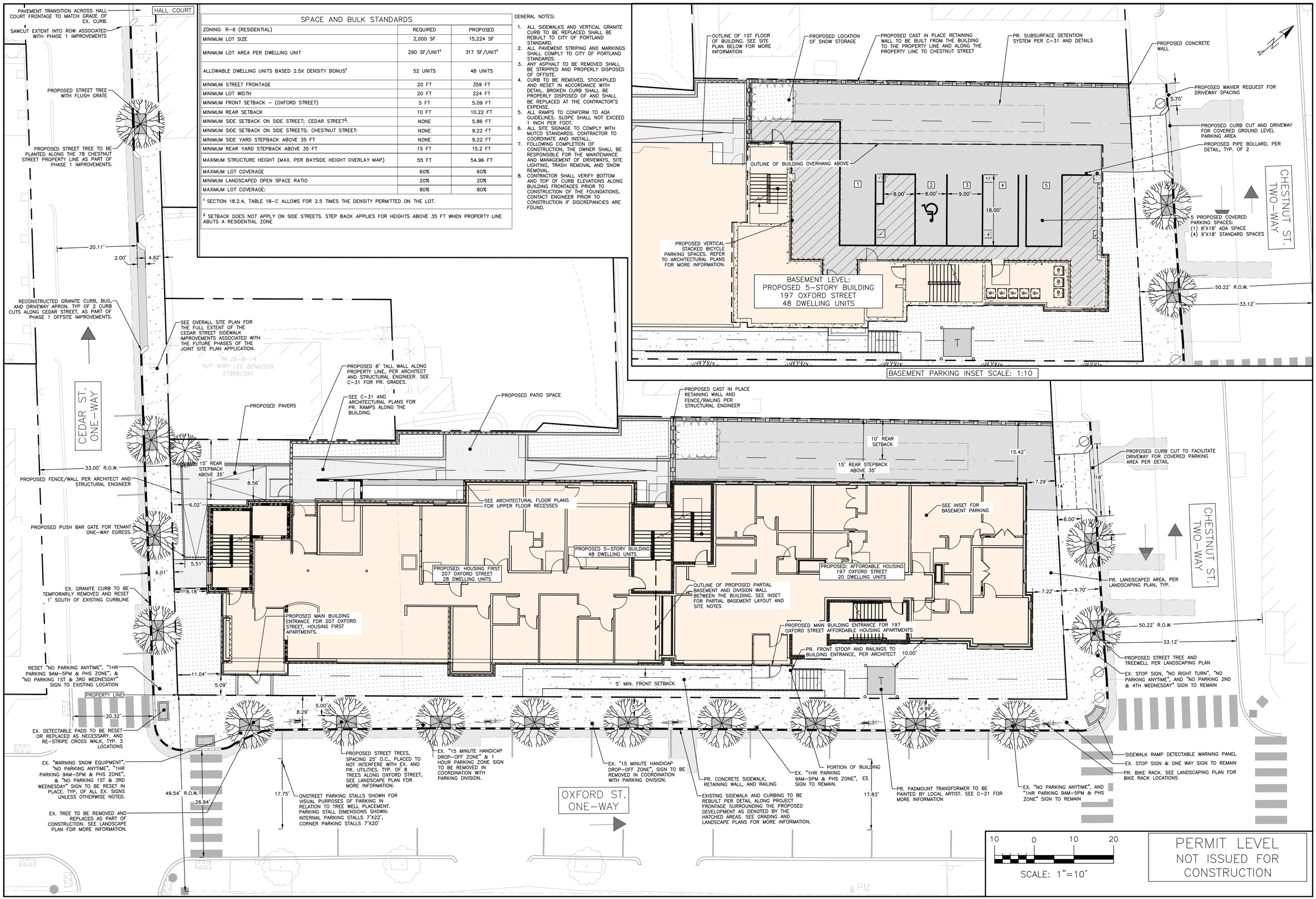
ZONING: R-6 (RESIDENTIAL)	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	15,224 SF
MINIMUM LOT AREA PER DWELLING UNIT	290 SF/UNIT[1]	317 SF/UNIT[1]
ALLOWABLE DWELLING UNITS BASED 2.5X DENSITY BONUS[1]	52 UNITS	48 UNITS
MINIMUM STREET FRONTAGE	20 FT	359 FT
MINIMUM LOT WIDTH	20 FT	224 FT
MINIMUM FRONT SETBACK – (OXFORD STREET)	5 FT	5.09 FT
MINIMUM REAR SETBACK	10 FT	10.22 FT
MINIMUM SIDE SETBACK ON SIDE STREET; CEDAR STREET[2]:	NONE	5.86 FT
MINIMUM SIDE SETBACK ON SIDE STREETS; CHESTNUT STREET:	NONE	9.22 FT
MINIMUM SIDE YARD STEPBACK ABOVE 35 FT	NONE	9.22 FT
MINIMUM REAR YARD STEPBACK ABOVE 35 FT	15 FT	15.2 FT
MAXIMUM STRUCTURE HEIGHT (MAX. PER BAYSIDE HEIGHT OVERLAY MAP)	55 FT	54.96 FT
MAXIMUM LOT COVERAGE	60%	60%
MINIMUM LANDSCAPED OPEN SPACE RATIO	20%	20%
MAXIMUM LOT COVERAGE:	80%	80%

[1] SECTION 18.2.4, TABLE 18-C ALLOWS FOR 2.5 TIMES THE DENSITY PERMITTED ON THE LOT.

[2] SETBACK DOES NOT APPLY ON SIDE STREETS. STEP BACK APPLIES FOR HEIGHTS ABOVE 35 FT WHEN PROPERTY LINE ABUTS A RESIDENTIAL ZONE

GENERAL NOTES:

1. ALL SIDEWALKS 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.



BASEMENT PARKING INSET SCALE: 1:10

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/11/24
COMMENT RESPONSE	SJL	9/30/24

DRAWING NAME: PHASE 1 – SITE PLAN

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2855

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FILE:	1212.1_AE_CIVIL_PH1 BASE
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-11

LANCASTER STREET
TWO–WAY

ELM STREET
ONE–WAY

CEDAR STREET
ONE–WAY

HALL COURT

ZONE B7

ZONE B3

ZONE R6

CITY ZONING DIVIDE BOUNDARY LINE

REMOVE EX. CURB CUT AND INSTALL GRANITE CURBING AND SIDEWALK PER DETAIL

TWO PR. ONSTREET PARKING SPACES; (1)– 7' X 20', (1) – 7' X 18' ON–STREET PARKING SPACE

2ND AND 3RD FLOOR BALCONY OVERHANG, TYP. OF 2

PR. ENTRYWAY WITH CONCRETE STEPS, TWO LOCATIONS ALONG LANCASTER STREET

SEE LANDSCAPE PLAN FOR LANCASTER STREET SIDEWALK TYPOLOGY

NO SETBACK OR STEPBACK ALONG SIDE STREETS

RESET DETECTABLE WARNING PLATE PER DETAIL, TYP.

RE–STRIPE CROSSWALK

5'

38'

5.00'

PR. LANDSCAPED AREA. SEE LANDSCAPING PLAN FOR MORE INFORMATION.

21.46'

PROPOSED RECIPROCAL ACCESS AND UTILITY EASEMENT.

4.73'

15.23'

89 ELM STREET REDEVELOPMENT APPROVED UNDER SEPARATE APPLICATION.

PROPOSED BUILDING:
50 CEDAR STREET
24–UNITS
(4,796 SF)

FRONT SHARED ENTRYWAY, TYP. OF TWO LOCATIONS ALONG CEDAR STREET

5' CONCRETE SIDEWALK, PER DETAIL

89 ELM STREET LLC
39779/236

CONNECT PR. BITUMINOUS SIDEWALK TO 89 ELM STREET SIDEWALK

9' X 18' VAN–ACCESSIBLE ADA PARKING SPACE WITH 9' X 18' ACCESS AISLE

(2) 9' X 18' PARKING SPACE

PROPOSED VERTICAL CURBING ALONG PARKING STALLS, PER DETAIL.

PROPOSED TIPDOWN CURBING, PER DETAIL. SEE C–32 FOR MORE INFORMATION ON PR. GRADES.

PROPOSED TIPDOWN CURBING, PER DETAIL. SEE C–32 FOR MORE INFORMATION ON PR. GRADES.

PR. LOCATION FOR SNOW STORAGE

22.83'

12.54'

9.00'

5.25'

5' SIDE SETBACK

10.87'

5.51'

15.01'

REMOVE EX. CURB CUT, TYP. OF 2 AND INSTALL GRANITE CURBING AND CONCRETE SIDEWALK PER DETAIL

5' FRONT SETBACK

PROPERTY LINE AND LOT FRONTAGE ALONG CEDAR STREET.

(4) PIPE BOLLARDS WITH DECORATIVE COVER, PER DETAIL.

REBUILD EX. CURB CUT

PR. FENCE ALONG PROPERTY LINE, PER LA

N/F AMELIA A. LABRECK
37970/11

TM 26–A–12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26–A–9,10
N/F PETER P. & ALICE
D. AMES
7926/278

OHE / T / C

8"W

PM

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.

SPACE AND BULK STANDARDS

ZONING DISTRICT: R6	REQUIRED	PROPOSED
MINIMUM LOT AREA	2,000 SF	23,250 SF
MINIMUM LOT AREA PER DWELLING UNIT	725 SF/UNIT	1,092 SF/UNIT
MINIMUM STREET FRONTAGE	20 FT	197 FT
MAXIMUM FRONT YARD SETBACK – (CEDAR ST)	5 FT	5.51 FT
MAXIMUM REAR YARD SETBACK	10 FT	21.46 FT
MINIMUM SIDE SETBACK	5 FT	12.54 FT
MINIMUM SIDE SETBACK ON SIDE STREET (LANCASTER ST)	NONE	5.25 FT
LOT WIDTH	20 FT	> 20 FT
MAXIMUM BUILDING HEIGHT	55 FT	< 35 FT
STEPBACK	ADDITIONAL 5' STEPBACK ABOVE 35'	NA
MAXIMUM LOT COVERAGE	60%	21%
MINIMUM LANDSCAPED OPEN SPACE RATIO	20%	20%

10 0 10 20

SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	6/20/24

DRAWING NAME: PHASE 2 – SITE PLAN

PROJECT NAME: PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
THESE PLANS SHALL NOT BE MODIFIED, WITHOUT WRITTEN PERMISSION OR, OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND BY ACCEPTANCE AGREES TO INDEMNIFY ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
70 MAIN STREET, FALMOUTH, MAINE 04104
PO BOX 3257 (207) 775–2655

FILE: 1212.2_AE_CIVIL
JN: 1212
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-12

OVER 0.1'

LANCASTER ST.
TWO–WAY

31.82'
50.00' ROW

PENINSULA DECORATIVE LIGHT POLES, TYP. OF 3 ALONG LANCASTER STREET. SEE LIGHT FIXTURE DETAILS FOR MORE INFORMATION.

EX. TREE TO REMAIN, TYP. (OF 3). SEE NOTES ON C–03 FOR MORE INFORMATION.

(7) PR. 9' X 18' 30–DEGREE PARKING SPACES

RECONSTRUCT PARKING LOT PER DETAIL AND SHEET C–33

CRUSHED STONE AND WOODEN GUARD RAIL, SEE DETAIL

RE–STRIPE EX. SIDEWALK

PR. 30' WALKWAY WITH RAILING. RETAINING WALL AND RAILING PER ARCHITECT, TYP.

PR. 4 – RISERS AND HANDRAILS PER ARCHITECT

PR. 5 – RISERS AND HANDRAILS PER ARCHITECT

RESET DETECTABLE WARNING PLATE PER DETAIL, TYP.

RE–STRIPE EX. SIDEWALK

8.58'

7.80'

16.00'

5.00' FRONT SETBACK

5.25'

9.14'

R5.00'

18.00'

9.00'

22.00'

34.96'

EX. STREET TREE TO REMAIN, TYP. OF 2 ALONG CHESTNUT STREET

PR. LANDSCAPED AREA. SEE PHASE 3 LANDSCAPING PLAN FOR MORE INFORMATION TYP.

PHASE 2: 50 CEDAR STREET REDEVELOPMENT, SEE C–12 FOR MORE INFORMATION.

POTENTIAL SNOW STORAGE AREA, TYP.

MATCH INTO EX. TIPDOWN

OHT/C

PROPOSED BUILDING
158 LANCASTER STREET
BUILDING FOOTPRINT:
4,796 SF

10.00'

12.41'

R5.00'

11.00'

10.00'

8.00'

8.00'

5.00'

UTILITY ROOM

BIKE ROOM

19.81'

CEDAR ST.
ONE–WAY

PROTECT EXISTING WALL AND LANDSCAPED AREA. EVALUATION OF WALL TO OCCUR PRIOR TO APPLICATION OF BUILDING PERMIT. IF WALL IS INSUFFICIENT AT THAT TIME, INSTALL NEW BLOCK WALL.

TM 26–A–12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

REBUILD RETAINING WALLS TO THE EAST OF THIS POINT. MAINTAIN RETAINING WALLS TO THE WEST OF THIS POINT UNLESS GEOTECHNICAL OR STRUCTURAL EVALUATION NECESSITATES REPLACEMENT

PR. 5' CONCRETE SIDEWALK, PER DETAIL

PR. VEGETATION PER LA

PR. 8' X 18' VAN–ACCESSIBLE ADA PARKING SPACE WITH 8' X 18' ACCESS AISLE

PR. CRUSHED STONE

PR. 10'X10' TRASH ENCLOSURE

10.00' SIDE YARD STEPBACK

5.00' SIDE YARD SETBACK

REBUILD EXISTING RETAINING WALL

UTILITY ROOM

BIKE ROOM

EX. CURB CUT TO BE REMOVED AND REPLACED WITH GRANITE CURBING.

PR. 5'X5' CONCRETE PAD FOR UTILITY ROOM ACCESS

PR. STOOP, STAIRS, AND RAMP WITH RAILINGS TO BUILDING ENTRANCE. SEE SHEET C–33 FOR THE PROPOSED GRADES.

PR. 9' X 9' TRANSFORMER PAD. INSTALL 10' (MIN.) FROM EDGE OF BUILDING

CHESTNUT ST.
TWO–WAY

13.13'

T

10.00' REAR YARD SETBACK

TM 26–A–8
N/F ALBERT
BRESETTE
7951/275

HALL COURT

LEGEND:

- PROPERTY LINE
- SETBACK
- FLUSH GRANITE CURB
- VERTICAL GRANITE CURB
- PROPERTY MARKER (TO BE SET)
- PROPERTY MARKER (FOUND)
- PR. PAVEMENT
- PR. BUILDING
- PR. CONCRETE
- PR. BRICK
- PR. STREET TREE

SPACE AND BULK STANDARDS

ZONING: R–6 (RESIDENTIAL)	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	17,748.60 SF
MINIMUM LOT AREA PER DWELLING UNIT	725 SF/UNIT	740 SF/UNIT
MINIMUM STREET FRONTAGE	20 FT	369 FT
MINIMUM LOT WIDTH	20 FT	VARIES
MINIMUM FRONT SETBACK – (LANCASTER STREET)	5 FT	5.25 FT
MINIMUM REAR SETBACK	10 FT	13.13 FT
MINIMUM SIDE SETBACK[1,2]	5 FT	> 5 FT
MINIMUM SIDE SETBACK ON SIDE STREETS:	NONE	9.14 FT
MINIMUM SIDE YARD STEPBACK ABOVE 35 FT	NA	> 10 FT
MINIMUM REAR YARD STEPBACK ABOVE 35 FT	NA	> 15 FT
MAXIMUM STRUCTURE HEIGHT (MAX. PER BAYSIDE HEIGHT OVERLAY MAP)	55 FT	34.79 FT
MAXIMUM LOT COVERAGE	60%	29%
MINIMUM LANDSCAPED OPEN SPACE RATIO	20%	35%
MAXIMUM IMPERVIOUS SURFACE AREA	80%	65%

[1] SETBACK DOES NOT APPLY ON SIDE STREETS. STEP BACK APPLIES FOR HEIGHTS ABOVE 35 FT WHEN PROPERTY LINE ABUTS A RESIDENTIAL ZONE

[2] CITY OF PORTLAND LAND USE CODE TABLE 7–A, FOOTNOTE 10 STATES THAT THE SIDE SETBACK "MAY BE REDUCED TO ZERO, PROVIDED THAT THE CUMULATIVE SIDE YARDS ARE NOT LESS THAN 10 FT..."

GENERAL NOTES:

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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.

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	9/30/24

DRAWING NAME: PHASE 3 – SITE PLAN

PROJECT NAME: PHASE 3 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, MODIFICATIONS, OR USE WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

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

1212_AE_CIVIL

JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
LICENSED
9/30/24

DRAWING NO.
C-13

LEGEND

PROPERTY LINE	
SETBACK LINE	
FLUSH GRANITE CURB	
VERTICAL GRANITE CURB	
PLANTING BED	
PAVING	
EXPANSION JOINT	EJ
PLANTER EDGING	

GENERAL NOTES:

1. REFER TO CIVIL DRAWINGS FOR SITE NOTES.
2. ALIGN LAYOUT OF CONCRETE JOINTS WITH LAYOUT OF STREET TREES AND TREE WELLS, AS INDICATED ON PLANS.
3. REFER TO PLANTING PLAN FOR EXTENTS OF STRUCTURAL SOIL BELOW SIDEWALK.
4. WIDTH OF TREE WELLS ALONG OXFORD STREET VARIES TO ACCOMMODATE CONSISTENT 5'-0" WIDE SIDEWALK PAVING AT BACK OF TREE WELL. LENGTH OF TREE WELLS IS TO BE CONSISTENTLY 6'-0".
5. TREE WELLS ALONG CHESTNUT AND CEDAR STREETS ARE TO MAINTAIN CONSISTENT 3'-0" WIDE BY 6'-0" DIMENSIONS.

SCHEDULE KEY NOTES

PAVEMENT, RAMPS, CURBS			
1.1	ASPHALT	PER CIVIL	
1.2	PAVING	PER CIVIL	
1.3	STEPS	PER ARCH.	
1.4	RAMP	PER ARCH.	
1.5	STONE CURBING	PER ARCH.	
1.6	EDGING AT PLANTING BED		STAKED COMPOSITE HEADER
JOINTING			
2.1	EXPANSION JOINT	DETAIL PER CIVIL	LAYOUT PER LANDSCAPE PLANS
2.2	CONTROL JOINT	DETAIL PER CIVIL	LAYOUT PER LANDSCAPE PLANS
SITE WALLS/ EMBANKMENTS			
3.1	WALL	PER STRUCTURAL/ ARCH.	
SITE FURNITURE			
4.1	BIKE RACK	DETAIL PER CIVIL	"BIKE HITCH" BY WWW.DERO.COM; (5) TOTAL
RAILINGS/ BARRIERS / FENCING			
5.1	HANDRAIL	PER ARCH.	
5.2	GUARDRAIL	PER ARCH.	
5.3	FENCE	PER ARCH.	
PLANTING			
6.1	PANTING BED		SEE L-02
MISCELLANEOUS SITE FEATURES			
7.1	STORMWATER SYSTEM	PER CIVIL	
7.2	TRANSFORMER	PER CIVIL	

TM 26-B-14
N/F MARY LEE
BENNISON
27956/297

TM 26-B-7
N/F FRANK E. DIDONATO
DONNA E. COX
24885/320

CEDAR STREET

CHESTNUT STREET

OXFORD STREET

PROPOSED: HOUSING FIRST
207 OXFORD STREET
28 DWELLING UNITS

PROPOSED 5-STORY BUILDING
48 DWELLING UNITS

PROPOSED: AFFORDABLE HOUSING
197 OXFORD STREET
20 DWELLING UNITS

CENTER JOINTS BETWEEN TREE WELLS, TYP.

ALIGN JOINTS TO EDGE OF PLANTER WELLS, TYP.

1 PHASE 1 – HARDSCAPE AND MATERIALS PLAN

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	8/16/24
COMMENT RESPONSE	SJL	9/30/24

DRAWING NAME: PHASE 1 – HARDSCAPE AND MATERIALS PLAN

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT:

AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

LANDSCAPE ARCHITECTURE

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, SHALL RELIEVE ACORN ENGINEERING, INC. OF ALL RESPONSIBILITY AND LIABILITY WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

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

A C O R N

FILE:	1212.1_AE_LA
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	ALDV
DRAWN BY:	ALDV
CHECKED BY:	SJL

LICENSED LANDSCAPE ARCHITECT
ALEXIS LOPEZ DELVECCHIO
LAR5303
9/30/2024
STATE OF MAINE

DRAWING NO.
L-01

PLANTING SCHEDULE

TREES

SYMBOL	SCIENTIFIC NAME	COMMON NAME	SPACING	SIZE	QTY	NOTES
	AMELANCHIER LAEVIS	SERVICEBERRY	PER PLAN	2" CAL.	5	STANDARD TRUNK; NATIVE
	CERCIS CANADENSIS 'FOREST PANSY'	EASTERN REDBUD	PER PLAN	2" CAL.	4	NATIVE
	OSTRYA VIRGINIA	AMERICAN HOPHORNBEAM	PER PLAN	2.5" CAL.	6	NATIVE
	PICEA GLAUCA	WHITE SPRUCE	PER PLAN	5–6" HT.	1	NATIVE
	THUJA PLICATA	ARBORVITAE	PER PLAN	5–6" HT.	2	NATIVE

HERBACEOUS PERENNIALS/ SHRUBS

SYMBOL						
AN	AJUGA REPTANS 'CHOCOLATE CHIP'	CHOCOLATE CHIP BUNGLEWEED	12" O.C.	1 GAL.	39	–
Rp	AZALEA 'NORTHERN HI–LIGHTS"	NORTHERN HI–LIGHTS AZALEA	42" O.C.	5 GAL.	5	–
dcg	DENNSTAEDTIA PUNCTILOBULA	HAY SCENTED FERN	18" O.C.	1 QUART OR 1 GAL.	55	NATIVE
cp	DESCHAMPSIA CESPITOSA 'GOLDTAU'	TUFTED HAIR GRASS	30" O.C.	1 QUART OR 1 GAL.	56	NATIVE
cot	COMPTONIA PEREGRINA	SWEET FERN	42" O.C.	5 GAL.	6	NATIVE
	COTINUS COGGYGRIA	SMOKE TREE	5' O.C.	5 GAL.	15	–
FG	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	36" O.C.	5 GAL.	23	–
Po	POLYGONATUM ODORATUM 'VARIEGATUM'	SOLOMON'S SEAL	18" O.C.	1 GAL.	67	–
RAE	RHODODENDRON 'ALBUM ELEGANS'	ELEGANT CATAWBA	4' O.C.	5 GAL.	2	–
Rpjm	RHODODENDRON 'P.J.M'	PJM RHODODENDRON	4.5' O.C.	5 GAL.	1	–
RhusGL	RHUS AROMATICA 'GRO–LOW'	GROW LOW SUMAC	4' O.C.	5 GAL.	22	NATIVE
Rhus	RHUS GLABRA	SMOOTH SUMAC	5' O.C.	10 GAL.	3	NATIVE
RS	RUDBECKIA FULGIDA 'GOLDSTRUM'	BLACK EYED SUSAN	2" O.C.	1 GAL.	31	NATIVE
St	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	18" O.C.	1 GAL.	47	NATIVE
W	WALDSTEINIA TERNATA	BARREN STRAWBERRY	8" O.C.	4" POT	260	–

SEEDING

SYMBOL	SEED MIX	SPECIES	PERCENTAGE	AREA	RATE
	GRASS MIX	SEE SEEDING NOTES	–	1425 SF	7 LBS /100 SF; 300 LBS/ACRE

PLANTING NOTES:

1. NO PLANTING IS TO BE INSTALLED UNTIL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
2. SUBSTITUTIONS TO THE PLANTING SCHEDULE ARE TO BE REVIEWED FOR APPROVAL BY THE LANDSCAPE ARCHITECT.
3. CONTRACTOR IS TO VERIFY UTILITIES ON PROPERTY AND TO PROTECT DURING EXCAVATION FOR PLANTS.
4. PLANT QUANTITIES LISTED IN THE PLANTING SCHEDULE ARE PROVIDED TO THE CONTRACTOR AS A CONVENIENCE; CONTRACTORS ARE TO VERIFY ALL PLANT QUANTITIES ON THE PLANS. IN THE EVENT OF A DISCREPANCY BETWEEN THE SCHEDULE AND THE DRAWING, THE DRAWING SHALL TAKE PRECEDENCE.
5. PLANTING MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
6. THE CONTRACTOR SHALL SUBMIT NURSERY PHOTOGRAPHS OF ALL SHRUBS AND HERBACEOUS MATERIAL TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO ACCEPTANCE.
7. THE CONTRACTOR SHALL SUBMIT NURSERY PHOTOGRAPHS OF ALL TREES TO THE LANDSCAPE ARCHITECT FOR REVIEW. THE LANDSCAPE ARCHITECT IS SUBSEQUENTLY TO TAG ALL STREET TREES IN THE NURSERY PRIOR TO ACCEPTANCE.
8. ALL PLANT MATERIAL DELIVERED TO THE SITE, INCLUDING TREES, SHRUBS, AND HERBACEOUS PERENNIALS, SHALL BE LOCATED IN A TEMPORARY "NURSERY" IN A SHADED AREA PROTECTED FROM WIND AND WATERED REGULARLY, ACCORDING TO THE SEASON AND PLANTS' REQUIREMENTS.
9. ALL TREE LOCATIONS ARE TO BE STAKED IN THE FIELD FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING. FINAL LOCATIONS FOR ALL TREES ARE TO BE DETERMINED IN THE FIELD BY THE LANDSCAPE ARCHITECT.
10. ALL SHRUBS AND HERBS ARE TO BE LAID OUT IN THE FIELD, ACCORDING TO THE LAYOUT PROVIDED IN THE PLANS, FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
14. TOPSOIL SHALL BE FREE FROM SUBSOIL, STONES LARGER THAN 1" OR ANY UNDESIRABLE MATERIAL, CONTAIN 5% ORGANIC MATTER AND HAVE A PH SUITABLE TO THE LOCAL GROWING CONDITIONS.
15. INSTALL ALL TREES, SHRUBS, AND HERBS PER PLANTING DETAILS.
16. ALL DISTURBED AREAS, INCLUDING THOSE NOT INDICATED ON THE PLANS, DUE TO CONSTRUCTION ACTIVITY OR THE STORAGE OF MATERIALS OR EQUIPMENT ARE TO BE REPAIRED, APPLY TOPSOIL AS NEEDED, TO MEET ADJACENT GRADES AND RE–SEED TO MATCH EXISTING OR PROPOSED LANDSCAPE. IF SITE CONDITIONS ARE UNCLEAR, CONTACT THE LANDSCAPE ARCHITECT TO VERIFY THE APPROPRIATE RE–SEEDING SPECIFICATION.
17. ALL PLANTING BEDS ARE TO RECEIVE 3" OF SHREDDED HARDWOOD MULCH.
18. CONTRACTOR IS TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING INSTALLATION.
19. CONTRACTOR IS TO BE RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS UNTIL THE START OF THE WARRANTY PERIOD.
20. THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUED CARE AND MAINTENANCE OF THE LANDSCAPED AREA. PLANTINGS THAT SHOW SIGNS OF CONSTRUCTION DAMAGE WITHIN A ONE YEAR PERIOD FOLLOWING CONSTRUCTION SHALL BE REPLACED PRIOR TO ANY DEFECT GUARANTEE AT NO ADDITIONAL COST TO THE OWNER.

REQUIRED STREET TREES

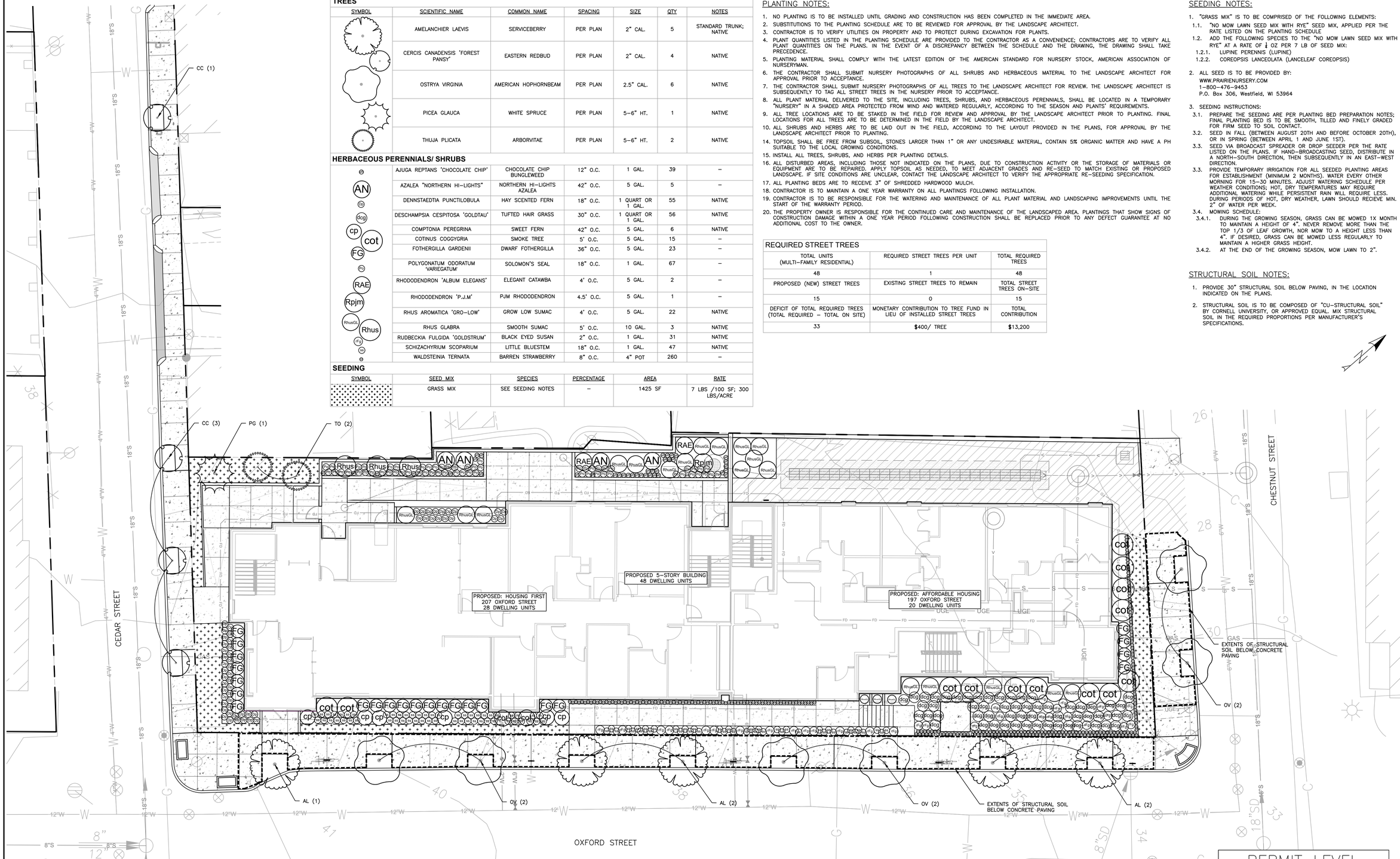
TOTAL UNITS (MULTI–FAMILY RESIDENTIAL)	REQUIRED STREET TREES PER UNIT	TOTAL REQUIRED TREES
48	1	48
PROPOSED (NEW) STREET TREES	EXISTING STREET TREES TO REMAIN	TOTAL STREET TREES ON–SITE
15	0	15
DEFICIT OF TOTAL REQUIRED TREES (TOTAL REQUIRED – TOTAL ON SITE)	MONETARY CONTRIBUTION TO TREE FUND IN LIEU OF INSTALLED STREET TREES	TOTAL CONTRIBUTION
33	$400/ TREE	$13,200

SEEDING NOTES:

1. "GRASS MIX" IS TO BE COMPRISED OF THE FOLLOWING ELEMENTS:
   - 1.1. "NO MOW LAWN SEED MIX WITH RYE" SEED MIX, APPLIED PER THE RATE LISTED ON THE PLANTING SCHEDULE
   - 1.2. ADD THE FOLLOWING SPECIES TO THE "NO MOW LAWN SEED MIX WITH RYE" AT A RATE OF ½ OZ PER 7 LB OF SEED MIX:
     - 1.2.1. LUPINE PERENNIS (LUPINE)
     - 1.2.2. COREOPSIS LANCEOLATA (LANCELEAF COREOPSIS)
2. ALL SEED IS TO BE PROVIDED BY:
   WWW.PRAIRIENURSERY.COM
   1–800–476–9453
   P.O. Box 306, Westfield, WI 53964
3. SEEDING INSTRUCTIONS:
   - 3.1. PREPARE THE SEEDING ARE PER PLANTING BED PREPARATION NOTES; FINAL PLANTING BED IS TO BE SMOOTH, TILLED AND FINELY GRADED FOR FIRM SEED TO SOIL CONTACT.
   - 3.2. SEED IN FALL (BETWEEN AUGUST 20TH AND BEFORE OCTOBER 20TH), OR IN SPRING (BETWEEN APRIL 1 AND JUNE 1ST).
   - 3.3. SEED VIA BROADCAST SPREADER OR DROP SEEDER PER THE RATE LISTED ON THE PLANS. IF HAND–BROADCASTING SEED, DISTRIBUTE IN A NORTH–SOUTH DIRECTION, THEN SUBSEQUENTLY IN AN EAST–WEST DIRECTION.
   - 3.3. PROVIDE TEMPORARY IRRIGATION FOR ALL SEEDED PLANTING AREAS FOR ESTABLISHMENT (MINIMUM 2 MONTHS). WATER EVERY OTHER MORNING FOR 15–30 MINUTES. ADJUST WATERING SCHEDULE PER WEATHER CONDITIONS; HOT, DRY TEMPERATURES MAY REQUIRE ADDITIONAL WATERING WHILE PERSISTENT RAIN WILL REQUIRE LESS. DURING PERIODS OF HOT, DRY WEATHER, LAWN SHOULD RECIEVE MIN. 2" OF WATER PER WEEK.
   - 3.4. MOWING SCHEDULE:
     - 3.4.1. DURING THE GROWING SEASON, GRASS CAN BE MOWED 1X MONTH TO MAINTAIN A HEIGHT OF 4". NEVER REMOVE MORE THAN THE TOP 1/3 OF LEAF GROWTH, NOR MOW TO A HEIGHT LESS THAN 4". IF DESIRED, GRASS CAN BE MOWED LESS REGULARLY TO MAINTAIN A HIGHER GRASS HEIGHT.
     - 3.4.2. AT THE END OF THE GROWING SEASON, MOW LAWN TO 2".

STRUCTURAL SOIL NOTES:

1. PROVIDE 30" STRUCTURAL SOIL BELOW PAVING, IN THE LOCATION INDICATED ON THE PLANS.
2. STRUCTURAL SOIL IS TO BE COMPOSED OF "CU–STRUCTURAL SOIL" BY CORNELL UNIVERSITY, OR APPROVED EQUAL. MIX STRUCTURAL SOIL IN THE REQUIRED PROPORTIONS PER MANUFACTURER'S SPECIFICATIONS.



1 **PHASE 1 – PLANTING PLAN**

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	9/30/24

DRAWING NAME: **PHASE 1 – PLANTING PLAN**
PROJECT NAME: **PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT**
CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

LANDSCAPE ARCHITECTURE

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ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775–2605

A C O R N

FILE:	1212.1_AE_LA
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	ALDV
DRAWN BY:	ALDV
CHECKED BY:	SJL

LICENSED LANDSCAPE ARCHITECT
ALEXIS LOPEZ DELVECCHIO
LAR5303
9/30/2024
STATE OF MAINE

DRAWING NO.
L-02

PLANTING NOTES

1. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
2. PLANT MATERIAL PROVIDED BY THE CONTRACTOR IS TO CONFORM TO THE HIGHEST STANDARD AS ADOPTED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (ANSI). PLANT MATERIAL IS TO BE HEALTHY SPECIMENS, FREE FROM DISEASE OR DAMAGE.
3. THE CONTRACTOR IS TO FURNISH PLANTS AND SOD SHOWN ON THE DRAWINGS. PLANTS ARE TO CONFORM WITH THE BOTANICAL IDENTIFICATIONS. PLANTS ARE TO BE SOURCED FROM A NURSERY WITHIN THE SAME CLIMATIC ZONE AS THE SITE LOCATION. NO SUBSTITUTIONS OF PLANT SPECIES ARE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE & THE LANDSCAPE ARCHITECT.
4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, TIME OF BLOOM & CLIMATIC LOCATION AS APPROVED BY LANDSCAPE ARCHITECT.
5. LOCATE AND VERIFY EXISTING & PROPOSED UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM PLANTING AREAS.
7. THE CONTRACTOR IS TO VERIFY SITE LAYOUT & GRADES & INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR CHANGES IN LAYOUT AND/OR GRADING PRIOR TO CONSTRUCTION. NO PLANTING IS TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
9. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE. PLANT AND STAKES ARE TO BE SET PLUMB UNLESS OTHERWISE NOTED. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
10. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
11. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN PLANT MATERIALS INCLUDING SOD/SEED AREAS IN A HEALTHY STATE DURING CONSTRUCTION AND DURING REQUIRED WARRANTY PERIODS. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
12. REPAIR DAMAGE DUE TO LANDSCAPE INSTALLATION OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK.
13. SOAK ALL PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION.
14. A LIST OF PLANTS INCLUDING BOTANICAL NAMES, SIZES, AND SPACING ARE SHOWN ON THE DRAWINGS. QUANTITIES ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE AND ARE TO BE VERIFIED. IN THE EVENT THAT QUANTITIES OR OMISSIONS OCCUR THE PLAN DRAWINGS ARE TO BE FOLLOWED.
15. IRRIGATION: A TEMPORARY UNDERGROUND DRIP AND SPRINKLER IRRIGATION SYSTEM IS TO BE PROVIDED FOR ALL PLANT MATERIAL AND SOD OR SEEDED AREAS.
16. DISTURBED SITE AREAS ARE TO BE DRESSED WITH 6" MIN. OF AMENDED TOPSOIL FOR LAWNS AND 12" MIN. FOR PLANT BEDS. TOPSOIL FOR SEEDED AND/OR SEEDED AREAS IS TO BE TWO PARTS SHARP SAND, ONE PART LOAM AND ONE PART ORGANIC COMPOST.
17. PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 5' DIA.
18. TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
19. ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

PLANTING SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
	DECIDUOUS TREES - 50 Cedar Street					
MI	*Malus "Ivory Spear"*	Ivory Spear Crabapple	1	1.75-2" cal	as shown	
LS	*Liquidambar styraciflua 'Slender Silhouette'*	Slender Silk Sweet Gum	6	2.75-3" cal	as shown	Seedless variety only
QP	*Quercus paulustris*	Pin Oak	2	2.5-3" cal	as shown	
	DECIDUOUS SHRUBS					
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
HH	*Hypericum 'Hidcote'*	St. John's Wort	5	24"-36" ht.	36" O.C.	
IV	*Itea virginica*	Little Henry Sweetspire	18	24"-36" ht.	36" O.C.	
LB	*Lindera Benzion*	Spice Bush	1	24"-36" ht.	36" O.C.	
	EVERGREEN SHRUBS					
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
IXSH	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	10	30"-36" ht.	60" O.C.	
	PERENNIAL					
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
AMH	*Amsonia hubrichtii*	Thread-leafed Bluestar	tbd	tbd	36" O.C.	
ABB	*Astilbe 'Bressingham Beauty'*	Bressingham Beauty Astilbe	tbd	tbd	18" O.C.	
COM	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis	tbd	tbd	18" O.C.	
GRC	*Geranium x 'Rozanne'*	Rozanne Cranesbill	tbd	tbd	24" O.C.	
HAH	*Hemeocallis 'Heavenly Angel Ice'*	Heavenly Angel Ice Daylilly	tbd	tbd	24" O.C.	
HEC	*Heuchera 'Caramel'*	Caramel Coral Bells	tbd	tbd	18" O.C.	
RFA	*Rudbeckia fulgida 'American Gold Rush'*	Gold Rush Black-Eyed Susan	tbd	tbd	24" O.C.	
SMM	*Salvia 'May Night'*	May Night Salvia	tbd	tbd	24" O.C.	
	GRASSES, VINES & GROUND COVERS					
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
AG	*Allium gladiator*	Ornamental Onion	tbd	Bulb	12" O.C.	
AU	*Arctostophylos uva-ursi*	Bearberry	tbd	1' ht.	36" OC	
PVS	*Panicum virgatum 'Shenandoah'*	Shenandoah Switchgrass	tbd	#2	24" O.C.	
SS	*Schizachryum scoparium*	Little Bluestem	tbd	#2	18" O.C.	
	DECIDUOUS TREES - Cedar Street Sidewalk Improvements Sheet L2					
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
ZS	*Zelkova Serrata*	City Sprite Zelkova	3	2.75-3" cal	as shown	

SITE SOIL NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF STOCKPILE AREAS FOR STRIPPED TOPSOIL AND PLANTING SOIL PRODUCTS. CONTRACTOR SHALL ENSURE AREA IS PROTECTED AND CONTAMINATION OR DISTURBANCE OF STORED PRODUCTS IS NOT ALLOWED.
2. CONTRACTOR SHALL ENSURE SUBGRADE IS SCARIFIED PRIOR TO INSTALLING PLANTING SOIL AND BLEND WITH INITIAL LIFT OR PLACEMENT OF PROPOSED PLANTING SOIL.
3. COORDINATE PLACEMENT OF PLANTING SOIL WITH OTHER WORK, ESPECIALLY UTILITIES. PLACEMENT SHOULD OCCUR AFTER INSTALLATION OF ALL HARDSCAPE IMPROVEMENTS, IRRIGATION SYSTEM, UTILITIES, ETC. AND BEFORE INSTALLATION OF PLANTS.
4. SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

SITE LANDSCAPING & BUFFERS

PARKING & SCREENING:

THE SITE HAS 3 PROPOSED PARKING SPACES WHICH REQUIRE THE PLANTING OF TWO TREES (OR ONE TREE AND THREE SHRUBS) PER FIVE PARKING SPACES.

PROPOSED TREES & SHRUBS = 2 TREES, 6 SHRUBS.

PLANTING REQUIREMENTS PER FRONTAGE:

THE SITE HAS 270 FEET OF FRONTAGE IN THE R-6 DISTRICT, WHICH REQUIRES 9 SHADE TREES OR THE EQUIVALENT OF A SHADE TREE VIA 6 PLANTINGS (1 PER 30 FEET)

PROPOSED STREET TREES = 8
EXISTING TREES=1
TOTAL STREET TREES = 9

TREE PLANTING REQUIREMENTS:

REQUIREMENT - ONE STREET TREE IS REQUIRED PER DWELLING UNIT (24),

PROPOSED TREES (SITE) = 10

PROPOSED TREES IN
COORDINATION WITH 89 ELM
STREET DEVELOPMENT = 16
(SEE SHEET L2)

PROPOSED TREES CEDAR SIDEWALK IMPROVEMENTS = 2*

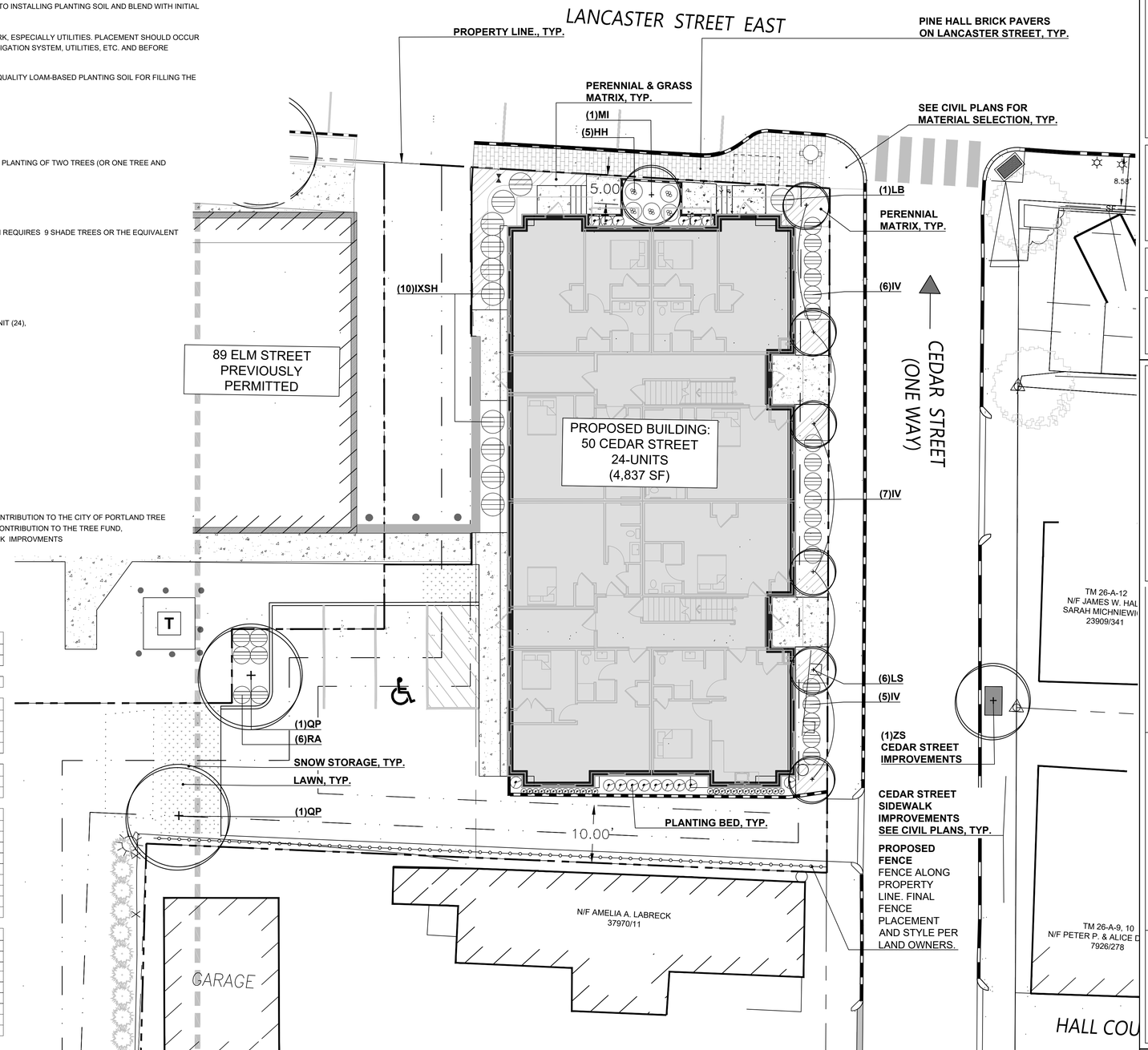
EXISTING TREES = 1

TOTAL PROPOSED TREES = 29*

TOTAL REQUIRED - 24

THE REMAINING STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND,

* PROPOSED TOTAL INCLUDES CEDAR STREET SIDEWALK IMPROVMENTS



PLANTING LEGEND

EXISTING TREE
PROPOSED SHRUB
PERENNIAL MATRIX
PROPOSED DECIDUOUS TREE
PROPOSED PERENNIAL BEDS

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:
REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:
Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 17, 2023

Issued For:
PERMITTING DOCUMENTS

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Title:
PLANTING PLAN

50 Cedar Street
PHASE 2
Portland ME 04103

Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024

North:

Sheet No.:
L1

Scale: 1" = 20'-0"
0 10 20 40

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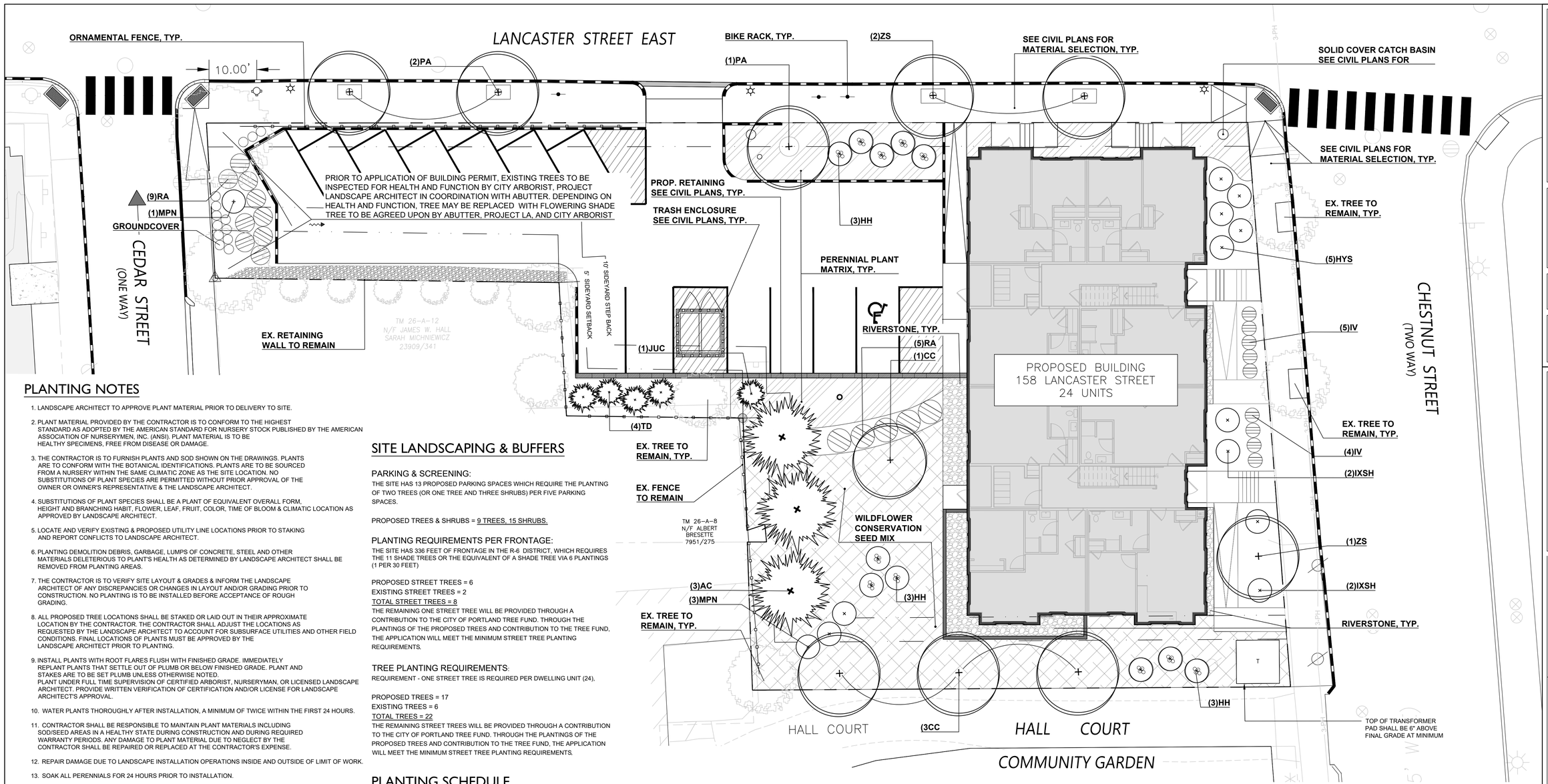

PLANTING NOTES

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4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, TIME OF BLOOM & CLIMATIC LOCATION AS APPROVED BY LANDSCAPE ARCHITECT.
5. LOCATE AND VERIFY EXISTING & PROPOSED UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM PLANTING AREAS.
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8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
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16. DISTURBED SITE AREAS ARE TO BE DRESSED WITH 6" MIN. OF AMENDED TOPSOIL FOR LAWNS AND 12" MIN. FOR PLANT BEDS. TOPSOIL FOR SEEDED AND/OR SEEDED AREAS IS TO BE TWO PARTS SHARP SAND, ONE PART LOAM AND ONE PART ORGANIC COMPOST.
17. PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 5' DIA.
18. TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
19. ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

SITE SOIL NOTES

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4. SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

SITE LANDSCAPING & BUFFERS

PARKING & SCREENING:

THE SITE HAS 13 PROPOSED PARKING SPACES WHICH REQUIRE THE PLANTING OF TWO TREES (OR ONE TREE AND THREE SHRUBS) PER FIVE PARKING SPACES.

PROPOSED TREES & SHRUBS = 9 TREES, 15 SHRUBS.

PLANTING REQUIREMENTS PER FRONTAGE:

THE SITE HAS 336 FEET OF FRONTAGE IN THE R-6 DISTRICT, WHICH REQUIRES THE 11 SHADE TREES OR THE EQUIVALENT OF A SHADE TREE VIA 6 PLANTINGS (1 PER 30 FEET)

PROPOSED STREET TREES = 6
EXISTING STREET TREES = 2
TOTAL STREET TREES = 8
THE REMAINING ONE STREET TREE WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.

TREE PLANTING REQUIREMENTS:

REQUIREMENT - ONE STREET TREE IS REQUIRED PER DWELLING UNIT (24),

PROPOSED TREES = 17
EXISTING TREES = 6
TOTAL TREES = 22
THE REMAINING STREET TREES WILL BE PROVIDED THROUGH A CONTRIBUTION TO THE CITY OF PORTLAND TREE FUND. THROUGH THE PLANTINGS OF THE PROPOSED TREES AND CONTRIBUTION TO THE TREE FUND, THE APPLICATION WILL MEET THE MINIMUM STREET TREE PLANTING REQUIREMENTS.

PLANTING SCHEDULE

DECIDUOUS TREES

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
CC	*Cercis canadensis*	Eatern Redbud	4	2.5-3" cal	as shown
PA	*Prunus 'accolade'*	Accolade Cherry	3	2.5-3" cal	as shown
ZS	*Zelkova Serrata*	City Sprite Zelkova	3	2.5-3" cal	as shown

EVERGREEN TREES

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
AC	*Abies concolor*	White Fir	3	8-10'	as shown
TD	*Thuja occidentalis "Degroots Spire"*	Degroot's Spire Arborvitae	4	#7 CONT.	as shown

DECIDUOUS SHRUBS

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
HH	*Hypericum 'Hidcote'*	St. John's Wort	11	24"-36" ht.	48" O.C.
HYS	*Hydrangea quercifolia 'Snow Queen'*	Snow Queen Oakleaf Hydrangea	5	24"-36" ht.	60" O.C.
IV	*Itea virginica*	Little Henry Sweetspire	7	24"-36" ht.	36" O.C.
MPN	*Myrica pensylvanica*	Northern Bayberry	4	24"-30" ht.	60" O.C.
RA	*Rhus aromatica*	Lo-gro Sumac	14	24"-30" ht.	48" O.C.

EVERGREEN SHRUBS

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
IXSH	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	4	30"-36" ht.	48" O.C.
JUC	*Juniperus conferta 'Emerald Sea*	Emerald Sea Shore Juniper	1	18"-24" ht.	48" O.C.

PERENNIAL MATRIX

CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
AMH	*Amsonia hubrichtii*	Thread-leafed Bluestar	tbd	tbd	36" O.C.
ABB	*Astilbe 'Bressingham Beauty'*	Bressingham Beauty Astilbe	tbd	tbd	18" O.C.
COM	*Coreopsis 'Moonbeam'*	Moonbeam Coreopsis	tbd	tbd	18" O.C.
GRC	*Geranium x 'Rozanne'*	Rozanne Cranesbill	tbd	tbd	24" O.C.
HAH	*Hemeocallis 'Heavenly Angel Ice'*	Heavenly Angel Ice Daylilly	tbd	tbd	24" O.C.
HEC	*Heuchera 'Caramel'*	Caramel Coral Bells	tbd	tbd	18" O.C.
RFA	*Rudbeckia fulgida 'American Gold Rush'*	Gold Rush Black-Eyed Susan	tbd	tbd	24" O.C.
SMM	*Salvia 'May Night'*	May Night Salvia	tbd	tbd	24" O.C.
PVS	*Panicum virgatum 'Shenandoah'*	Shenandoah Switchgrass	tbd	tbd	24" O.C.
SS	*Schizachryum scoparium*	Little Bluestem	tbd	tbd	18" O.C.

PLANTING LEGEND

EXISTING TREE
PROPOSED DECIDUOUS TREE
PROPOSED SHRUB
PROPOSED EVERGREEN TREE
PERENNIAL MATRIX
WILDFLOWER SEED MIX

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:
REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:
Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 16, 2024

Issued For:
PERMITTING DOCUMENTS

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Title: PLANTING PLAN

158 Lancaster Street
PHASE 3
Portland ME 04103

Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024

North:

Sheet No.: L3

Scale: 1" = 10'-0"
0 5 10 20

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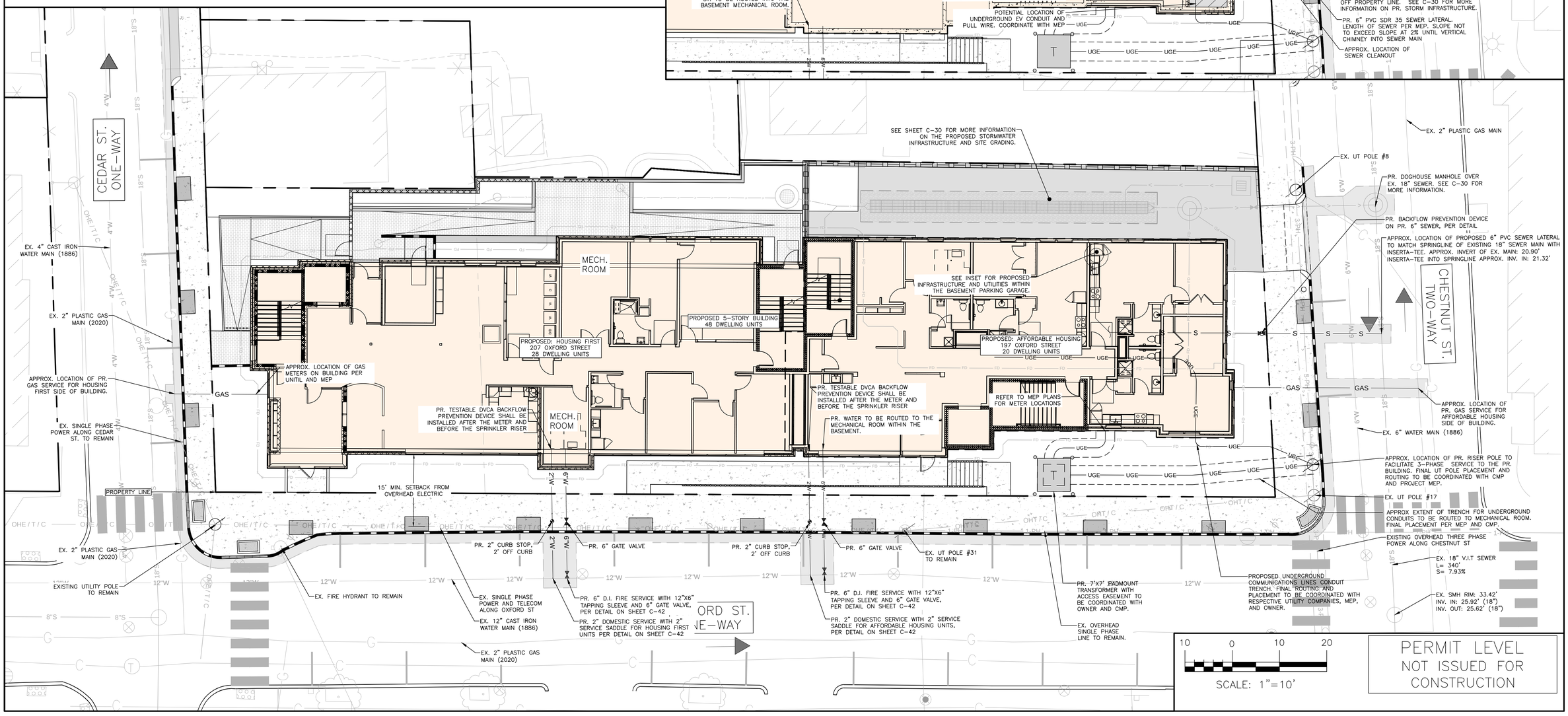
GENERAL NOTES:

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 FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.



PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/11/24
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: PHASE 1 – UTILITY PLAN
PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT
CLIENT: AVESTA HOUSING 307 CUMBERLAND AVE, PORTLAND, ME 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. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, ARE MADE SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE: 1212.1_AE_CIVIL_PH1
JN: 1212.1
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE — SAMUEL J. LEBEL — No. 16505 — PROFESSIONAL ENGINEER — LICENSED
9/30/24

DRAWING NO.
C-21

LANCASTER STREET
TWO-WAY

ELM STREET
ONE-WAY

CEDAR STREET
ONE-WAY

HALL COURT

PROPOSED BUILDING:
50 CEDAR STREET
24-UNITS
(4,796 SF)

PR. 6" D.I. FIRE SERVICE WITH 12"X6" SWIVEL TEE AND 6" GATE VALVE

2" TYPE K COPPER DOMESTIC LINE WITH 2" SERVICE SADDLE. PR. 2" AND 6" WATER SERVICE LINE TO TAP INTO THE LANCASTER STREET WATER MAIN. LANCASTER STREET WATER MAIN IS CURRENTLY AN 8" CAST (1887) WATER MAIN THAT IS PROPOSED TO BE REPLACED WITH A 12" DUCTILE IRON WATER MAIN AS PERMITTED UNDER THE BAYSIDE MDP WATER MAIN REPLACEMENT PROJECT, WHICH IS CURRENTLY UNDER REVIEW WITH PWD.

PR. 2" CURB STOP, 2' FROM CURB

PR. BACKFLOW PREVENTER ON FOUNDATION DRAIN

EXTEND 12" WATER MAIN ALL THE WAY TO CHESTNUT STREET

EX. HYDRANT PROPOSED TO BE MOVED ONTO THE OPPOSITE SIDE OF CEDAR STREET. SEE SHEET C-23 FOR MORE INFORMATION ON THE RELOCATED HYDRANT LOCATION AND PROPOSED IMPROVEMENTS.

POTENTIAL 38Y MANHOLE AND/OR PULL BOXES, PER DETAIL FOR 3-PHASE POWER TO BUILDING. FINAL MANHOLE PLACEMENT PER CMP.

UNDERGROUND SECONDARIES TO BE ROUTED TO THE BUILDINGS UTILITY ROOM. REFER TO MEP PLANS FOR METER LOCATIONS. FINAL ROUTING AND PLACEMENT TO BE COORDINATED WITH RESPECTIVE UTILITY COMPANIES, MEP, AND OWNER.

PR. RISER POLE WITH POLE MOUNTED TRANSFORMER, TO ROUTE SECONDARY LINES UNDERGROUND TO THE PROPOSED BUILDING AT 50 CEDAR STREET. FINAL LOCATION OF RISER POLE TO BE COORDINATED WITH CMP

PR. EXTENT OF TRENCHING FOR UNDERGROUND ELECTRIC.

PR. EXTENT CONCRETE ENCASED DUCT BANK FOR UNDERGROUND SECONDARY CONDUITS

APPROX. EX. INV. INTO 48" SEWER: 4.95'

EX. SMH RIM: 16.88'
48" INV. IN: 3.58'
48" INV. OUT: 3.48'

EX. MH RIM: 17.60'
8" INV. IN: 8.20'
8" INV. OUT: 8.10'

APPROX. LOCATION OF BEND IN EX. SEWER. APPROX. INV. AT BEND: 13.47'

EX. CB RIM: 19.47'
HOOD: 13.87'

PR. 6" PVC SEWER TO RUN UNDER SLAB TO THE BUILDINGS MECHANICAL ROOM PER MEP

APPROX. LOCATION OF PROPOSED 6" PVC SEWER LATERAL TO MATCH SPRINGLINE OF EXISTING SEWER MAIN WITH INSERTA-TEE. APPROX. INVERT OF EX. MAIN: 14.39' WYE INTO SPRINGLINE, APPROX. INV. IN: 14.89' CONTRACTOR TO TEST PIT TO CONFIRM INVERT. TYP. OF ALL UTILITY CONNECTIONS

6" PVC GRAVITY SEWER LATERAL. L=23', SLOPE MIN: 0.01, MAX: 0.04

PR. BACKFLOW PREVENTER AT PL ON 6" PVC SEWER.

PR. TESTABLE DVCA BACKFLOW PREVENTION DEVICE SHALL BE INSTALLED AFTER THE METER AND BEFORE THE SPRINKLER RISER

UTILITY/SPRINKLER ROOM

BIKE ROOM

APPROX. LOCATION OF GAS METERS ON BUILDING PER UNITIL AND MEP

APPROX. LOCATION OF SUBSURFACE STORAGE SYSTEM FOR 50 CEDAR STREET. SEE GRADING PLAN FOR MORE INFORMATION.

POTENTIAL 38Y MANHOLE AND/OR PULL BOXES TO CONVEY UNDERGROUND PRIMARY CONDUITS FOR 89 ELM STREET. FINAL ROUTING AND PLACEMENT TO BE COORDIANTED WITH RESPECTIVE UTILITY COMPANIES, MEP, AND OWNER.

APPROX. LOCATION OF UTILITY TRENCHING AND PAVEMENT REPAIRS

APPROX. LOCATION OF PR. GAS SERVICE FOR BUILDING. FINAL SERVICE LOCATION, METERS, AND GAS VALVE PER MEP AND UNITIL.

89 ELM STREET LLC
39779/236

N/F AMELIA A. LABRECK
37970/11

TM 26-A-12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26-A-9,10
N/F PETER P. & ALICE
D. AMES
7926/278

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.
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10 0 10 20
SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	6/20/24

DRAWING NAME: PHASE 2 – UTILITY PLAN

PROJECT NAME: PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

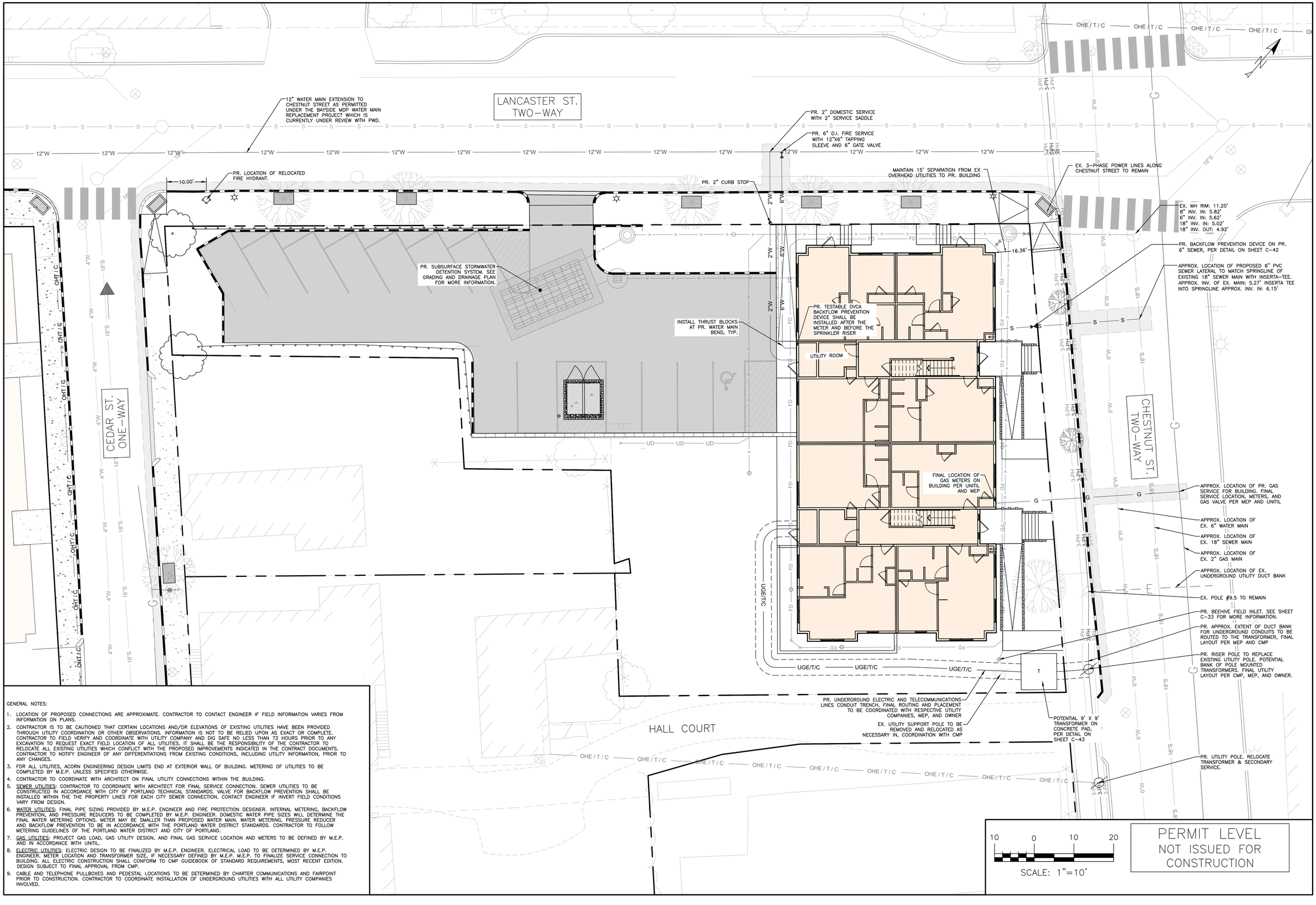
THESE PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND THE ORIGINAL SEAL AND SIGNATURE OR DIGITAL SIGNATURE SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
CIVIL ENGINEERING • LAND PLANNING
PO BOX 3422 PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1212.2_AE_CIVIL
JN: 1212
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: DNM
CHECKED BY: SJL

STATE OF MAINE
Sam Lebel
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-22



GENERAL NOTES:

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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.
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9. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.

ISSUED FOR	BY DATE
JOINT SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: PHASE 3 – UTILITY PLAN

PROJECT NAME: PHASE 3 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE ADOPTED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, MODIFICATIONS OR USE WITHOUT SUCH SHALL BE AT USERS SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

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

1212_AE_CIVIL

JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-23

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 HEIGHT CALCULATION:

AVERAGE GRADE: (29.40'+35.40'+42.25'+41.07')/4 = 37.03'

ROOF HEIGHT: 92.00'

BUILDING HEIGHT: 92.00' – 37.03' = 54.96'

HALL COURT

CEDAR ST. ONE–WAY

OXFORD ST. ONE–WAY

CHESTNUT ST. TWO–WAY

GRADING AND FINAL DESIGN OF OFF–SITE IMPROVEMENTS TO BE DETERMINED IN COORDINATION WITH DPW.

TM 26–B–14
N/F MARY LEE BENNISON
27956/297

PR. TW: 30.55'
FG(BOT): 29.65'
FG(BOW–NW): 29.69'

PR. TW: 36.50'
FG(BOT): 36.25'
FG(BOW–NW): 30.05'

PR. TW–SE: 40.00'
PR. BW–SE: 36.00'
PR. TW–NW: 35.90'
PR. BW–NW: 31.63'

EX. BW: 31.66'
EX. TW: 35.70'

PR. TW: 36.50'
BW–S: 36.25'
BW–N: 30.00'

PR. CIP WALL WITH MIN. 8" REVEAL ABOVE PAVEMENT ALONG ENTIRE WALL. PR. 6' TALL RAILING OR JERITH FENCE ALONG TOP OF WALL

PR. 4" UNDERDRAIN WITHIN SYSTEM, TYP. OF 2 UNDER EACH ROW OF TANKS.

PR. DMH RIM: 28.40'
10" INV. IN: 25.63' (10" HEADER PIPE FROM R–TANK OVERFLOWS)
4" INV. IN: 22.61' (UNDERDRAIN FROM R–TANK WITH CAP AND 1" ECCENTRIC ORIFICE DRILLED ON CAP INSIDE OF CB)
(2) 4" INV. IN: 24.00' (FOUNDATION DRAINS)
12" INV. OUT: 22.31'

PR. (4)–4" OVERFLOW PIPES FROM SYSTEM INTO 10" HEADER PIPE

PR. R–TANK SUBSURFACE STORMWATER DETENTION SYSTEM, PER DETAIL

EX.: 25.69'

EX. EP: 26.56'

EX. EP: 26.51'

PR. TW: 27.90'
BW: 27.00'

PR. F–BASIN RIM: 27.90'
INV. OUT: 26.00'

PR. 25.25'

EX. BC: 26.24'
EX. TC: 26.67'

PR. BACKFLOW PREVENTER, TYP. OF 2, TO BE PLACED ON STORM DRAIN AND SEWER 1' OFF PROPERTY LINE. SEE C–21 FOR MORE INFORMATION ON SEWER.

POTENTIAL LOCATION OF DOGHOUSE MANHOLE ON EX. 18" SEWER MAIN.
RIM: 27.15'
INV. IN: 21.72' (12" STORMDRAIN FROM OCS)
INV. IN: 19.06' (EX. 18" SEWER)
INV. OUT: 18.66' (EX. 18" SEWER)

PR. 27.53'

PR. 27.60'

PR. 28.70'

EX. BC: 28.15'
PR. 1" LIP BETWEEN EXISTING PAVEMENT AND DRIVEWAY APRON: 28.23'

TRANSITION FROM 7" CURB TO 5"

EX. BC: 30.92'
PR. TC: 31.50'

PR. STORMFILTER VAULT TO COLLECT AND TREAT 25% OF THE ROOF RUNOFF. STORMFILTER TO HAVE AN OPEN GRATE TO COLLECT RUNOFF FROM THE BACK PATIO AREA. RIM APPROX.: 36.10'
6" INV. IN: 33.85' (FIELD INLET)
6" APPROX. INV. IN: 33.85' (ROOF LEADER)
8" INV. OUT: 29.60'

6"X8"X10" WYE TO RELAY 6" ROOF LEADER WITH UNTREATED ROOF RUNOFF AND TREATED STORMWATER FROM STORMFILTER VAULT TO BE DETAINED IN RTANK SUBSURFACE SYSTEM.
RIM: 36.00'
8" APPROX. INV. IN: 26.98' (STORM FILTER–TREATED)
6" INV. IN: 27.00' (ROOF LEADER–UNTREATED)
10" INV. OUT: 26.00' (10" TO R–TANKS)

PR. HOUSING FIRST EGRESS TO BACK PATIO AREA. PR. ¾" THRESHOLD BETWEEN BUILDING ENTRY AND LANDING. FFE IN STAIRWELL: 37.00'
SPOT GRADE AT LANDING: 36.96'

HALF INCH THRESHOLD BETWEEN BLDG FFE AND LANDING. PR. BLDG FFE: 30.00'
SPOT AT LANDING OUTSIDE OF AFFORDABLE HOUSING ENTRY DOOR: 29.96'. TYP. AT ALL DOORS

PR. RIDGE LINE /DRAINAGE DIVIDE LINE DELINEATING SURFACE RUNOFF FLOWS FROM THE COVERED PARKING AREA AND DRIVE AISLE

OIL WATER SEPARATOR,
RIM: 29.00'
INV. OUT: 24.70'

BASEMENT LEVEL:
PROPOSED 5–STORY BUILDING
197 OXFORD STREET
BASEMENT FFE: 30.00'

PR. 29.65'
PR. 29.45'
PR. 29.10'
PR. 29.55'
PR. 29.45'
PR. 29.35'
PR. 29.20'
PR. 29.40'
PR. 28.75'
PR. 29.95'
PR. 29.90'
PR. 29.90'
PR. 29.80'
PR. 30.00'
PR. 30.00'
PR. 30.00'

EX. 37.90'
EX. BC: 37.52'
EX. TC: 37.90'
TRANSITION CURB REVEAL TO MATCH INTO EXISTING CURB LINE AT END OF FRONTAGE

PR. 6" SD. L=61', S=0.005
PR. BW: 39.40'
PR. 6" SD. L=27', S=0.005
PR. FIELD INLET WITH BEEHIVE GRATE, PER DETAIL ON SHEET C–44. RIM: 38.70'
PR. 41.76'
PR. 41.81'
PR. 41.04'

PR. STEPPED WALLS ALONG REAR PROPERTY LINE PER ARCHITECT

PR. FIELD INLET PER DETAIL ON SHEET C–44. RIM: 39.15'

PR. 6.5' RETAINING WALL DESIGNED BY OTHERS, WITH 4' TALL JERITH FENCE ALONG TOP OF WALL. SEE INSET FOR PR. GRADES ALONG WALLS.

PR. CIP WALL WITH MIN. 8" REVEAL ABOVE PAVEMENT WITH RAILING OR JERITH FENCE ALONG TOP OF WALL

PR. R–TANK SUBSURFACE STORMWATER DETENTION SYSTEM, PER DETAIL ON SHEET C–45

SEE INSET FOR PR. GRADES IN THE COVERED PARKING AREA.

PR. TW: 41.20'
BW–E: 41.10'
BW–W: 38.36'

PR. 39.38'

PR. BW: 39.20'

PR. 39.25'

PR. L=30' ADA COMPLIANT RAMP PER ARCHITECT

PR. L=30' ADA COMPLIANT RAMP PER ARCHITECT

PR. L= 14.85' WALKWAY, S=4.7%

PR. 39.53'

PR. 39.50'

PR. STORMFILTER VAULT TO COLLECT AND TREAT 25% OF THE ROOF RUNOFF. STORMFILTER VAULT PER DETAIL ON SHEET C–45. SEE INSET FOR MORE INFORMATION.

PR. ROOF LEADER FOR 75% OF ROOF RUNOFF TO BE ROUTED TO SUBSURFACE DETENTION SYSTEM. REMAINING 25% TO BE ROUTED TO THE PR. STORMFILTER.

PR. BC: 26.66'
PR. TC: 27.24'

PROPOSED DOGHOUSE MANHOLE TO FACILITATE STORM DRAIN CONNECTION. SEE INSET FOR INVERTS.

PR. 28.70'

PR. 28.75'

PR. 12" SD STORM DRAIN L=40' S=0.015

PR. BC: 28.20'
PR. TC: 28.62'

PR. 41.10'
PR. 41.80'
PR. 41.07'
PR. 41.87'

PR. RETAINING WALL AND RAILING ADJACENT TO RAMP, TYP. PER ARCHITECT

41.96' WITH ¾" THRESHOLD, TYP.

PR. FIELD INLET PER DETAIL, ON SHEET C–44. RIM: 41.90'

41.96' WITH ¾" THRESHOLD, TYP.

PR. 36.85'

PR. 37.00' WITH ¾" THRESHOLD TO 36.96'

PROPOSED 5–STORY BUILDING
48 DWELLING UNITS

PROPOSED: HOUSING FIRST
207 OXFORD STREET
28 DWELLING UNITS

PROPOSED: AFFORDABLE HOUSING
197 OXFORD STREET
20 DWELLING UNITS

FFE: 42.00'

FFE: 42.00'

FFE: 42.00'

PR. L= 13.70' WALKWAY, S=4.9%

BC: 39.55'
TC: 40.13'
(7" CURB)

PR. 40.40'
PR. 40.30'

EX. BC: 40.00'
PR. TC: 40.58'
(7" CURB)

PR. 40.64'

PR. 42.25'

PR. FOUNDATION DRAIN HIGH POINT AND CLEANOUT, TYP. OF 2

EX. BC: 41.45'
PR. TC: 42.03'

PROPERTY LINE

EX. 41.70'

PR. 42.10'

HALF INCH THRESHOLD BETWEEN BLDG FFE AND BRICK LANDING. PR. SPOT AT LANDING OUTSIDE OF HOUSING FIRST ENTRY DOOR: 41.96'

HALF INCH THRESHOLD BETWEEN BLDG FFE AND LANDING. PR. BLDG FFE: 42.00'
SPOT AT LANDING OUTSIDE OF AFFORDABLE HOUSING ENTRY DOOR: 41.96'

PR. 39.42'

PR. 39.33'

PR. 39.34'

PR. 52' WALKWAY, S=4.9%

PR. 39.60'

PR. 39.22'

PR. 41.74'

PR. 41.86'

PR. 41.91'

PR. 37.00'

PR. (9) – 7" STEPS TO: 36.65'

PR. 36.57'

PR. 35.40'

PR. 36.61'
PR. 36.56'

PR. 36.38'

BEGIN 7' TIPDOWN CURB

BC: 32.00'
TC: 32.58'

FLUSH CURB

PR. 41.85'

EX. BC: 40.77'
PR. TC: 41.35'
(7" REVEAL)

EX. BC: 40.26'
PR. TC: 40.84'
(7" REVEAL)

EX. BC: 38.93'
PR. TC: 39.51'
(7" REVEAL)

EX. BC: 38.42'
PR. TC: 39.00'
(7" REVEAL)

EX. BC: 37.46'
PR. TC: 38.04'
(7" REVEAL)

EX. BC: 36.83'
PR. TC: 37.41'
(7" REVEAL)

EX. BC: 35.70'
PR. TC: 36.28'
(7" REVEAL)

EX. BC: 34.91'
PR. TC: 35.49'
(7" REVEAL)

EX. CATCH BASIN HEADSTONE TO BE REMOVED AND REPLACED WITH CASCADE GRATE (3 FLANGE NEENAH 3589 LL4.) EX. CB RIM: 33.34'
EX. TOP OF HEADSTONE: 34.26'

BEGIN 7' TIPDOWN CURB

MATCH INTO EX. GRADE, APPROX.: 33.11'

EX. 18" V.I.T SEWER
L= 340'
S= 7.93%

EX. BC: 32.27'
EX. TC: 32.51'

EX. SMH RIM: 33.42'
INV. IN: 25.92' (18")
INV. OUT: 25.62' (18")

FLUSH CURB, TYP.

EX. BC: 41.21'
PR. TC: 41.79'

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/11/24
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: PHASE 1 – GRADING & DRAINAGE PLAN

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS MADE TO THIS DOCUMENT SHALL BE DONE IN SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

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

FILE:	1212.1_AE_CIVIL_PH1 BASE
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C–31

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.

LANCASTER STREET
TWO–WAY

ELM STREET
ONE–WAY

CEDAR STREET
ONE–WAY

HALL COURT

PROPOSED 4' DRAIN MANHOLE:
RIM: 17.75'
12" INV. IN: 12.71'
12" INV. OUT: 12.61'

PROPOSED 4' DRAIN MANHOLE:
RIM: 17.75'
12" INV. IN: 13.29'
12" INV. OUT: 13.19'

PR. 12" PVC,
L=18'
S=0.002

PR. BACKFLOW PREVENTER

PROPOSED CB–3
RIM: 18.40'
10" INV. IN: 15.75'
(2) 6" INV. IN: 13.45' (FOUNDATION DRAINS)
12" INV. OUT: 13.31'

PROPOSED GUTTERLINE TO CATCHBASIN

PR. 18.75'

10" PVC S=0.046 L=67'

UTILITY IMPROVEMENTS AS PART OF 89 ELM STREET REDEVELOPMENT SHOWN FOR REFERENCE.

RETAINING WALL PART OF 89 ELM STREET TO REMAIN. TW: 23.85'
BW–SW: 19.00'
BW–NE: 23.18'

PR.: FIELD INLET WITH BEEHIVE GRATE RIM: 23.25'

6' SD STORM DRAIN L=14', S=0.005

PR.: 6" SD TO TEE INTO SPRINGLINE OF 10" STORM DRAIN. INV. IN: 16.09'

SLAB ELEVATION 19.25' WITH 1" LIP ALONG NORTHERLY EDGE

PR. 7.75' TALL RETAINING WALL TO BE DESIGNED BY OTHERS.

PR. TO TIE OUTLET PIPE FROM 50 CEDAR R–TANK SYSTEM INTO CATCH BASIN ON 89 ELM.
RIM: 25.35'
PR. 10" INV. IN: 21.50'
EX. 10" INV. IN: 18.85'
PR. 4" INV. IN: 21.82' (R–TANK UNDERDRAIN WITH CAP AND 1" ORIFICE DRILLED ON CAP INSIDE OF CB)
EX. 10" INV. OUT: 16.00' IN COORDINATION WITH STRUCTURAL ENGINEER

INLINE FIELD INLET WITH BEEHIVE GRATE
RIM: 25.60'

PR. 4" UNDERDRAIN TO BYPASS STORM FILTER

F–BASIN RIM: 26.20'
TC: 26.70'

PR. SUBSURFACE STORMFILTER TREATMENT SYSTEM, PER DETAIL ON SHEET C–45. RIM: 27.45'
INV. IN: 23.83' (8") R–TANK OVERFLOW
INV. OUT: 18.69' (8")

PR. BC: 26.75'
TC: 27.25'

PR. TIPDOWN CURB TO 26.90'

PR. R–TANK SUBSURFACE STORMWATER DETENTION SYSTEM

PR. 4" UNDERDRAIN WITHIN SYSTEM, TYP. OF 2

PR. (3) – 4" OVERFLOW PIPES FROM R–TANK SYSTEM INTO 8" HEADER PIPE

PR. TIPDOWN CRUB TO 27.30'

PROPOSED 4" MOUNTABLE CURB
BC: 17.90'
TC: 18.23'

TRANSITION FROM 4" MOUNTABLE CURB TO VERTICAL GRANITE CURB WITH 7" REVEAL
BC: 17.82'
TC: 18.15'

VERTICAL GRANITE CURB WITH 7" REVEAL
BC: 17.77'
TC: 18.35'

PR. BC: 17.60'
TC: 18.18'

PR. BC: 17.45'
TC: 18.03'

EX. BC: 17.53'
PR. TC: 18.11'
(7" REVEAL)

PROPOSED TIPDOWN CURB ON EACH SIDE OF LANDING TO MATCH EX. GRADE: 17.75'

APPROX. EX. INV. INTO 48" SEWER: 4.95'

EX. SMH RIM: 16.88'
48" INV. IN: 3.58'
48" INV. OUT: 3.48'

EX. MH RIM: 17.60'
8" INV. IN: 8.20'
8" INV. OUT: 8.10'

APPROX. LOCATION OF BEND IN EX. SEWER. APPROX. INV. AT BEND: 13.47'

EX. CB RIM: 19.47'
HOOD: 13.87'

PR.: 18.25'
PR.: 18.15'
PR.: 18.23'
PR.: 18.51'
PR.: 18.63'

FFE 19.00'
FFE 19.00'

TWO RISERS UP TO 18.96'

HALF INCH THRESHOLD BETWEEN BLDG FFE AND LANDING. PR. BLDG FFE AND SPOT AT LANDING. TYP. OUTSIDE EACH ENTRY WAY TO BUILDING.

PR. (8) – 7" RISER STEPS TO 18.71'. REVEAL AT LAST STEP SLIGHTLY VARIES WITH GRADE AND IS NOT TO EXCEED A 7" REVEAL.

PR.: 23.21'

FFE 23.25'

23.21' WITH HALF INCH THRESHOLD BETWEEN BLDG FFE AND LANDING TO 23.25'.

PROPOSED BUILDING:
50 CEDAR STREET
24–UNITS
(4,796 SF)

PR. TOW: 26.97'
PR. BW: 19.25'
PR.: 27.05'
PR.: 25.96'
PR.: 26.85'
PR.: 26.90'

PR. BC: 27.00'
TC: 27.50'

PR.: 27.60'
(2 INTERNAL RISERS)

FFE 26.50'

FINAL ROOF LEADERS TBD BY ARCHITECT AND MEP. ROOF LEADERS TO BE ROUTED TO THE RTANK SYSTEM.

26.46' WITH HALF INCH THRESHOLD BETWEEN BLDG FFE AND LANDING TO 26.50'.

PR. FOUNDATION DRAIN HIGH POINT AND CLEANOUT, TYP. OF 2

PR. BC: 29.00'
TC: 29.50'

PR. BC: 27.93'
TC: 28.51'

PR. BC: 28.38'
TC: 28.88'

PR. 28.33'

PR. BC: 19.00'
TC: 19.58'

PR. BC: 22.42'
TC: 23.00'

EX.: 22.75'

PR. BC: 25.70'
TC: 26.28'

EX.: 25.75'

PR. BC: 27.00'
TC: 27.58'

TIPDOWN TO 27.80'

TIPDOWN CURB TO 27.65'

PR. 1" LIP BETWEEN EXISTING PAVEMENT AND DRIVEWAY APRON: 28.38' TO 28.46'

PR. 28.73'

MATCH EX. CURB CUT AND INSTALL APPROX. 10 LF OF TIPDOWN CURB AND NEW SIDEWALK TO FACILITATE DRIVEWAY RAMP.

EX. BC: 28.63'
PR. TC: 29.21'

TC: 29.93'
BC: 29.35'

TC: 30.17'
BC: 29.59'

4' RAMP AND TIPDOWN CURB AT AN 8% SLOPE TO MATCH GRADE OF STREET.

TIPDOWN TO 29.85'

EX: 30.77'

PR. TOP OF CURB: 30.17'
BC–N: 29.92' (3" REVEAL)
BC–S: 29.62' (7" REVEAL)

EX.: 30.34'
EX: 30.46'
EX.: 30.96'
EX: 30.28'

SEE INSET FOR PRELIMINARY GRADING ALONG CEDAR STREET. FINAL GRADING AND DESIGN OF OFF–SITE IMPROVEMENTS TO BE DETERMINED IN COORDINATION WITH DPW.

TIPDOWN TO 28.42'

CONTRACTOR TO VERIFY ELEVATION OF EXISTING WALL AND FOUNDATION AND REPORT ELEVATIONS TO CIVIL ENGINEER PRIOR TO CONSTRUCTION OF PARKING AREA

HIGH POINT: 29.08'. CONTRACTOR TO VERIFY IN FIELD ELEVATION OF EX. BUILDING FOUNDATION WALL AND CONFIRM WITH CIVIL ENGINEER.

TM 26–A–12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26–A–9,10
N/F PETER P. & ALICE
D. AMES
7926/278

N/F AMELIA A. LABRECK
37970/11

LM STREET LLC
39779/236

TM 33–H–16,17
N/F
DAVID B. NOWLIN
25148/336

PR. BC: 27.00'
TC: 27.58'

TIPDOWN CURB TO 27.65'

EX. BC: 28.63'
PR. TC: 29.21'

PR. 28.33'

POTENTIAL 5' WIDE SIDEWALK AND GRANITE CURBING TO BE COORDINATED WITH OWNER AND ABUTTERS

PR. TOP OF CURB: 30.17'
BC–N: 29.92' (3" REVEAL)
BC–S: 29.62' (7" REVEAL)

EX.: 30.34'
EX.: 30.96'
EX: 30.46'
EX: 30.28'

TC: 29.93'
BC: 29.35'

TC: 30.17'
BC: 29.59'

4' RAMP AND TIPDOWN CURB AT AN 8% SLOPE TO MATCH GRADE OF STREET.

TIPDOWN TO 29.85'

EX: 30.77'

TIPDOWN TO 31.10'

15' RAMP AND TIPDOWN CURB TO MATCH GRADE OF STREET.

GRADING AND FINAL DESIGN OF OFF–SITE IMPROVEMENTS TO BE DETERMINED IN COORDINATION WITH DPW.

8' RAMP AND TIPDOWN CURB TO MATCH GRADE OF STREET.

TIPDOWN TO 33.00'

TIPDOWN TO 35.54'

15' RAMP AND TIPDOWN CURB TO MATCH GRADE OF STREET.

TC: 36.74'
BC: 36.16'

CONTRACTOR TO MATCH INTO EX. GRADE OF SIDEWALK.

TC: 41.58'
BC: 41.00'

INSET SCALE: 1:20

10 0 10 20
SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	6/25/24

PHASE 2 – GRADING PLAN

PROJECT NAME: PHASE 2 –PHASED OXFORD STREET REDEVELOPMENT

DRAWING NAME:

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

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ACORN ENGINEERING, INC.
P.O. BOX 3422, PORTLAND, MAINE 04104
(207) 775–2655

FILE:	1212.2_AE_CIVIL
JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
Sam Lebel
SAMUEL J. LEBEL
No. 16505
PROFESSIONAL ENGINEER
LICENSED
9/30/24

DRAWING NO.
C-32

GENERAL NOTES:

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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 HEIGHT CALCULATION:

AVERAGE GRADE: (11.90'+15.75'+18.75'+13.25'+14.91')/5 = 14.91'

ROOF HEIGHT: 49.70'

BUILDING HEIGHT: 34.79'

LANCASTER ST.
TWO-WAY

CEDAR ST.
ONE-WAY

CHESTNUT ST.
TWO-WAY

HALL COURT

EX. BC: 16.89'
PR. TC: 17.47'
(7" REVEAL)

PR. TIPDOWN CURB, MATCH EX. 17.45'

PR. TIPDOWN CURB, MATCH EX. 18.08'

EX. BC: 19.47'
PR. TC: 20.05'
(7" REVEAL)

CURB REVEAL TRANSITION AT THIS POINT

10.00'

EX. BC: 16.00'
PR. TC: 16.58'
(7" REVEAL)

EX. BC: 15.00'
PR. TC: 15.58'
(7" REVEAL)

EX. BC: 14.42'
PR. TC: 15.00'
(7" REVEAL)

BC-NW: 16.72'
TC/PARK: 17.30'

BC-NW: 15.73'
TC/PARK: 16.31'

BC-NW: 15.15'
TC/PARK: 16.00'

BC-NW: 17.02'
BC/PARK: 17.40'
TC: 17.58'

BC/PARK: 17.40'
TC: 17.90'

EX. CURB CUT TO REMAIN. REDEFINE CURB CUT WITH 3' RADIAL GRANITE CURBING TO FACILITATE MODIFIED DRIVEWAY RAMP

PR.: 13.40'

EX. ELEV. 12.99

PR.: 13.40'

BC: 13.47'
TC: 13.97'

PR.: 13.90'

PR. TIPDOWN CURB TO 13.97'

PR. TIPDOWN CURB TO 17.70'

EX. GUARDRAIL AND WALL TO REMAIN

PR. LOCATION OF R-TANK SUBSURFACE DETENTION SYSTEM, PER DETAIL ON SHEET C-45. DOUBLE STACK R-TANK SYSTEM (8 ROWS, 9 CHAMBERS/ROW); (4)-4" OVERFLOW DRAINS TO A 10" HEADER PIPE, (4) - 4" UNDERDRAINS

PR. TIPDOWN CURB TO 14.62'

PR.: 14.75'

PR. CLEANOUT AT HIGH POINT IN UNDERDRAIN.

GRADING TO TIE INTO EXISTING TOPOGRAPHY AND AVOID DISTURBANCE OF EXISTING CHOKE CHERRY TREE TO GREATEST EXTENT FEASIBLE

GRADING AND FINAL DESIGN OF OFF-SITE SIDEWALK IMPROVEMENTS TO BE DETERMINED IN COORDINATION WITH DPW

PR. DRAIN MANHOLE,
RIM: 13.95'
10" OVERFLOW INV. IN: 11.00'
4" INV. IN: 8.84' (UNDERDRAIN FROM R-TANK WITH 1.2" ECCENTRIC ORIFICE DRILLED ON CAP INSIDE OF CB)
10" INV. OUT: 8.75'

EX. BC: 12.50'
PR. TC: 13.08'
(7" REVEAL)

BC: 12.20'
TC: 12.78'
(7" REVEAL)

PR.: 13.20'

PR. 12.90'

PR. TIPDOWN CURB: 13.25'

BC: 14.00'
TC: 14.50'

PR. FIELD INLET WITH BEEHIVE GRATE, RIM: 12.75'

PR. 8" ROOF LEADER TO BE ROUTED TO CATCH BASIN

PR. CATCH BASIN
RIM: 13.25'
TC: 14.35'
8" INV. IN: 11.77'
10" INV. OUT: 11.67'

PR.: 14.30'

PR. TIPDOWN CURB TO 14.60'

PR. 8" STORM DRAIN L=57' S=0.005

BW: 13.85'
TW: 17.00'

PR. UNDERDRAIN FOR REBUILT WALL, TO CONNECT INTO 8" STORM DRAIN

PR. BEEHIVE FIELD INLET, RIM: 16.25'

PR. 4" FOUNDATION DRAIN

TW: 21.50'
BW: 18.50'

PR. FOUNDATION DRAIN HIGH POINT AND CLEANOUT, PER DETAIL ON SHEET C-44. TYP. OF 2

PR. BEEHIVE DRAIN INTO FOUNDATION DRAIN RIM: 18.25'

PR. 18.75'

PR. 18.50'

PR. BEEHIVE FIELD INLET, RIM: 16.85'

TOP OF TRANSFORMER PAD WITH MIN. 6" REVEAL ABOVE FINAL GRADE, PER DETAIL

EX. BC: 11.66'
PR. TC: 12.24'
(7" REVEAL)

EX. BC: 11.52'
PR. TC: 12.10'
(7" REVEAL)

EX. ELEV. 11.34

PR. 12.60'

PR. 12.40'

BS: 12.25'

BS: 11.95'

PR.: 11.72'

EX. ELEV. 11.14

PR. 10" STORM DRAIN L=99' S=0.005

EX. BC: 11.24'
PR. TC: 11.82'
(7" REVEAL)

EX. BC: 11.12'
PR. TC: 11.70'
(7" REVEAL)

PR. TIPDOWN CURB. MATCH EX. 11.08'

PR. CATCH BASIN
RIM: 11.45'
10" INV. IN: 8.24'
8" INV. IN: 8.41'
(1) - 4" INV. IN: 8.75'
12" INV. OUT: 7.84'

PR.: 11.12'

PR. BACKFLOW PREVENTER ON STORM DRAIN AT THE PROPERTY LINE

PR. FLUSH CURB, TYP.

PR. TIPDOWN CURB. MATCH EX. 10.92'

PR. 12" STORM DRAIN L=32' S=0.005

EX. SMH RIM: 11.20'
INV. IN: 5.02' (18")
INV. IN: 5.82' (8")
INV. IN: 5.62' (6")
INV. OUT: 4.92' (18")

PR. TIPDOWN CURB. TC: 11.50' BC: 10.77'

EX. CATCHBASIN HEADSTONE TO BE REMOVED. REPLACE CATCH BASIN GRATE WITH CASCADE GRATE (3 FLANGE NEENAH 3589 LL4.) EX. RIM: 10.66' PR. TC: 11.51'

PR. BACKFLOW PREVENTER ON FOUNDATION DRAIN

PR. 13.25'

PR. CAST IN PLACE WALL ALONG 30' LONG RAMP

PR. 30' LONG RAMP, S=6.6%

4 RISERS WITH 7" REVEAL

5 RISERS WITH 6.5" REVEAL

PR. 14.66' WITH 1/4" THRESHOLD UP TO 14.70'

PR. 11.90'

PR. 11.52'

4 RISERS WITH 7" REVEAL

PR. 14.66' WITH 1/4" THRESHOLD UP TO 14.70'

PR. 12.27'

PR. 8" STORM DRAIN L=110' S=0.005

APPROX. LOCATION OF EX. 18" COMBINED SEWER, SLOPE OF SEWER VARIES ALONG CHESTNUT STREET. SLOPE FROM EX. MH TO PR. DOGHOUSE MH = 1.25% BASED ON DPW "CHESTNUT STREET SEWER" PLAN, SHEET 467, DATED 2/1959

EX. BC: 11.87'
PR. TC: 12.45'
(7" REVEAL)

PR. 12.62'

PR. 14.55'

PR. 14.60'

16' RAMP @ 8.1% SLOPE

PR. 13.30'

PR. 13.30'

PR. 12.92'

APPROX. LOCATION OF PROPOSED 6' DOGHOUSE MANHOLE TO ACCEPT SANITARY AND STORM FLOWS FROM 158 LANCASTER STREET. PR. 6" PVC SEWER LATERAL TO MATCH SPRINGLINE OF EXISTING 18" SEWER MAIN WITH INSERTA-TEE. STORM DRAIN INVERT TO BE SET 18" HIGHER THAN SEWER INVERT. CONTRACTOR TO TEST PIT AND CONFIRM INVERT OF EX. SEWER AND CONFIRM WITH CIVIL ENGINEER PRIOR TO CONSTRUCTION.
RIM: 12.00'
12" INV. IN: 7.62' (STORM DRAIN)
18" APPROX. INV. OF EX. MAIN: 5.37'
6" INV. IN: 6.25' (SEWER)

EX. BC: 12.47'
PR. TC: 13.05'
(7" REVEAL)

PR. 13.22'

6 RISERS WITH MAX. 7" REVEAL. REVEAL AT LAST STEP VARIES WITH GRADE.

PR. 13.50'

EX. BC: 12.78'
PR. TC: 13.36'
(7" REVEAL)

PR. 13.78'

PR. 13.70'

PR. 17.16' WITH 1/4" THRESHOLD UP TO 17.20'

PR. 17.00'

PR. 17.07'

22' RAMP @ 8.25% SLOPE

EX. BC: 13.43'
PR. TC: 14.01'
(7" REVEAL)

PR. 14.10'

PR. 14.90'

PR. 15.28'

PR. 15.28'

PR. 15.75'

PR. 15.20'

EX. BC: 14.15'
PR. TC: 14.73'
(7" REVEAL)

EX. BC: 14.45'
PR. TC: 15.03'
(7" REVEAL)

EX. ELEV. 15.18

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: PHASE 3 - GRADING PLAN

PROJECT NAME: PHASE 3 - PHASED OXFORD STREET REDEVELOPMENT

CLIENT: REVELER DEVELOPMENT
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

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

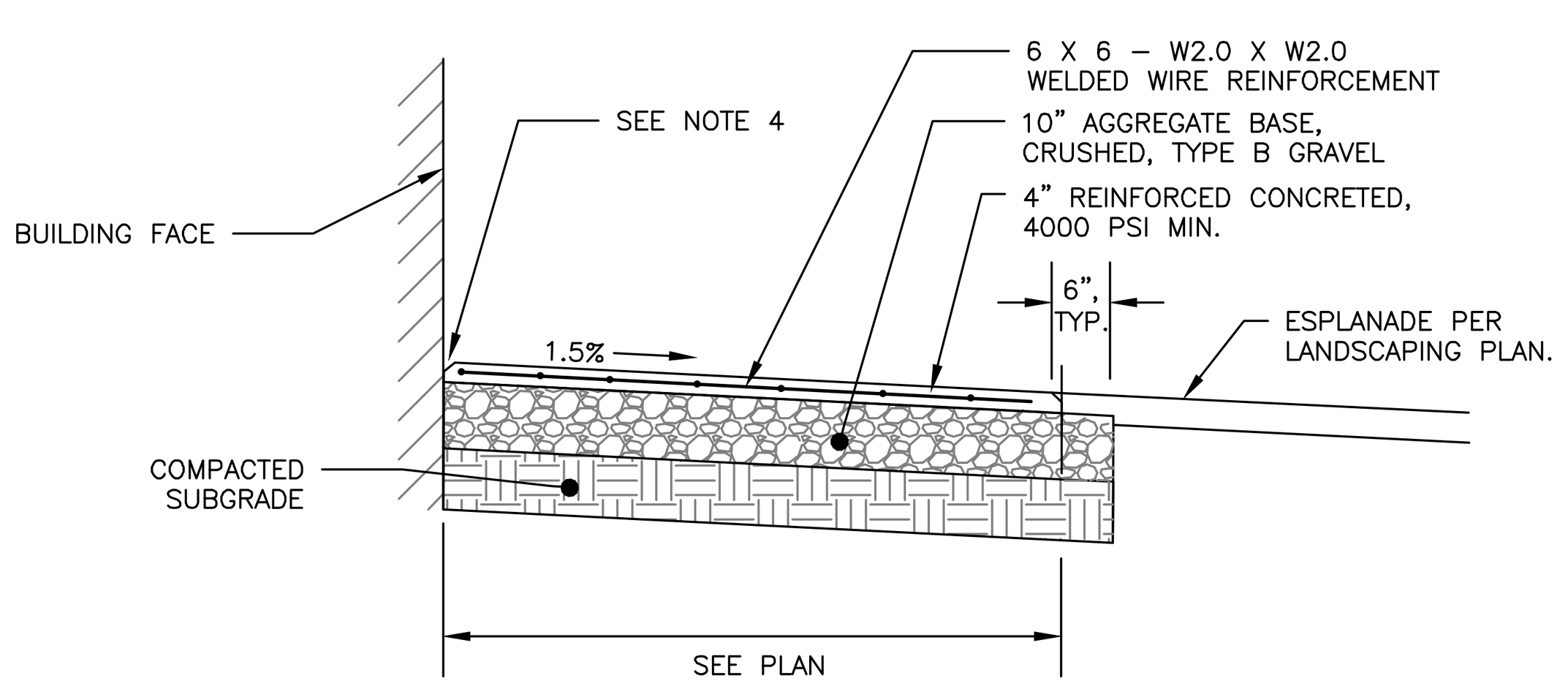
1212_AE_CIVIL

JN:	1212
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
LICENSED
9/30/24

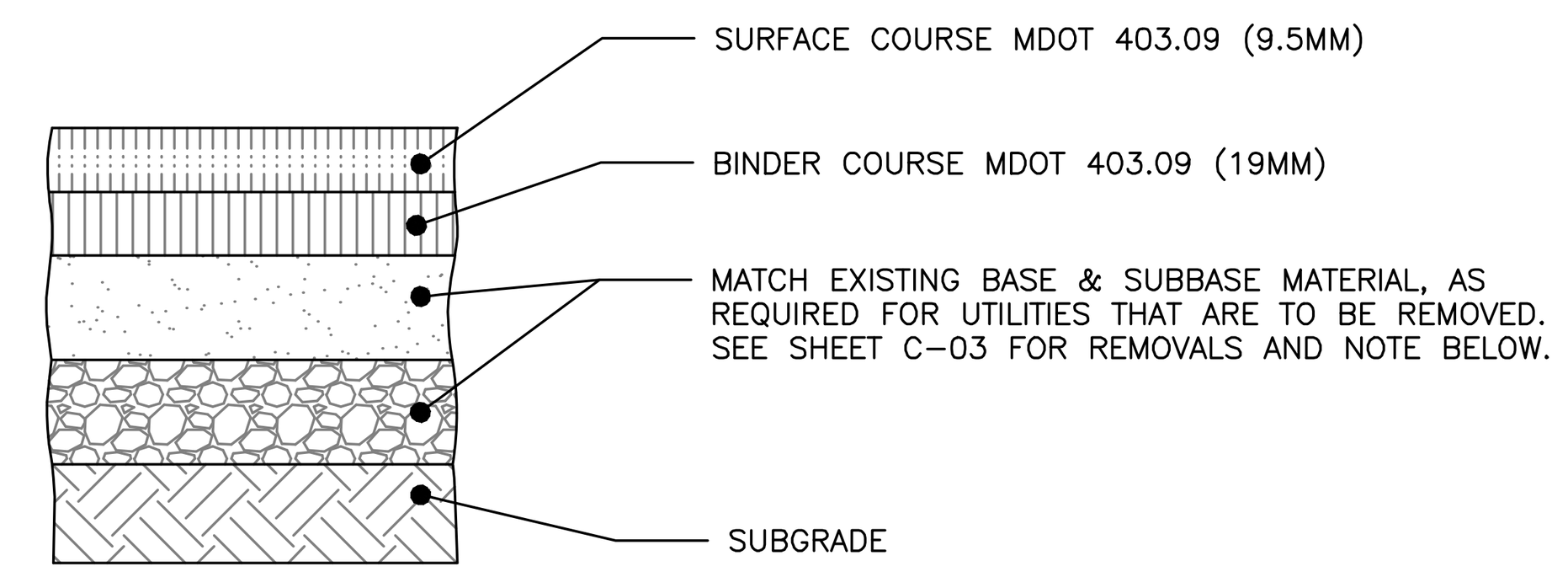
DRAWING NO.
C-33

NOTES:
1. AT A MINIMUM, TESTING SHALL CONSIST OF ENTRAINED AIR AND SLUMP TESTS ON SITE PRIOR TO POURING THE SIDEWALKS. ENTRAINED AIR TESTS SHALL BE DONE IN ACCORDANCE WITH AASHTO T152. TEST FIRST TWO LOADS AND EVERY THIRD LOAD THEREAFTER PROVIDED CONSISTENT RESULTS ARE ACHIEVED.
2. WELDED WIRE FABRIC SHALL BE PLACED 2 INCHES ABOVE THE CRUSHED GRAVEL, AND 2 INCHES FROM ALL FINISHED EDGES, EXPANSION JOINTS AND CURBS. ALL FABRIC JOINTS SHALL BE OVERLAPPED A MINIMUM OF 1 FOOT AND BE PROPERLY TIED. IF THE CONTRACTOR ELECTS TO USE REBAR, ONLY 4-GAUGE WILL BE ACCEPTABLE. IF THE CONTRACTOR ELECTS TO USE A PRE-MIXED FIBER MESH, A SPECIFICATION SHEET MUST BE SUBMITTED AND PRE-APPROVED BY THE ENGINEER PRIOR TO ITS APPLICATION.
3. SLABS SHALL BE PLACED ALTERNATELY IN LENGTHS NOT TO EXCEED 30 FEET OR AS DIRECTED AND SHALL BE SEPARATED BY AN EXPANSION JOINT OF PREFORMED EXPANSION FILLER ½ INCH IN THICKNESS.
4. WHEN CONSTRUCTED ADJACENT TO A BUILDING, RETAINING WALL OR OTHER FIXED STRUCTURE, A ¼ INCH THICK PREFORMED JOINT FILLER SHALL BE USED BETWEEN THE SLAB AND THE STRUCTURE.
5. THE SIDEWALK SURFACE SHALL BE SCORED INTO BLOCK UNITS NO GREATER THAN 40 SQUARE FEET AS DIRECTED. THE DEPTH OF THE SCORING SHALL BE AT LEAST ONE QUARTER OF THE THICKNESS OF THE SLAB.
6. ANY MATCHING INTO EXISTING SIDEWALKS SHALL BE DONE SO WITH A CLEAN VERTICAL FACE CONNECTION.
7. THE SURFACE SHALL BE FINISHED TO PRODUCE A BROOMLIKE "BRUSHED" PATTERN. NO PLASTERING OF THE SURFACE WITH MORTAR WILL BE PERMITTED. THE FINISH SHALL RESULT IN A SURFACE OF UNIFORM TEXTURE AND COLOR. ALL OUTSIDE EDGES OF THE SLAB AND ALL JOINTS SHALL BE ROUNDED WITH A ¼ INCH RADIUS EDGING TOOL.
8. CONCRETE SHALL BE CURED FOR 72 HOURS. CURING SHALL BE BY MEANS OF THOMPSON'S WATER SEAL AS MANUFACTURED BY E.A. THOMPSON CO., INC. OF MEMPHIS, TENNESSEE, BOILED LINSEED OIL, WHITE PIGMENTED CURING COMPOUND, OR BY OTHER APPROVED METHODS. CONCRETE SIDEWALK TO BE SEALED WITH CONSOLIDECK SALTGUARD WB OR APPROVED EQUAL 28 DAYS AFTER PLACEMENT. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR APPLICATION.
9. GENERAL CONTRACTOR TO COLLECT DELIVERY SLIPS AND TRANSFER TO THE OWNER.
10. REFER TO CITY OF PORTLAND CONCRETE SPECIFICATIONS SECTION 608 FOR MORE INFORMATION.



REINFORCED CONCRETE SIDEWALK

NOT TO SCALE



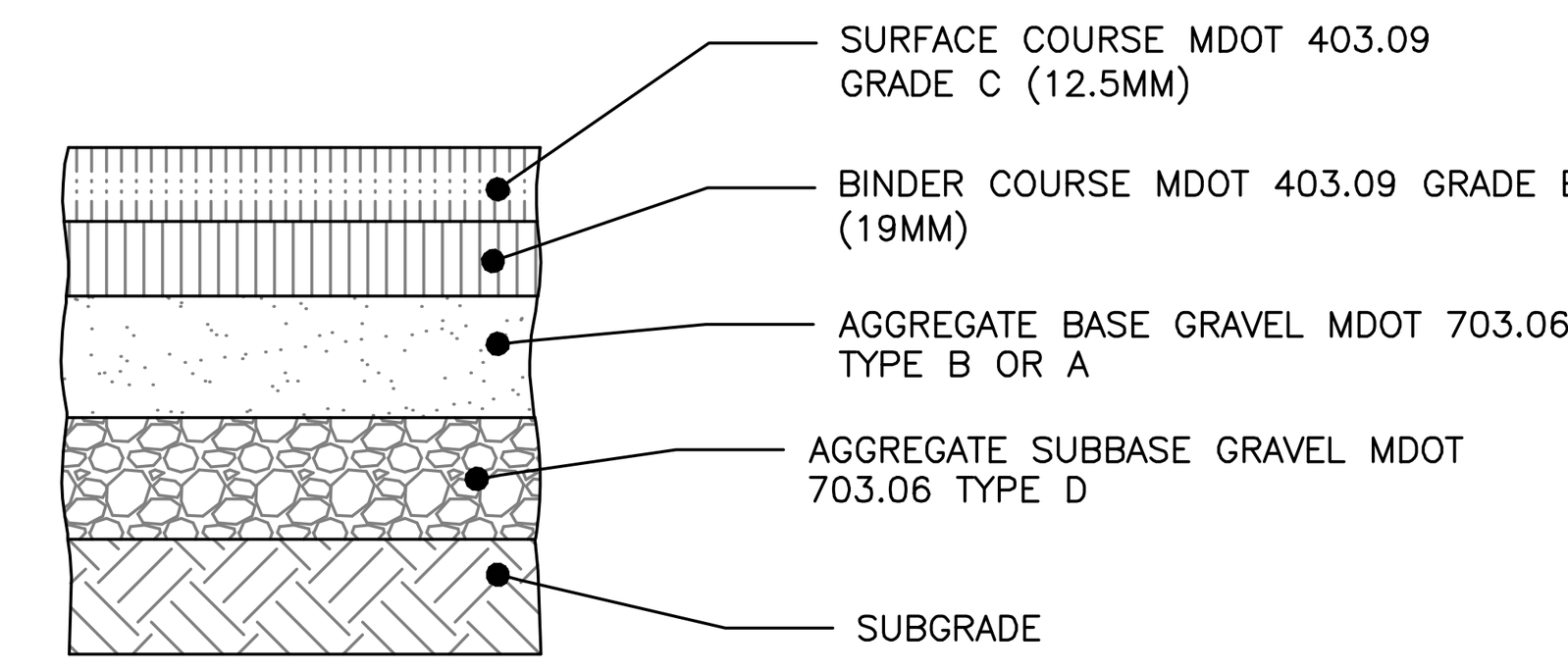
NOTE:
1. COMPACT AGGREGATES TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.

THICKNESS OF LAYERS

STANDARD	LAYERS
1-1/4"	SURFACE COURSE MDOT 403.09 (9.5mm)
1-3/4"	BINDER COURSE MDOT 403.09 (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE A
12"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

INTERNAL PAVEMENT PROFILE:

NOT TO SCALE



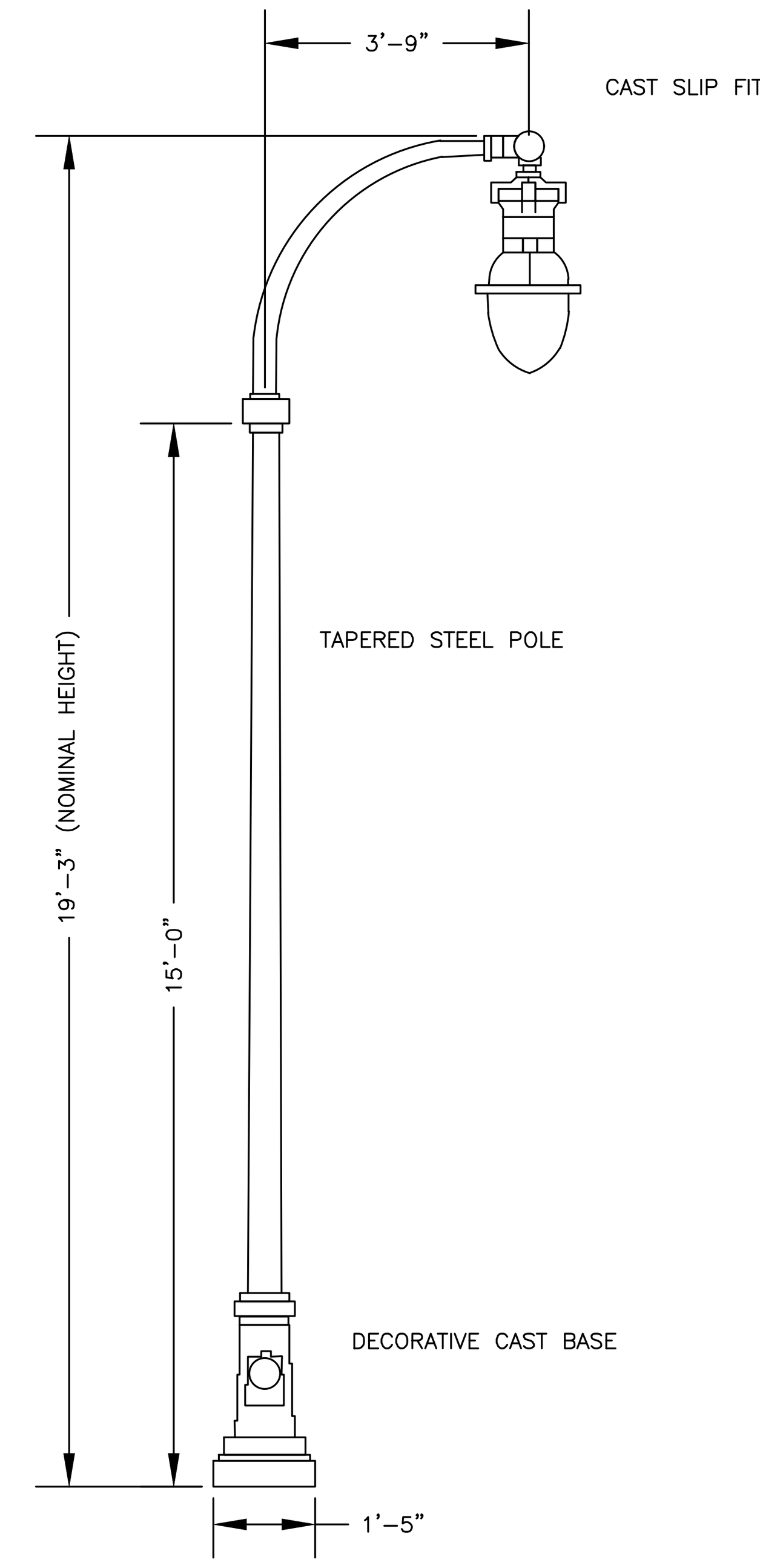
NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

THICKNESS OF LAYERS

STANDARD	LAYERS
1-1/2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B OR A
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

LOCAL BITUMINOUS PAVEMENT PROFILE

NOT TO SCALE



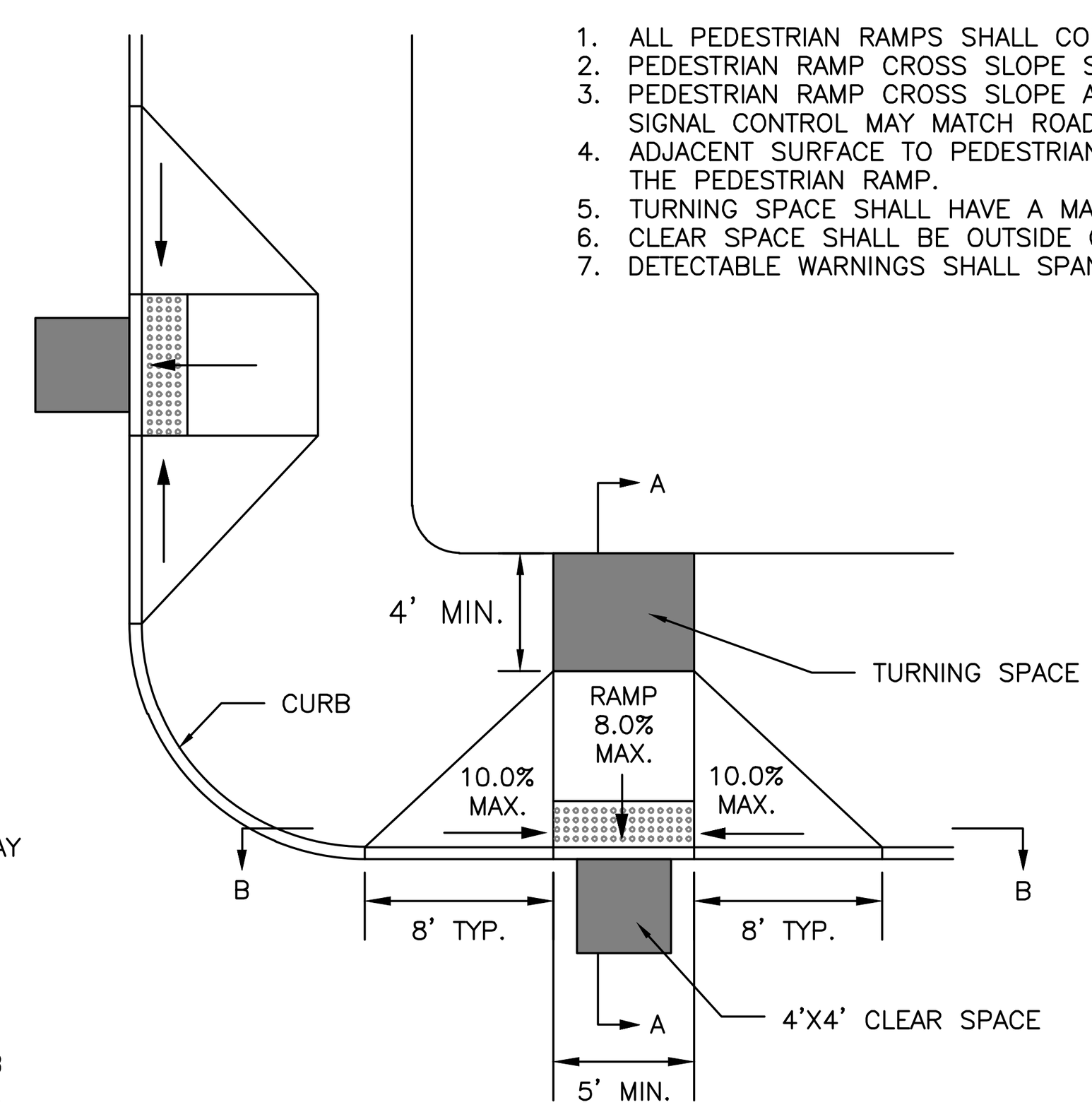
NOTES:
1. LUMINAIRE
HOLOPHANE ESPLANADE LED II
MODEL:ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC
OR SPRING CITY COLUMBIA SERIES MODEL
ALMCLU-LE080/EVX/X2-30-CR3-GR14-LACLB-FED-CU
PENDANT MOUNT, CAST ALUMINUM HOUSING WITH STAINLESS STEEL HARDWARE. DROPPED REFRACTOR SHALL BE THERMAL RESISTANT BOROSILICATE GLASS. INTERNAL REFLECTOR AND PRISMATIC DIFFUSER SHALL PROVIDE AN IES TYPE IV DISTRIBUTION PATTERN. LED 3000K COLOR TEMPERATURE.
2. BRACKET ARM
HOLOPHANE OUC ROADWAY ARM MODEL OUC 6063-T6 OR SPRING COLUMBIA ARM MODEL AARCLA-1S-51-53-TN2.38/7.00-CU
ALUMINUM CROSSARM WITH A POST-TOP FITTING FOR A 3 ½" BY 8" TENON. SINGLE ARM 45" ORIENTED 180 DEGREES.
3. SLIP FITTER
HOLOPHANE BOSTON HARBOR SERIES MODEL BHLF-200-SCA/AS
2 ⅜" O.D. WITH SWIVEL CAST FITTER.
4. LIGHTING POLE
HOLOPHANE MODEL CM17CSB-CA-RAL6012
OR SPRING CITY CAMBRIDGE SERIES MODEL
SSHSM-G11-7.00-15.00-TN3.50/8.00-CU
SMOOTH, TAPERED STEEL POLE SMOOTH SHAFT RATED FOR A 90 MPH WIND LOAD WITH A 1.3 GUST FACTOR. PROVIDE FOUR HOT-TIPPED GALVANIZED STEEL L-TYPE ANCHOR BOLTS. LIGHTING POLE SHALL BE HOT TIP GALVANIZED PRIOR TO POWDER COAT PAINT.
5. DECORATIVE POLE BASE
HOLOPHANE CAMBRIDGE SERIES MODEL CM17CSB OR SPRING CITY CAMBRIDGE SERIES MODEL DWBCMB-17-CU
DECORATIVE CLAMSHELL CAST ALUMINUM BASE. HARDWARE SHALL BE STAINLESS STEEL.
6. DIMENSIONS
OVERALL HEIGHT = 19' 3"
POLE HEIGHT = 15' 0"
BRACKET ARM = 3' 9"
BASE DIAMETER = 17" TO 18"
7. FINISH
BLACK (STANDARD)

APPLICATION:
STREET/SIDEWALK LIGHTING
SPACING:
ONE SIDE: 80'-110' ON CENTER
PLACE IN FURNISHING ZONE OVERHANG TOWARDS STREET; WHERE FIXTURE CONFLICTS WITH OVERHEAD UTILITIES, MAY BE PLACED ON BACK OF SIDEWALK.

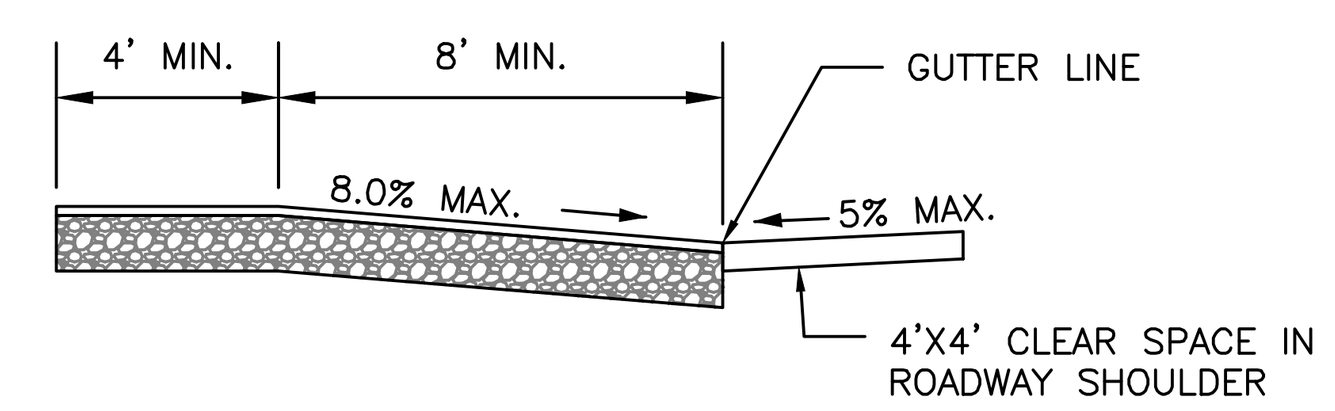
PENINSULA MEDIUM DECORATIVE LIGHTING ALONG LANCASTER STREET

NOT TO SCALE

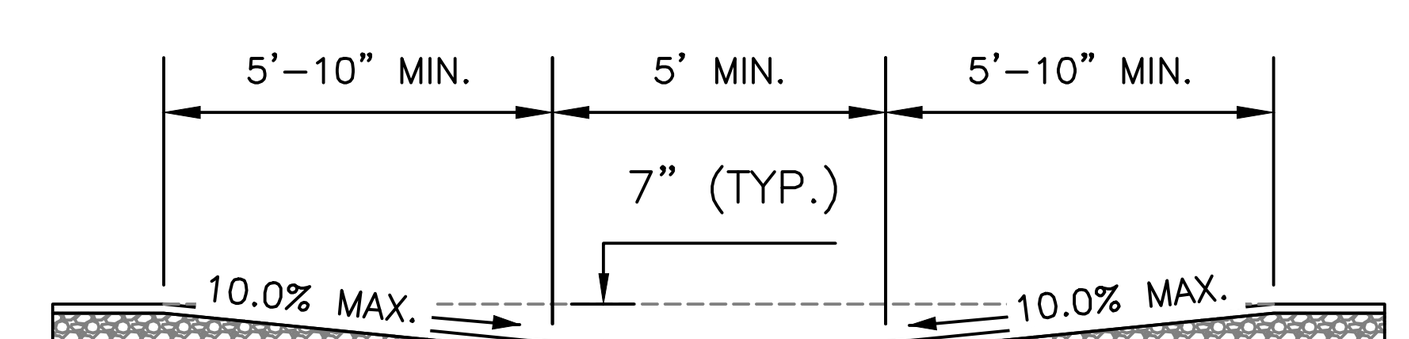
NOTES:
1. ALL PEDESTRIAN RAMPS SHALL COMPLY WITH ADA STANDARDS.
2. PEDESTRIAN RAMP CROSS SLOPE SHALL BE A MAXIMUM OF 2%.
3. PEDESTRIAN RAMP CROSS SLOPE AT STREET CROSSINGS WITHOUT STOP OR SIGNAL CONTROL MAY MATCH ROADWAY PROFILE.
4. ADJACENT SURFACE TO PEDESTRIAN RAMP SHALL BE FLUSH WITH THE BOTTOM OF THE PEDESTRIAN RAMP.
5. TURNING SPACE SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
6. CLEAR SPACE SHALL BE OUTSIDE OF ACTIVE TRAVEL LANES.
7. DETECTABLE WARNINGS SHALL SPAN THE WIDTH OF THE PEDESTRIAN RAMP.



PLAN VIEW



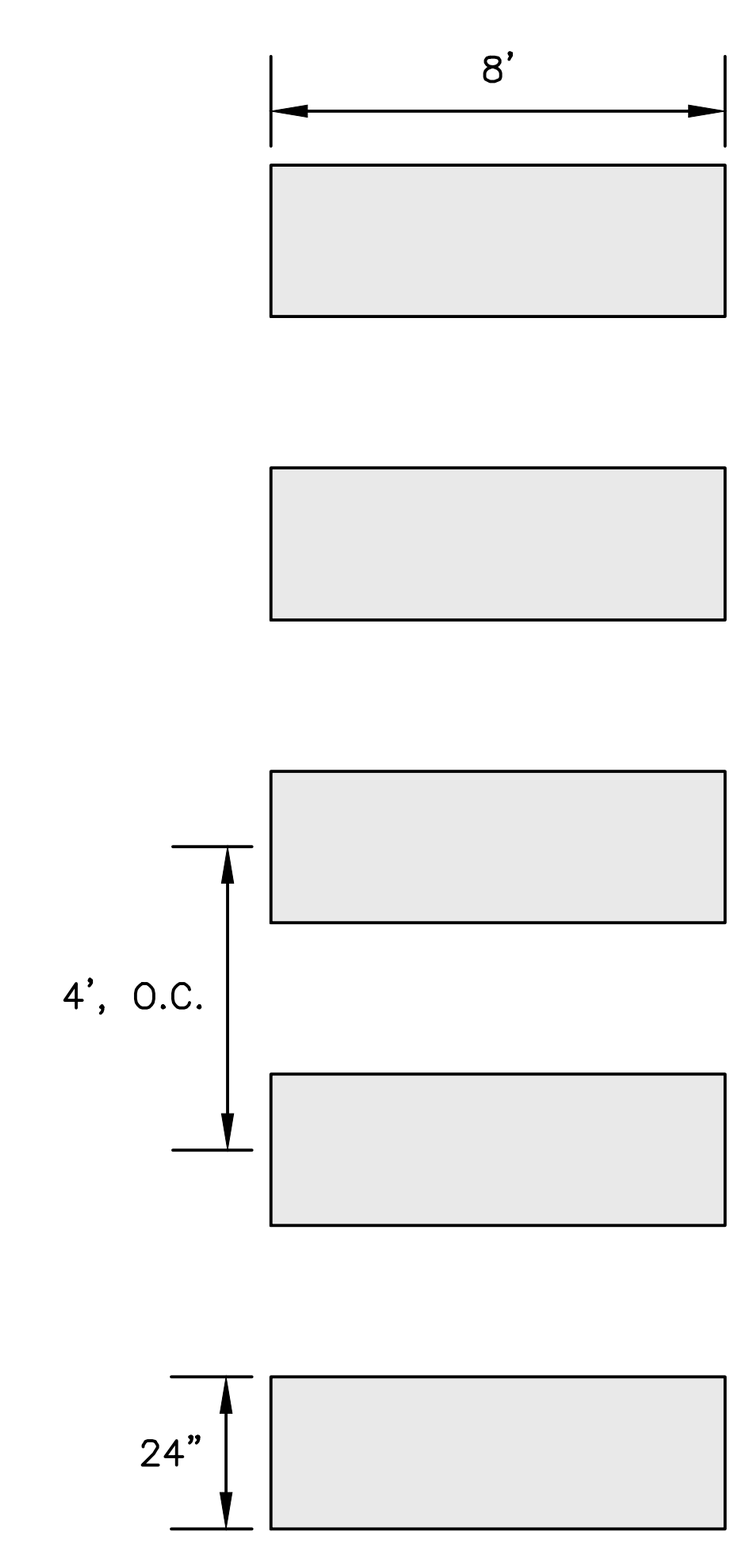
SECTION A-A



SECTION B-B

PERPENDICULAR PEDESTRIAN RAMP DETAIL

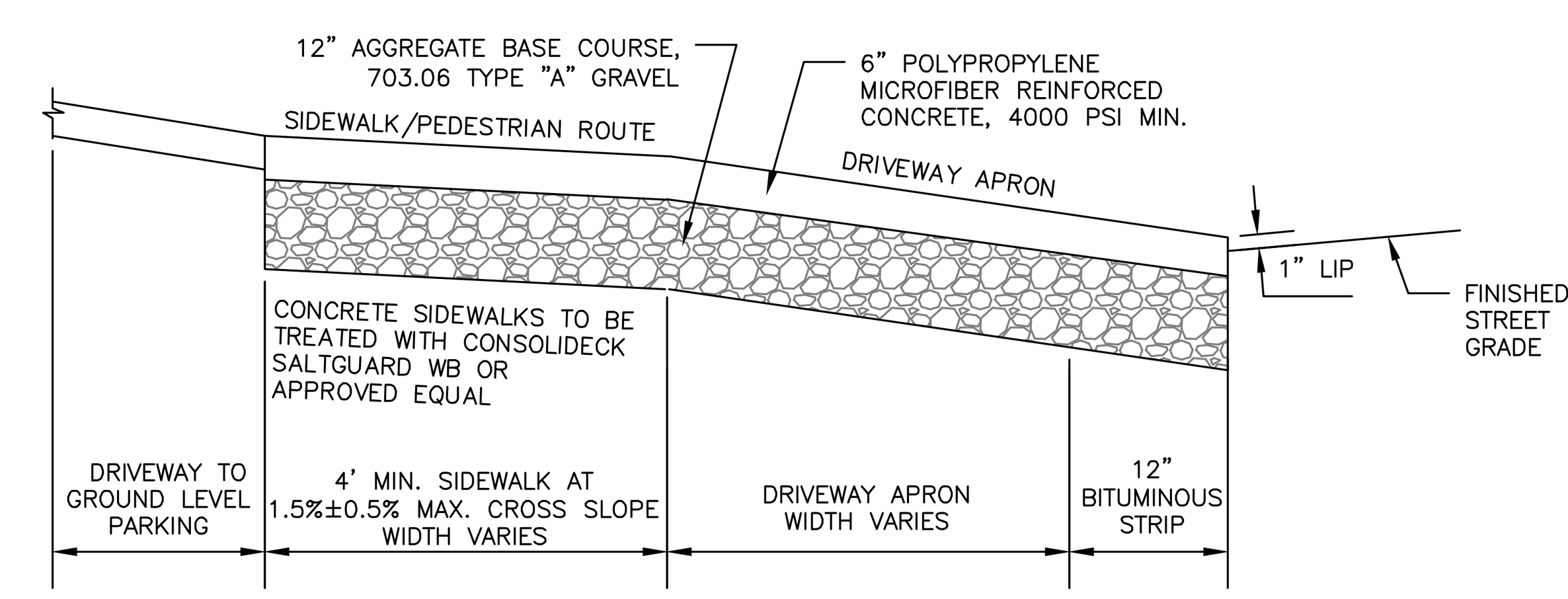
NOT TO SCALE



NOTE:
1. CROSSWALKS TO BE BUILT IN CONFORMANCE WITH MUTCD STANDARDS, LATEST EDITION.
2. CROSSWALKS ARE TO BE PAINTED WHITE MEETING MAINE DOT SPECIFICATIONS.
3. BLOCKS TO BE ORIENTED PARALLEL TO THE DIRECTION OF VEHICLE TRAFFIC.

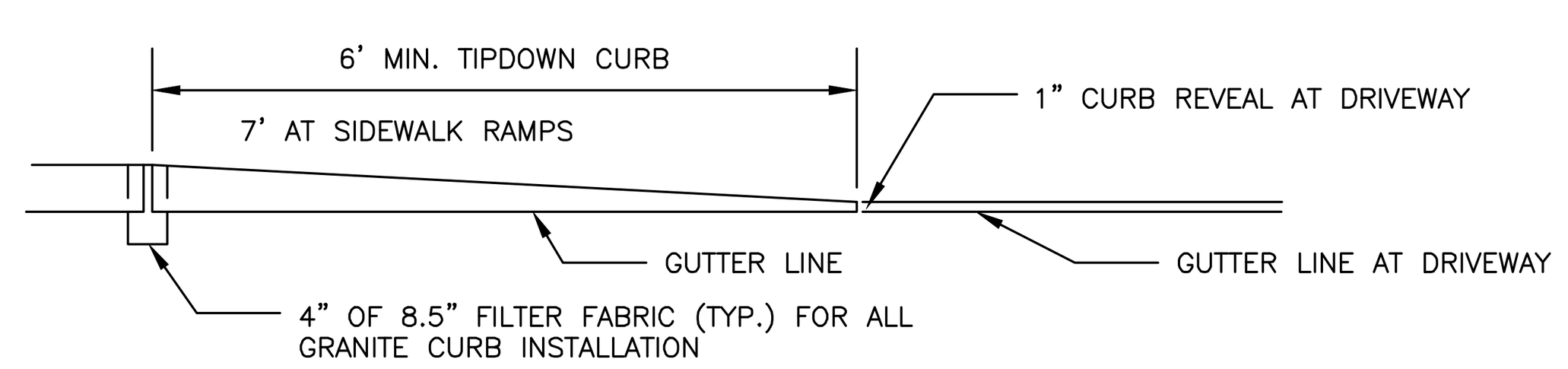
BLOCK CROSSWALK

NOT TO SCALE

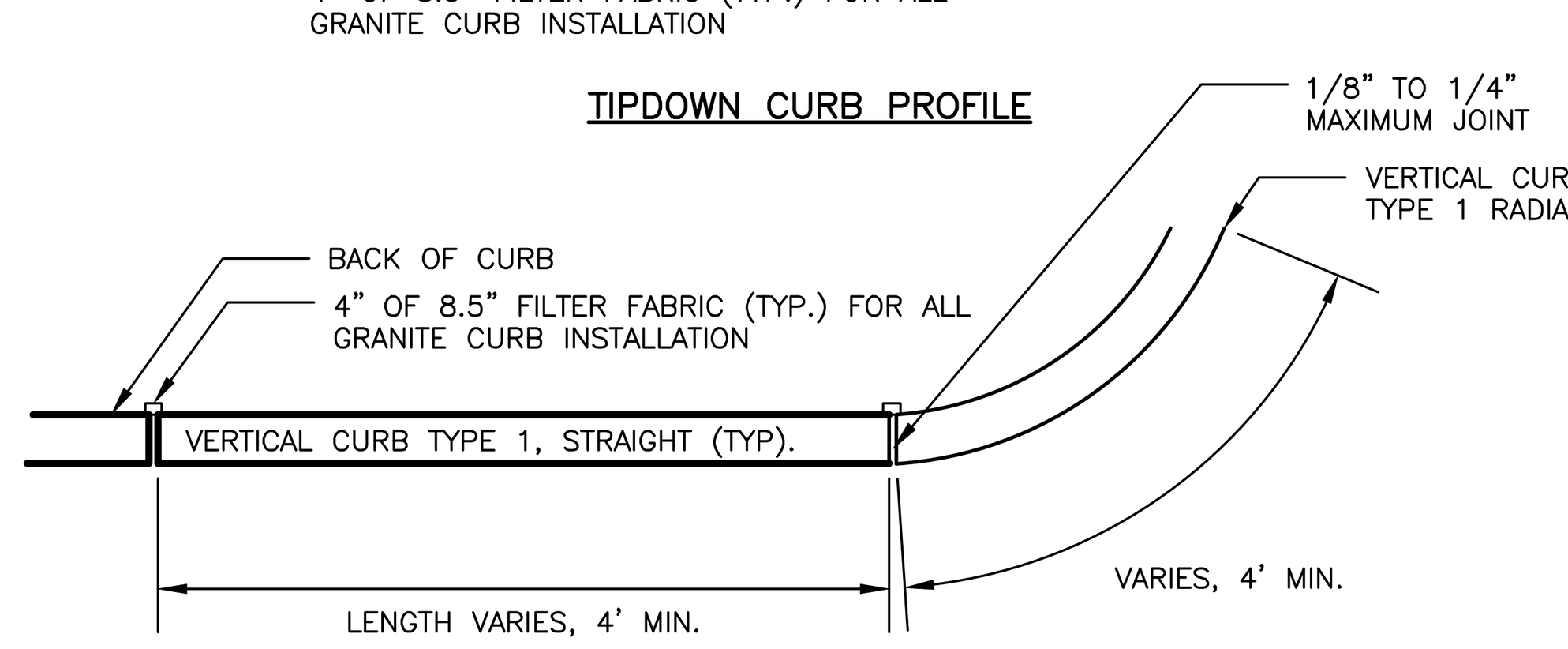


REINFORCED CONCRETE DRIVEWAY APRON DETAIL

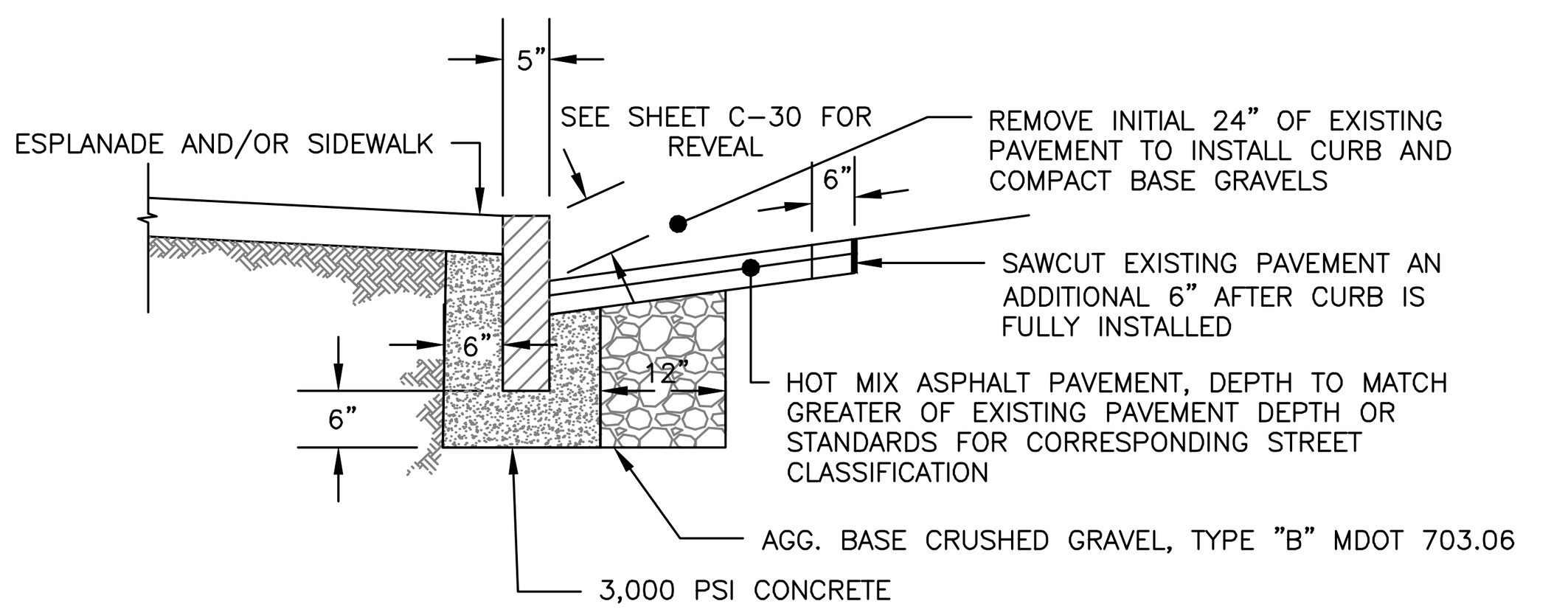
NOT TO SCALE



TIPDOWN CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW

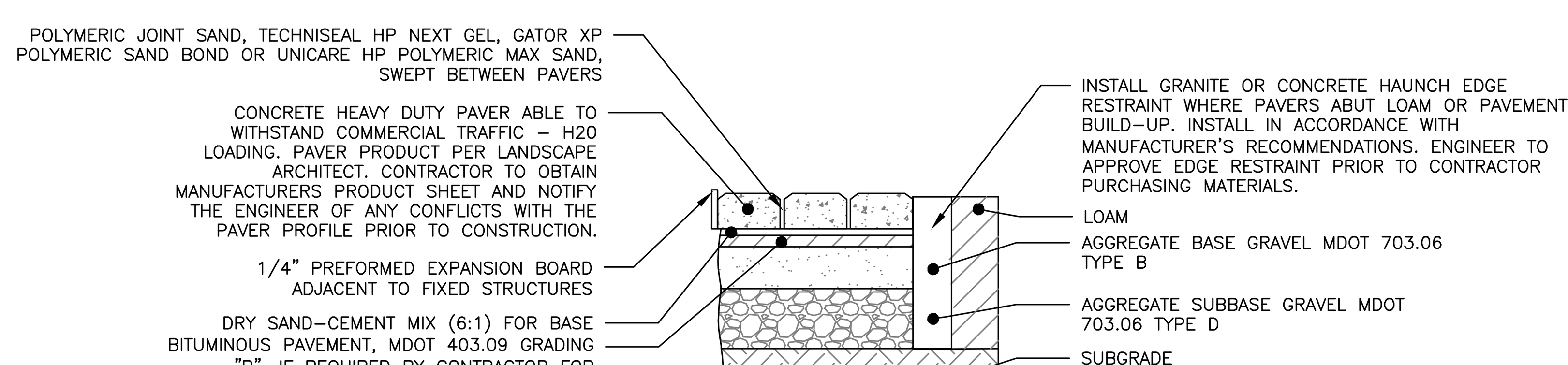


VERTICAL GRANITE CURB CROSS SECTION

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



NOTES:
1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557
2. SURFACE AND AGGREGATE MATERIALS SHALL MEET THE CITY OF PORTLAND STANDARDS IN ADDITION TO MDOT STANDARDS.
3. JOINT SAND COMPRESSION STRENGTH: PROVEN RESISTANCE TO COMPRESSION OF 550 PSI AFTER DRYING FOR 7 DAYS UNDER CONTROLLED CONDITIONS (73 DEGREE F AT 50% HUMIDITY)

GRADATION REQUIREMENTS FOR JOINT SAND

SIEVE SIZE	NATURAL SAND PERCENT PASSING	MANUFACTURED SAND PERCENT PASSING
NO. 4 (4.75mm)	100	100
NO. 8 (2.36mm)	95-100	95-100
NO. 16 (1.18mm)	70-100	70-100
NO. 30 (0.60mm)	40-75	40-75
NO. 50 (0.30mm)	10-30	20-40
NO. 100 (0.15mm)	2-15	10-25
NO. 200 (0.075)	0-1	0-10

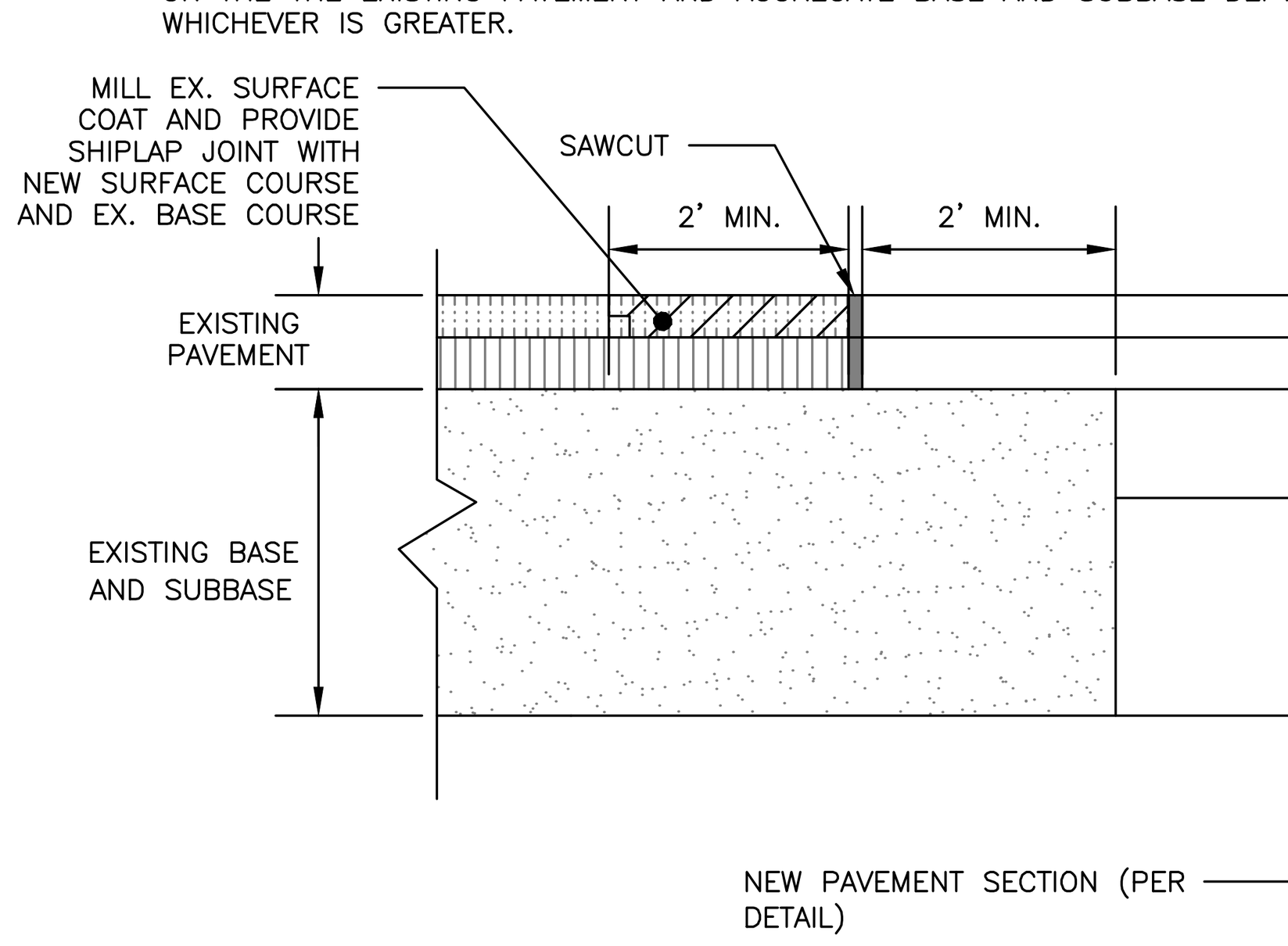
THICKNESS OF LAYERS

STANDARD	LAYERS
3.149"	CONCRETE PAVER (DEPTH TBD BASED UPON MANUFACTURER)
1"	DRY SAND-CEMENT MIX (6:1)
2"	BITUMINOUS MDOT 403.09 GRADING "B"
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

PAVER PROFILE

NOT TO SCALE

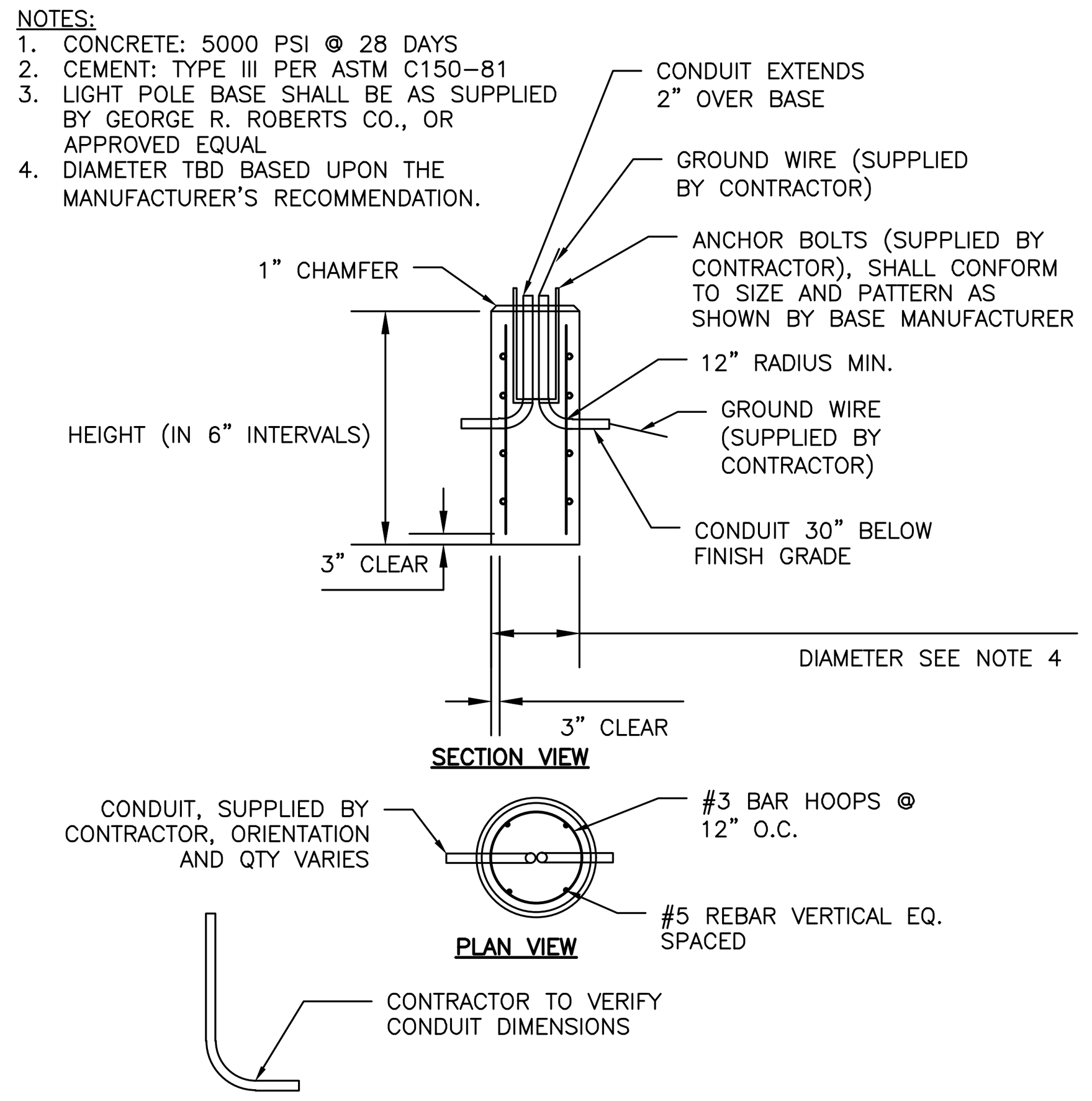
NOTES:
1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. CREATE UNIFORM AND RIGID BUTT JOINT AND APPLY BITUMINOUS TACK COAT AT AN APPLICATION RATE OF 0.10 TO 0.14 GALLONS PER SQUARE YARD PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.
2. THE NEW PAVEMENT SECTION SHALL MEET PAVEMENT 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

NOTES:
1. CONCRETE: 5000 PSI @ 28 DAYS
2. CEMENT: TYPE III PER ASTM C150-81
3. LIGHT POLE BASE SHALL BE AS SUPPLIED BY GEORGE R. ROBERTS CO., OR APPROVED EQUAL
4. DIAMETER TBD BASED UPON THE MANUFACTURER'S RECOMMENDATION.



LIGHT POLE BASE

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: SITE DETAILS – 1

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

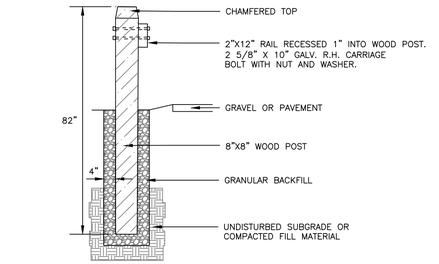
A C O R N ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

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

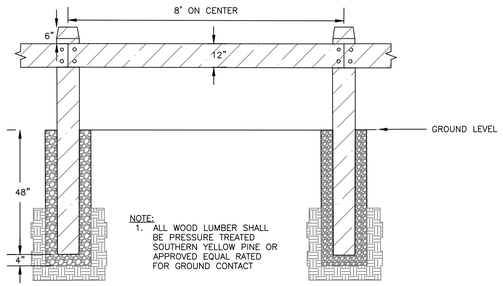
FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE – SAMUEL J. LEBEL – No. 16505 – LICENSED PROFESSIONAL ENGINEER – 9/30/24

DRAWING NO.
C-40



SIDE ELEVATION

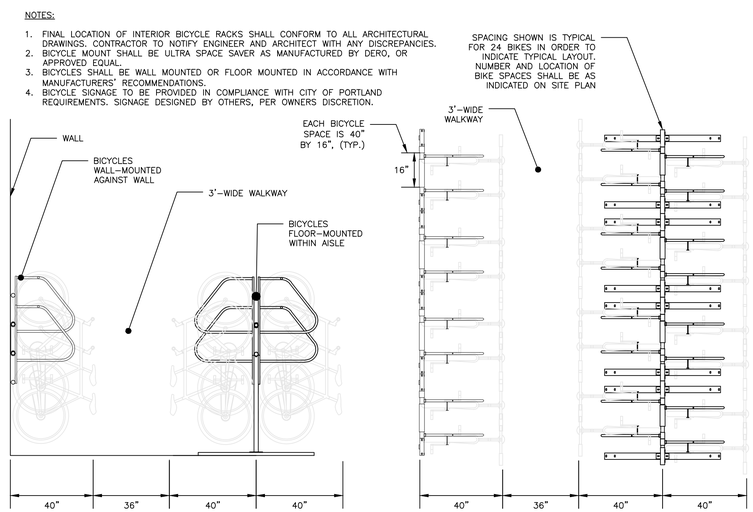


NOTE:
1. ALL WOOD LUMBER SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE OR APPROVED EQUAL RATED FOR GROUND CONTACT

FRONT ELEVATION

WOODEN GUARDRAIL DETAIL
NOT TO SCALE

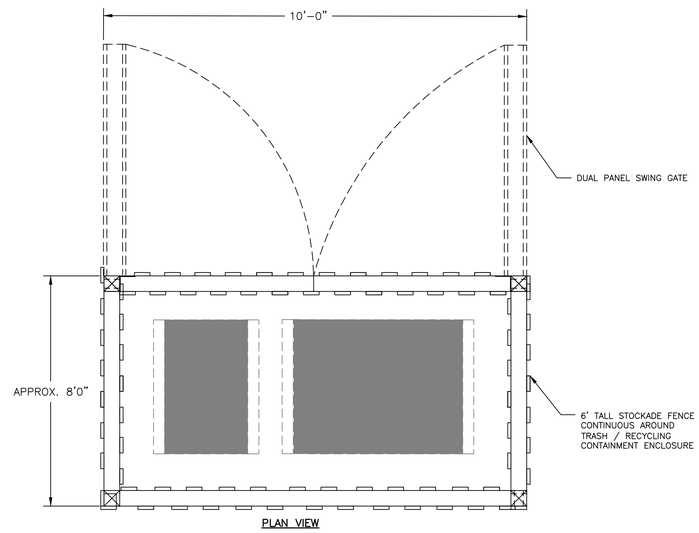
NOTES:
1. FINAL LOCATION OF INTERIOR BICYCLE RACKS SHALL CONFORM TO ALL ARCHITECTURAL DRAWINGS. CONTRACTOR TO NOTIFY ENGINEER AND ARCHITECT WITH ANY DISCREPANCIES.
2. BICYCLE MOUNT SHALL BE ULTRA SPACE SAVER AS MANUFACTURED BY DERO, OR APPROVED EQUAL.
3. BICYCLES SHALL BE WALL MOUNTED OR FLOOR MOUNTED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
4. BICYCLE SIGNAGE TO BE PROVIDED IN COMPLIANCE WITH CITY OF PORTLAND REQUIREMENTS. SIGNAGE DESIGNED BY OTHERS, PER OWNERS DISCRETION.



CROSS SECTION VIEW

PLAN VIEW

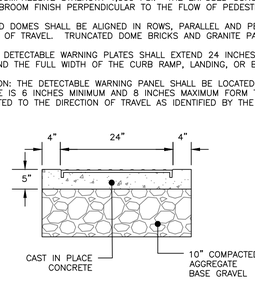
INTERIOR BICYCLE RACK DETAIL
NOT TO SCALE



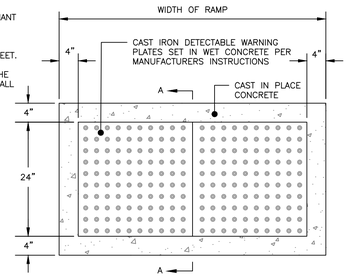
PLAN VIEW

TRASH ENCLOSURE DETAIL
NOT TO SCALE

NOTES:
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 FORM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



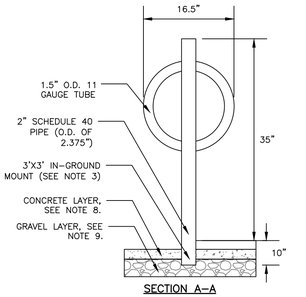
SECTION A-A



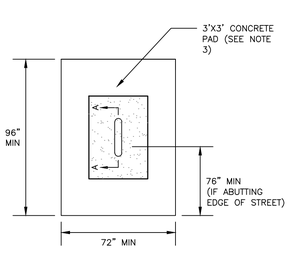
PLAN VIEW

SIDEWALK RAMP DETECTABLE WARNING PANEL
NOT TO SCALE

NOTES:
1. BICYCLE RACK SHALL HAVE CAPACITY FOR TWO BICYCLES.
2. BICYCLE RACK PARTS SHALL BE OF UNIFORM COLOR AND SHALL BE FINISHED IN ACCORDANCE WITH PRODUCT SPECIFICATION. PER CITY OF PORTLAND TECHNICAL STANDARDS ALL BIICYCLE RACKS WITHIN THE RIGHT-OF-WAY SHALL MATCH THE FURNITURE COLOR FOR THAT LOCATION AS DESCRIBED IN THE MUNICIPAL LIGHTING STANDARDS; IF NO DESIGNATED COLOR FOR THAT AREA EXISTS, BICYCLE RACKS SHALL BE BLACK.
3. BICYCLE RACK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S MOST RECENT INSTALLATION RECOMMENDATIONS, AND SHALL BE INSTALLED WITH AN IN-GROUND MOUNT UNLESS OTHERWISE APPROVED BY ENGINEER.
4. BICYCLE RACK SHALL BE "DERO BIKE HITCH", AS MANUFACTURED BY DERO BIKE RACKS.
5. MINIMUM OFFSETS SHOWN. MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.
6. MINIMUM DISTANCE BETWEEN BICYCLE RACKS SHALL BE 24". RECOMMENDED DISTANCE BETWEEN BICYCLE RACKS SHALL BE 38".
7. ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.
8. CONCRETE SHALL BE 4000 PSI @28 DAYS. BOTTOM OF CONCRETE SHALL BE AT TOP OF SIDEWALK GRAVEL ELEVATION. DEPTH VARIES APRROX. 4"-7".
9. GRAVEL LAYER SHALL BE INSTALLED IN ACCORDANCE WITH BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL, AND SHALL BE MAINEDOT 703.06 TYPE B.

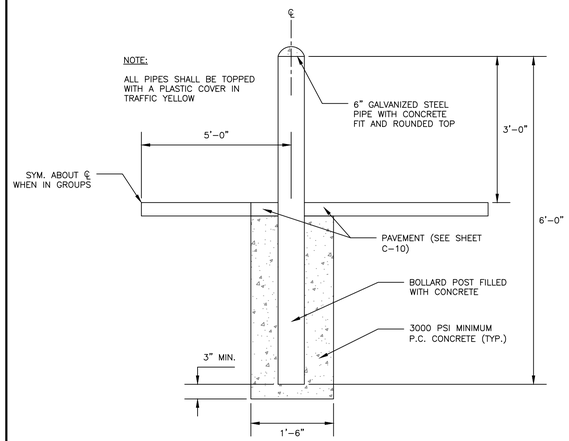


SECTION A-A



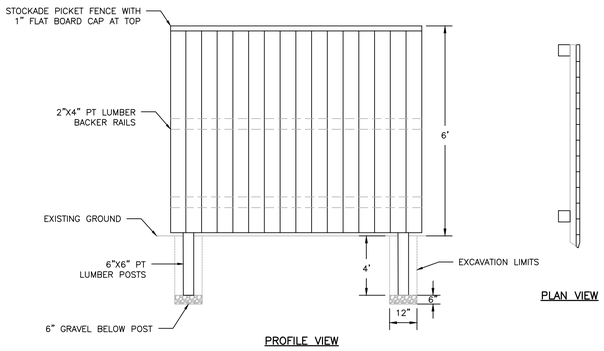
PLAN VIEW

EXTERIOR BICYCLE RACK DETAIL
NOT TO SCALE



PIPE BOLLARD
NOT TO SCALE

NOTES:
1. INSTALL FENCE PER MANUFACTURERS SPECIFICATIONS
2. SEE SHEET C-10 FOR FENCE LOCATIONS

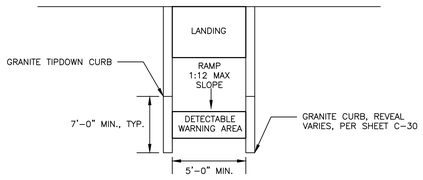


PROFILE VIEW

PLAN VIEW

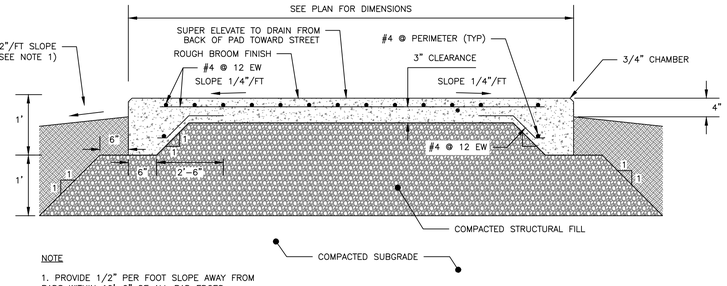
STOCKADE FENCE DETAIL
NOT TO SCALE

NOTES:
1. ALL RAMPS SHALL COMPLY WITH CITY OF BIDDEFORD AND ADA STANDARDS.
2. SIDEWALK MATERIAL SHALL BE PER CITY SIDEWALK MATERIAL POLICY.
3. FLARED SECTIONS SHOULD MATCH SURFACE MATERIAL USED FOR SIDEWALK CONSTRUCTION.



DESIGN ELEMENT	SLOPE IN DIRECTION OF TRAVEL	CROSS SLOPE
APPROACH	8.33% MAX	2%
LANDING	2%	2%
RAMP	8.33% MAX	MATCH STREET GRADE
SIDEWALK	PER C-30	2%

SIDEWALK RAMP LAYOUT
NOT TO SCALE



NOTE
1. PROVIDE 1/2" PER FOOT SLOPE AWAY FROM PADS WITHIN 10'-0" OF ALL PAD EDGES

SECTION

DUMPSTER PAD DETAIL
NOT TO SCALE

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	5/30/24

DRAWING NAME: SITE DETAILS - 2

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

THESE PLANS SHALL NOT BE MODIFIED, WITH ALTERATIONS TO INFORMATION SHOWN THEREON, UNLESS AUTHORIZED IN WRITING BY ACORN ENGINEERING, INC. OR, OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
FALMOUTH, MAINE 04104
PO BOX 3257
(207) 775-2655

FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

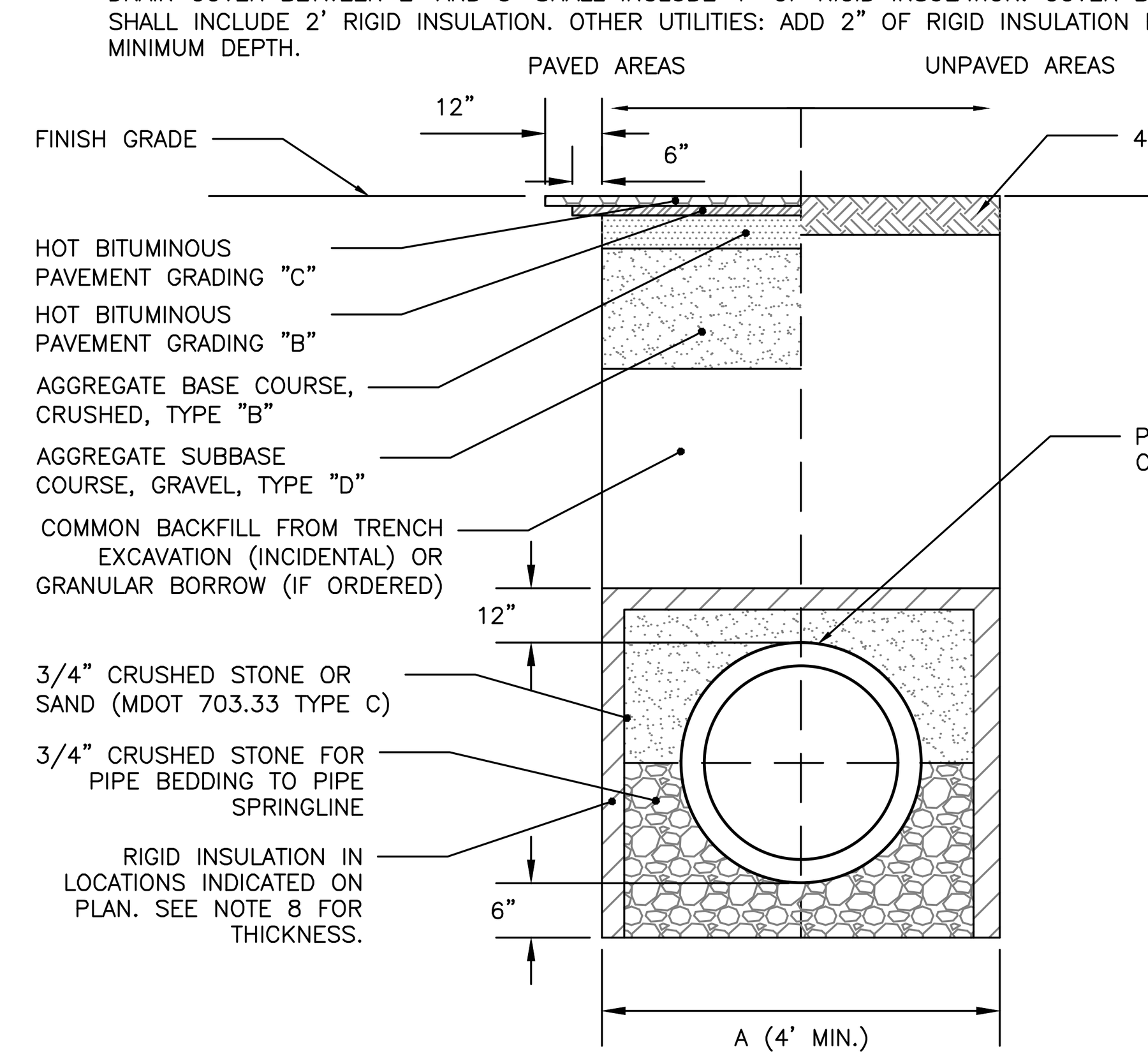
STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
5/30/24

DRAWING NO.
C-41

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

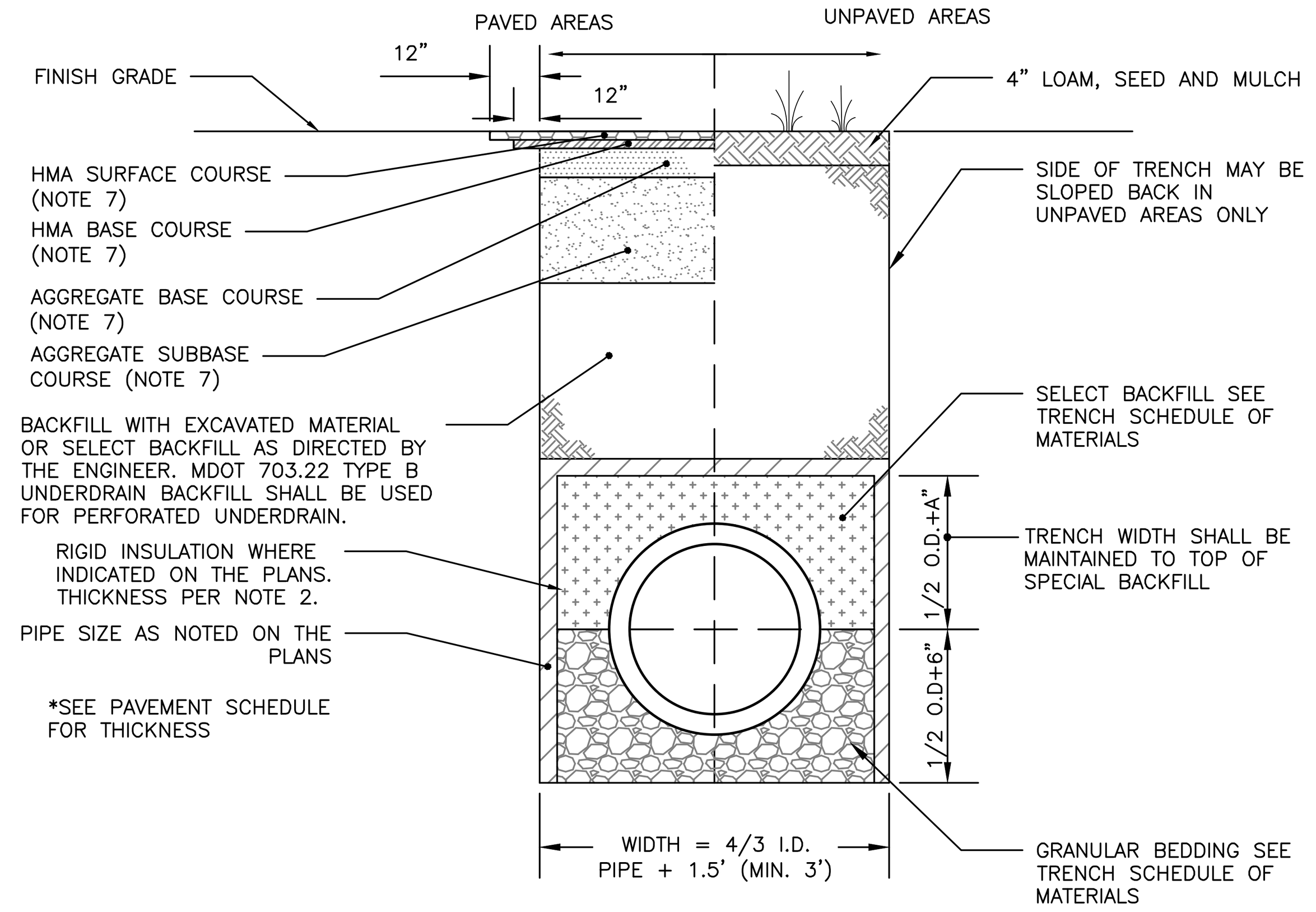
NOTES:

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 ROW.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.



TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	5
15	5
18	5
24	6
36	6
48	7

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL
NOT TO SCALE



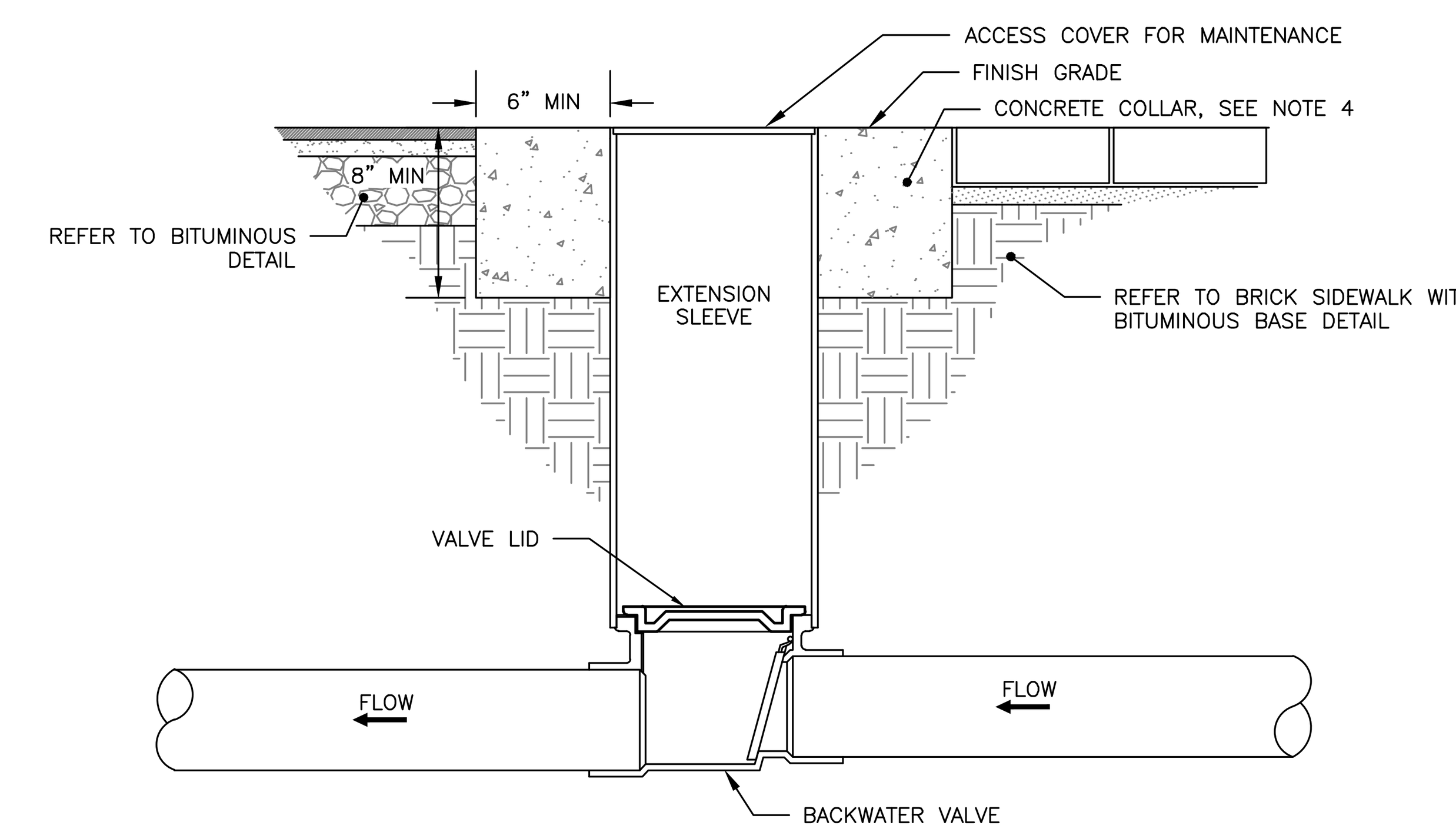
ALLOWABLE PIPE MATERIALS:
- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS–46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N–12 HP TRIPLE–WALL MIN PS–46 RATING
- ADS SANITITE HP MIN. PS–46

SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. 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.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   - 4.1. 2'–0" – STORM DRAIN
   - 4.2. 5'–0" – SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF BIDDEFORD ROW.
7. THICKNESS AS NOTED BY SURFACE DETAILS
8. ALL PROPOSED TREES PLANTED WITHIN 10' OF A STORM OR SEWER PIPE SHALL BE PLANTED AT A DEPTH NO GREATER THAN 3' DEEP. PERMEABLE LANDSCAPE FABRIC SHALL CREATE A ROOT BARRIER AROUND THE PIPES. CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE DRAWINGS.

STORM DRAIN AND SEWER TYPICAL TRENCH SECTION
NOT TO SCALE



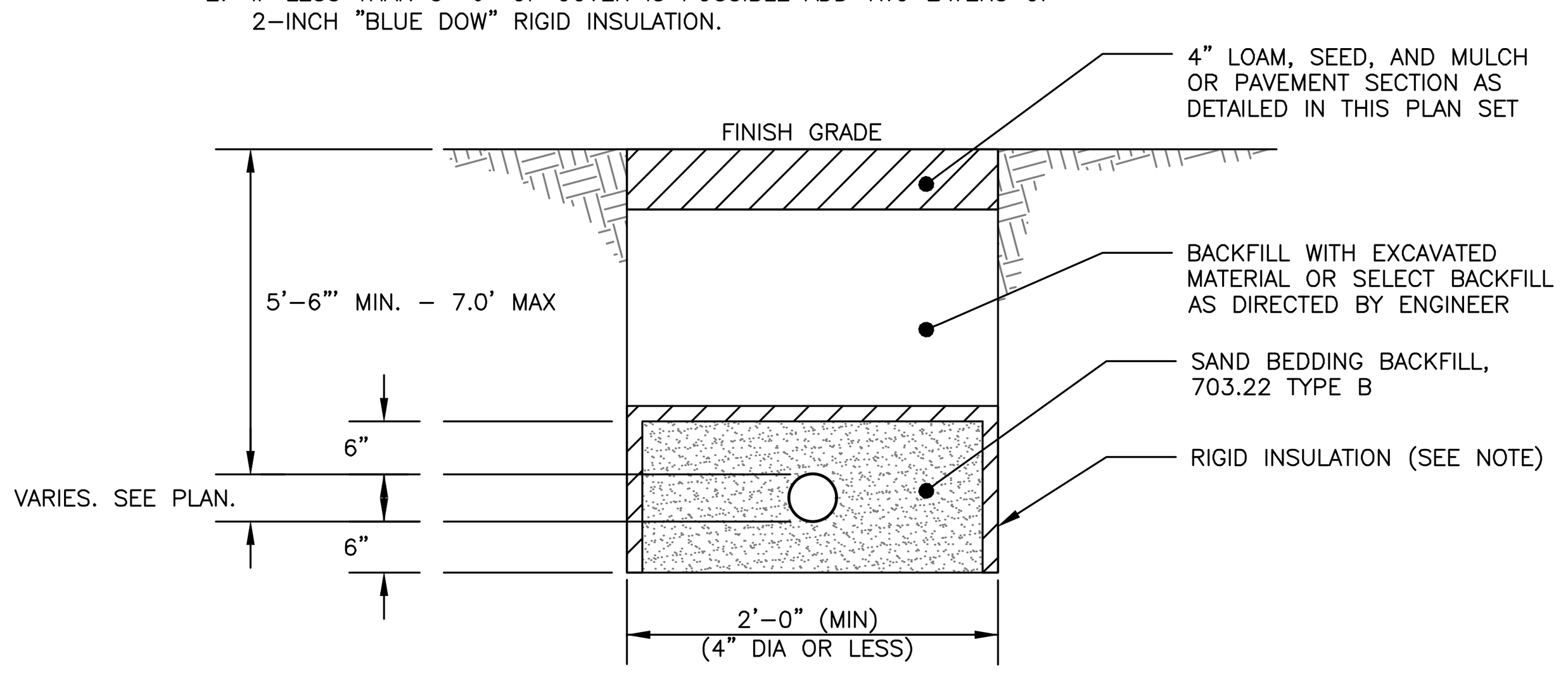
NOTES:

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:

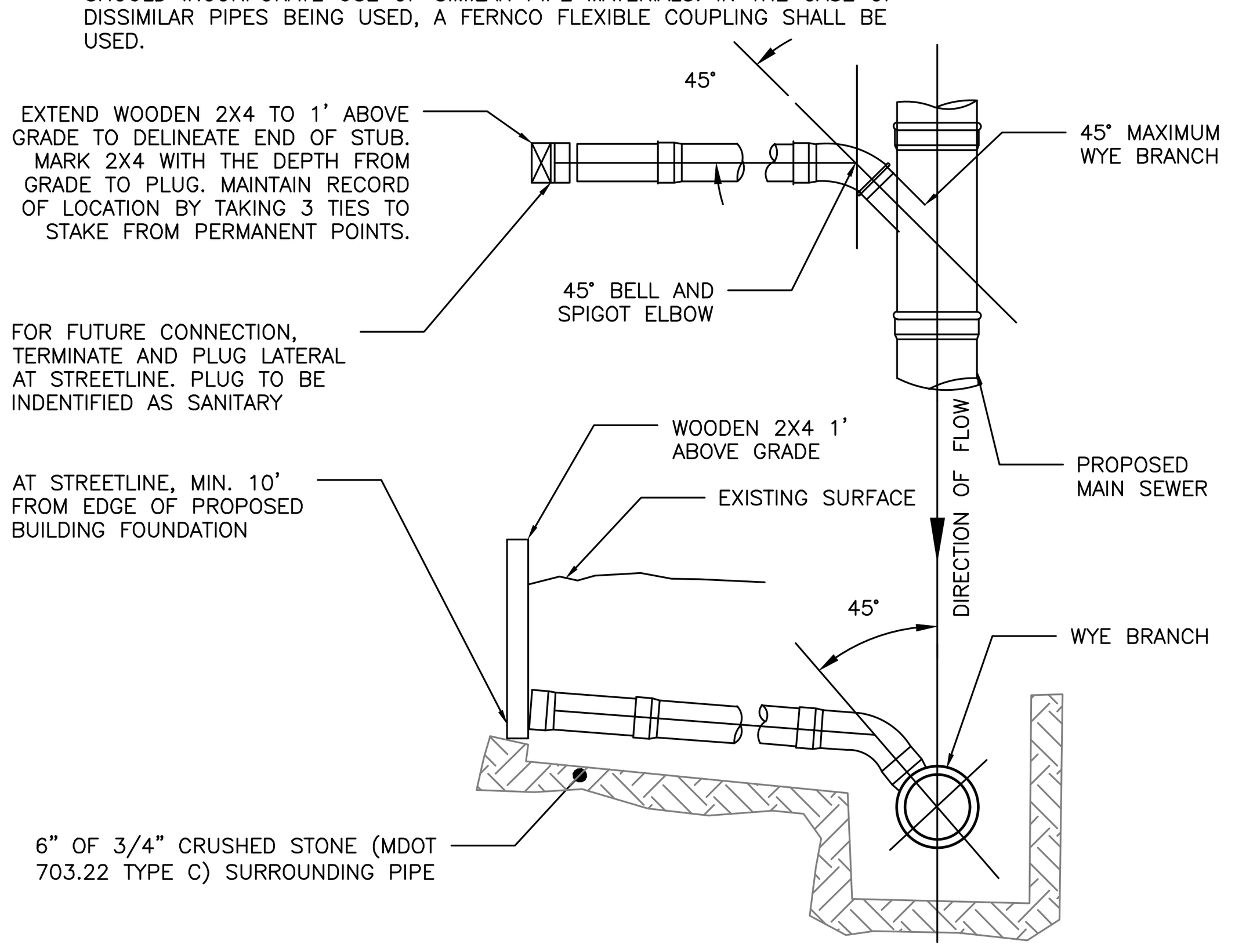
1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'–6" OF COVER IS POSSIBLE ADD TWO LAYERS OF 2–INCH "BLUE DOW" RIGID INSULATION.



WATER SERVICE TRENCH SECTION DETAIL
NOT TO SCALE

NOTES:

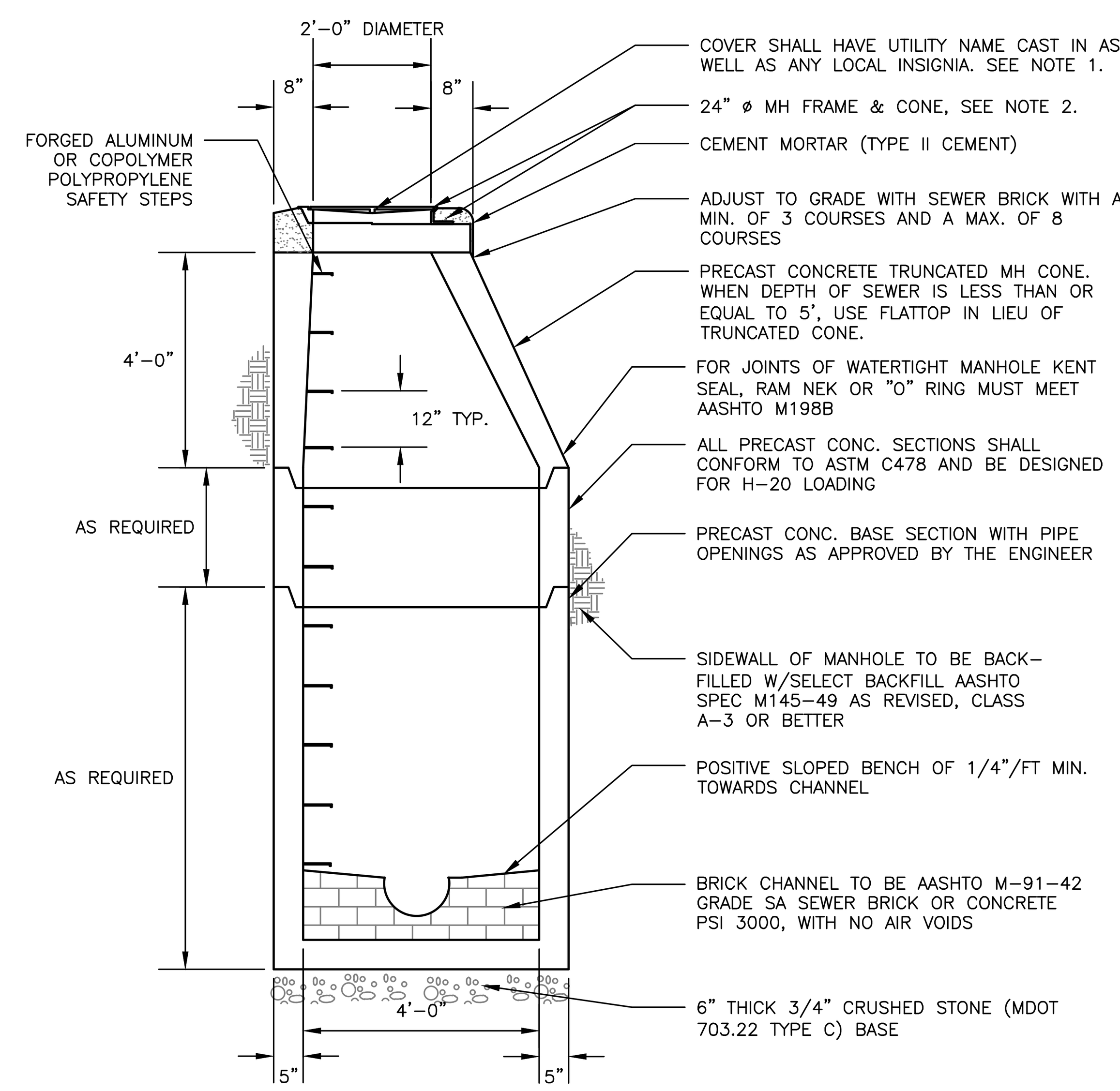
1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO STRUCTURE PLUMBING WITH ARCHITECTURAL CONTRACTOR.
3. CONNECTION OF PROPOSED SEWER LATERAL TO STRUCTURE PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



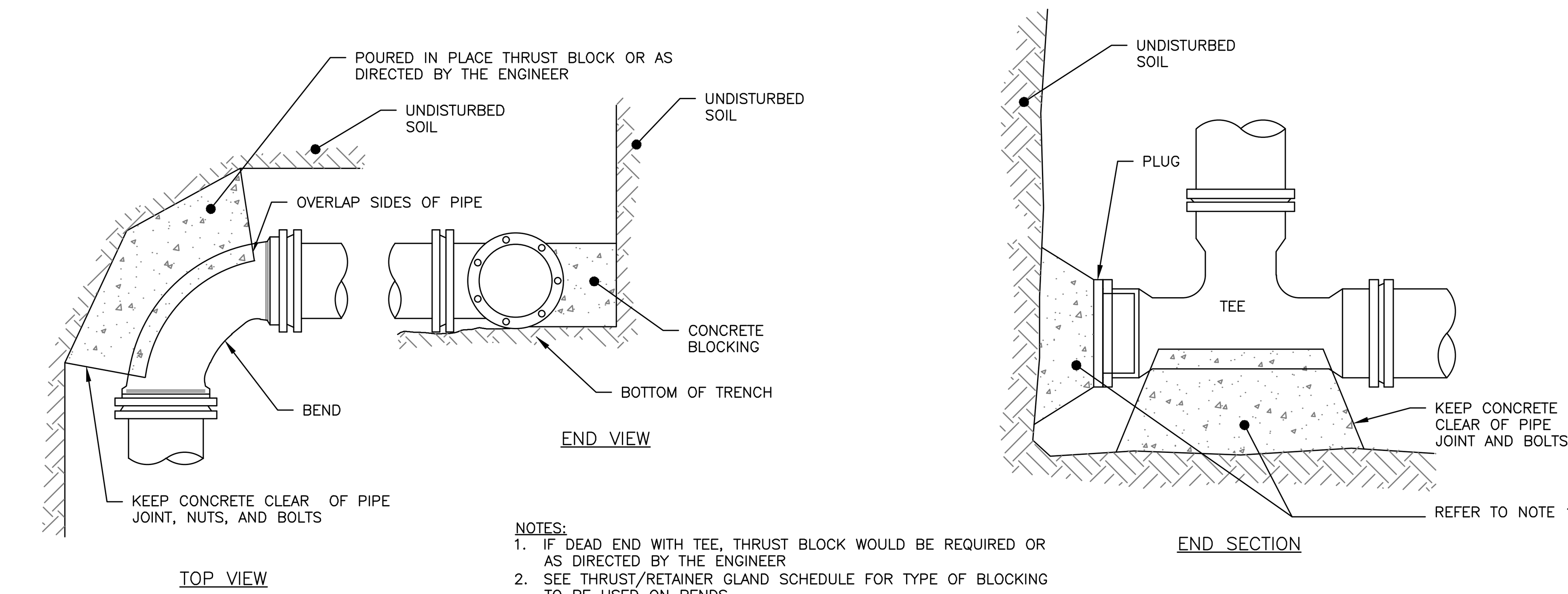
SEWER TEE/WYE CONNECTION DETAIL
NOT TO SCALE

NOTES:

1. WITHIN CITY OF PORTLAND ROW, STORM DRAIN MANHOLE SHALL CONFORM WITH "STANDARD PRECAST SEWER MANHOLE DETAIL", WITH THE EXCEPTION THAT THE COVER SHALL BE MARKED AS "DRAIN". REFER TO CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 – SANITARY SEWER AND STORM DRAIN, FIGURE II–1
2. SUBMITTAL REQUIRED FOR MANHOLES, MANHOLE FRAMES & MANHOLE COVERS

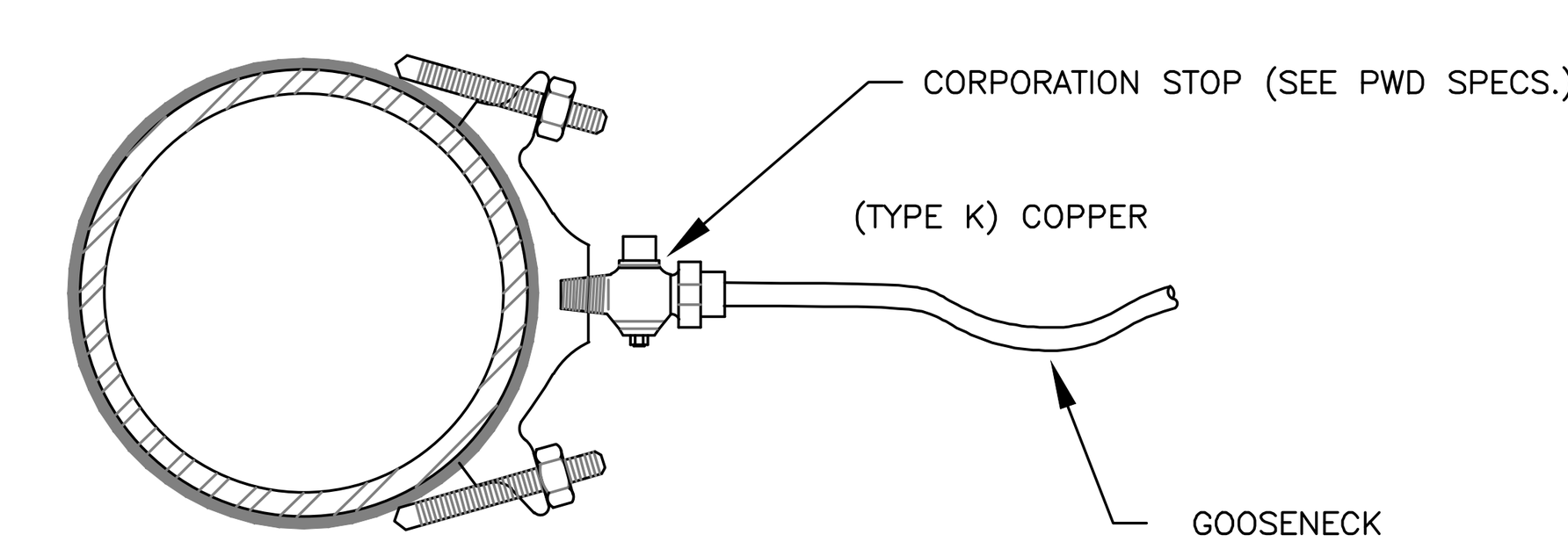


STANDARD PRECAST SEWER MANHOLE
NOT TO SCALE

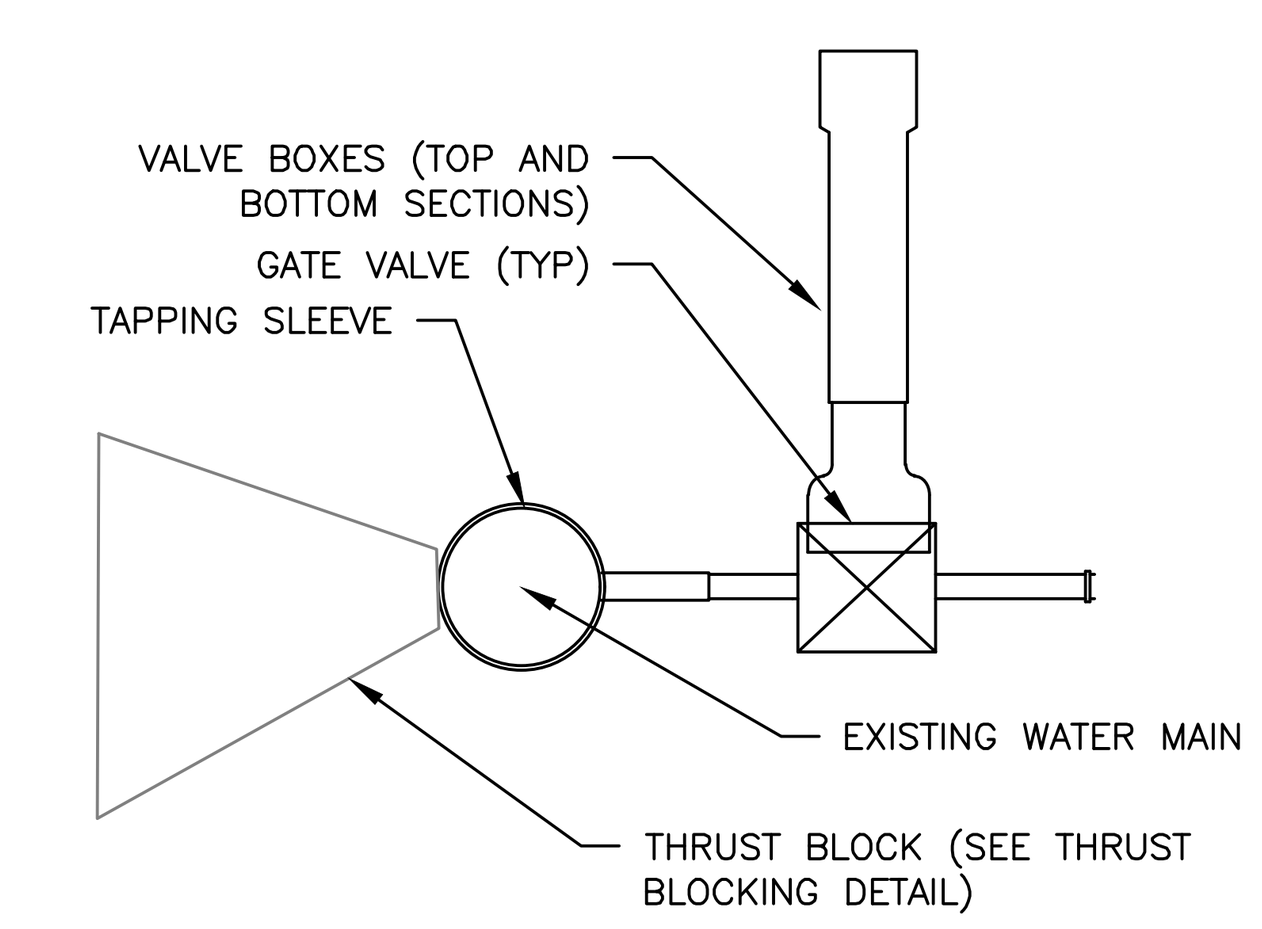


NOTES:
1. IF DEAD END WITH TEE, THRUST BLOCK WOULD BE REQUIRED OR AS DIRECTED BY THE ENGINEER
2. SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

THRUST BLOCKING: REGULAR BEND
NOT TO SCALE



SERVICE SADDLE: 1–1/2" AND 2" C.C. THREAD
NOT TO SCALE



TAPPING SLEEVE AND VALVE
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: UTILITY DETAILS – 1

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

A C O R N ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775–2655

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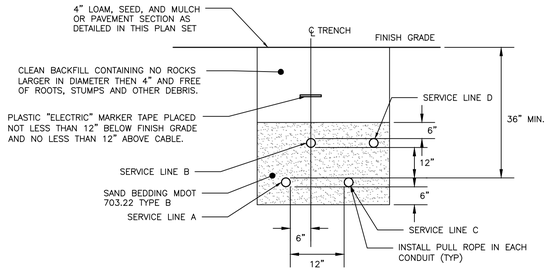
STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-42



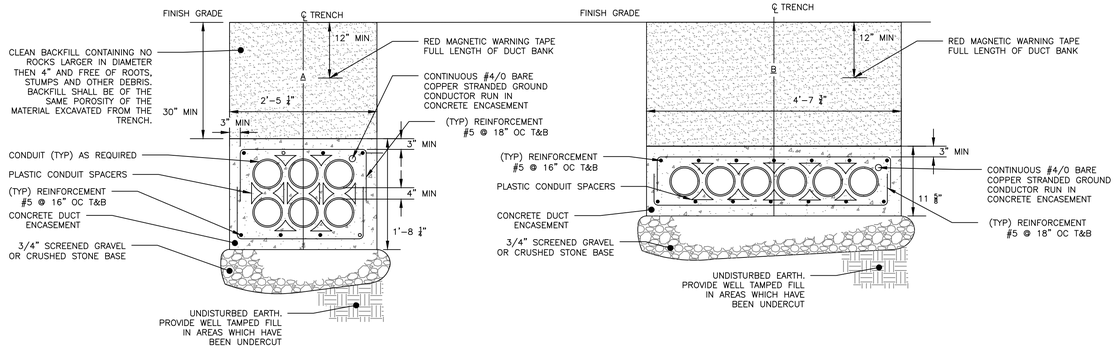
CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2–5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2–4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2–4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2–4"	SCHEDULE 40 PVC	CABLE	–

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.

UTILITY TRENCH:
PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE



NOTES:

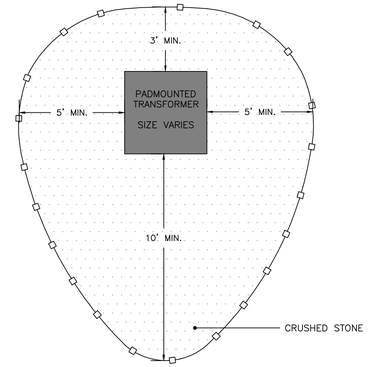
1. "A" WILL BE USED FOR MAJORITY OF INSTALLATION. DUCT BANK WILL NEED TO BE DEEPER AND NARROWER NEAR MANHOLES.
2. "B" WILL BE USED AS NEEDED. DUCT BANK WILL NEED TO BE WIDER AND SHALLOWER.
3. CONDUITS WITHIN THE CITY RIGHT–OF–WAY SHALL BE ENCASED IN CONCRETE.
4. FINAL SIZE OF CONDUITS TO BE SPECIFIED BY MEP, ELECTRICIAN, OR DESIGN/BUILD ELECTRICAL CONTRACTOR.
5. ALL CONSTRUCTION TO BE IN COMPLIANCE WITH CMP'S CONSTRUCTION STANDARDS AND THE LATEST EDITION OF THE NATIONAL ELECTRICAL SAFETY CODE.
6. ALL 90 DEGREE BENDS SHALL BE GALVANIZED LONG SWEEP BENDS. CONDUIT BELL ENDS REQUIRED AT SPLICE BOXES, TRANSFORMER BASES, AND SWITCH CABINETS.
7. CONDUITS SHALL BE PROPERLY PITCHED TO DRAIN INTO TRANSFORMER FOUNDATIONS, MANHOLES, OR SPLICE BOXES. THREE INCHES PER 100 FEET MINIMUM SLOPE. IF CONDUITS SLOW TOWARD THE RISER POLE, A COMPANY APPROVED DRAINAGE BOX AT THE RISER BASE SHALL BE INSTALLED.
8. INSTALL 1" (OR MULE TAPE) PULLING LINE IN EACH CONDUIT.
9. INSTALL 4/0 CU NEUTRAL IN CONDUIT DUCT BANK.
10. INSTALL CONDUIT SPACERS

PRIMARY POWER CONDUIT DUCT BANK

NOT TO SCALE

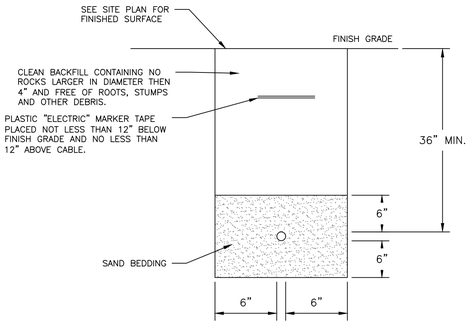
NOTES:

1. WHERE DANGER OF PLOW OR TRAFFIC DAMAGE EXISTS, BARRIERS CONSISTING OF CONCRETE FILLED 6 INCH IPS STEEL POSTS SET 4 FEET DEEP SHALL BE PROVIDED FOR PROTECTION (PRESSURE TREATED 6X6 INCH MIN. TIMBER POSTS MAY BE SUBSTITUTED IN RESIDENTIAL AREAS). POSTS SHALL NOT INTERFERE WITH TRANSFORMER ACCESS. GENERALLY THE POSTS SHALL BE LOCATED NEAR THE CORNERS OF THE TRANSFORMERS.
2. THE SETBACKS DEPICT CLEARANCES FROM OBSTRUCTIONS INCLUDING TREES, SHRUBS, AND FENCES.
3. THERE SHALL BE NO OPENINGS IN THE BUILDING WALL IN BACK OF, BESIDE, OR OVER THE TRANSFORMER UNLESS THE TRANSFORMER IS A MIN. OF 10 FEET FROM THE BUILDING.
4. SIDE CLEARANCES FROM DOORS OR WINDOWS SHALL NOT BE LESS THAN 10 FEET.
5. THERE SHALL BE A MIN. OF 10 FEET BETWEEN THE TRANSFORMER AND ANY GAS METER/REGULATOR, GAS RELIEF VALVE, GAS VENT DISCHARGE, GAS FILLING CONNECTION, OR PROPANE TANK. SOME INSURANCE COMPANIES MAY REQUIRE INCREASED CLEARANCES.
6. TRANSFORMER SHALL BE LOCATED FAR ENOUGH AWAY FROM BUILDING OVERHANGS SO THAT THEY WILL NOT BE SUBJECT TO DAMAGE BY FALLING ICE AND SNOW.
7. IF TRANSFORMER IS NOT INSTALLED IMMEDIATELY UPON THE INSTALLATION OF THE CABLE IN THE PAD, THE DEVELOPER SHALL PROVIDE AND INSTALL A CMP APPROVED CONCRETE, STEEL, OR FIBERGLASS COVER OVER THE PAD OPENING TO ELIMINATE EXPOSURE OF THE CABLE.



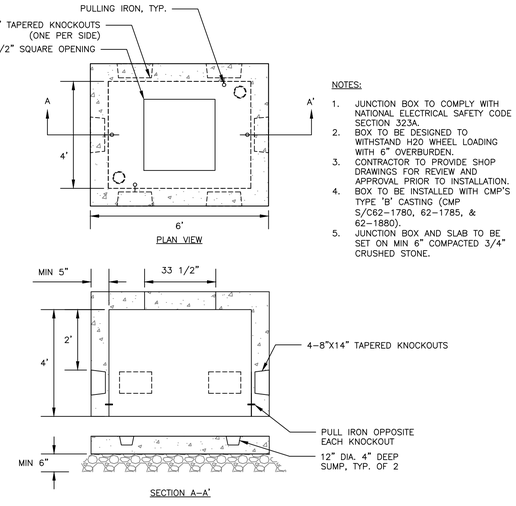
CMP TRANSFORMER SETBACKS

NOT TO SCALE



SECONDARY ELECTRICAL TRENCH

NOT TO SCALE

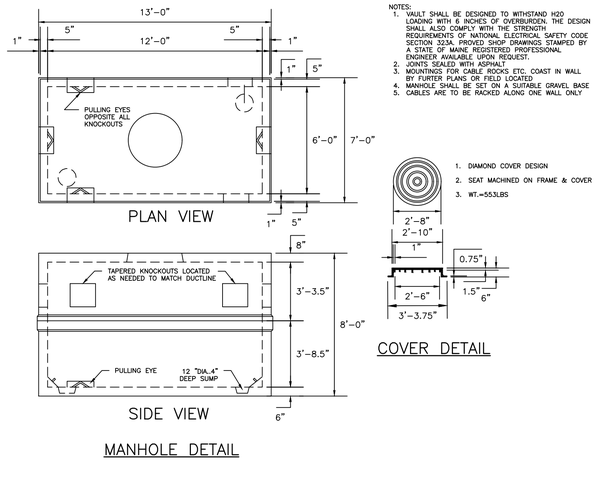


NOTES:

1. JUNCTION BOX TO COMPLY WITH NATIONAL ELECTRICAL SAFETY CODE SECTION 323A.
2. BOX TO BE DESIGNED TO WITHSTAND H20 WHEEL LOADING WITH 6" OVERBURDEN.
3. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
4. BOX TO BE INSTALLED WITH CMP'S TYPE 'B' CASTING (CMP S/C62–1780, 62–1785, & 62–1880).
5. JUNCTION BOX AND SLAB TO BE SET ON MIN 6" COMPACTED 3/4" CRUSHED STONE.

CMP JUNCTION BOX (PULL BOX)

NOT TO SCALE



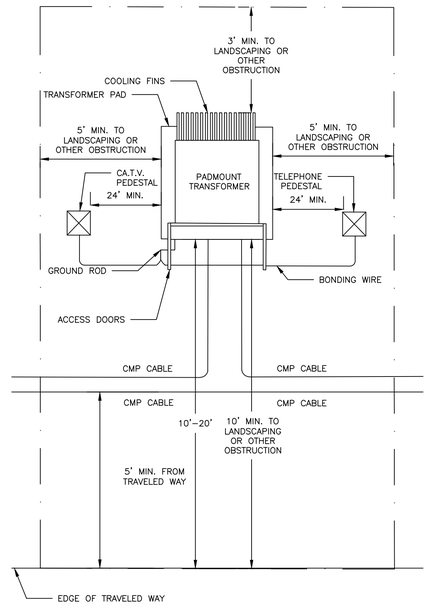
NOTES:

1. VAULT SHALL BE DESIGNED TO WITHSTAND H20 LOADING WITH 6 INCHES OF OVERBURDEN. THE DESIGN SHALL ALSO COMPLY WITH THE STRENGTH REQUIREMENTS OF NATIONAL ELECTRICAL SAFETY CODE SECTION 323A. PROVED SHOP DRAWINGS STAMPED BY A STATE OF MAINE REGISTERED PROFESSIONAL ENGINEER AVAILABLE UPON REQUEST.
2. JOINTS SEALED WITH ASPHALT
3. MOUNTINGS FOR CABLE RACKS ETC. COAST IN WALL BY FURTER PLANS OR FIELD LOCATED
4. MANHOLE SHALL BE SET ON A SUITABLE GRAVEL BASE
5. CABLES ARE TO BE RACKED ALONG ONE WALL ONLY

PRECAST CONCRETE 38Y MANHOLE DETAIL

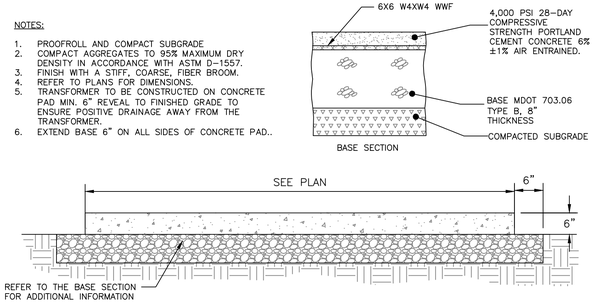
NOT TO SCALE

COVER DETAIL



9'X9' PAD MOUNTED TRANSFORMER

NOT TO SCALE



NOTES:

1. PROOFROLL AND COMPACT SUBGRADE
2. COMPACT AGGREGATES TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557.
3. FINISH WITH A STIFF, COARSE, FIBER BROOM.
4. REFER TO PLANS FOR DIMENSIONS.
5. TRANSFORMER TO BE CONSTRUCTED ON CONCRETE PAD MIN. 6" REVEAL TO FINISHED GRADE TO ENSURE POSITIVE DRAINAGE AWAY FROM THE TRANSFORMER.
6. EXTEND BASE 6" ON ALL SIDES OF CONCRETE PAD..

CONCRETE PAD DETAIL

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 7/30/24

DRAWING NAME: UTILITY DETAILS – 2

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
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ACORN ENGINEERING, INC.
FOR ALL YOUR ENGINEERING NEEDS
PO BOX 3207 PORTLAND, MAINE 04104
(207) 775–2655

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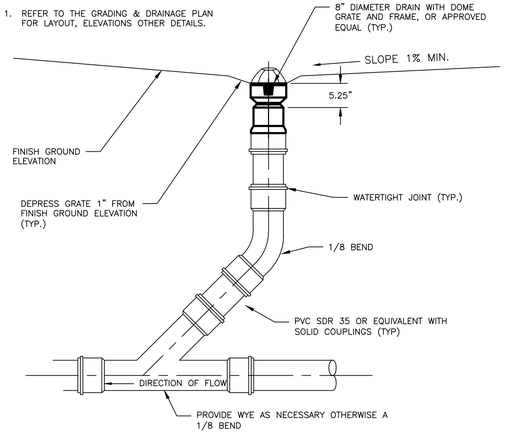
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE — SAMUEL J. LEBEL — No. 16505 — LICENSED PROFESSIONAL ENGINEER — 9/30/24

DRAWING NO.
C-43

NOTES:

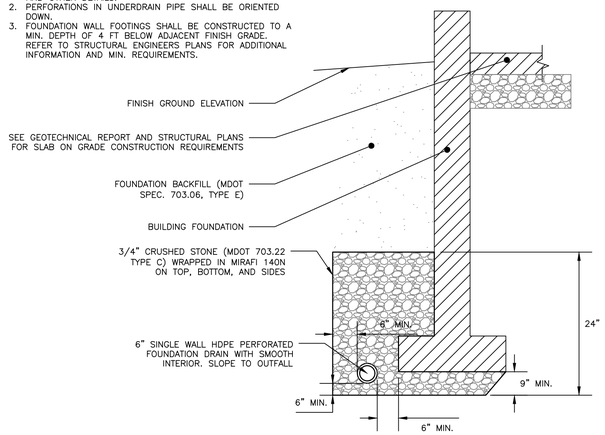
1. REFER TO THE GRADING & DRAINAGE PLAN FOR LAYOUT, ELEVATIONS OTHER DETAILS.



INLINE DRAIN DETAIL WITH BEEHIVE GRATE
NOT TO SCALE

NOTES:

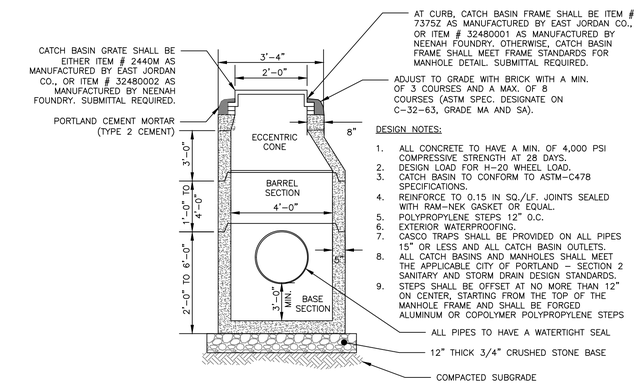
1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4 FT BELOW ADJACENT FINISH GRADE. REFER TO STRUCTURAL ENGINEERS PLANS FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.



FOUNDATION DRAIN DETAIL
NOT TO SCALE

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

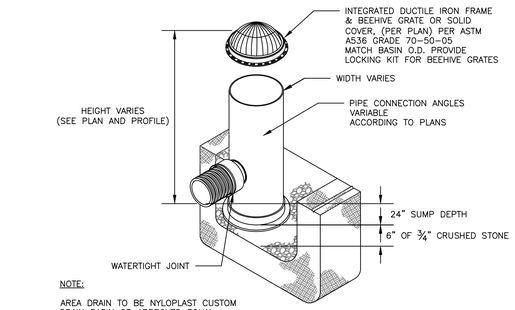
1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
3. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
4. ALL STORM MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE ⅞" DIAMETER DRILLED PICK HOLE LOCATED 8" FROM THE CENTER OF THE COVER.
5. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
6. ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR APPROVAL EQUAL.
7. CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE ETHERIDGE DR5A OR APPROVED EQUAL.
8. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.
9. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.



DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. CASCO TRAPS SHALL BE PROVIDED ON ALL PIPES 15" OR LESS AND ALL CATCH BASIN OUTLETS.
8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND - SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
9. 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

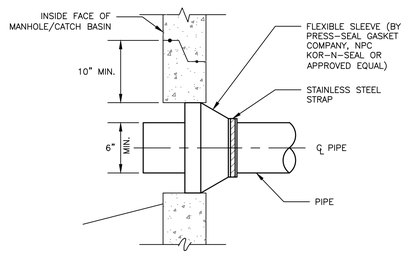
4'-0" DIAMETER PRECAST CATCH BASIN/MANHOLE DRAIN
NOT TO SCALE



NOTE:

AREA DRAIN TO BE NYLOPLAST CUSTOM DRAIN BASIN OR APPROVED EQUAL.

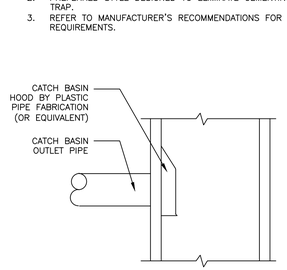
BEEHIVE DRAIN DETAIL
NOT TO SCALE



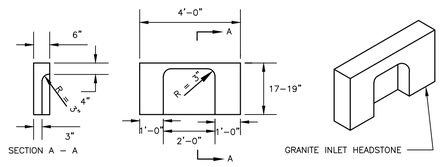
NEW PIPE TO NEW STRUCTURE CONNECTION DETAIL
NOT TO SCALE

NOTES:

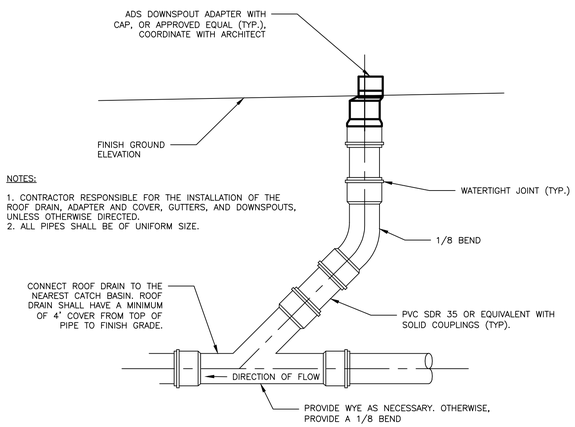
1. INSTALL HOOD ON ALL OUTLETS 24" OR LESS.
2. PREFERRED STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION REQUIREMENTS.



CATCH BASIN HOOD DETAIL
NOT TO SCALE



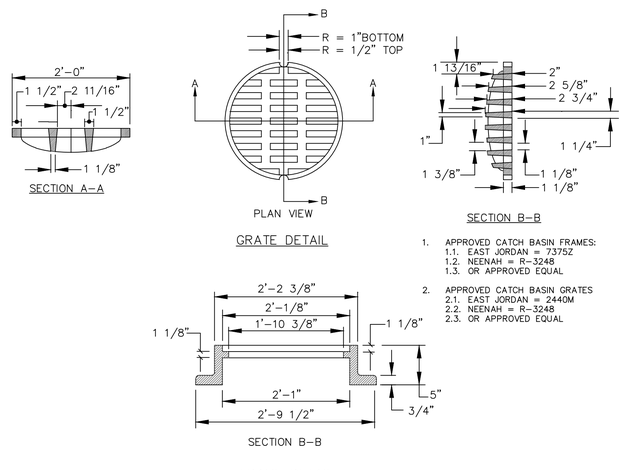
4' GRANITE HEADSTONE FOR CATCH BASIN INLET
NOT TO SCALE



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

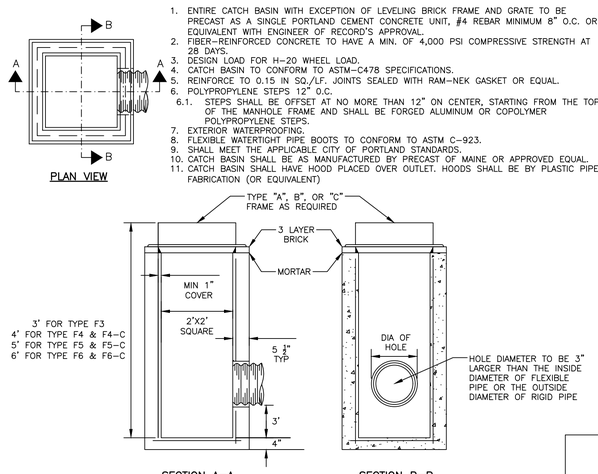


1. APPROVED CATCH BASIN FRAMES:
   1.1. EAST JORDAN = 7375Z
   1.2. NEENAH = R-3248
   1.3. OR APPROVED EQUAL
2. APPROVED CATCH BASIN GRATES
   2.1. EAST JORDAN = 2440M
   2.2. NEENAH = R-3248
   2.3. OR APPROVED EQUAL

CIRCULAR CATCH BASIN FRAME & GRATE W/O D-RING
NOT TO SCALE

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 CITY OF PORTLAND STANDARDS.
10. CATCH BASIN SHALL BE AS MANUFACTURED BY PRECAST OF MAINE OR APPROVED EQUAL.
11. CATCH BASIN SHALL HAVE HOOD PLACED OVER OUTLET. HOODS SHALL BE BY PLASTIC PIPE FABRICATION (OR EQUIVALENT)



24" SQUARE CATCH BASIN "TYPE F"
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 7/30/24

DRAWING NAME: DRAINAGE DETAILS - 1

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT

307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC
70 FORT ROAD, SOUTH PORTLAND, MAINE 04106
PO BOX 3235 (207) 775-2655

USE OF THESE PLANS, IN PART OR IN WHOLE, MODIFIED OR NOT, WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

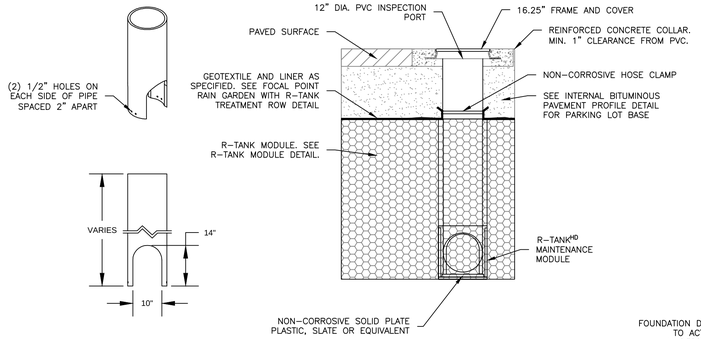
FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
Sam Label
SAMUEL J. LEBEL
No. 16505
REGISTERED PROFESSIONAL ENGINEER
9/30/24

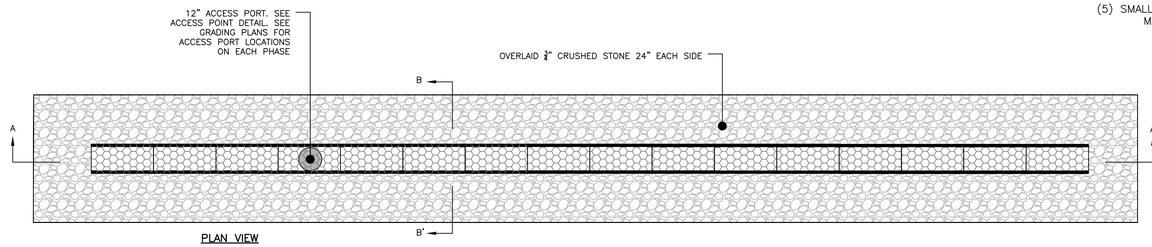
DRAWING NO.
C-44

R–TANK SUBSURFACE STORMWATER DETENTION SYSTEM OVERVIEW BY PHASE:			
	PHASE 1: 197 OXFORD ST.	PHASE 2: 50 CEDAR ST.	PHASE 3: 158 LANCASTER ST.
FINISHED GRADE:	28.40'	26.75	13.25'
TOP OF CRUSHED STONE:	26.95'	26.25'	13.00'
TOP OF R–TANK:	25.96'	25.25'	12.00'
OVERFLOW INVERT OUT:	25.63'	24.92'	11.67'
BOTTOM OF R–TANK:	23.13'	22.43'	9.18'
UNDERDRAIN INVERT OUT:	22.80'	22.09'	8.84'
BOTTOM OF STONE:	22.38'	21.68'	8.43'
TOTAL TANK COUNT	50	40	72
NUMBER OF 4" OVERFLOW DRAINS	4	3	4

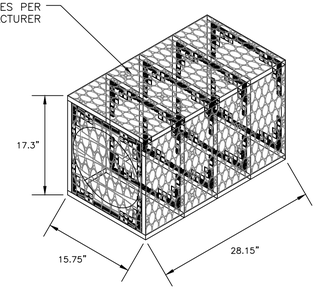
NOTES
1. THE INSPECTION PORT IS USED IN THE MAINTENANCE MODULE TO INSPECT THE LEVEL OF SEDIMENT ACCUMULATION.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH MAINTENANCE ROW VIA THE ACCESS STRUCTURE FROM EITHER 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



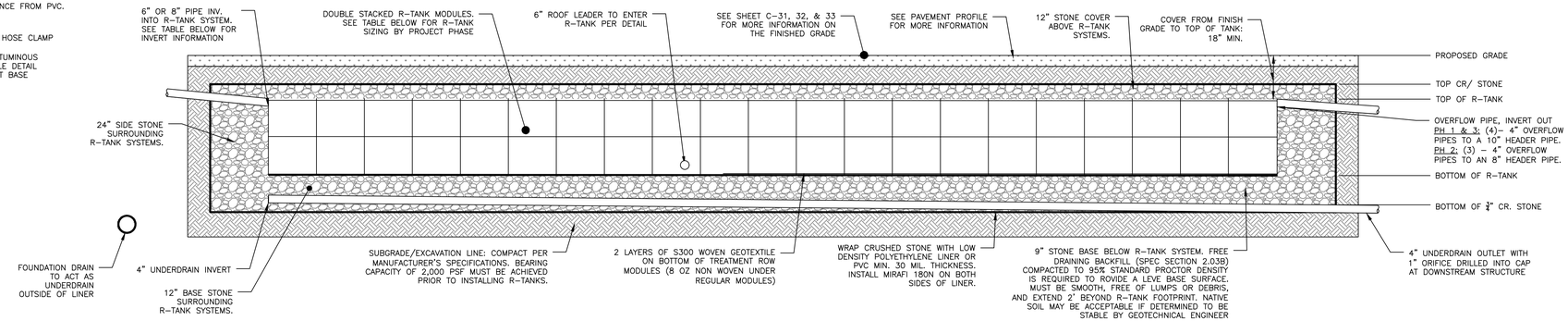
PLAN VIEW



ISOMETRIC VIEW

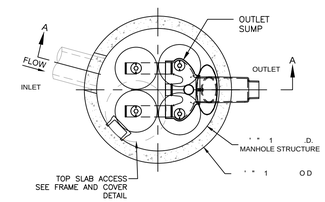
R–TANK MODULE DETAIL
NOT TO SCALE

NOTES:
INSTALLATION TO MEET MANUFACTURER'S SPECIFICATIONS.



SECTION A–A

R–TANK SUBSURFACE DETENTION SYSTEM
NOT TO SCALE



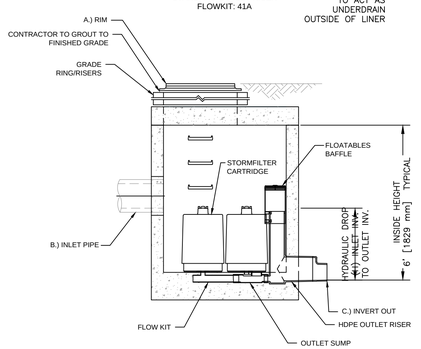
PLAN VIEW
STANDARD OUTLET RISER
FLOWKIT: 41A

STORMFILTER DESIGN NOTES									
STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (4). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 4 CARTRIDGES. ' ' ' t MANHOLE STORMF LTER PEA H DRA L APA T S1 FS L F THE S TE ND T ONS EX EED 1 FS L AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.									
CARTRIDGE SELECTION									
CARTRIDGE HEIGHT	27" [686 mm]			18" [458 mm]			LOW DROP		
RECOMMENDED HYDRAULIC DROP (H)	3.05' [930 mm]			2.3' [700 mm]			1.8' [550 mm]		
SPECIFIC FLOW RATE (gpm/sf) [L/s/m^2]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]
CARTRIDGE FLOW RATE (gpm) [L/s]	22.5 [1.42]	18.79 [1.19]	11.25 [0.71]	15 [0.95]	12.53 [0.79]	7.5 [0.44]	10 [0.63]	8.35 [0.54]	5 [0.32]

* 1.67 gpm/sf [1.08 L/s/m^2] SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB (PSORB) MEDIA ONLY



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



SECTION A-A

FOUNDATION DRAIN TO ACT AS UNDERDRAIN OUTSIDE OF LINER

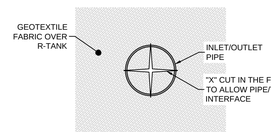
GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' [1524 mm] AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES [178 mm]. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
7. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) [L/s] DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft)[m^2].
8. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S).
E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES [200 mm], CONTRACTOR TO REMOVE THE 8 INCH [200 mm] OUTLET STUB AT MOLDED-IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR.
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

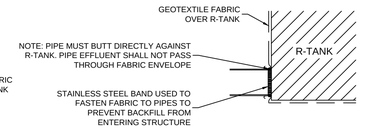
STORMFILTER INVERTS OVERVIEW:			
		PHASE 1: 197 OXFORD STREET:	PHASE 2: 50 CEDAR STREET:
A	RIM:	36.10'	27.45'
B	INVERT IN:	33.85'	21.74'
C	INVERT OUT:	29.60'	18.69'
	TOTAL CARTRIDGES:	2	2

STORMFILTER (SFMH60) SYSTEM
NOT TO SCALE

T AN X N THE FA R ENVELOPE THAT S SL HTL LARGER THAN THE PIPE. PULL THE FABRIC FLAPS AROUND THE PIPE, AND SEAL WITH A STAINLESS STEEL BAND.

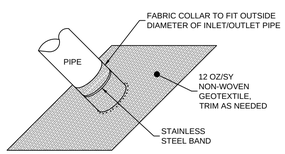


END VIEW OF PIPE/FABRIC CONNECTION

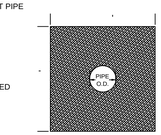


SIDE VIEW OF PIPE/FABRIC CONNECTION

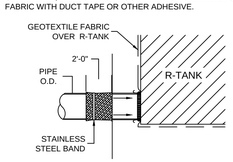
AFTER TANK WRAP IS SECURED TO PIPE, SLIDE BOOT AGAINST R-TANK AND SECURE WITH SECOND STAINLESS STEEL BAND, THEN ATTACH BOOT FLAP TO TANK ENVELOPE FABRIC WITH DUCT TAPE OR OTHER ADHESIVE.



GEOTEXTILE BOOT



FRONT VIEW OF GEOTEXTILE BOOT



SIDE VIEW OF GEOTEXTILE BOOT

R–TANK INLET/OUTLET WITH GEOTEXTILE BOOT
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 4/10/24
COMMENT RESPONSE	SJL 7/30/24

DRAWING NAME: DRAINAGE DETAILS – 2

PROJECT NAME: PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE, PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.
ENGINEERING — SURVEYING
ACORN ENGINEERING, INC.
P.O. BOX 1237, ENGLAND, MAINE 04104
(207) 775–2655

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

FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE — SAMUEL J. LEBEL — No. 16505 — LICENSED PROFESSIONAL ENGINEER — 9/30/24

DRAWING NO.
C-45

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 **CEDAR STREET, LANCASTER STREET, CHESTNUT STREET, AND HALL COURT** 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:

- Ø MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- Ø MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- Ø CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- Ø 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 CEDAR STREET AND CHESTNUT 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

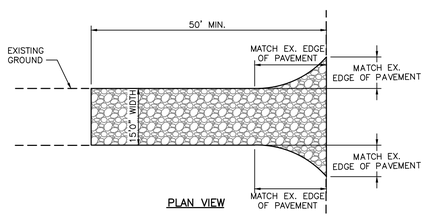
SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

7.4 MULCHING

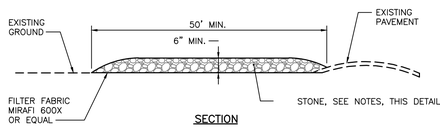
MULCH SHALL BE HARDWOOD AND APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT. REFER TO DETAIL 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.



PLAN VIEW

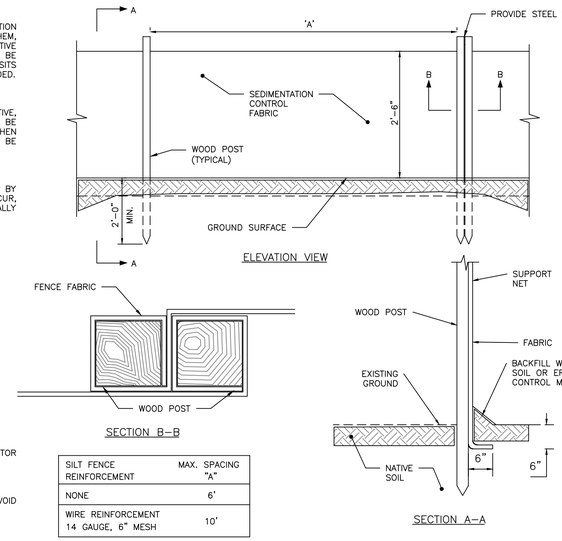


SECTION

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



ELEVATION VIEW

SECTION B–B

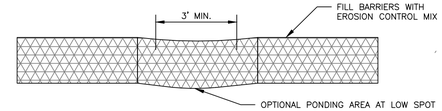
SECTION A–A

SILT FENCE REINFORCEMENT	MAX. SPACING "A"
NONE	6'
WIRE REINFORCEMENT 14 GAUGE, 6" MESH	10'

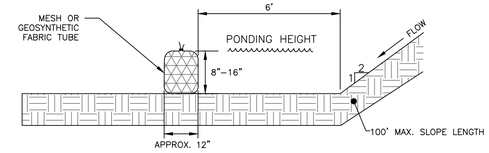
SILTATION FENCE DETAIL
NOT TO SCALE

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.

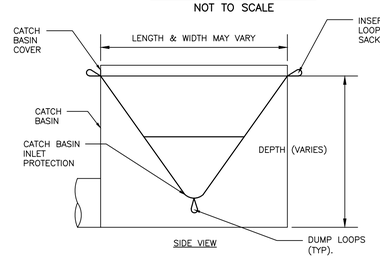


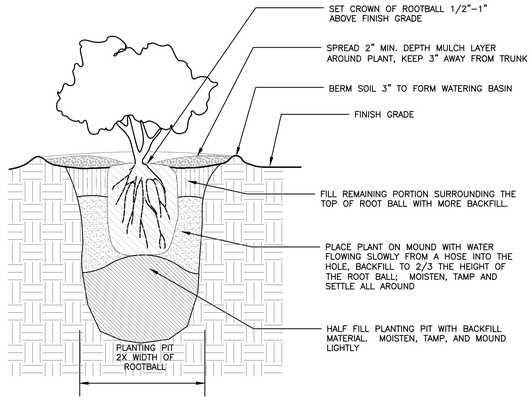
FRONT VIEW



SIDE VIEW

FILTER SOCK DETAIL
NOT TO SCALE


CATCH BASIN COVER
LENGTH & WIDTH MAY VARY
INSERT 1" REBAR



BACKFILL AMENDMENTS

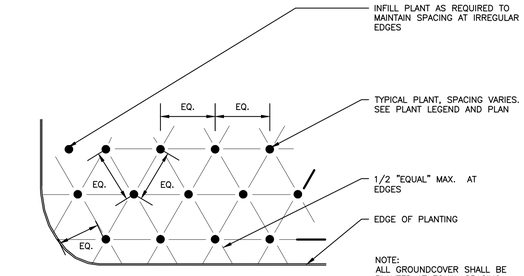
A) WHERE NATIVE TOP SOIL IS PRESENT IN PLANTING AREAS, NO SOIL AMENDMENT IS RECOMMENDED. THE NATIVE SOIL SHOULD BE SOFT AND FRIABLE. LARGE ROCKS AND CLODS ARE TO BE REMOVED FROM BACKFILL.

NOTES

A) PLANT PIT TO BE DUG TWICE AS DEEP AND TWICE AS WIDE AS PLANT CONTAINER.
B) PRIOR TO ANY BACKFILLING, FILL PLANTING PIT WITH WATER AND ALLOW TO PERCOLATE INTO SUBSOIL
C) FORM WATERING BASIN USING REMAINING BACKFILL AND NATIVE SOIL
D) WATER THOROUGHLY, FILLING THE BASIN WITH WATER AND SPRINKING AROUND TO SETTLE BACKFILL, MULCH AND BERM.
E) ALLOW TO SOAK IN AND REPEAT.

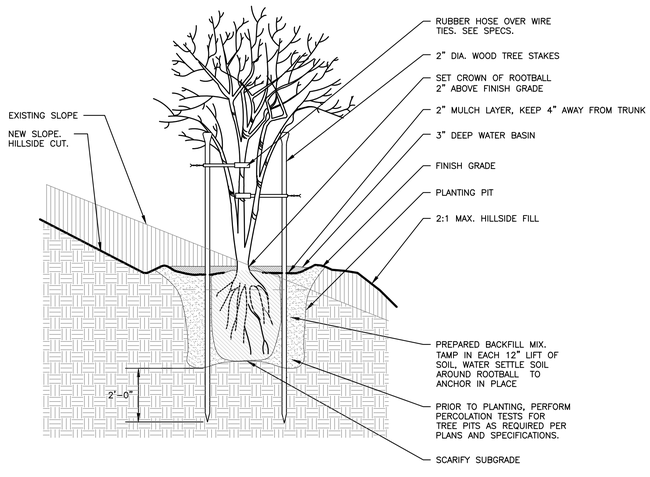
6 NATIVE SHRUB PLANTING DETAIL

N.T.S.



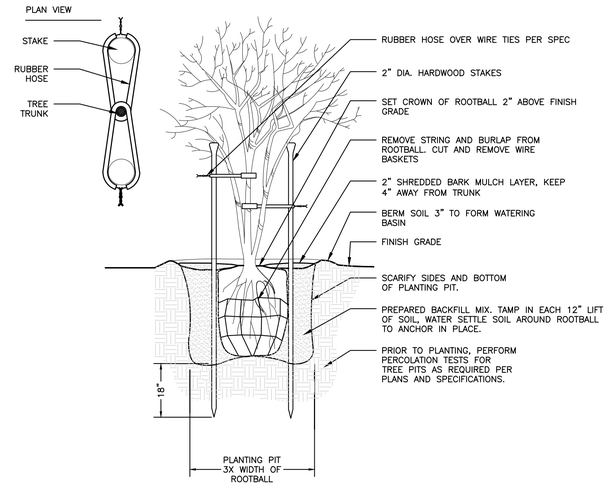
3 GROUNDCOVER SPACING

N.T.S.



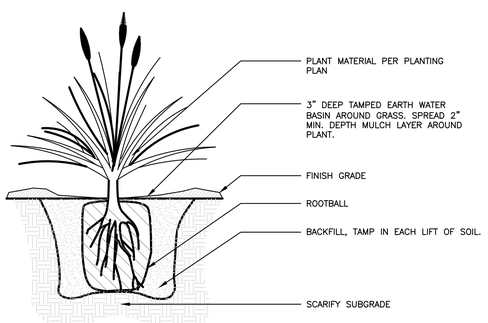
5 TREE PLANTING ON SLOPE DETAIL

N.T.S.



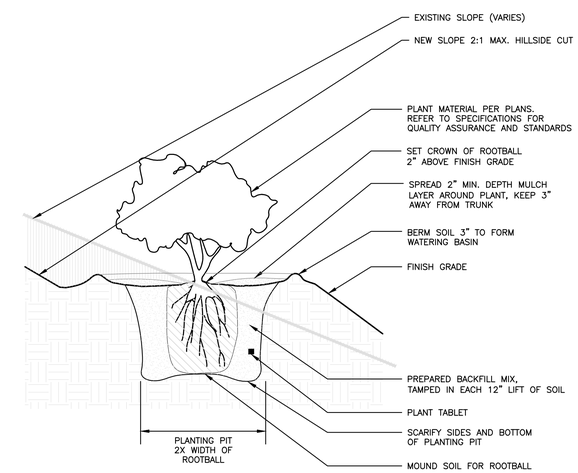
2 TREE PLANTING DETAIL

N.T.S.



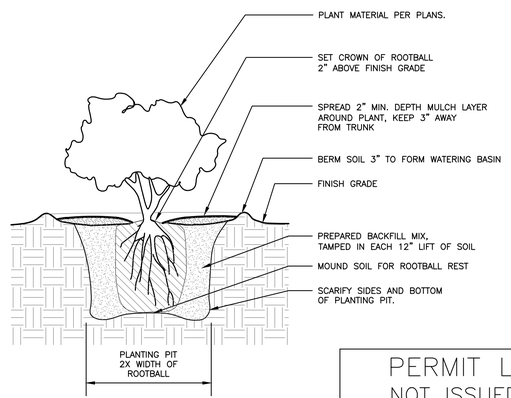
7 ORNAMENTAL GRASS PLANTING

N.T.S.



4 SHRUB PLANTING ON SLOPE DETAIL

N.T.S.



1 SHRUB PLANTING DETAIL

N.T.S.

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL 8/16/24
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: PHASE 1 – PLANTING DETAILS

PROJECT NAME: PHASE 1 – PHASED OXFORD STREET REDEVELOPMENT

CLIENT: AVESTA HOUSING
307 CUMBERLAND AVE, PORTLAND, ME 04101

LANDSCAPE ARCHITECTURE

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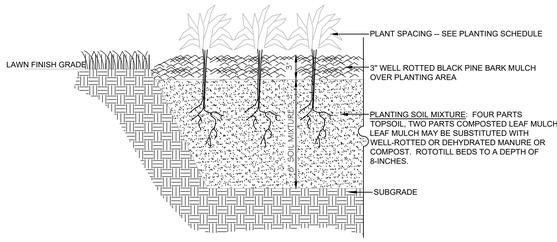
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

A C O R N

FILE:	1212.1_AE_LA
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	ALDV
DRAWN BY:	ALDV
CHECKED BY:	SJL

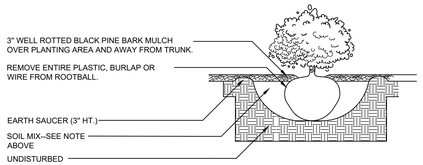
LICENSED LANDSCAPE ARCHITECT
ALEXIS LOPEZ DELVECCHIO
LAR5303
9/30/2024
STATE OF MAINE

DRAWING NO.
L-03



01 PLANTING BED AND MULCH DETAIL

SCALE: N.T.S.



PLANT INSTALLATION NOTES:
DIG HOLE AT LEAST 2 TIMES THE WIDTH OF ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH TOP AT GROUND LEVEL OR SLIGHTLY HIGHER. CORRECT HOLE DEPTH AS NEEDED.

FOR DECIDUOUS AND NEEDLED EVERGREEN TREES AND SHRUBS: 1 FULL WHEELBARROW EXISTING SOIL, 3 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL.

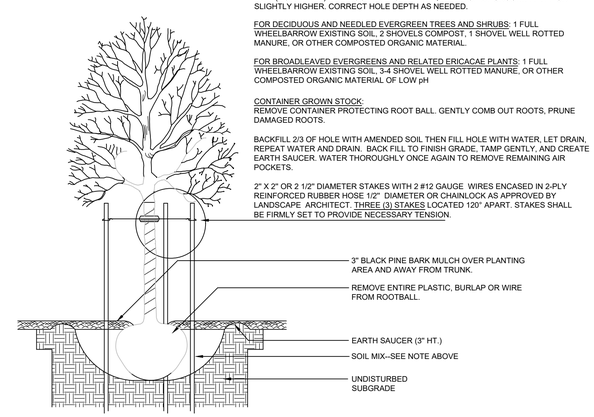
FOR BROADLEAVED EVERGREENS AND RELATED ERICACAE PLANTS: 1 FULL WHEELBARROW EXISTING SOIL, 3-4 SHOVELS COMPOST, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL OF LOW pH

CONTAINER GROWN STOCK:
REMOVE CONTAINER PROTECTING ROOT BALL. GENTLY COMB OUT ROOTS, PRUNE DAMAGED ROOTS.

BACKFILL 2/3 OF HOLE WITH AMENDED SOIL THEN FILL HOLE WITH WATER, LET DRAIN, REPEAT WATER AND DRAIN. BACK FILL TO FINISH GRADE, TAMP GENTLY, AND CREATE EARTH SAUCER. WATER THOROUGHLY ONCE AGAIN TO REMOVE REMAINING AIR POCKETS.

02 SHRUB INSTALLATION

SCALE: N.T.S.



PLANT INSTALLATION NOTES:
DIG HOLE AT LEAST 2 TIMES THE WIDTH OF ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH TOP AT GROUND LEVEL OR SLIGHTLY HIGHER. CORRECT HOLE DEPTH AS NEEDED.

FOR DECIDUOUS AND NEEDLED EVERGREEN TREES AND SHRUBS: 1 FULL WHEELBARROW EXISTING SOIL, 2 SHOVELS COMPOST, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL.

FOR BROADLEAVED EVERGREENS AND RELATED ERICACAE PLANTS: 1 FULL WHEELBARROW EXISTING SOIL, 3-4 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL OF LOW pH

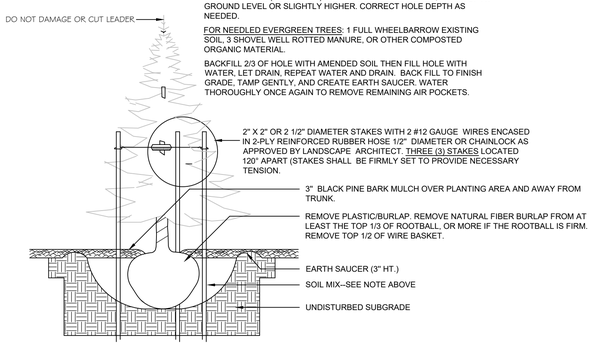
CONTAINER GROWN STOCK:
REMOVE CONTAINER PROTECTING ROOT BALL. GENTLY COMB OUT ROOTS, PRUNE DAMAGED ROOTS.

BACKFILL 2/3 OF HOLE WITH AMENDED SOIL THEN FILL HOLE WITH WATER, LET DRAIN, REPEAT WATER AND DRAIN. BACK FILL TO FINISH GRADE, TAMP GENTLY, AND CREATE EARTH SAUCER. WATER THOROUGHLY ONCE AGAIN TO REMOVE REMAINING AIR POCKETS.

2" X 2" OR 2 1/2" DIAMETER STAKES WITH 2 #12 GAUGE WIRES ENCASED IN 2-PLY REINFORCED RUBBER HOSE 1/2" DIAMETER OR CHAINLOCK AS APPROVED BY LANDSCAPE ARCHITECT. THREE (3) STAKES LOCATED 120° APART. STAKES SHALL BE FIRMLY SET TO PROVIDE NECESSARY TENSION.

03 DECIDUOUS TREE DETAIL

SCALE: N.T.S.



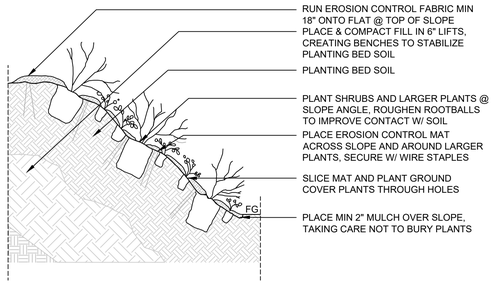
PLANT INSTALLATION NOTES:
DIG HOLE AT LEAST 2 TIMES THE WIDTH OF ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH TOP AT GROUND LEVEL OR SLIGHTLY HIGHER. CORRECT HOLE DEPTH AS NEEDED.

FOR NEEDLED EVERGREEN TREES: 1 FULL WHEELBARROW EXISTING SOIL, 3 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL.

BACKFILL 2/3 OF HOLE WITH AMENDED SOIL THEN FILL HOLE WITH WATER, LET DRAIN, REPEAT WATER AND DRAIN. BACK FILL TO FINISH GRADE, TAMP GENTLY, AND CREATE EARTH SAUCER. WATER THOROUGHLY ONCE AGAIN TO REMOVE REMAINING AIR POCKETS.

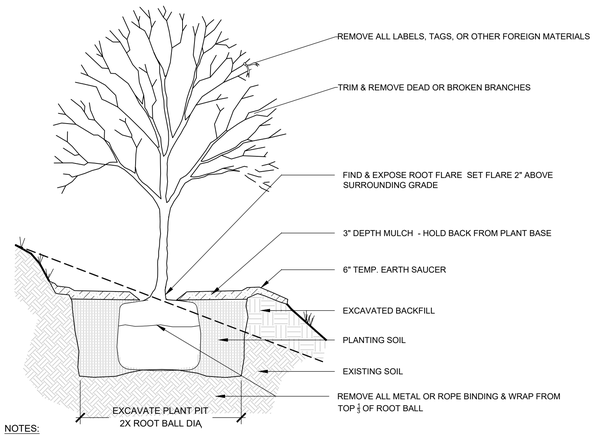
04 CONIFEROUS TREE DETAIL

SCALE: N.T.S.



05 SLOPE PLANTING DEATIL

SCALE: N.T.S.

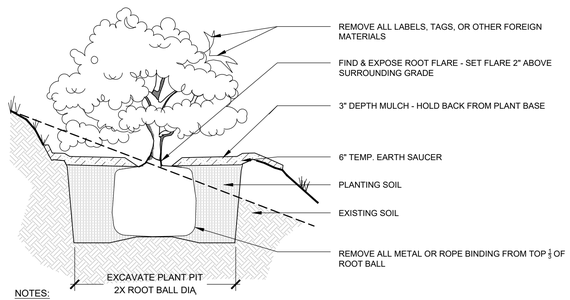


NOTES:

1. TREE TO BE SET PLUMB.
2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

06 TREE PLANTING ON SLOPE

SCALE: N.T.S.

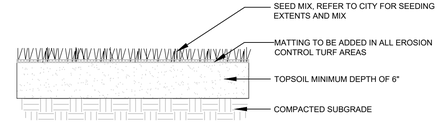


NOTES:

1. SHRUB TO BE SET PLUMB.
2. SECURE SHRUB AS MAY BE REQUIRED ACCORDING TO SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

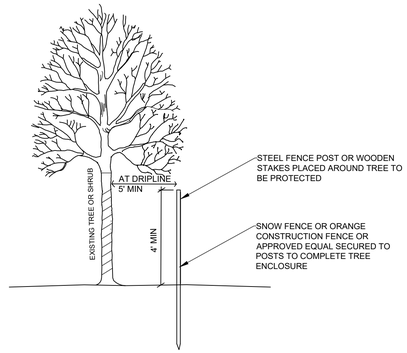
07 SHRUB PLANTING ON SLOPE

SCALE: N.T.S.



08 LAWN SEED MIX

SCALE: N.T.S.



09 TREE PROTECTION

SCALE: N.T.S.

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:

REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 17, 2023

Issued For:
PERMITTING DOCUMENTS

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Title: DETAILS

158 Lancaster Street & 50 Cedar Street

PHASE 2 & 3

Portland ME 04103

Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024

North:

Sheet No.: L5

Scale: AS NOTED

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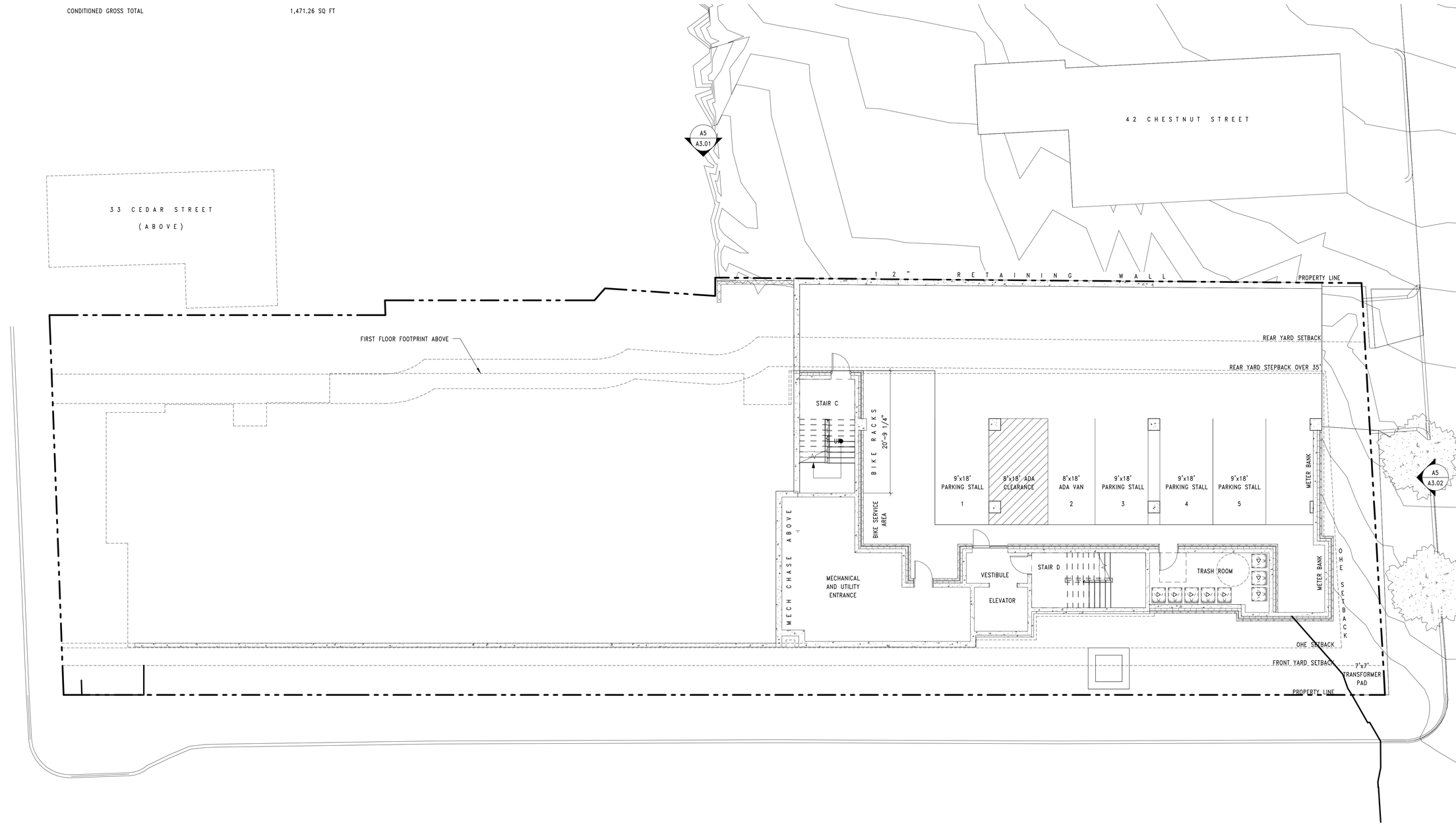
BASEMENT PARKING LEVEL

TOTAL PARKING STALLS — FIVE (5)
(INCLUDES 1 ADA VAN STALL)

SQ FT CALCULATIONS

CONDITIONED GROSS TOTAL — 1,471.26 SQ FT



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BASEMENT PARKING LEVEL

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

A1.00

SCALE: 1/8" = 1'-0"

DATE: 2024 | 09 | 26

9/26/2024 1:12:39 PM

A5 00 BASEMENT LEVEL PARKING

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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MUNICIPAL SUBMISSION No. 2

FIRST FLOOR SQ FT CALCULATIONS

FIRST FLOOR GROSS TOTAL	8,904 SQ FT (5,016 SF H-1 + 3,888 SF AH)

FIRST FLOOR UNIT COUNTS

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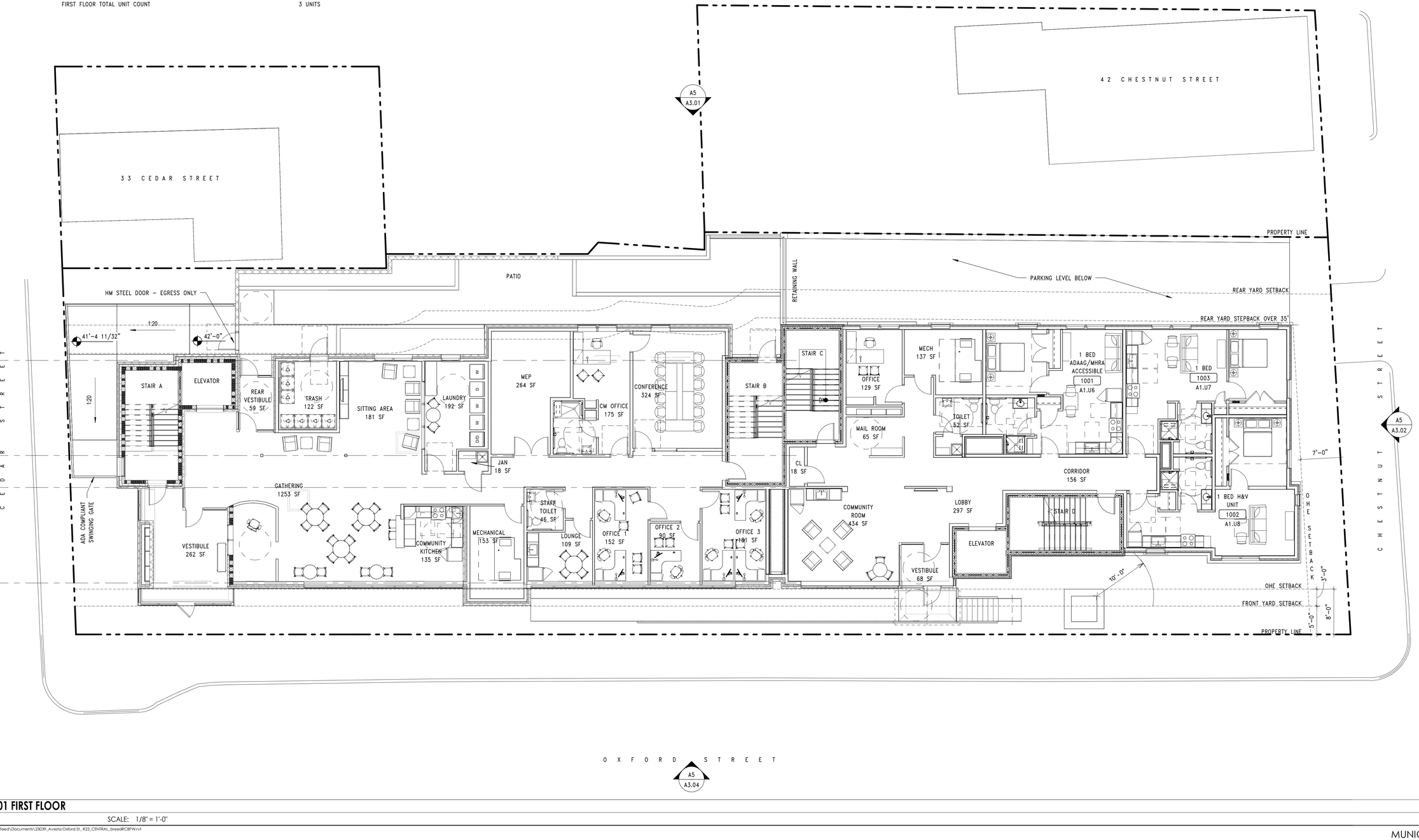
1 BEDROOM	3 UNITS (0 H-1 + 3 AH)
FIRST FLOOR TOTAL UNIT COUNT	3 UNITS



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FIRST FLOOR PLAN

CWS PROJECT NUMBER: 23039

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DRAWING NUMBER

A1.10

A5 01 FIRST FLOOR

SCALE: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"

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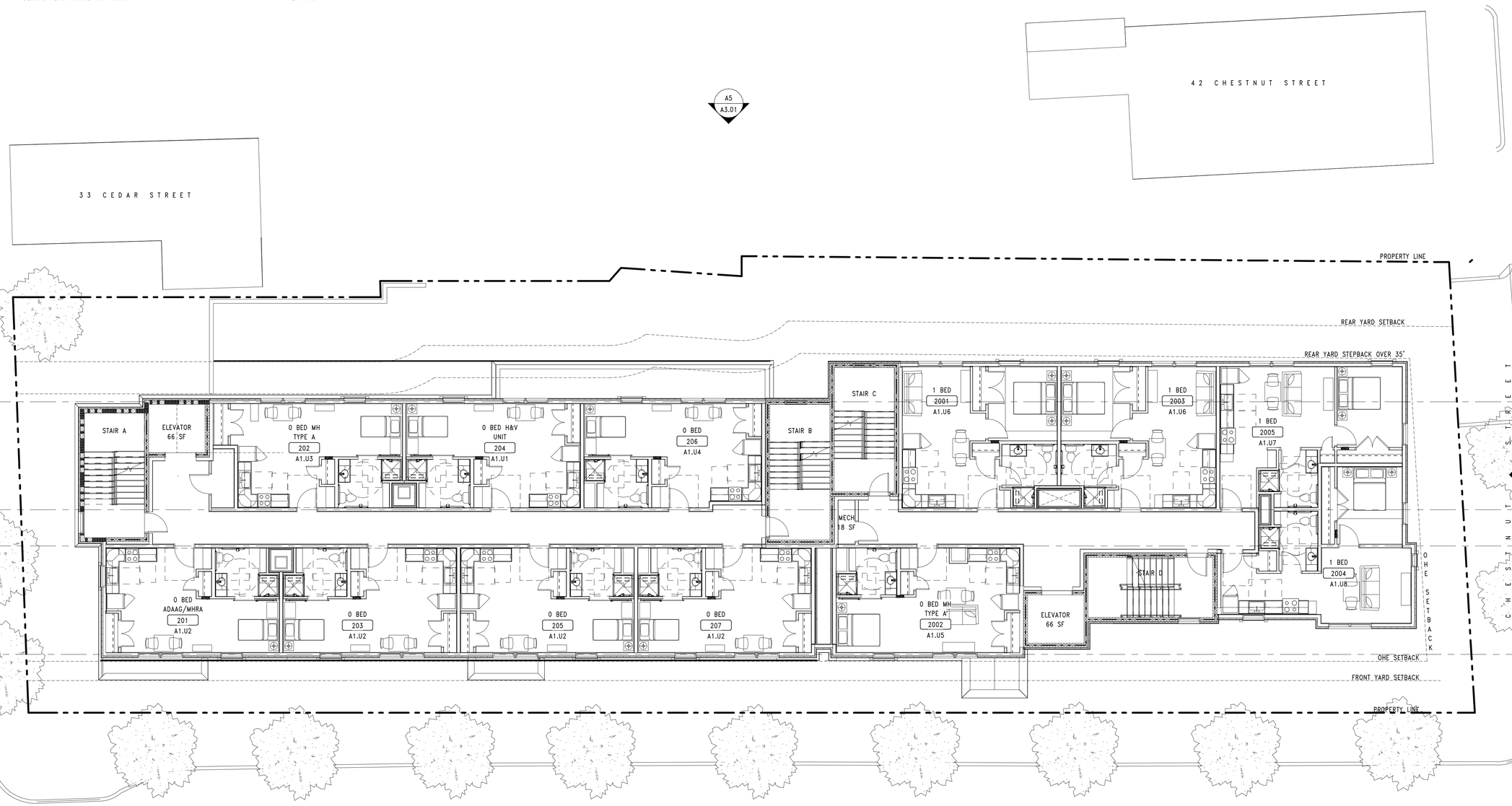
MUNICIPAL SUBMISSION No. 2

SECOND FLOOR SQ FT CALCULATIONS

SECOND FLOOR GROSS TOTAL	8,482 SQ FT (4,603 SF H-1 + 3,878 SF AH)

SECOND FLOOR UNIT COUNTS

0 BEDROOM	8 UNITS (7 H-1 + 1 AH)
1 BEDROOM	4 UNITS (0 H-1 + 4 AH)
SECOND FLOOR TOTAL UNIT COUNT	12 UNITS



A5 **02 SECOND FLOOR**

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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SECOND FLOOR PLAN

CWS PROJECT NUMBER: 23039

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DRAWING NUMBER

A1.20

SCALE: 1/8" = 1'-0"

DATE: 2024 | 09 | 26

9/26/2024 1:33:00 PM

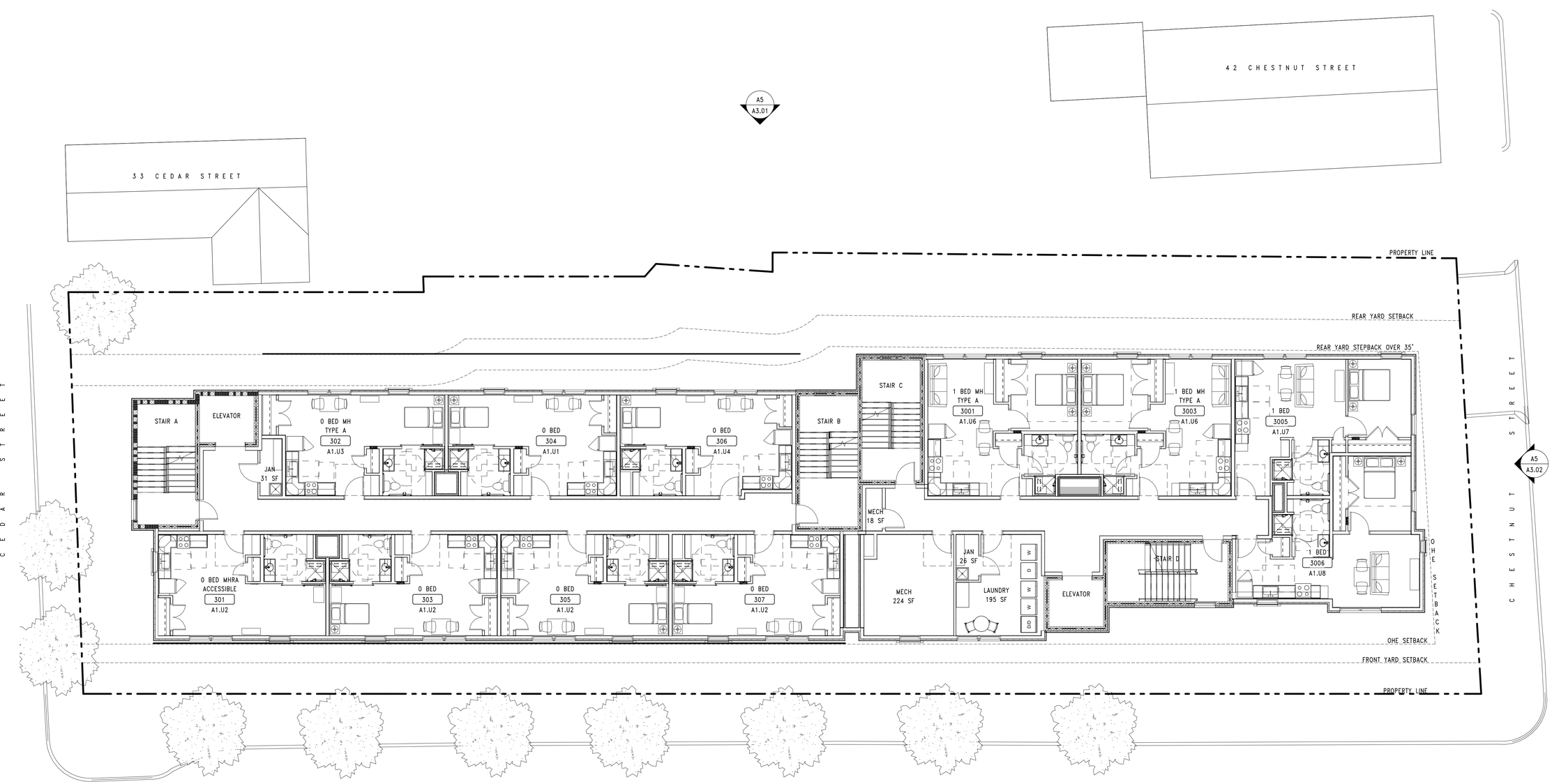
MUNICIPAL SUBMISSION No. 2

THIRD FLOOR SQ FT CALCULATIONS

THIRD FLOOR GROSS TOTAL	8,482 SQ FT (4,603 SF H-1 + 3,878 SF AH)

THIRD FLOOR UNIT COUNTS

0 BEDROOM	7 UNITS (7 H-1 + 0 AH)
1 BEDROOM	4 UNITS (0 H-1 + 4 AH)
SECOND FLOOR TOTAL UNIT COUNT	11 UNITS



A5 **03 THIRD FLOOR**

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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THIRD FLOOR PLAN
CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER
A1.30

SCALE: 1/8" = 1'-0"
DATE: 2024 | 09 | 26

9/26/2024 1:53:01 PM

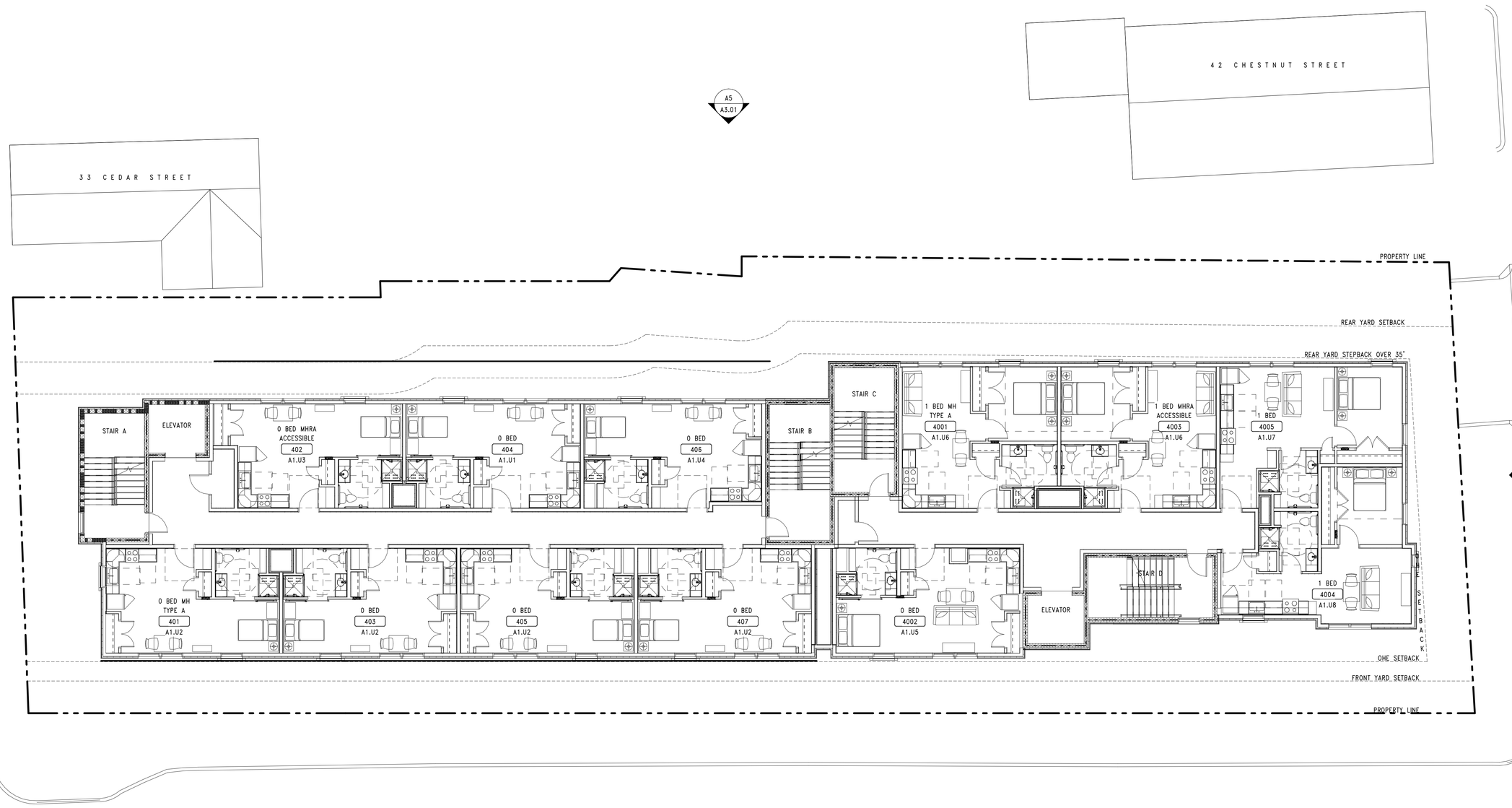
MUNICIPAL SUBMISSION No. 2

FOURTH FLOOR SQ FT CALCULATIONS

FOURTH FLOOR GROSS TOTAL	8,482 SQ FT (4,603 SF H-1 + 3,878 SF AH)

FOURTH FLOOR UNIT COUNTS

0 BEDROOM	8 UNITS (7 H-1 + 1 AH)
1 BEDROOM	4 UNITS (0 H-1 + 4
SECOND FLOOR TOTAL UNIT COUNT	12 UNITS



A5 **04 FOURTH FLOOR**

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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FOURTH FLOOR PLAN

CWS PROJECT NUMBER: 23039

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DRAWING NUMBER

A1.40

SCALE: 1/8" = 1'-0"

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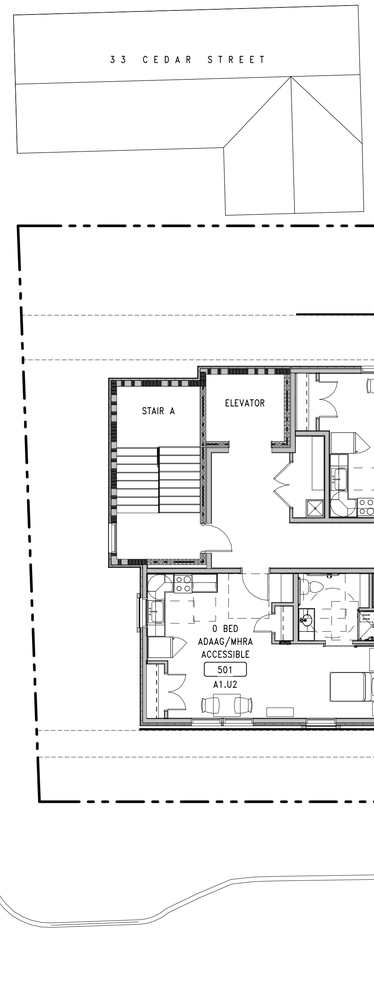
MUNICIPAL SUBMISSION No. 2

FIFTH FLOOR SQ FT CALCULATIONS

FIFTH FLOOR GROSS TOTAL	7,282 SQ FT (4,603 SF H-1 + 2,679 SF AH)

FIFTH FLOOR UNIT COUNTS

0 BEDROOM	8 UNITS (7 H-1 + 1 AH)
1 BEDROOM	2 UNITS (0 H-1 + 2 AH)
SECOND FLOOR TOTAL UNIT COUNT	10 UNITS



A5 05 FIFTH FLOOR

REFERENCED FROM: A3.01 SCALE: 1/8" = 1'-0"

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FIFTH FLOOR PLAN

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A1.50

SCALE: 1/8" = 1'-0"

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A5 **NORTH ELEVATION**

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NORTH ELEVATION

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DRAWING NUMBER

A3.01

SCALE: 1/8" = 1'-0"

DATE: 2024 | 09 | 26

9/26/2024 1:14:16 PM

MUNICIPAL SUBMISSION No. 2



A5 **EAST ELEVATION**

REFERENCED FROM: A1.00 SCALE: 1/8" = 1'-0"

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EAST ELEVATION

CWS PROJECT NUMBER: 23039

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DRAWING NUMBER

A3.02

SCALE: 1/8" = 1'-0"

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MUNICIPAL SUBMISSION No. 2



A5 **WEST ELEVATION**

REFERENCED FROM: A1.00 SCALE: 1/8" = 1'-0"

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WEST ELEVATION

CWS PROJECT NUMBER: 23039

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DRAWING NUMBER

A3.03

SCALE: 1/8" = 1'-0"

DATE: 2024 | 09 | 26

9/26/2024 1:14:24 PM

MUNICIPAL SUBMISSION No. 2



A5 SOUTH ELEVATION

REFERENCED FROM: A1.00 SCALE: 1/8" = 1'-0"

C:\Users\Bren Reed\Documents\23039_Avesta Oxford St_R23_CENTRAL_breedRC8PW.rvt

CWS ARCHITECTURE + INTERIOR DESIGN

PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER

CWS ARCHITECTURE + INTERIOR DESIGN
264 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, ME 04074
207 774 4441
CWSARCH.COM

OWNER

AVESTA

OWNER ADDRESS

PROJECT

AVESTA OXFORD

PROJECT ADDRESS

DRAWING

SOUTH ELEVATION

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

A3.04

SCALE: 1/8" = 1'-0"

DATE: 2024 | 09 | 26

9/26/2024 11:43:38 PM

MUNICIPAL SUBMISSION No. 2

CEDAR STREET

4,796 SF FLOOR PLATE

LANCASTER STREET

SLAB STEPS UPHILL AT MIDPOINT OF BUILDING

ONE BEDROOM UNIT 101 567 SF

TYPE A STUDIO UNIT 103 436 SF

STUDIO UNIT 105 436 SF

TYPE A ONE BEDROOM UNIT 107 567 SF

ONE BEDROOM UNIT 102 575 SF

UTILITY ROOM 110 109 SF

STUDIO UNIT 104 419 SF

STUDIO UNIT 106 419 SF

BIKE ROOM 111 109 SF

ONE BEDROOM UNIT 108 575 SF

TRANSOM WINDOW

ROOF DRAINS TO DISCHARGE BELOW GRADE HERE

1 FIRST FLOOR PLAN
1/4" = 1'-0"

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MULTI-FAMILY BUILDING

50 CEDAR STREET
PORTLAND, MAINE

RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET, SUITE 2
PORTLAND, MAINE 04101
O: 207-747-5159
C: 207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:

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06-24-24

DATE:

PROJECT No.	2312
DRAWN BY:	RRT
CHECKED BY:	RJS
SCALE:	AS NOTED

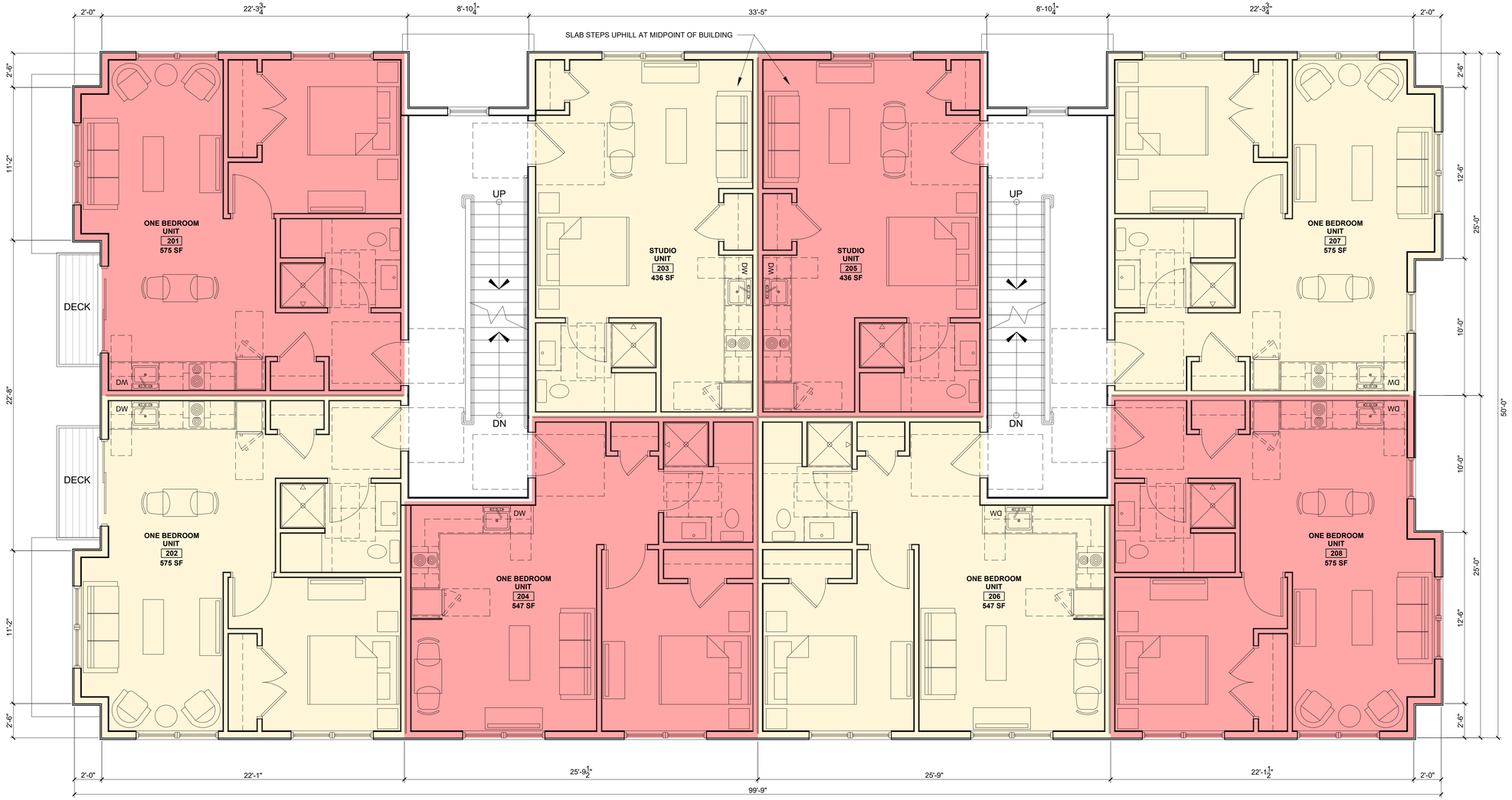
SHEET TITLE:
FIRST FLOOR PLAN

A1-1

CEDAR STREET

4,796 SF FLOOR PLATE

LANCASTER STREET



N
TRUE NORTH

0 4' 8' 16' 32'

1 SECOND FLOOR PLAN
1/4" = 1'-0"

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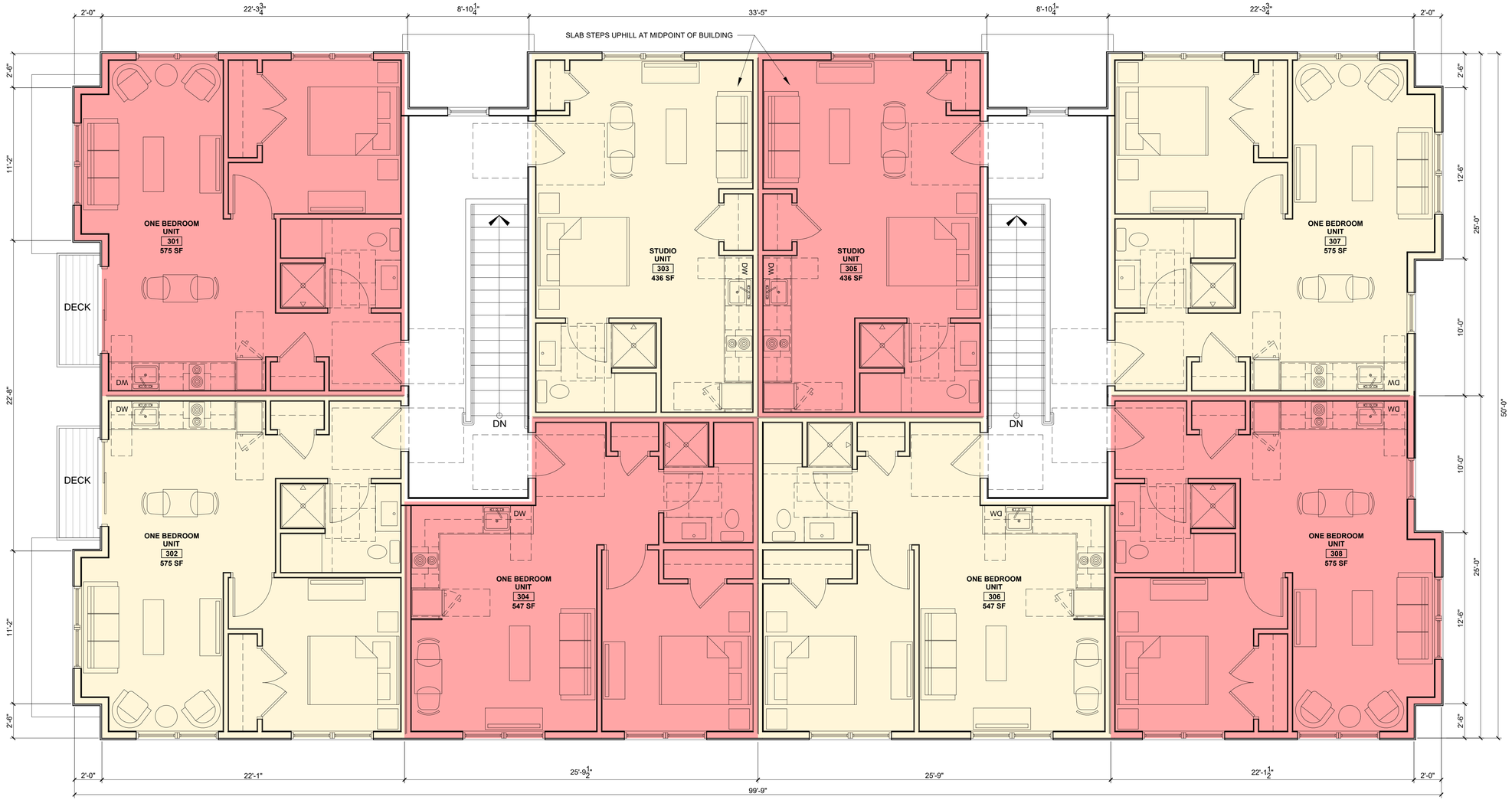
SHEET TITLE:
SECOND FLOOR PLAN

A1-2

CEDAR STREET

4,796 SF FLOOR PLATE

LANCASTER STREET





0 4' 8' 16' 32'

1 THIRD FLOOR PLAN
1/4" = 1'-0"

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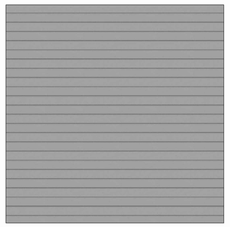
SHEET TITLE:
THIRD FLOOR PLAN

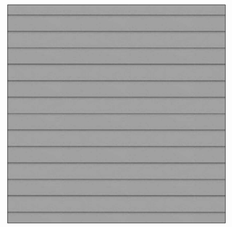
A1-3



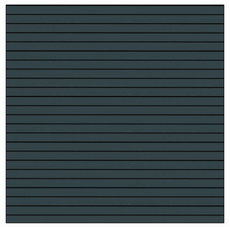
COLOR #1 (WHITE)
5” LAP SIDING



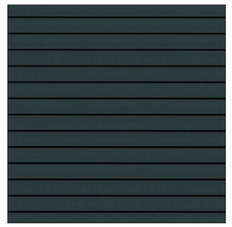
COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



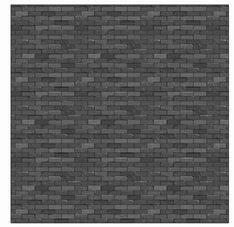
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 WEST ELEVATION
1/4" = 1'-0"

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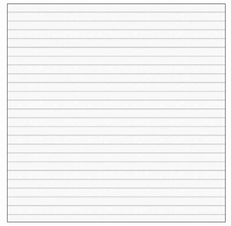
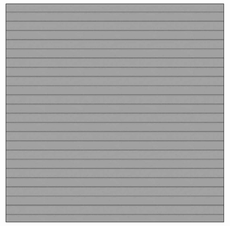
SCALE:	AS NOTED

SHEET TITLE:
WEST ELEVATION

A2-0



COLOR #1 (WHITE)
5” LAP SIDING



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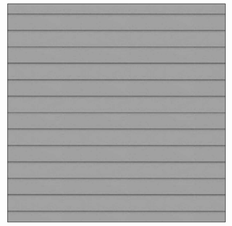
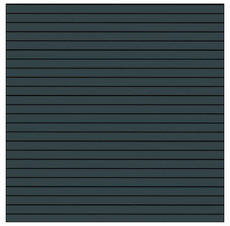
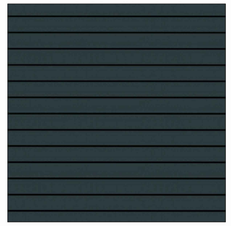
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



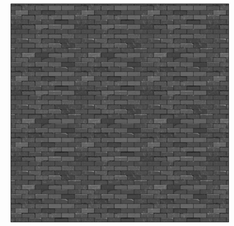
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 NORTH ELEVATION
1/4" = 1'-0"

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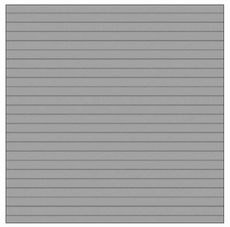
SCALE:	AS NOTED

SHEET TITLE:
NORTH ELEVATION

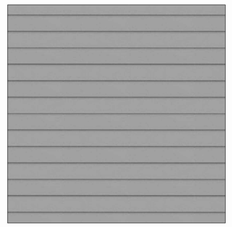
A2-1



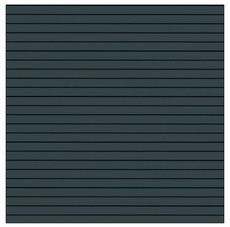
COLOR #1 (WHITE)
5” LAP SIDING



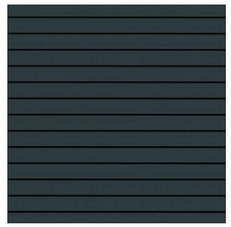
COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



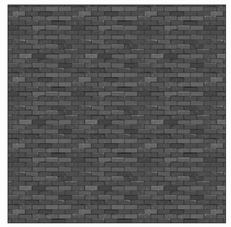
COLOR #3 (EVENING BLUE)
5” LAP SIDING



COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 EAST ELEVATION
1/4" = 1'-0"

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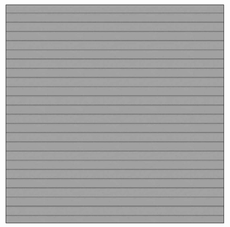
SHEET TITLE:
EAST ELEVATION

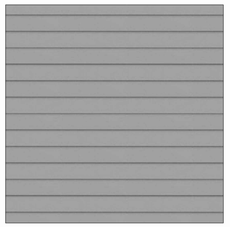
A2-2



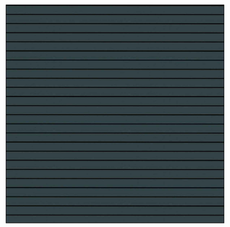
COLOR #1 (WHITE)
5” LAP SIDING



COLOR #2 (GRAY)
5” LAP SIDING



COLOR #2 (GRAY)
9” ARTISAN SQUARE



COLOR #3 (EVENING BLUE)
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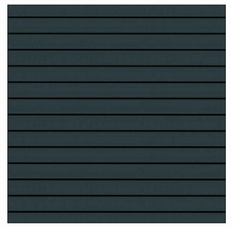
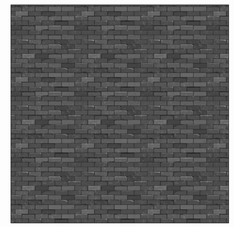


COLOR #3 (EVENING BLUE)
9” ARTISAN SQUARE



COLOR #4 (BLACK)
DOORS AND WINDOWS



COLOR #5 (DARK GRAY)
BRICK



1 SOUTH ELEVATION
1/4" = 1'-0"

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SHEET TITLE:
SOUTH ELEVATION

A2-3



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PERSPECTIVE 1

P1



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SHEET TITLE:
PERSPECTIVE 2

P2



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SHEET TITLE:
PERSPECTIVE 3

P3



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SHEET TITLE:
PERSPECTIVE 4

P4



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C: 207-650-6414
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SCALE:	AS NOTED

SHEET TITLE:
PERSPECTIVE 5

P5



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SHEET TITLE:
PERSPECTIVE 6

P6



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SHEET TITLE:
PERSPECTIVE 7

P7



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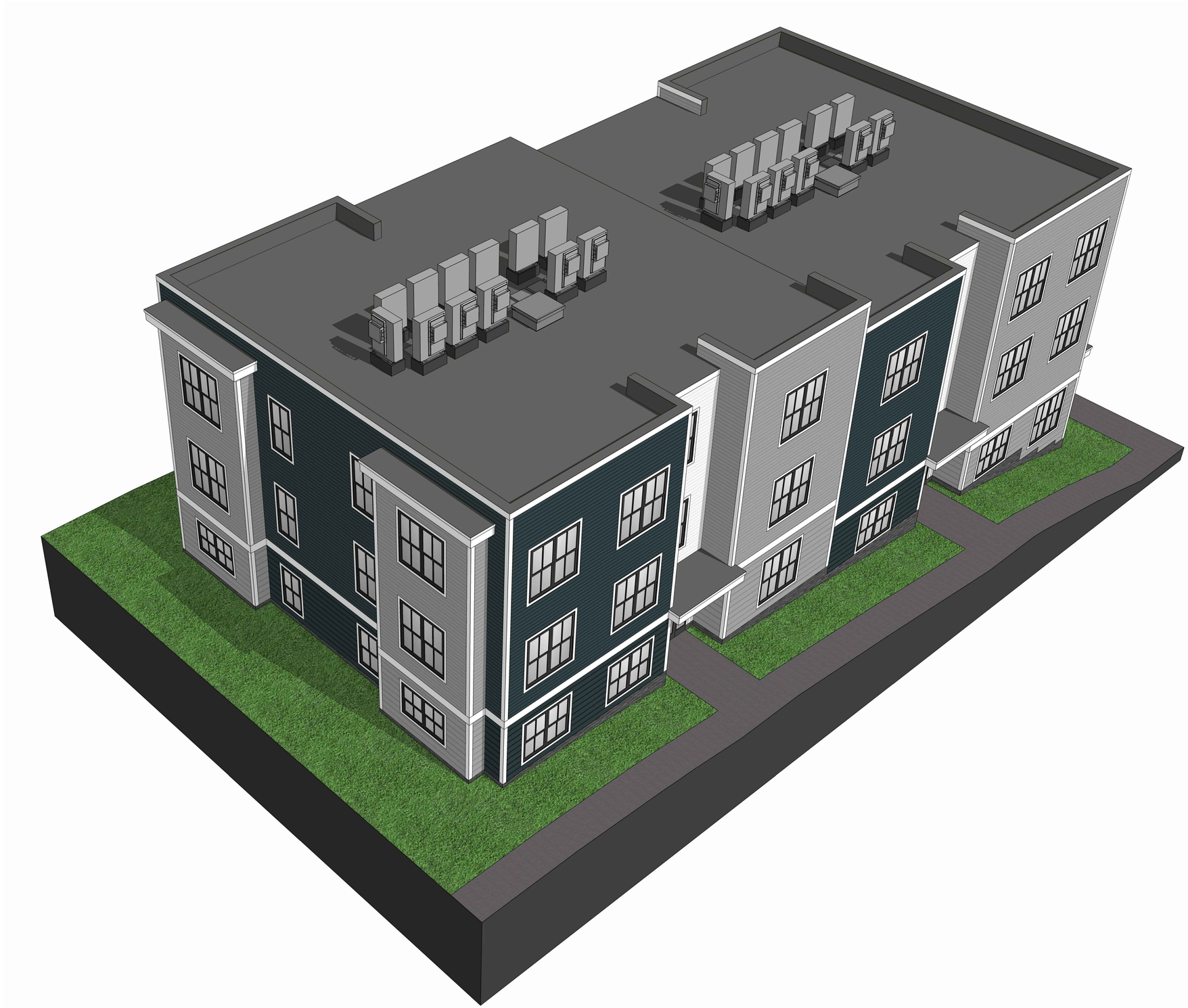
SHEET TITLE:
PERSPECTIVE 8

P8



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CHECKED BY:	RJS
SCALE:	AS NOTED

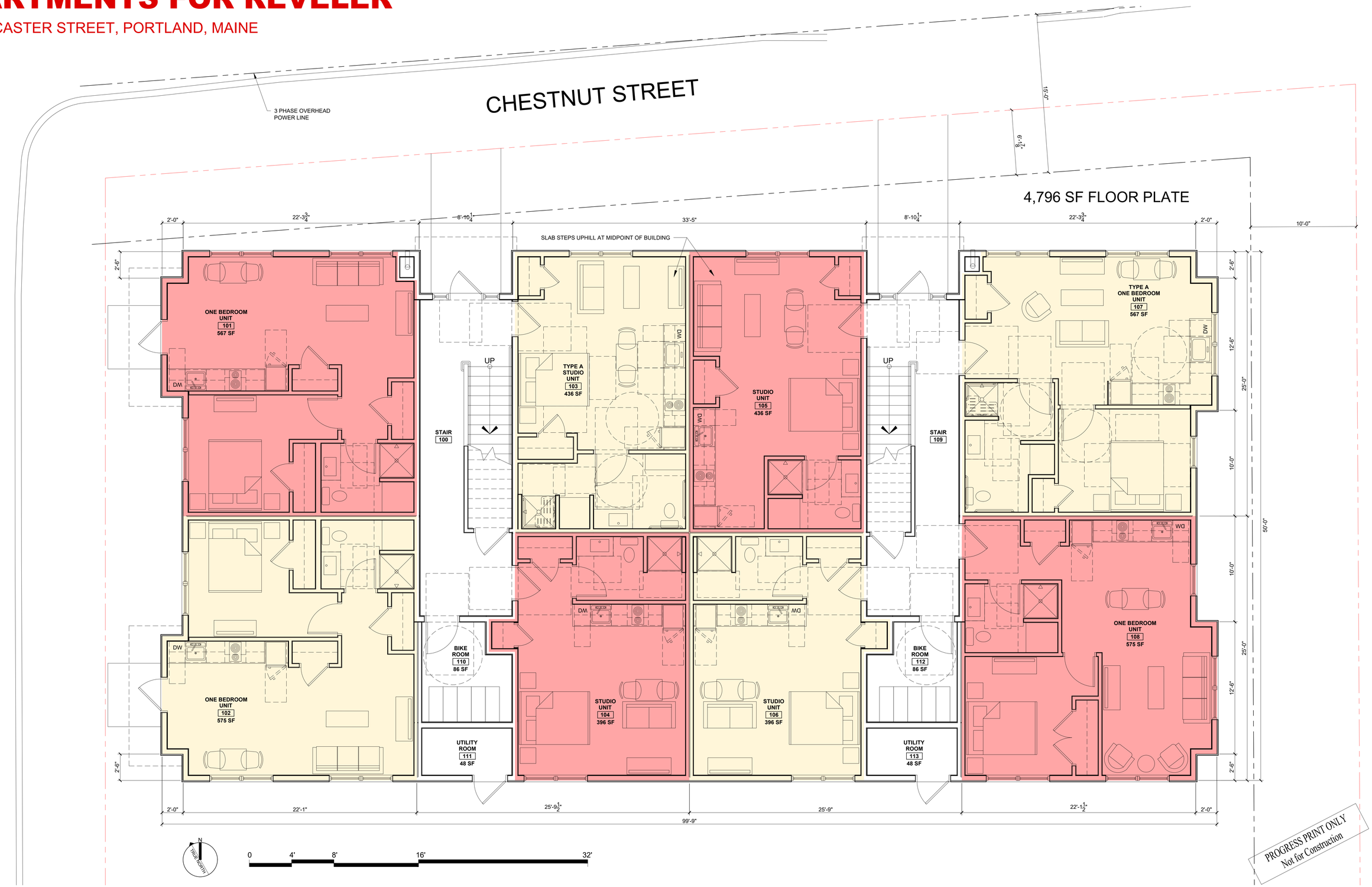
SHEET TITLE:
PERSPECTIVE 9

P9

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



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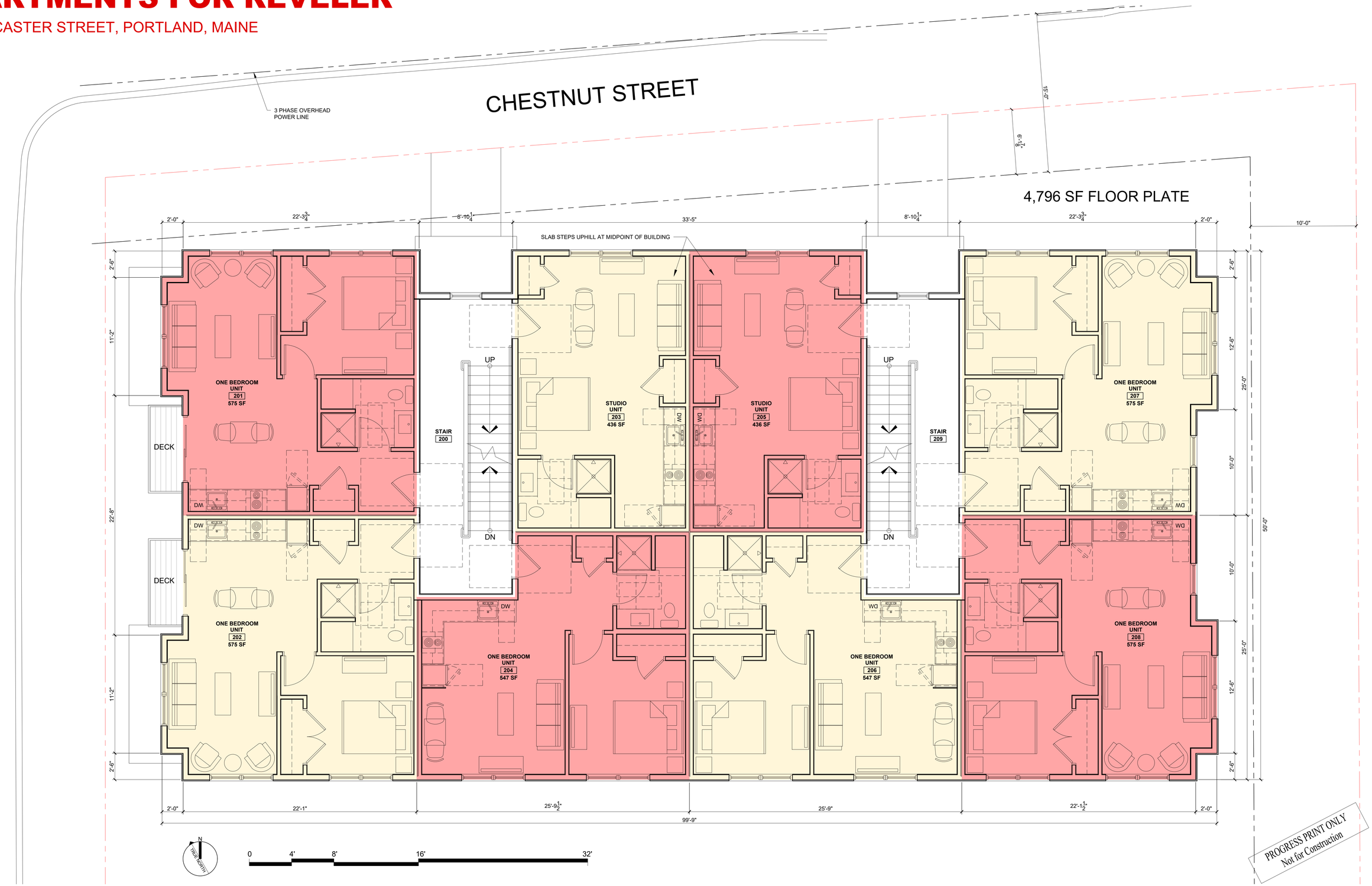
1 FIRST FLOOR PLAN
1/4" = 1'-0"

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



PROGRESS PRINT ONLY
Not for Construction

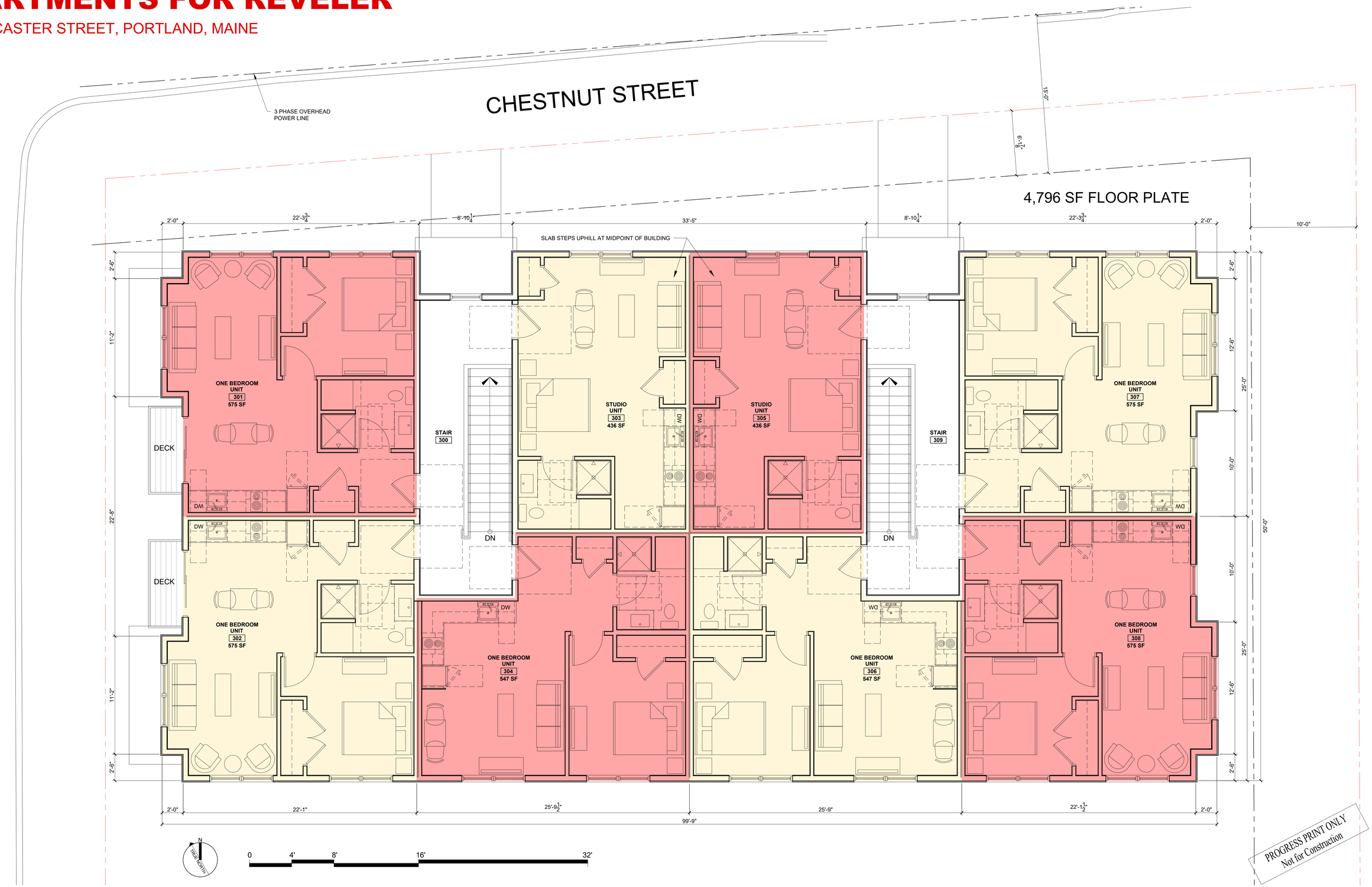
1 SECOND FLOOR PLAN
1/4" = 1'-0"

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



PROGRESS PRINT ONLY
Not for Construction

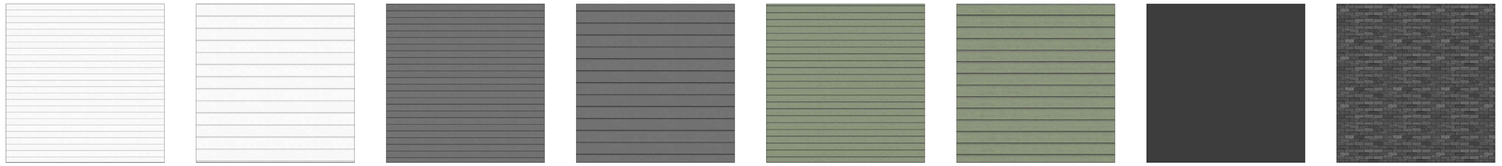
1 THIRD FLOOR PLAN
1/4" = 1'-0"

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



COLOR #1 (WHITE)
5" LAP SIDING

COLOR #1 (WHITE)
9" ARTISAN SQUARE

COLOR #2 (GRAY)
5" LAP SIDING

COLOR #2 (GRAY)
9" ARTISAN SQUARE

COLOR #3 (GREEN)
5" LAP SIDING

COLOR #3 (GREEN)
9" ARTISAN SQUARE

COLOR #4 (BLACK)
DOORS AND WINDOWS

COLOR #5 (DARK GRAY)
BRICK



1 WEST ELEVATION
1/4" = 1'-0"

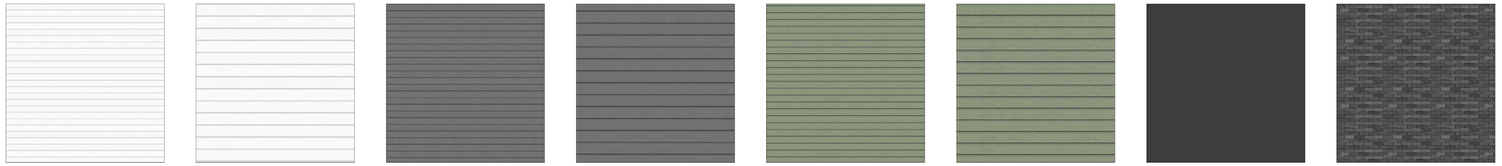
PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



COLOR #1 (WHITE)
5" LAP SIDING

COLOR #1 (WHITE)
9" ARTISAN SQUARE

COLOR #2 (GRAY)
5" LAP SIDING

COLOR #2 (GRAY)
9" ARTISAN SQUARE

COLOR #3 (GREEN)
5" LAP SIDING

COLOR #3 (GREEN)
9" ARTISAN SQUARE

COLOR #4 (BLACK)
DOORS AND WINDOWS

COLOR #5 (DARK GRAY)
BRICK



1 NORTH ELEVATION
1/4" = 1'-0"

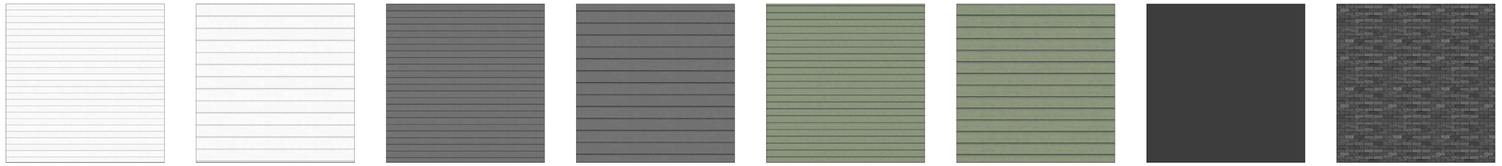
PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



COLOR #1 (WHITE)
5" LAP SIDING

COLOR #1 (WHITE)
9" ARTISAN SQUARE

COLOR #2 (GRAY)
5" LAP SIDING

COLOR #2 (GRAY)
9" ARTISAN SQUARE

COLOR #3 (GREEN)
5" LAP SIDING

COLOR #3 (GREEN)
9" ARTISAN SQUARE

COLOR #4 (BLACK)
DOORS AND WINDOWS

COLOR #5 (DARK GRAY)
BRICK



1 EAST ELEVATION
1/4" = 1'-0"

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024

COLOR #1 (WHITE)
5" LAP SIDING

COLOR #1 (WHITE)
9" ARTISAN SQUARE

COLOR #2 (GRAY)
5" LAP SIDING

COLOR #2 (GRAY)
9" ARTISAN SQUARE

COLOR #3 (GREEN)
5" LAP SIDING

COLOR #3 (GREEN)
9" ARTISAN SQUARE

COLOR #4 (BLACK)
DOORS AND WINDOWS

COLOR #5 (DARK GRAY)
BRICK



1 SOUTH ELEVATION
1/4" = 1'-0"

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



1 VIEW FROM CORNER OF LANCASTER AND CHESTNUT STREET
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



1 VIEW FROM CHESTNUT STREET
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



1 VIEW FROM CORNER OF CHESTNUT STREET AND COMMUNITY GARDEN
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



1 VIEW FROM LANCASTER STREET
NTS

PROGRESS PRINT
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



1 OVERHEAD VIEW 1
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

APARTMENTS FOR REVELER

158 LANCASTER STREET, PORTLAND, MAINE

SEPTEMBER 30, 2024



1 OVERHEAD VIEW 2
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

Joint Site Plan Application- Open Space & Tree Summary



Site Acreage

197 Oxford Street (Phase 1)	1	.35 acres
50 Cedar Street (Phase 2)	2	.53 acres
158 Lancaster Street (Phase 3)	3	.41 acres
Total		***1.29 acres***

Proposed Open Space

197 Oxford Street (Phase 1)	1	20% +/-
50 Cedar Street (Phase 2)	2	21.8% +/-
158 Lancaster Street (Phase 3)	3	41.9% +/-

Trees Total (proposed/existing)

197 Oxford Street (Phase 1)	1	18
50 Cedar Street (Phase 2)	2	28
158 Lancaster Street (Phase 3)	3	22

Trees Removed

197 Oxford Street (Phase 1)	1	14
50 Cedar Street (Phase 2)	2	0
158 Lancaster Street (Phase 3)	3	6

197 Oxford Street + 50 Cedar Street + 158 Lancaster Street
Portland, ME

Joint Site Plan Application- Plan View



197 Oxford Street + 50 Cedar Street + 158 Lancaster Street
Portland, ME

Joint Site Plan Application- Site Map

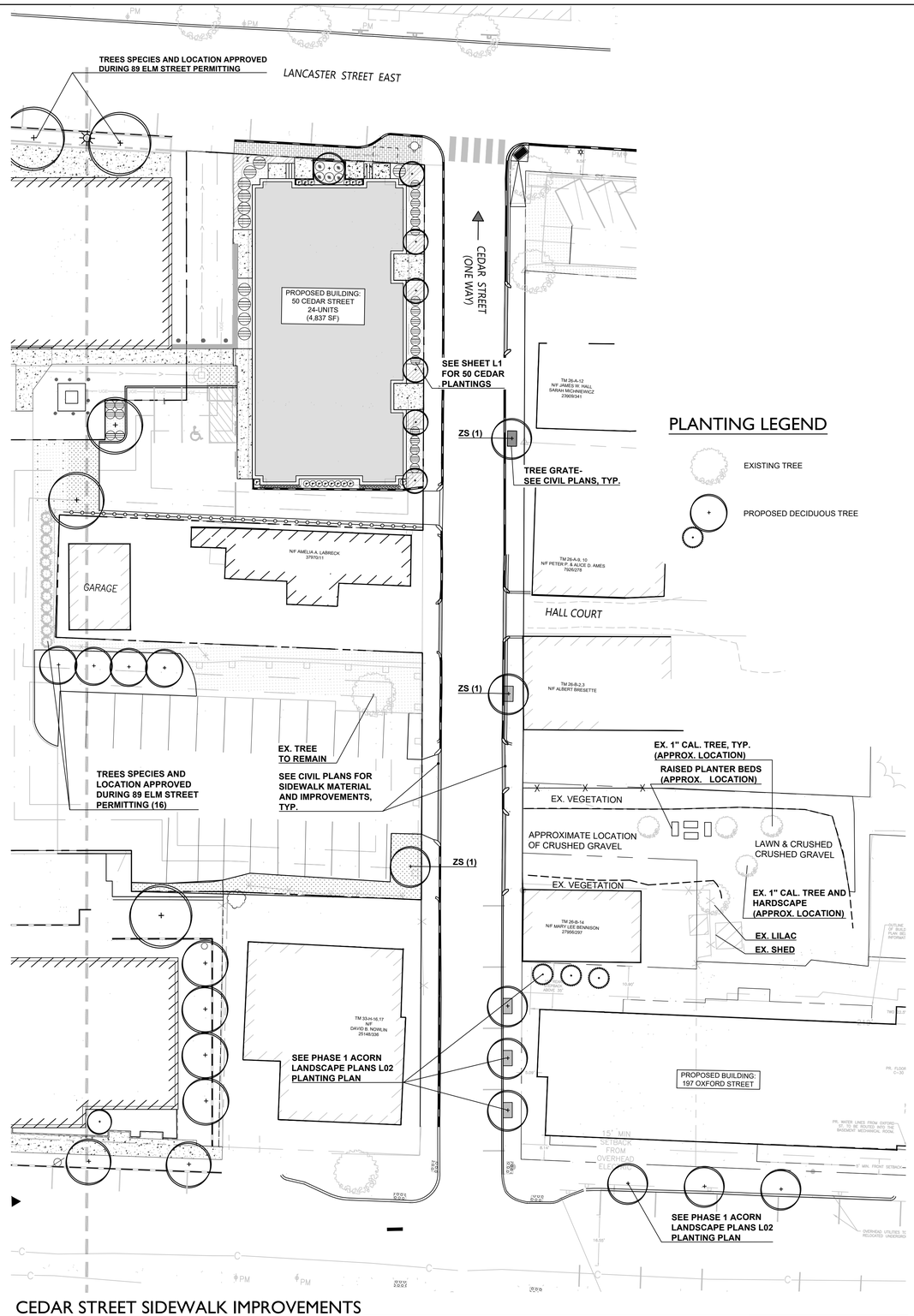


197 Oxford Street + 50 Cedar Street + 158 Lancaster Street
Portland, ME

Joint Site Plan Application- Sidewalk Improvement Plan



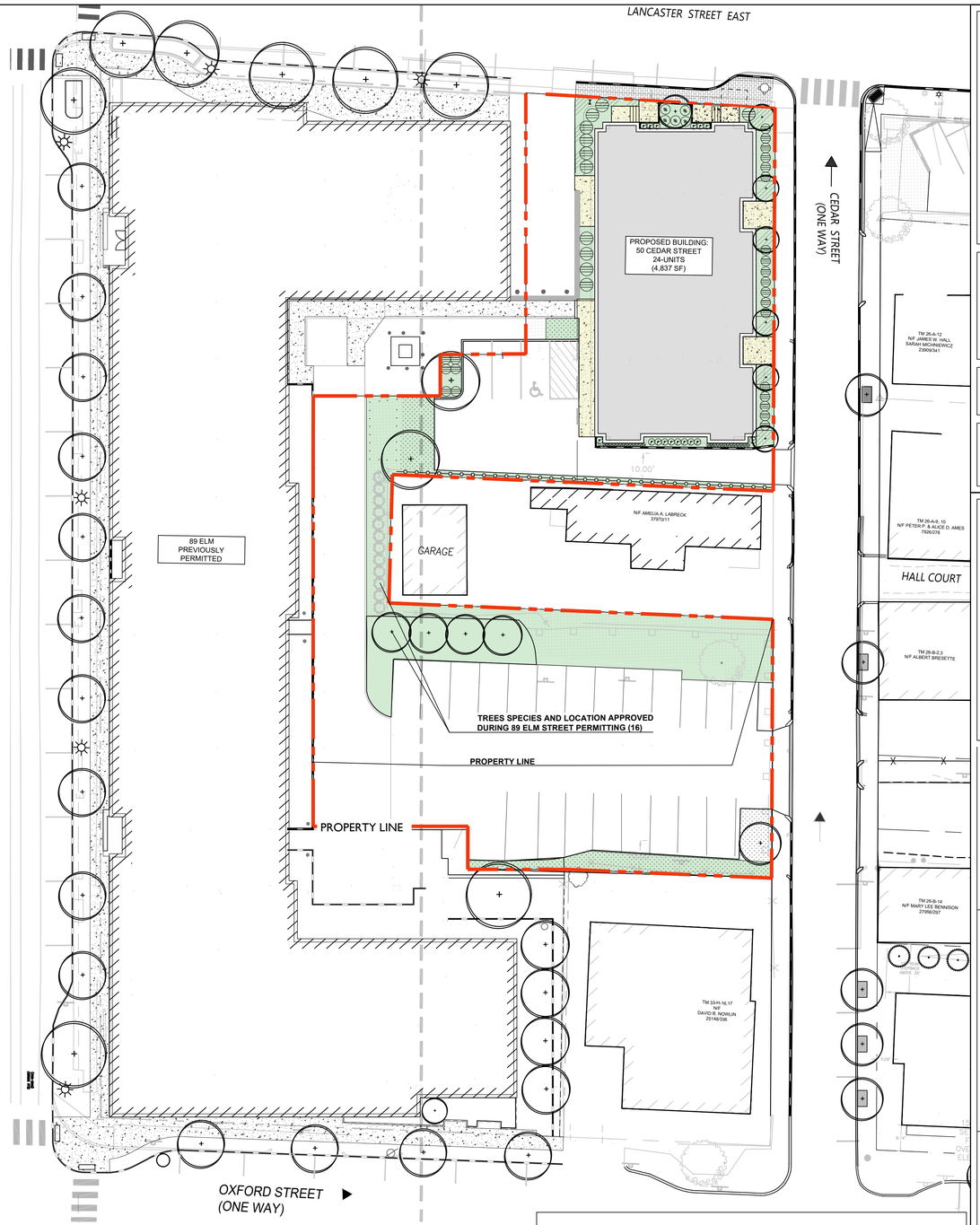
197 Oxford Street + 50 Cedar Street + 158 Lancaster Street
Portland, ME



PLANTING LEGEND

- EXISTING TREE
- PROPOSED DECIDUOUS TREE

CEDAR STREET SIDEWALK IMPROVEMENTS



OPEN SPACE EXHIBIT

OPEN SPACE SUMMARY– LOT SIZE 23,250 SF

	MR	COLOR
LANDSCAPED OPEN SPACE– 5079 SF	21.8%	
HARDSCAPED OPEN SPACE – 621 SF	2.7%	
TOTAL OPEN SPACE	21.82%	

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:

REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 17, 2023

Issued For:
PERMITTING DOCUMENTS

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Title:
OPEN SPACE EXHIBIT & PLANTING PLAN

50 Cedar Street

PHASE 2

Portland ME 04103

Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024

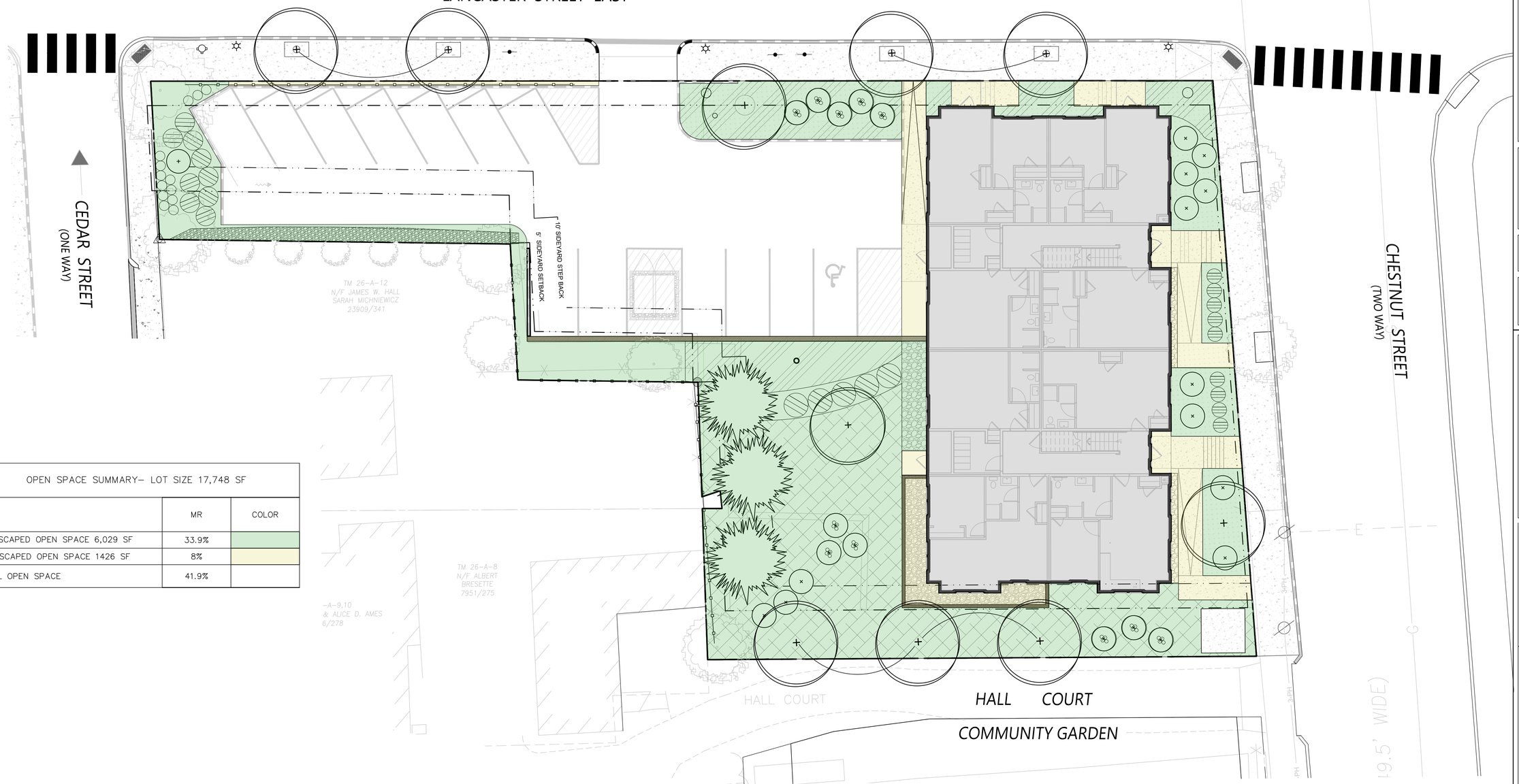
North:

Sheet No.: L2

Scale: 1" = 20'-0"

0 10 20 40

C:\Users\DRY-L-OL\OneDrive\Documents\Onedrive\DRY-LA\Projects\50 Cedar+ 158 Lancaster\CAD\50 Cedar Street sketch Plan Submission REV 1 09.30.2024.dwg dry-l 9/30/2024



OPEN SPACE SUMMARY– LOT SIZE 17,748 SF		
	MR	COLOR
LANDSCAPED OPEN SPACE 6,029 SF	33.9%	
HARDSCAPED OPEN SPACE 1426 SF	8%	
TOTAL OPEN SPACE	41.9%	

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:

REVELER, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:
Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:
APRIL 16, 2024

Issued For:
PERMITTING DOCUMENTS

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Title: OPEN SPACE EXHIBIT

158 Lancaster Street

PHASE 3

Portland ME 04103

Revisions:
1ST WORKSHOP COMMENTS REV.1 - 09.30.2024

North:

Sheet No.: L4

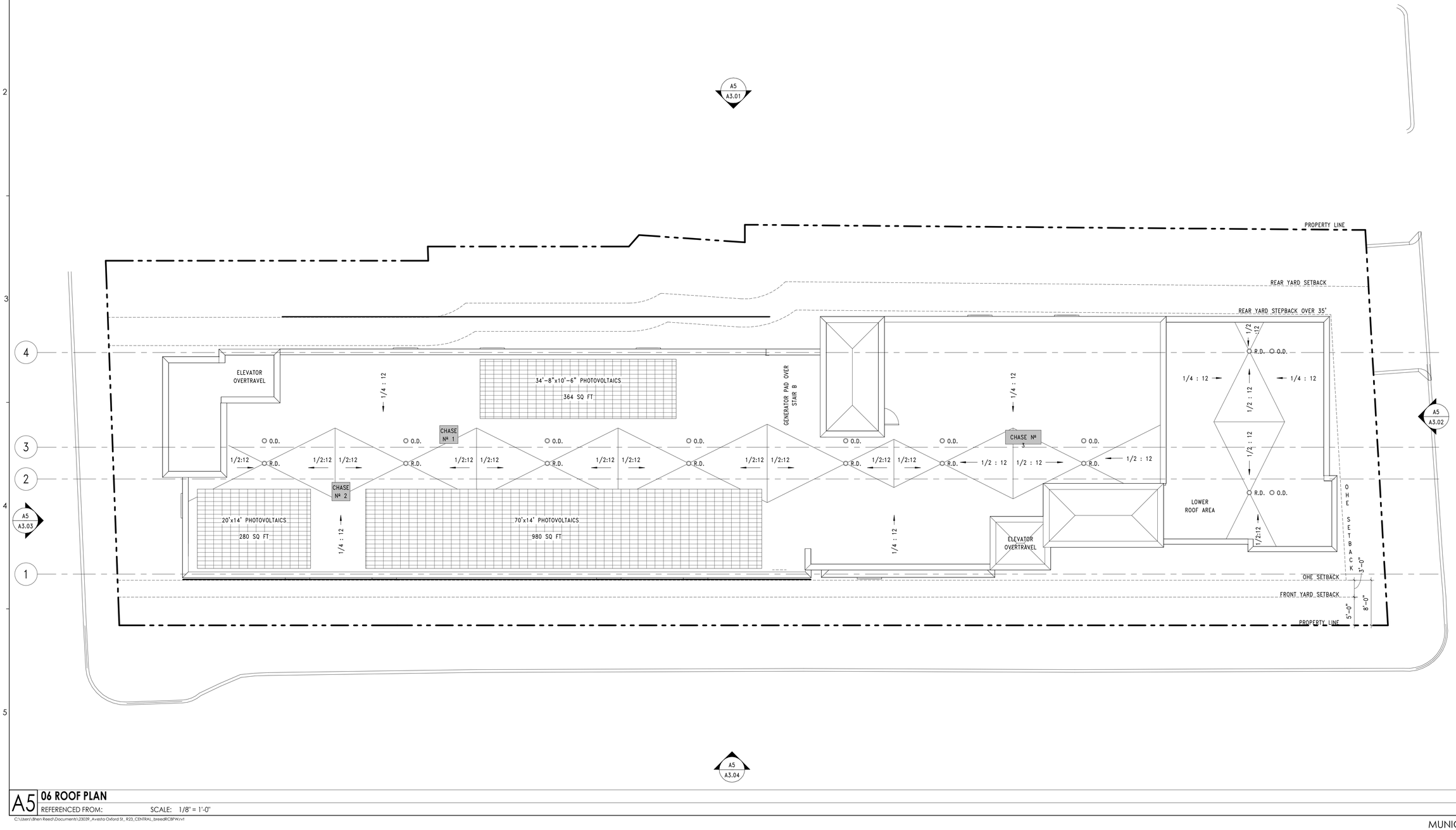
Scale: 1" = 10'-0"

0 5 10 20

C:\Users\DRY-LO\OneDrive\Documents\OneDrive\DRY-LA\Projects\50 Cedar • 158 Lancaster\CAD\158 Lancaster-sketch Plan Submission REV 1 09.30.2024.dwg dry-l 9/30/2024

ROOF CALCULATIONS

ROOF GROSS TOTAL	9,343 SQ FT
HEATED PENTHOUSE AREA	218 SQ FT
15% PV AREA PER BETTER ROOF REQUIRMENT	1,402 SQ FT
TOTAL PV AREA PROPOSED (PASS)	1,624 SQ FT



A5 **06 ROOF PLAN**

REFERENCED FROM: SCALE: 1/8" = 1'-0"

C:\Users\Rhen Reed\Documents\-23039_Avesta Oxford St_ R23_CENTRAL_breedRCBPW.rvt

CWS ARCHITECTURE + INTERIOR DESIGN

PLANNING + DESIGN CONSTRUCTION SERVICES

DESIGNER

CWS ARCHITECTURE + INTERIOR DESIGN
264 US ROUTE ONE, SUITE 100-2A
SCARBOROUGH, ME 04074
207 774 4441
CWSARCH.COM

OWNER

AVESTA

OWNER ADDRESS

PROJECT

AVESTA OXFORD

PROJECT ADDRESS

DRAWING

ROOF PLAN

CWS PROJECT NUMBER: 23039

REVISIONS

DRAWING NUMBER

A1.60

SCALE: 1/8" = 1'-0"

DATE: 2024 | 09 | 26

9/26/2024 1:33:03 PM

MUNICIPAL SUBMISSION No. 2


SLOW


Cedar St

REFERENCES:

1. EXISTING CONDITIONS PROVIDED BY "TOPOGRAPHIC SURVEY BAYSIDE PARCELS LANCASTER, PREBLE, ELM, CEDAR, CHESTNUT AND OXFORD STREETS, PORTLAND, MAINE" PREPARED FOR BUSH WATSON DATED DECEMBER 6, 2022 BY OWEN HASKELL, INC.UTILITY INFORMATION OBTAINED FROM PORTLAND WATER DISTRICT MAPPING, UNITIL MAPPING, AND THE CITY OF PORTLAND GIS DATA CATALOG.
2. ADDITIONAL EXISTING INFORMATION FROM CAD FILE PROVIDED BY OWEN HASKELL, INC. OF "BOUNDARY & TOPOGRAPHIC SURVEY AT 117 PREBLE STREET, PORTLAND, MAINE" DATED SEPTEMBER 28, 2015.

LANCASTER STREET
HANOVER STREET
ADLER STREET
PREBLE STREET
38' WIDE – ONE WAY
117 PREBLE ST
MDP PHASE 5A:
195 LANCASTER ST.
KENNEBEC STREET
30' WIDE – ONE WAY
165–185 LANCASTER ST.
MDP PHASE 5B:
163 LANCASTER ST.
MDP PHASE 4:
149 LANCASTER ST.
ZONE B7
ZONE B3
ZONE R6
LANCASTER STREET
32'–38' WIDE – TWO–WAY
MDP PHASE 1B:
196 LANCASTER ST.
MDP PHASE 1A:
89 ELM ST.
JSPA
PHASE 2:
50 CEDAR
ST.
JSPA PHASE 3:
158 LANCASTER ST.
81 PREBLE ST.
ELM STREET
30' WIDE – ONE WAY
CEDAR STREET
20' WIDE – ONE WAY
78 CHESTNUT ST.
CHESTNUT STREET
TWO–WAY
MDP PHASE 5C:
235 OXFORD ST.
JSPA PHASE 1:
197 OXFORD ST.
OXFORD STREET
ONE–WAY
62 ELM ST.
MDP PHASE 2:
60 ELM ST.
PORTLAND STREET
MDP PHASE 3:
315 CUMBERLAND AVE
CUMBERLAND AVE

PROJECT BOUNDARY LEGEND:

WEST BAYSIDE MASTER DEVELOPMENT PLAN PROJECT BOUNDARY:

197 OXFORD STREET REDEVELOPMENT JOINT SITE PLAN APPLICATION PROJECT BOUNDARY:

PROJECT BOUNDARY LINES

ZONING DISTRICT BOUNDARY LINE

50 0 50 100

SCALE: 1" = 50'

N

CONCEPT
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
COMMENT RESPONSE	SJL 9/30/24

DRAWING NAME: WEST BAYSIDE MDP & 197 OXFORD ST. JSPA OVERALL PLAN

PROJECT NAME: WEST BAYSIDE MASTER DEVELOPMENT PLAN

CLIENT: WEST BAYSIDE PARTNERS, LLC
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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(207) 775-2655

FILE: 1093.13_CIVIL
JN: 1093.13
SCALE: AS NOTED
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
C-99

LANCASTER ST.
TWO-WAY

CEDAR ST.
ONE-WAY

CHESTNUT ST.
TWO-WAY

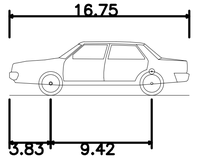
PROPOSED BUILDING
158 LANCASTER STREET
BUILDING FOOTPRINT:
4,796 SF

TM 26-A-12
N/F JAMES W. HALL
SARAH MICHNIEWICZ
23909/341

TM 26-A-8
N/F ALBERT
BRESETTE
7951/275

TM 26-A-9,10
N/F PETER P. & ALICE D. AMES
7926/278

HALL COURT



Architectural	
Overall Length	16.750ft
Overall Width	6.300ft
Overall Body Height	5.003ft
Min Body Ground Clearance	0.939ft
Track Width	6.300ft
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	20.000ft

10 0 10 20
SCALE: 1" = 10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
JOINT MAJOR SITE PLAN APPLICATION	SJL	4/10/24
COMMENT RESPONSE	SJL	7/30/24

DRAWING NAME: **PHASE 3 – TURNING TEMPLATE**

PROJECT NAME: **PHASED OXFORD STREET REDEVELOPMENT**

CLIENT: AVESTA HOUSING & REVELER DEVELOPMENT
307 CUMBERLAND AVE. PORTLAND, ME 04101
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

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

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FILE:	1212_AE_CIVIL
JN:	1212.1
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	DNM
CHECKED BY:	SJL

STATE OF MAINE
SAMUEL J. LEBEL
No. 16505
LICENSED
PROFESSIONAL ENGINEER
9/30/24

DRAWING NO.
AT-3

Planning and Urban Development
Kevin Kraft, AICP
Director

Below is a summary of key initiatives, milestones, and updates regarding the work of the Planning & Urban Development Department for September/October 2024.

1. **Sustainability & Transportation Committee Meeting:** On September 11 Planning & Urban Development staff along with staff from the DPW provided the S&T Committee with an update on the current status of major transportation projects, which include the following:
    a. Franklin Street
    b. Libbytown Safety & Accessibility
    c. Brighton Avenue: Rosemont Corner
    d. Forest Avenue: Morrill's Corner (Smart Corridor Study: Phase II)
    e. Forest Avenue: Marginal Way to Park Avenue (Smart Corridor Study: Phase III)
    f. Forest Avenue: Revere Street to Bedford (Smart Corridor Study: Phase IV)
    g. State & High Street Two-Way Conversion
    h. Active Transportation Projects
    i. Comprehensive Transportation Plan

    More information on the staff update can be viewed here.

2. **Sustainability & Transportation Committee Meeting:** On September 11 Planning & Urban Development Staff provided the S&T Committee with a project update on the status of the Franklin Street Master Plan. Additionally, staff sought an endorsement of the Franklin Street Update Project as well as a recommendation from the S&T Committee to the City Council to approve use of $250,000 from existing impact fee funds to provide a 10% local match, in partnership with MaineDOT, to apply for $2 million in funding from the U.S. DOT's Reconnecting Communities and Neighborhoods Grant Program. The City of Portland and the MaineDOT entered into a Village Partnership imitative (VPI) agreement to update the 2015 Master Plan in 2024. A Request for Proposals (RFP) for this work was released by the City on August 14, 2024. Proposals were due by September 12, 2024. A consulting team will be selected this fall with the updated master plan anticipated to be completed by January 2026. More information on the staff update can be viewed here.

3. **City Council holds two workshops on ReCode:** The Planning & Urban Development staff presented the final draft of ReCode to the City Council on September 30 and October 28.

389 Congress Street, Portland, Maine 04101 | ph: 207.874.8430 | kkraft@portlandmaine.gov

4. **Planning Board recommends ReCode to City Council:** On October 8, 2024, the Planning Board voted unanimously (7-0) to recommend the work products of Phase II of ReCode, the city's initiative to comprehensively rewrite the City of Portland land use code and amend the zoning map. This recommendation also includes a minor amendment to the existing conditional rezoning agreement for properties in the vicinity of Diamond Cove and Great Diamond Island. The Planning Board found the amendments to be consistent with the City of Portland's comprehensive plan.

5. **Sustainability & Transportation Committee Meeting:** On October 9, the Planning & Urban Development staff, along with the Assistant City Manager and the Transportation Systems Engineer, provided the Sustainability & Transportation Committee with an update on the conclusions and outcomes of MaineDOT's 2022 Portland to Auburn Rail Use Advisory Council (RUAC) which was tasked with reviewing future use options for the St. Lawrence rail corridor including considerations of converting the corridor into a multi-use 'trail-until-rail'. The RUAC was composed of the communities along the rail corridor, including Portland, and several advocacy organizations. More information can be viewed on the agenda center here.

6. **Libbytown Safety & Accessibility Public Meeting:** On October 17, the City and MaineDOT hosted an open house and formal preliminary public meeting for the Libbytown Safety and Accessibility Project. This project will involve reconstructing roadways and installing a new roundabout, and converting Park Avenue and Congress Street to two-way traffic. Additionally, it includes improvements to sidewalks and crosswalks, enhanced street and sidewalk lighting, off-street two-way shared-use paths, cycle tracks, and an extension of a multi-use path. In March 2024 this project was awarded a $22.4 million Federal grant. More information on the project can be viewed here.

7. **Staff Present at 2024 Northern New England (NNECAPA) Planning Conference:** Senior Planner Zach Powell, AICP, presented at the 2024 Northern New England American Planning Association (NNECAPA) Annual Conference on October 29. Zach was joined by staff from the City of Burlington, VT, and the Lincoln County Regional Planning Commission to discuss 'Housing Data & Technology.' The session highlighted how data and technology serve as powerful tools that enable planners, community members, and decision-makers to better understand local housing trends, as well as how these communities have approached compiling and visualizing data to create housing dashboards. Portland's housing data dashboard can be viewed here.

8. **Annual District Meetings – District 4:** On October 30, the P&UD Director participated in the Annual District Meeting for District 4 and provided updates on proposed projects along Ocean Avenue and gave a brief summary of ReCode.

389 Congress Street, Portland, Maine 04101 | c: 207.274.8430 | kkraft@portlandmaine.gov

RECEIVED
OCT 8 2024
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STATE OF MAINE
CUMBERLAND, ss.

SUPERIOR COURT
CIVIL ACTION
DOCKET NO. AP-24-03

PETER L. MURRAY, et al.

Petitioners,

v.

CITY OF PORTLAND

Respondent,

and

37 MONTREAL, LLC

Party-in-Interest

REMAND ORDER

Before the Court is Peter L. Murray, Deborah D. Murray, Carol Connor, Michael Hoover, and Jean McManamy's (collectively "Petitioners") fully briefed Rule 80B Complaint for Review of Governmental Action. The Rule 80B briefs of Party-in-Interest 37 Montreal, LLC ("37 Montreal") and the City of Portland (the "City") (collectively "Respondents") are also before the Court. The narrow issue is whether the City of Portland Planning Board (the "Planning Board"), made sufficient factual findings on remand from the Law Court to permit meaningful judicial review. After reviewing the parties' well-written briefs and hearing oral argument, the Court concludes that the Planning Board's supplemental findings are insufficient for meaningful judicial review. For the following reasons, the Court retains jurisdiction and remands the matter to the Planning Board to make clear factual findings regarding the height, setback, and design-review requirements.

CLERK'S OFFICE
OCT 24 2024

I. BACKGROUND

This Rule 80B appeal concerns the Planning Board's decision to reapprove a four-story apartment complex (the "Project")[1], following remand by the Law Court in *Murray v. City of Portland*, 2023 ME 57, 301 A.3d 777. (Supplemental Record ("Supp. R.") 1.) The facts of this case prior to remand are more fully detailed in the Law Court's Order, familiarity with which is presumed. *See Murray*, 2023 ME 57, ¶¶ 3-12, 301 A.3d 777. Nonetheless, a brief recapitulation of the relevant factual background and procedural history following remand is warranted.

On August 12, 2019, 37 Montreal filed its initial application for Level III Site Plan, Subdivision and Inclusionary Zoning Conditional Use. (Administrative Record ("R.") 1.) The Planning Board held a public workshop on September 24, 2019. (R. 273.) At the workshop, the Planning Board accepted public comments and provided initial feedback. (R. 273.) Public comments focused primarily on the Project's scale, overbearing size, and compatibility with the neighborhood. (R. 335-350.)

In April 2021, 37 Montreal filed new plans with the Planning Board. (R. 200-210.) A public hearing was scheduled to address the new plans on July 13, 2021. (R. 199.) Petitioners, along with several other Munjoy Hill residents, submitted written statements echoing earlier objections to the Project. (R. 335-340, 342-345, 347.) The objections asserted the Project violated the maximum height for structures within the MHNCOD, did not adhere to applicable setback requirements, and did not conform to the architectural character of the neighborhood. (R. 335-340, 342-345, 347.)

[1] The Project involves combining two pre-existing lots on a parcel of land to develop a four-story apartment complex. (R. 273.) The apartment complex will be located at 19 Willis Street, Portland, Maine. (R. 273.) The Project is in Portland's R-6 zoning district and the Munjoy Hill Neighborhood Conservation Overlay District ("MHNCOD"). (R. 314.)

In November and early December 2021, 37 Montreal submitted final plans for the Project. (R. 2-129.) On December 14, 2021, the Planning Board held a final public hearing. (R. 728-787.) The meeting closed with a unanimous vote by six (6) members of the Planning Board approving the Project. (R. 782-786.) On January 15, 2022, Petitioners filed a timely appeal with the Superior Court pursuant to M.R. Civ. P. 80B. *See Peter Murray, et al. v. City of Portland, et al.*, Docket No. AP-22-03.

On August 1, 2022, this Court entered an Order denying Petitioner's 80B Appeal and denying Respondent's Motion to Supplement the Administrative Record. *See* Docket No. AP-22-03. Petitioners appealed to the Law Court. The Law Court concluded that the Planning Board's decision did not contain sufficient findings required for meaningful judicial review. *Murray*, 2023 ME 57, ¶ 15, 301 A.3d 777. The *Murray* Court stated, "the Planning Board did not explain its conclusions or reasoning related to the proposed development's height or setbacks" and did not "mention or discuss the historic-preservation design-review requirement". *Id.* The Law Court vacated judgment and remanded to this Court with instructions to remand to the Planning Board to make the required findings. *Id.* ¶ 19. Accordingly, this Court remanded to the Planning Board. *See* Docket No. AP-22-03.

On November 22, 2023, Planning Board staff prepared a report (the "Report") to address the issues on remand. (Supp. R. 10-17.) The Planning Board held a hearing on November 28, 2023 ("November 2023 Hearing"). (Supp. R. 59.) At the November 2023 Hearing, the Planning Board adopted statements contained in the Report regarding the height, setback, and design-review requirements as supplemental findings ("Supplemental Decision"). (Supp. R. 1.) The Supplemental Decision incorporated by reference the findings in the Report. (Supp. R. 1.) On

December 12, 2023, the Planning Board formally adopted the Supplemental Decision, and the Project was once again approved. (Supp. R. 1-5, 88-90.)

On January 9, 2024, Petitioners timely filed the current Rule 80B appeal. On February 20, 2024, Petitioners filed their Rule 80B Brief. On March 18, 2024, both 37 Montreal and the City filed their 80B Briefs. On March 29, 2024, Petitioners filed a Reply Brief. On August 22, 2024, this Court held oral argument on the matter.

II. STANDARD OF REVIEW

When the Superior Court acts in an appellate capacity pursuant to Maine Rules of Civil Procedure 80B, the court reviews the operative decision of a municipality for errors of law, abuse of discretion, or findings not supported by substantial evidence in the record. *Grant v. Town of Belgrade*, 2019 ME 160, ¶ 8, 221 A.3d 112 (quoting *Gensheimer v. Town of Phippsburg*, 2005 ME 22, ¶¶ 7, 16 868 A.2d 161). "Substantial evidence exists when a reasonable mind would rely on that evidence as sufficient support for a conclusion." *Ouellette v. Saco River Corridor Comm'n*, 2022 ME 42, ¶ 20, 278 A.3d 1183 (quoting *Doane v. Dep't of Health & Hum. Servs.*, 2021 ME 28, ¶ 38, 250 A.3d 1101). The court may not substitute its judgment for that of a board. *Hill v. Town of Wells*, 2021 ME 38, ¶ 8, 254, A.3d 1161. The party seeking to vacate the decision bears the burden of persuasion on appeal. *Olson v. Town of Yarmouth*, 2018 ME 27, ¶ 11, 179 A.3d 920.

III. DISCUSSION

In this 80B appeal, Petitioners argue that the Planning Board: (1) failed to correctly interpret and apply the height and setback requirements of the Portland City Land Use Code (the "Code"); (2) did not comply with the historic preservation design-review requirement; and (3) failed to make sufficient findings supported by substantial record evidence on remand. Because

the Court concludes the Planning Board's supplemental findings are insufficient, the Court will only address the sufficiency of the record.

A. Sufficency of the Record

Petitioners assert that the Planning Board's findings on remand are insufficient. In short, Petitioner's argue that the Report set forth findings in advance of the hearing that were adopted by the Planning Board without critical analysis, deliberation, or discussion.[2] Respondents contend the Planning Board adopted additional findings of fact sufficient to support its conclusions to allow for meaningful judicial review.

On remand, the Planning Board was required to make findings of fact adequate for judicial review. *See Christian Fellowship & Renewal Ctr. V. Town of Limington*, 2001 ME 16, ¶¶ 15-16, 769 A.2d 834. "Every final decision of the planning board...shall include written findings of fact and shall specify the reason or reasons for such decision." Portland, Me., Code § 14-27(b) (Aug. 7, 1989). "[M]eaningful judicial review of a decision requires that the decision contain findings of fact sufficient to apprise the reviewing court of the decision's basis and that those findings be based on substantial evidence in the record." *LaMarre v. Town of China*, 2021 ME 45, ¶ 6, 259 A.3d 764. The Law court has explained that:

> "In the absence of such findings, a reviewing court cannot effectively determine if an agency's decision is supported by the evidence, and there is a danger of judicial usurpation of administrative functions. Adequate findings also assure more careful administrative considerations, help parties plan cases for rehearing or judicial review and keep agencies within their jurisdiction." *Chapel Rd. Assocs. V. Town of Wells*, 2001 ME 178, ¶ 10, 787 A.2d 137 (citations and quotation marks omitted).

When there is no reviewable decision, the matter must be remanded. *LaMarre*, 2021 ME 45, ¶ 10, 259 A.3d 764; *see also Chapel Rd. Assocs.*, 2001 ME 178, ¶ 13, 787 A.2d 137 (explaining the

[2] Petitioners do not argue that the Planning Board needs to physically draft the findings. Rather, Petitioners assert that the Planning Board must deliberate and clearly articulate findings that form the basis of their conclusions.

remedy for an agency's failure to make sufficient and clear findings is remand for findings that permit meaningful judicial review).

i. Maximum Height Requirements

At the November 2023 Hearing, the Planning Board began by addressing the height requirement. (Supp. R. 75.) The Planning Board adopted a statement in the Report that says, "the City's longstanding practice has been to calculate allowable height on the mainland from average finished grade."[3] (Supp. R. 13, 81.) The Report lacks factual support for this conclusion—the Report does not illustrate any examples of this historical precedent. (Supp. R. 12-13.) During the November 2023 Hearing, the Planning Board made a vague reference to calculating grade for a building project on Fore Street and a project on Hancock Street in this manner. (Supp. R. 80.) These references lack specificity and are not clear findings that support the conclusion that this is the City's "longstanding practice." (Supp. R. 80.) Similarly, Planning Board member Ms. Stanely's statement, "this is how we have historically always treated the measurement of grade that's come up over and over and over again and we have consistently used this method" is not an adequate finding of fact on the issue. (Supp. R. 76.)

Simply put, the Planning Board's conclusion the City has a "longstanding practice" to calculate height with this method is not tied to a sufficient factual basis in the record.[4] The

[3] The Code defines the height of a building as "[t]he vertical measurement from grade, or the predevelopment grade on the islands, to the highest point" of the building. Portland, Me. Code § 14-47 (Feb. 20, 2019). The dispute here is whether height is to be measured from the natural, unfinished grade or from the finished grade created by imported fill.

[4] As this Court noted during oral argument, there is a due process concern lingering in the background. Members of the public who oppose a project are entitled to due process throughout a planning board's permit application review and hearing processes under both the United States and Maine Constitutions. *See Duffy v. Town of Berwick*, 2013 ME 105, ¶¶ 15-17, 82 A.3d 148; *see also* U.S. Const. amend. XIV § 1; *see also* Me. Const. art. I, § 6–A; *see also Lane Constr. Corp. v. Town of Washington*, 2008 ME 45, ¶¶ 28–29, 942 A.2d 1202 (recognizing the procedural due process rights of a project's opponents before a municipal planning board). In terms of fundamental due process, if a consideration of a governmental organization is based on "longstanding" historical practice, but that

Planning Board adopted statements in the Report as supplemental findings without engaging in substantive deliberation to flesh out the factual basis for their conclusion that the Project conforms to the height requirement. At this juncture, the record does not set forth findings that establish the clear collective judgment of the Planning Board on the height requirement issue. Therefore, the Court concludes that the record lacks sufficient factual support to apprise the Court of the rational basis for the decision regarding the height requirement and is thus not susceptible to meaningful judicial review. *See LaMarre*, 2021 ME 45, ¶ 6, 259 A.3d 764.

ii. Setback Requirements

The Planning Board next addressed the setback requirements at the November 2023 Hearing. (Supp. R. 81-82.) Again, the Planning Board adopted statements in the Report as supplemental findings. (Supp. R. 82-83.) The Report states, "certain miscellaneous auxiliary structures such as retaining walls that are not part of the foundational support for the building . . . are not considered 'conforming structures' which need to be setback from the street or lot line and are therefore exempt from setback dimensional requirements." (Supp. R. 14.) This assertion appears in the Report without adequate factual support. At the November 2023 Hearing, the Planning Board did not engage in substantive deliberation to provide a factual basis for the conclusion that retaining walls are not structures. (Supp. R. 81-82.)

The Court concludes that judicial review is hampered by a lack of findings to support the conclusion that retaining walls are not "structures" and that the Project conforms to the setback requirements. This issue could be considered a mixed question of law and fact. Thus, the Court

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practice is not memorialized anywhere, there is cause for concern that an individual dealing with the agency will not know how to conduct themselves in a way that conforms to that practice.

remands to the Planning Board to establish a clear factual and analytical basis regarding why a retaining wall does not fit within the definition of structure.

iii. Historic Preservation Board

The Law Court noted that the Planning Board's initial decision did not mention or discuss the historic-preservation design-review requirement. *See Murray*, 2023 ME 57, ¶ 15, 301 A.3d 777. Land Use Code Section 14-526(d)(5)(b) provides in pertinent part:

> When any proposed development is within one hundred feet of any designated historic district . . . . such development shall be generally compatible with the major character defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development . . . . To aid the planning board in its deliberations, historic preservation staff shall provide 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.

At the November 2023 Hearing, the Planning Board adopted a statement in the Report that says, "Deb Andrews' participation in the design-review memorandum met the clear intent of giving [the Planning Board] the analysis that the ordinance required to be provided by someone from HP." (Supp. R. 15, 83-84.) The Planning Board did not engage in substantive deliberation or discussion regarding the factual basis for concluding that the memorandum met the requirements of Section 14-526(d)(5)(b). (Supp. R. 83-84). Section 14-526(d)(5)(b) specifically provides that the historic preservation written analysis is intended *to aid the planning board in deliberations.* The Planning Board did not deliberate or make factual findings that the Project was compatible with the character of the neighborhood. (Supp. R. 83-84.) Because the record is devoid of clear factual findings on these issues, there are insufficient facts to apprise the Court of the rational basis for the Planning Board's conclusions. *See LaMarre*, 2021 ME 45, ¶ 6, 259 A.3d 764.

B. Remand to the Planning Board

There are two options when the Superior Court is confronted with an inadequate record. *Sanborn v. Town of Eliot*, 425 A.2d 629, 631 (Me. 1981). "First, the court may set aside the decision and require a new hearing." *Id.* Second, the court can "remand to the Board for further findings to develop the record within a stated time period, while explicitly retaining jurisdiction in order to demonstrate that the decision is not a final judgment." *Id.* The first course strikes the Court as inappropriate because the Law Court remanded to the Planning Board to make sufficient findings of fact. *See Murray*, 2023 ME 57, ¶ 19, 301 A.3d 777. Accordingly, this Court will retain jurisdiction and remand the matter to the Planning Board to deliberate and make clear factual findings on the record regarding the height, setback, and design-review requirements.

IV. CONCLUSION

In sum, the Planning Board's findings should be the result of a deliberative process that clearly sets forth the factual basis for its reasoning and conclusions. The Court concludes that there is a defect in the record because there are insufficient facts to permit meaningful judicial review.

Entry Is:

The matter is remanded to the Planning Board to make sufficient findings of fact regarding the height, setback, and design-review requirements. The Planning Board must make clear findings to support its reasoning and conclusions.

The Court assumes the Planning Board will be able to address this matter and return the case to the Court within 90 days of entry of this Remand Order. The parties will report to the Court if the case has not returned within 90 days. Upon filing the supplemental record reflecting the Planning Board's action on remand and any further filings made by the parties during remand, the

following further briefing schedule applies: (a) Petitioners may file a supplemental brief within 20 days of the filing the supplemental record; (b) Respondents may file supplemental briefs within 40 days of filing of the supplemental record; and (c) Petitioners may file a reply brief within 50 days of the filing of the supplemental record. The Court retains jurisdiction, meaning there is no need to commence a new Rule 80B action.

Pursuant to M.R. Civ. P. 79(a), the Clerk is directed to incorporate this Remand Order by reference in the docket.

Dated: 9/30/24

John O'Neil Jr.
Justice, Maine Superior Court

Entered on the Docket: 10/3/24

Planning Board Report
Planning & Urban Development Department

Monument Hotel
465 Congress Street
Conditional Use and Inclusionary Zoning
CU-003095-2024
Marieke Thormann, Applicant

Submitted to:	Portland Planning Board	**Prepared By:**	Taylor Colbeth
Public Hearing Date:	November 12, 2024	**Date:**	November 8, 2024

I. INTRODUCTION

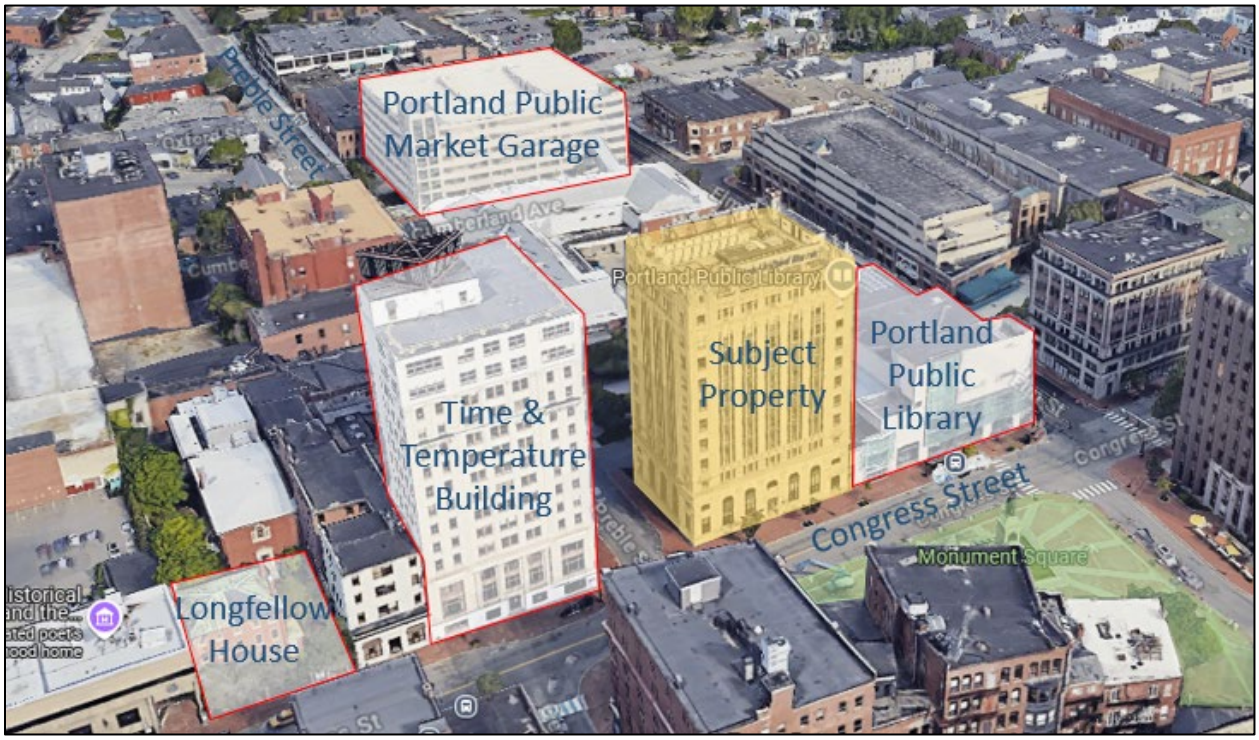

Figure 1: Neighborhood Context, 465 Congress Street Highlighted in Yellow

The applicant, Monument Hotel, LLC, has submitted a hotel inclusionary zoning conditional use application to facilitate the conversion of an existing unoccupied commercial building at 465 Congress Street into a 92-room hotel with bar, restaurant, and spa facilities. The property is located within the Downtown Entertainment Overlay Zone (DEOZ), the Pedestrian Activities District (PAD), and the Congress Street Historic District.

Article 18.5.2.C of the City's Land Use Code state that all development totaling 10 or more hotel rooms is considered a conditional use subject to Planning Board review under the conditions of Subsection 18.2.5. As a conditional use, this applicant is also subject to the general conditional use standards under Subsection 6.5.6.

Agent: Lauren Swett, Woodard & Curran
Applicant: Marieke Thormann, Fathom Companies

II. REQUIRED REVIEWS

Review	*Applicable Standards*
General Conditional Use Standards	*Chapter 14, 6.5.2 General Conditional Use*
Supplemental Use-Specific Conditional Use Standards	*Chapter 14, 18.2.5 Hotel Inclusionary Zoning Standards*

III. PROJECT DATA

Existing Zoning	B-3 Business Downtown
Overlay Zones	Downtown Entertainment Overlay Zone (DEOZ), Pedestrian Activities District Overlay Zone (PAD)
Historic District	Congress Street Historic District
Property Size	19,477 sq. ft.
Existing Use	Unoccupied Office
Proposed Use	Hotel (92 rooms)

IV. EXISTING CONDITIONS AND SURROUNDING AREA

465 Congress Street was previous occupied by the historic Fidelity Trust Company Building and has historic landmark status within the Congress Street Historic District. The subject property faces Monument Square in the center of Downtown Portland and sits adjacent to the historic Time and Temperature Building across Preble Street. Located behind the building to the northwest of the subject property is an existing plaza area with five off-street parking spaces, landscaped area, and a drive-through paved loop and window for an existing ground-floor bank.



Figure 2: Subject Property as Viewed from Monument Square

The building is located in the B-3 Downtown Business zone and is within the boundaries of the Downtown Entertainment Overlay Zone, the Pedestrian Activities District Overlay Zone, and the Congress Street Historic District. The area surrounding 465 Congress Street represents dense, mixed-use development with buildings ranging from four to ten stories in height. The subject property and surrounding buildings vary in design and structure, representing various eras in architecture and contributing to the diverse character of Downtown. Being in the Pedestrian Activities District, there is ample pedestrian activation along the property frontage on

Congress Street, with a bus stop in Monument Square serving several lines of the Greater Portland METRO.

V. PROPOSED DEVELOPMENT

The proposal before the Planning Board involves the conversation of the existing unoccupied office space into a 92-room hotel with restaurant, bar, and spa facilities. The primary guest entrance will be off of Congress Street, with secondary entrance for staff and guests utilizing the valet service, will be at the rear of the building. The ground floor serve as the hotel's lobby, and will also include a restaurant and bar. The basement level will house the hotel's electrical and maintenance rooms as well as the gym and spa facilities. The remaining levels will convert approximately 79,980 square feet of unoccupied office space into guest suites, along with the creation of two private terraces on the hotel roof.

The hotel will utilize valet operations and have off-street parking access at the Portland Public Market Garage. Valet operations will be conducted in the plaza area behind the subject property on Preble Street. The property was previously subject to Minor Site Plan review (PL-003084-2024) for the redevelopment of this plaza area. As part of this project, the plaza area will be redeveloped with updated building materials but access and circulation off Preble Street will remain a one-way loop. The Congress Street entrance will primarily serve pedestrian traffic that is entering and exiting the restaurant and bar area.

The applicant is proposing to maintain existing utility services to the extent possible to mitigate site impacts. The applicant will be required to provide ability to serve approvals from Central Maine Power for electricity, Unitil for gas, and Portland Water District for water as part of their future building permit application.,

VI. RIGHT, TITLE, & INTEREST

The applicant has submitted a copy of the deed showing ownership by Monument Hotel, LLC, demonstrating right, title, and interest for the property at 465 Congress Street (Attachment D).

VII. ZONING ANALYSIS

The proposed hotel use is a permitted us within the B-3 zone. However, per Article 18.2.5.C, all hotel developments exceeding 10 rooms are to be considered conditional uses, subject to Planning Board review for inclusionary zoning compliance.

With respect to dimensional requirements, the proposed development is occurring entirely within an existing building. A minor site plan (PL-003084-2024) has been approved by the Planning Authority to redevelop the plaza area on Preble Street. The existing building on site complies with all current dimensional requirements, which include restrictions related to street frontage, setbacks, lot coverage, and building height.

A. Downtown Entertainment Overlay Zone (DEOZ)

The purpose of the Downtown Entertainment Overlay Zone is to regulate the location of businesses with entertainment licenses in order to prevent an overconcentration of such uses within the downtown. Confirmation of compliance with the requirements of the DEOZ will be confirmed by the City's Business Licensing Division at the time an entertainment license is sought.

B. Pedestrian Activities District (PAD)

The purpose of the Pedestrian Activities District is to ensure ground-level activation along prominent streets within Downtown Portland. This overlay zone requires that ground level spaces be occupied by certain uses which enhance the pedestrian experience, such as retail, services, restaurants, cultural facilities, and art studios. The overlay zone requires that 75% of a building's street level frontage be occupied by one of these permitted uses at a depth of 20 feet or more.

The proposed development features a restaurant and bar area on the ground floor with an entrance from Commercial Street. This change of use is expected to activate pedestrian activity on Congress Street.

VIII. CONDITIONAL USE STANDARDS

This project has been reviewed by staff for conformance with the relevant review standards of Portland's Land Use Code Chapter 14, Section 6.5.2 (General Condition Use Standards), and Chapter 14, Section 18.2.5 (Inclusionary Zoning for Hotel Projects). Staff Comments are as follows:

A. General Conditional Use Standards (6.5.2)

1. *The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses or other allowable uses in the same zone.*

   Discussion: The hotel use is a permitted use within the B-3 zone, and the applicant intends to provide off-street parking in accordance with Table 19-A, which requires a minimum of one parking space per four guest rooms. The proposed hotel would contain 92 guest rooms. Therefore, the minimum off-street parking requirement would be 23 parking spaces. Under this proposal, Unified Parking Partners will conduct valet operations and has a master lease on the Portland Public Market Garage, which will be utilized to satisfy this requirement.

   Staff Finding: This conditional use application features limited new construction, and does not increase the amount of pavement or parking spaces on site. Under Table 19-B, changes of use within the B-3 zone are exempt from providing additional off-street parking. Additionally, the hotel valet will have access to off-site parking that exceeds the current minimum parking requirement for the proposed uses. Staff finds the proposal to meet this review standard.

2. *The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage disposal, emissions to the air, odor, lighting, or litter.*

   Discussion: This proposal will involve exterior site work on the plaza area as part of the approved PL-003084-2024, and the proposed use is permitted by right within the B-3 zone, and so any impacts associated with this use are anticipated to be consistent with other uses permitted within the zone. The proposed hotel use is unlikely to produce any unsanitary or harmful conditions which would impact abutters. The applicant is contracted with a waste removal service to remove waste from the building on a regular basis.

   Staff Finding: The development is expected to be fully compliant with City building codes and zoning performance standards related to lighting, odor, and noise. Staff find that the proposal meets this review standard.

3. *The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.*

   Discussion: The design and operation of the proposed hotel is not anticipated to have a substantially greater impact on surrounding property, with respect to the impacts listed above, than other uses permitted by right within the zone. The only perceived changes of the project site will be the redevelopment of the plaza area with updated building materials and improved landscaping.

   Staff Finding: The proposed conditional use will have no additional or greater impact on surrounding properties than other uses permitted within the B-3 zone. Therefore, staff find that the proposal meets this review standard.

4. *The proposed use will meet any additional zone or use-specific standards identified in Table 6-A to 6-F and Subsections 6.5.6 and 6.5.7.*

   The Hotel Inclusionary Zoning Conditional Use Standards are discussed in the following section.

B. Hotel Inclusionary Zoning (Section 18.2.5)

Discussion: Article 18.2.5.C. states that all hotel projects of 10 or more rooms within the City of Portland are to be considered conditional uses, subject to Planning Board review for compliance with hotel inclusionary zoning requirements. Article 18.2.5.D. states that all hotel projects are required to provide one unit of low-income housing for rent in the City of Portland for every 28 rooms in the hotel projects or pay an equivalent fee in-lieu into the Jill C. Duson Housing Trust Fund. The fee, which was first established in 2018, is listed under Article 18.2.5.E. as $3,806 per hotel room, which is then adjusted annually in accordance with Article 18.1.8. The adjusted fee amount for 2024 is $4,692 per hotel room.

Staff Finding: The applicant has elected to pay the fee in-lieu of providing a low-income housing unit on-site. Based upon there being 92 hotel rooms, the applicant will be responsible for paying $431,664 into the Jill C. Duson Housing Trust Fund.

IX. PUBLIC COMMENT

As of November 8,2024, one written public comment has been received in opposition to this application.

X. STAFF RECOMMENDATION

Subject to the proposed motion listed below, Planning staff recommends that the Planning Board find that the proposed 465 Congress Street hotel inclusionary zoning conditional use application (CU-003096-2024) meets the applicable standards of Portland's Land Use Code.

XI. PROPOSED MOTIONS

A. CONDITIONAL USE – HOTEL INCLUSIONARY ZONING

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 November 12, 2024, for application CU-003095-2024, relevant to Land Use Code Sections 6.5.2 and 18.2.5 and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **[is/is not]** in conformance with the Conditional Use standards of the Land Use Code subject to the following condition of approval:

Prior to the Issuance of a Certificate of Occupancy
The applicant shall contribute $431,664 into the City's Jill C. Duson Housing Trust Fund to satisfy the inclusionary zoning requirements for a 92-room hotel development.

B. PLANNING BOARD DECISION

On the basis of the findings, conclusions, and recommendations contained in the Planning Board report for the public hearing on November 12, 2024 related to the application for CU-003096-2024 at 465 York Street, 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 CU-003096-2024, and authorizes the Planning Board Chair to assign the approval letter as drafted.

XII. **ATTACHMENTS**

APPLICANT SUBMITTAL

A. Conditional Use Narrative
B. Site Plan Narrative & Attachments
C. Zoning Assessment Table
D. Property Deed

PLANS

Plan 1. ALTA Survey
Plan 2. Building Elevations
Plan 3. Building Footprints Plan 4. Civil Plans

Att. A

TO: Inclusionary Zoning for Hotel Projects Conditional Use Application
Planning & Urban Development Department
City of Portland, Maine
FROM: Monument Hotel, LLC,
SUBJECT: 465 Congress Street Hotel Inclusionary Zoning Memorandum
DATE: September 23, 2024

Monument Hotel, LLC has reviewed the Amendment to Portland City Code Chapter 14 and the related options for Hotel Project Inclusionary Zoning. This memorandum summarizes our understanding of the compliance options to meet the requirements outlined in 14-448.1 and acts as an application to the City of Portland stating the approach that Monument Hotel, LLC has selected for the 465 Congress Street Hotel project.

Compliance Options

14-488.1-c (Option 1) Create on-site low-income rental housing units
14-488.1-d (Option 2) Fee-in-lieu
14-488.1-c,d (Option 3) Combination of on-site low income rental units and fee-in-lieu

465 Congress Street Hotel Summary Data and Compliance Approach

The 465 Congress Street Hotel project is anticipated to consist of 92 guest rooms and has selected the Fee-in-lieu Alternative option to meet the Inclusionary Zoning ordinance. In accordance with 14-488.1-d, a fee of $4,692 per hotel guest room that results in a total fee of $431,664 will be paid into the City of Portland Housing Trust. Monument Hotel, LLC considered the option outlined in 14-488.1-c to create on-site low-income rental housing units but after a detailed analysis, it was determined that due to the programmatic requirements associated with the operation of the hotel, any type of residential unit within the hotel is not a feasible option.

Conclusion

Monument Hotel, LLC is providing this memorandum as the Inclusionary Zoning for Hotel Projects Conditional Use Application to the City of Portland to supplement the Minor Site Plan application for the 465 Congress Street Hotel project.

Att. B

465 Congress Street

Minor Site Plan Application

465 Congress Street
Portland, Maine

12 Mountfort Street
Portland, ME 04101
800.426.4262

woodardcurran.com

0235483.00
Fathom Companies
September 23, 2024

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1. PROJECT SUMMARY

On behalf of the property owner, Monument Hotel LLC (Applicant), Woodard & Curran (W&C) is submitting a Minor Site Plan Application for proposed work at 465 Congress Street in Portland. The project will involve the renovation of the existing office building, also known as the Fidelity Trust Building, into a hotel. The project also includes site work to modify the property's existing plaza space off Preble Street, and the addition of a curb bump out on Congress Street. A letter authorizing W&C to act as the agent on behalf of the applicant is attached to this section. This application has been prepared in accordance with the City of Portland's Chapter 14, Land Use Code and the applicable sections of the City of Portland Design and Technical Manuals.

The proposed work is shown on the drawings submitted with this application. With minimal utility and grading changes proposed, the site plan has been developed to include all site improvements, including grading notation, and utility work.

1.1 Project Site and Background

The project is located on land identified by the City Tax Assessor as Tax Map 027, Lot A015. A view of the tax map for this area is included in the figure below, and an aerial photo of the site area is provided on the next page.



Figure 1-1 Project Parcel Tax Map (City of Portland Parcels and Tax Map Viewer)

The project is in the City's B-3 Zone and is included in the Congress Street Historic District. The building located on the property is identified as a "Landmark" to the Historic District and is in proximity to other Historic Landmarks within the District. The project will be submitted separately for review by the Historic Preservation Board.

The building frontage along Congress Street is within the Pedestrian Activities District Overlay Zone (PAD) and the property is within the Downtown Entertainment Overlay Zone (DEOZ).

The current land use designations for 465 Congress Street include office and bank, within the Site Plan land use category of "Commercial/Service." The gross square footage of the building is 84,930 square feet.

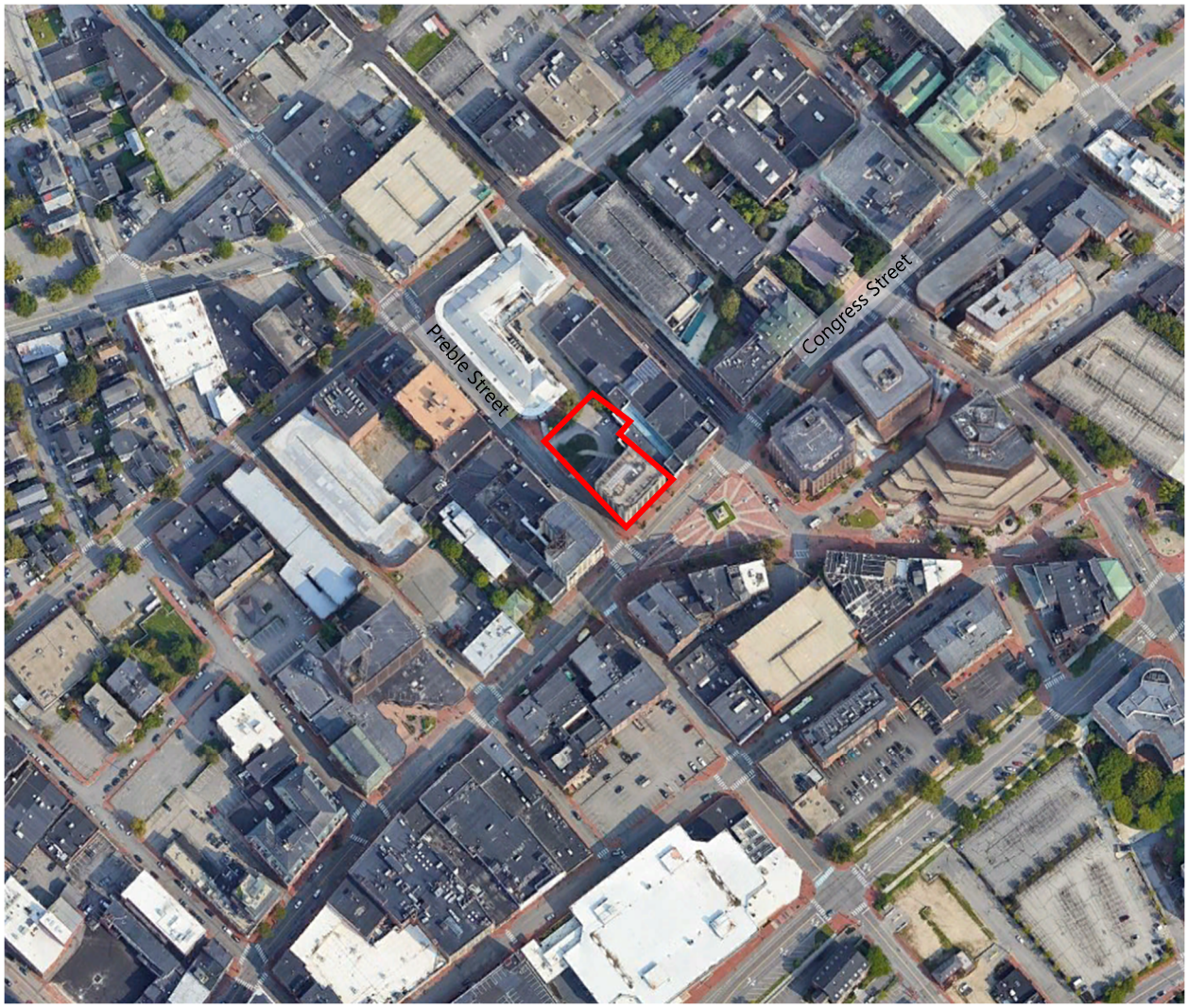


Figure 1-2 Project Location Map (Google Aerial Photo, Imagery September 2022)

This property was previously the subject of a Major Site Plan and Inclusionary Zoning Conditional Use Application (PL-002411-2023) that was submitted to the Portland Planning Department in March of 2023, and subsequently approved by the Planning Board in May of 2023. Due to unforeseen circumstances, the project was not pursued after approval, and this current application is new, and does not include any of the work proposed as part of the previous approval.

Due to the current project's size and scale, this application will be reviewed by staff as a Minor Site Plan. It is our understanding that an Inclusionary Zoning Conditional Use application will also be required for the

current project's proposed hotel use. This will be submitted and reviewed separately for approval by the Planning Board following the Minor Site Plan review.

1.2 Proposed Project

The project will include the renovation of the existing office building to construct an approximately 92-room hotel with associated restaurant, bar, and spa facilities. In addition to the building renovation, the plaza space adjacent to the hotel will be reconstructed. The existing one-way looped driveway with its entrance and exit on Preble Street, a one-way street, will be reconstructed, and the plaza area will be rebuilt using updated surface materials and landscaping.

In addition to the work on Preble Street, a curb bump out will be constructed on Congress Street at the corner of Preble Street. This curbline change will serve to create a loading/unloading area for the building on Congress Street and will also result in pedestrian improvement at this corner. The existing street trees on Congress Street will be replaced as part of this project, utilizing the existing granite curbed tree wells.

Much of the sidewalk around the building is in good condition and will be maintained where possible. The sidewalk will be replaced in front of the plaza area to facilitate the reconstruction of the driveways with appropriate grades to facilitate accessibility per the requirements of the City's technical manual. Sidewalk replacement will also occur at the corner of Congress and Preble Street to facilitate both the construction of the new bump out and some utility work.

1.3 Attachments

- Agent authorization letter
- Project Plans (uploaded separately to Plans folder)

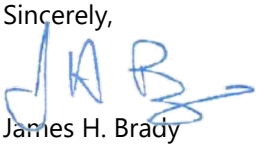
9/17/2024

Re: 465 Congress Street Agent Authorization

To Whom It May Concern:

Monument Hotel LLC is preparing plans for work at our property located at 465 Congress Street in Portland, Maine. Monument Hotel LLC is authorizing Fathom Development and Woodard & Curran, Inc. to act as our agents for the permitting required for this work.

Sincerely,



James H. Brady
Manager
Monument Hotel LLC

2. PERMITTING AND ZONING

This application for a Minor Site Plan for the proposed work will meet the Site Plan and Zoning requirements for an application as outlined in the City of Portland Land Use Code.

2.1 Site Plan

The proposed project work will require Minor Site Plan Approval due to the inclusion of between 1,000 square feet and 3 acres of land disturbance for the proposed site work. No other thresholds for Minor or Major Site Plan are met by the proposed work. The Minor Site Plan Checklist has been provided as a separate attachment.

2.1.1 Zoning

The project is in the City's B-3 Zone and is included in the Congress Street Historic District. The building is identified as a "Landmark" to the Historic District. The building frontage along Congress Street is within the Pedestrian Activities District Overlay Zone (PAD) and the property is within the Downtown Entertainment Overlay Zone (DEOZ). A copy of the Zoning Assessment Table has been provided as a separate attachment.

The current land use designation for 465 Congress Street is approximately 76,980 square feet of office and 7,200 square feet of bank. The gross square footage of the existing building is 84,930 square feet.

2.1.2 Use Standards

Per Table 6-A of the Land Use Code, the proposed use of hotel is permitted within the B-3 zone. The Zoning Assessment Table demonstrates the project's compliance with dimensional requirements specified in the Land Use Code.

2.2 Inclusionary Zoning for Hotel Projects

In the City of Portland's Land Use Code, Section 18.2.5, Inclusionary Zoning for Hotel Projects, identifies that all hotel projects are conditional uses subject to Planning Board Review, and must meet the identified inclusionary zoning requirements, providing low-income housing or paying a fee-in-lieu.

An Inclusionary Zoning application is being set up as a sub-application to this Minor Site Plan application and will be reviewed separately by the Planning Board following the staff review of this Minor Site Plan.

2.3 Waiver Requests

There are no waivers being requested at this time. A copy of the waiver table is provided as a separate attachment for record.

2.4 Evidence of State and/or Federal Permits

The project will be reviewed by the State Historical Preservation Commission and the National Park Service as part of the separate Historic Preservation Board review process. Copies of these approvals can be supplied upon receipt.

2.5 Evidence of Financial Capability

Attached is a copy of a letter verifying the Applicant's financial capability to undertake the project.

2.6 Evidence of Right Title and Interest

The proposed development is located on property identified as Tax Map 027, Lot A015. The property is owned by Monument Hotel LLC and a copy of the property deed is attached.

A copy of the current ALTA survey for the property is also attached.

2.7 Evidence of Technical Capability

The project is being developed by a team with experience in site and building development in the City of Portland and beyond.

Fathom Companies is a multi-faceted, award-winning development, hospitality management, and equity investment company. Their focus is on the people, community, culture, and success of every project. The Fathom team has a wealth of experience providing opportunities for exemplary results in all offered services.

Woodard & Curran has extensive experience with design for site development projects and specifically on the peninsula within the City of Portland. Woodard & Curran, a 1,300-person Portland-based firm, has provided engineering services to the public and private sector for over 40 years, including permitting, civil/site engineering, stormwater, and construction management services.

AAmp Studio is an architecture firm based in Portland and licensed to practice architecture in the state of Maine. AAmp has a wide breadth of architectural experience in both ground-up and retrofit/renovation projects. These include commercial, residential, hospitality, and adaptive reuse projects (including within historic structures). AAmp has numerous completed projects and several currently under design and construction.

Soren DeNiord Design Studio (SDDS) is a professional landscape design firm located in Portland, Maine that is providing the landscape design for the project. With over 15 years of experience. SDDS has worked on award winning projects ranging from residential design and public art to state land planning.

VHB is a 1,600-person multi-disciplinary firm that is providing traffic engineering services for the project. VHB professionals include scientists, planners, engineers, and designers, and their work includes transportation, real estate, institutional, and energy industries.

2.8 Attachments

- Minor Site Plan Checklist (uploaded separately to Documents folder)
- Zoning Assessment Table (uploaded separately to Documents folder)
- Waiver Table (uploaded separately to Documents folder)
- Financial Capacity Letter
- Property Deed
- ALTA Survey (uploaded separately to Plans folder)

SENT VIA EMAIL

July 1st, 2024

City of Portland – Planning Board
389 Congress Street - 4th Floor
Portland, Maine 04101

Re: Statement of Financial Capacity – Monument Hotel, LLC as relates to Fathom Development, LLC and Mr. James Brady.

To Whom It May Concern,

We are pleased to confirm that Monument Hotel, LLC, as part of Fathom Development, LLC, and Mr. James Brady possess the full financial capacity and experience to successfully finance the proposed historic redevelopment of 465 Congress Street, Portland, Maine 04101.

Please do not hesitate to contact me if you have any questions or concerns.

Sincerely,



Tad Atwell
Tad.Atwell@MascomaBank.com
Senior Vice President
48 Free Street, Portland, Maine

MAINE REAL ESTATE TAX PAID

QUITCLAIM DEED WITH COVENANT
DLN: 1002440278048

CTR CONGRESS LLC, a Delaware limited liability company having a mailing address of 23 S. Main Street, Suite 2C, Hanover, NH 03755, for consideration paid, *GRANTS* to **MONUMENT HOTEL, LLC**, a Delaware limited liability company having a mailing address of c/o Fathom Development, LLC, 80 Exchange Street, Portland, ME 04101, with *Quitclaim Covenant*, the following:

See **Exhibit A** attached hereto and incorporated by reference herein.

IN WITNESS WHEREOF, CTR CONGRESS LLC has caused this instrument to be signed and sealed in its corporate name by Geoffrey W. Colla, the Managing Member of Connecticut River Capital LLC, the manager of Portland OZ Fund GP LLC, the manager of CTR CONGRESS LLC, thereunto duly authorized, this 20th day of June, 2024.

[Signature Page Follows]

CTR CONGRESS LLC

By: PORTLAND OZ FUND GP LLC, its manager
By: Connecticut River Capital LLC, its manager

By: _____
Name: Geoffrey W. Colla
Title: Managing Member

STATE OF NEW HAMPSHIRE

COUNTY OF Grafton June 20, 2024

Personally appeared the above named Geoffrey W. Colla, the Managing Member of Connecticut River Capital LLC, the manager of Portland OZ Fund GP LLC, the manager of CTR CONGRESS, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, the free act and deed of Connecticut River Capital LLC in its said capacity, Portland OZ Fund GP LLC, in its said capacity, and of CTR CONGRESS LLC.

Before me, _____
Notary Public

Lynne Johnston Ford
Notary Public, State of New Hampshire
My Commission Expires 4/7/2026

Printed/Typed Name Com. Exp.

SEAL

133439528v5

Exhibit A

A certain lot or parcel of land, together with the buildings and improvements thereon, situated on the northerly side of Congress Street and the easterly side of Preble Street in the Monument Square area of the City of Portland, County of Cumberland, State of Maine, and further bounded and described as follows:

Beginning at the intersection of the easterly side of Preble Street with the northerly side of Congress Street;

Thence from said point of beginning and by said Congress Street N 55°30'E, 96.64 feet to land of the City of Portland, the Portland Public Library;

Thence by said City of Portland land on the following described courses and distances, which basically follow building faces of the buildings herein conveyed, and party walls with said Portland Public Library building;

N 34°50' W, 78.54 feet;

Thence N 55°41'40" E, 0.50 feet;

Thence N 32°41'30" W, 31.91 feet;

Thence N 55°02'40" E, 24.57 feet;

Thence N 32°33' W, 30.43 feet;

Thence N 56°55' E, 8.07 feet;

Thence N 31°04'10" W, 43.44 feet to land now or formerly of East End Corp.;

Thence S 58°20'30" W, 122.35 feet to Preble Street;

Thence by said Preble Street S 30°57'40" E, 190.62 feet to the point of beginning.

Together with rights, easements, terms and conditions in and to the use of Emergency Passage and restriction relating to "Right from City of Portland" as to Parcel 2 described in deed from Crown Life Insurance Company to October Corporation dated June 12, 1995, and recorded in the Cumberland County Registry of Deeds in Book 11974, Page 39, as modified by Agreement between the City of Portland and October Corporation, dated April 16, 1996 and recorded in said Registry of Deeds in Book 12460, Page 168 and in Quitclaim Deed from City of Portland to October Corporation, dated April 12, 1996 and recorded in said Registry of Deeds in Book 12460, Page 172.

Together with Driveway and Curb Easement set forth in Easement Agreement by and between GRE Congress Canal LLC and Atlantic National Holdings, LLC, dated June 2, 2008, and recorded in the Cumberland County Registry of Deeds in Book 26103, Page 335.

The above-described premises are conveyed TOGETHER WITH and SUBJECT TO the following:

1. Terms and conditions in Easement Agreement by and between GRE Congress Canal LLC and Atlantic National Holdings LLC dated June 2, 2008, recorded in Book 26103, Page 335.

2. Rights, easements, terms and conditions set forth in that certain deed from Marcy, Inc. to the City of Portland dated October 17, 1977, and recorded in Book 4118, Page 175, as modified by deed to Ram & Co., dated August 17, 1981, and recorded in Book 4842, Page 131, as affected by Agreement to Modify Easement by and between the City of Portland and October Corporation dated April 16, 1996, and recorded in Book 12460, Page 175.

3. Terms and conditions of State of Maine Department of Environmental Protection Site Location Order dated March 12, 1992, and recorded in Book 10001, Page 133, and Transfer of Findings of Facts and Order dated September 7, 1993, and recorded in Book 10965, Page 83.

4. Common law party wall rights.

5. Rights, easements, terms and conditions in and to the use of Emergency passage and restriction relating to "Right from City of Portland" as to Parcel 2 described in deed from Crown Life Insurance Company to October Corporation dated June 12, 1995, and recorded in Book 11974, Page 39, as modified by Agreement between the City of Portland and October Corporation dated April 16, 1996, and recorded in Book 12460, Page 168, and in Quitclaim Deed from City of Portland to October Corporation dated April 12, 1996, and recorded in Book 12460, Page 172.

6. Rights, easements, terms and conditions set forth in Easement Deed between the City of Portland and October Corporation dated April 11, 1997, and recorded in Book 13028, Page 74.

7. Terms and conditions of that certain Department of Environmental Protection Order dated January 13, 1999, and recorded with an Affidavit dated May 26, 2006, and recorded in Book 24001, Page 217.

Being the same premises conveyed to the Grantor by deed of 5 Monument Square, LLC, dated January 6, 2019 and recorded in the Cumberland County Registry of Deeds in Book 35700, Page 260.

Received
Recorded Register of Deeds
Jun 26,2024 03:36:16P
Cumberland County
Jessica M. Spaulding

3. CONSISTENCY WITH CITY OF PORTLAND SITE PLAN REVIEW STANDARDS

The project design has considered the Site Plan Review Standards as outlined in Section 14.6 of the City of Portland Land Use Code. This section describes the applicable standards and how the project proposes to meet them.

3.1 14.6.1 Transportation Standards

A Traffic Impact Study has been completed for this project to address the required transportation standards. A copy of this study has been uploaded as a separate Site Plan Attachment for review by City staff.

3.1.1 Impact on surrounding street systems

The project proposes site improvements that will not negatively impact Congress Street or Preble Street. The proposed curb bump out construction at the corner of Congress and Preble will facilitate loading/unloading on Congress street while helping to provide a safer street layout for pedestrians without negatively impacting traffic movements. As review progresses for the Site Plan Application, we would like to work with Public Works and Planning Staff on the layout of the bump out relative to existing pedestrian crossing locations to verify the proposed design.

Detailed discussion of traffic is provided in the Traffic Impact Study.

3.1.2 Access and circulation

The primary vehicular access to the building will be from the driveway on Preble Street. Preble Street is currently one way, and the site has an existing one way driveway that loops through the site with an entrance and exit on Preble Street. This driveway will be reconstructed, maintaining the same traffic movement pattern. The drive through that existed within the exiting driveway for a bank ATM will be removed.

The exiting driveway is located closest to the intersection of Preble and Congress Streets and will be approximately 125 feet from this intersection, continuing to provide for adequate separation. Detailed discussion of project traffic is provided in the Traffic Impact Study.

3.1.3 Public transit access

The site is located with easy access to multiple existing bus stops, including one located next to the site at Monument Square. This stop, and others in the neighborhood provide access to a variety of bus routes for hotel customers. Further discussion of the access to public transit is included in the Traffic Impact Study and the Traffic Demand Management Plan, both included as separate attachments.

3.1.4 Parking

No new parking will be provided as part of this project. The existing parking spaces within the adjacent plaza space will be maintained for use as temporary parking associated with valet operations. Parking for the hotel will be provided in the nearby Portland Public Market Garage.

3.1.5 14.6.1 Transportation Demand Management (TDM)

A Transportation Demand Management plan has been developed for the project and has been uploaded as a separate Site Plan attachment for review by City staff.

3.2 14.6.2 Environmental Quality Standards

The project primarily involves the renovation of an existing building and the reconstruction of existing paved plaza and roadway areas within a developed urban area. There are minimal existing resources to be impacted by the proposed work.

3.2.1 Preservation of significant natural features

There are no existing significant natural features within the project area.

3.2.2 Landscape preservation & Site landscaping and buffers

There is minimal existing landscaping within the project area. Existing landscaping within the plaza area behind the hotel on Preble Street will be removed and replaced as part of this project. In addition, the three street trees located on Congress Street will be replaced with new trees to be installed within the existing granite planters.

3.2.3 Site landscaping and buffers

Per the City's Site Plan standard, a minimum of one shade tree or six plantings is required per 30 linear feet of all frontages as measured along the property line. The project site includes approximately 290 linear feet of property line along Congress Street and Preble Street, requiring 10 trees and/or sets of 6 plantings per the outlined standards. The project proposes to replace three street trees on Congress Street and will install eight additional deciduous trees within the site, in addition to roughly 1,700 square feet of perennial planting beds, meeting the requirements for site landscaping.

3.2.4 Water quality, stormwater management, and erosion control

The project is a redevelopment project and will result in a minimal increase in impervious surface of 690 square feet due to the reconfiguration of the plaza space. A stormwater memo outlining compliance with the stormwater management standards of MaineDEP Chapter 500 and City of Portland Technical Memo Section 5 has been uploaded as a separate Site Plan Attachment for review by City Staff.

3.3 14.6.3 Public Infrastructure and Community Safety Standards

3.3.1 Consistency with City master plans

No new buildings will be constructed and no changes to easements or access are proposed as part of this project.

3.3.2 Public safety and fire prevention

No new buildings will be constructed as part of this project. The site work is primarily to replace site surfaces and landscaping, and will not result in any significant changes to site security or site access.

3.3.3 Public utilities

To the extent possible, existing utility services will be maintained to avoid site impacts. We are currently in the process of reviewing utility requirements with the existing utility providers, including Unitil for gas, Portland Water District for water, and Central Maine Power for electricity to determine what can be utilized, and what may need to be demolished or replaced. Ability to serve approvals will be provided when they are received. Similarly for sewer, we are evaluating the reuse of the existing sewer service, with the intent to utilize internal grease traps for proposed hotel restaurant kitchens. A request for ability to serve will be provided to Public Works for sewer under separate cover.

3.4 14.6.4 Site Design Standards

The proposed building work includes the renovation of an existing building and refresh of the existing plaza area. Many of the site design standards will not be applicable as there are no new buildings proposed as part of this project.

3.4.1 Massing, ventilation, and wind impact

No new buildings are proposed as part of this project.

3.4.2 Shadow

The project is located in the B-3 zone, and this standard is not applicable. No new buildings are proposed as part of this project.

3.4.3 Snow and ice loading

Snow removal from the plaza area will be managed through a private contractor who will clear and remove the snow from the site as required with storm events.

3.4.4 View corridors

No new buildings are proposed as part of this project.

3.4.5 Historic resources

The project is located within the Congress Street Historic District, and the building is a Historic Landmark. The project will be submitted to the City of Portland Historic Preservation Board for review and approval.

3.4.6 Exterior lighting

Site lighting within the plaza space will be provided in locations as shown on the landscaping plan and will primarily consist of bollard lighting. A photometrics plan will be provided under separate cover.

3.4.7 Noise and vibration

No new buildings are proposed as part of this project. Any modifications to the existing building's heating and ventilation systems will be designed to meet applicable state and federal emissions requirements and will not impact abutting properties.

3.4.8 Signage and wayfinding

The project signage will be provided to compliment the existing building and support the proposed plaza work. Signage will be reviewed with proposed building renovation work by the Historic Preservation Board.

3.4.9 Design standards

No new buildings are proposed as part of this project. Renovations to the existing building will be reviewed by the Historic Preservation Board.

3.5 Construction Management Plan

A construction management plan has been provided as a separate attachment.

3.6 Attachments

- Traffic Impact Study (uploaded separately to Documents folder)
- TDM Plan (uploaded separately to Documents folder)
- Stormwater Memo (uploaded separately to Documents folder)
- Construction Management Plan (uploaded separately to Documents folder)

Woodard & Curran

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) B-3

All Projects:

	Required	Proposed
Lot Size	N/A	
Area Per Dwelling Unit	N/A	
Minimum Street Frontage	15 ft	290 ft
Front Yard Minimum	N/A	
Front Yard Maximum	5 ft	2 ft 10 in
Rear Yard	N/A	
Yard Right	N/A	
Yard Left	N/A	
Side Street Setback	N/A	
Step Back	N/A	
Maximum Lot Coverage	25% > 125'	N/A
Minimum Lot Coverage	N/A	
Maximum Height	150/190 ft	Existing Building
Open Space	N/A	
Maximum Impervious Area	N/A	
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	1/4 Rooms = 23	Existing Portland Public Market Garage (595 spaces)
Loading Bays	N/A	
Other 1		
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		
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			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Att. D

MAINE REAL ESTATE TAX PAID

QUITCLAIM DEED WITH COVENANT
DLN: 1002440278048

CTR CONGRESS LLC, a Delaware limited liability company having a mailing address of 23 S. Main Street, Suite 2C, Hanover, NH 03755, for consideration paid, *GRANTS* to **MONUMENT HOTEL, LLC**, a Delaware limited liability company having a mailing address of c/o Fathom Development, LLC, 80 Exchange Street, Portland, ME 04101, with *Quitclaim Covenant*, the following:

See **Exhibit A** attached hereto and incorporated by reference herein.

IN WITNESS WHEREOF, CTR CONGRESS LLC has caused this instrument to be signed and sealed in its corporate name by Geoffrey W. Colla, the Managing Member of Connecticut River Capital LLC, the manager of Portland OZ Fund GP LLC, the manager of CTR CONGRESS LLC, thereunto duly authorized, this 20th day of June, 2024.

[Signature Page Follows]

CTR CONGRESS LLC

By: PORTLAND OZ FUND GP LLC, its manager
By: Connecticut River Capital LLC, its manager

By: Geoffrey W. Colla
Name: Geoffrey W. Colla
Title: Managing Member

STATE OF NEW HAMPSHIRE

COUNTY OF Grafton June 20, 2024

Personally appeared the above named Geoffrey W. Colla, the Managing Member of Connecticut River Capital LLC, the manager of Portland OZ Fund GP LLC, the manager of CTR CONGRESS, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, the free act and deed of Connecticut River Capital LLC in its said capacity, Portland OZ Fund GP LLC, in its said capacity, and of CTR CONGRESS LLC.

Before me,

Notary Public

Lynne Johnston Ford
Notary Public, State of New Hampshire
My Commission Expires 4/7/2026

Printed/Typed Name Com. Exp.

SEAL

133439528v5

Exhibit A

A certain lot or parcel of land, together with the buildings and improvements thereon, situated on the northerly side of Congress Street and the easterly side of Preble Street in the Monument Square area of the City of Portland, County of Cumberland, State of Maine, and further bounded and described as follows:

Beginning at the intersection of the easterly side of Preble Street with the northerly side of Congress Street;

Thence from said point of beginning and by said Congress Street N 55°30'E, 96.64 feet to land of the City of Portland, the Portland Public Library;

Thence by said City of Portland land on the following described courses and distances, which basically follow building faces of the buildings herein conveyed, and party walls with said Portland Public Library building;

N 34°50' W, 78.54 feet;

Thence N 55°41'40" E, 0.50 feet;

Thence N 32°41'30" W, 31.91 feet;

Thence N 55°02'40" E, 24.57 feet;

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Together with rights, easements, terms and conditions in and to the use of Emergency Passage and restriction relating to "Right from City of Portland" as to Parcel 2 described in deed from Crown Life Insurance Company to October Corporation dated June 12, 1995, and recorded in the Cumberland County Registry of Deeds in Book 11974, Page 39, as modified by Agreement between the City of Portland and October Corporation, dated April 16, 1996 and recorded in said Registry of Deeds in Book 12460, Page 168 and in Quitclaim Deed from City of Portland to October Corporation, dated April 12, 1996 and recorded in said Registry of Deeds in Book 12460, Page 172.

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4. Common law party wall rights.

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6. Rights, easements, terms and conditions set forth in Easement Deed between the City of Portland and October Corporation dated April 11, 1997, and recorded in Book 13028, Page 74.

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Being the same premises conveyed to the Grantor by deed of 5 Monument Square, LLC, dated January 6, 2019 and recorded in the Cumberland County Registry of Deeds in Book 35700, Page 260.

Received
Recorded Register of Deeds
Jun 26,2024 03:36:16P
Cumberland County
Jessica M. Spaulding

'Julie Orrego' via Planning Board <planningboard@portlandmaine.gov> 10:22 AM (1 hour ago)
to planningboard@portlandmaine.gov

Good morning, Chair Mazer and other members of the Planning Board,

Please see attached document with Preble Street's testimony against this proposed plan.

Thank you,

Julie

Julie Orrego, MSW
Advocacy Supervisor
Preble Street
38 Preble St.
Portland, ME 04101
ext. 2086
Work cell: 207-835-9724
Pronouns: she/her/hers

Dear Chair Mazer and other members of the Planning Board, my name is Julie Orrego, and I am the advocacy supervisor at Preble Street.

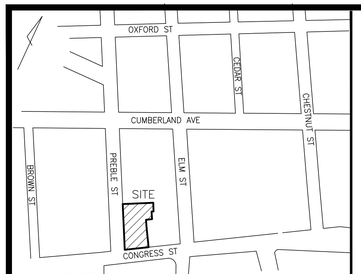
I am testifying on behalf of Preble Street against the proposed development of a hotel with a restaurant and bar at 465 Congress Street. As you know, we have a housing crisis in the City of Portland and the State of Maine. Maine needs more than 80,000 housing units to meet current demand. As such, this development fails to address our community's most pressing need: affordable and accessible housing.

The development of another luxury hotel will occupy more precious land and potentially increase the property value in surrounding areas, which makes it more difficult for other developers to build affordable housing projects, as land costs will increase. Additionally, this project will raise property taxes and rent, potentially worsening our existing housing crises.

According to the State of Maine Housing Production Needs Study, renters in Maine face affordability and availability challenges and have seen rent and home prices increase significantly since 2022. In most cases, these increased housing costs outpace wage increases. For households spending so much of their income on rent, any unexpected expense — such as a car repair or emergency medical care — could lead to eviction and homelessness. Often living on fixed incomes, senior citizens are especially vulnerable to losing their homes, and because they are disproportionately affected by poverty, Black, Indigenous, and People of Color are also at high risk. Additionally, Maine has seen a significant decrease in renter-occupied units since 2016. This trend has exacerbated the affordability crisis, with most low-income renters (earning below 60% of the AMI) spending over 30% of their income on rent in 2021.

Preble Street advocates for policies and programs that address the root causes of poverty, homelessness, and housing instability in Maine. Our advocacy work includes community organizing, policy advocacy, and system change to enhance the lives of the people we serve. Everyone deserves a safe, stable place to call home. Affordable housing is about building strong families, fostering communities, and creating opportunities for people to thrive in secure spaces. We must invest in affordable housing to address our current housing crisis.

We urge the planning board to reject this proposal and prioritize the needs of our community. Let's invest in housing solutions that will truly make a difference in the lives of Portland residents.



Location Map N.T.S.

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.

Legal Description

THE LAND REFERRED TO HEREIN IS SITUATED IN THE COUNTY OF CUMBERLAND, STATE OF MAINE, AND IS DESCRIBED AS FOLLOWS:

A CERTAIN LOT OR PARCEL OF LAND, TOGETHER WITH THE BUILDINGS AND IMPROVEMENTS THEREON, SITUATED ON THE NORTHERLY SIDE OF CONGRESS STREET AND THE EASTERLY SIDE OF PREBLE STREET IN THE MONUMENT SQUARE AREA OF THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE, AND FURTHER BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE EASTERLY SIDE OF PREBLE STREET WITH THE NORTHERLY SIDE OF CONGRESS STREET;

THENCE FROM SAID POINT OF BEGINNING AND BY SAID CONGRESS STREET N 55°30'E, 96.64 FEET TO LAND OF THE CITY OF PORTLAND, THE PORTLAND PUBLIC LIBRARY;

THENCE BY SAID CITY OF PORTLAND LAND ON THE FOLLOWING DESCRIBED COURSES AND DISTANCES, WHICH BASICALLY FOLLOW BUILDING FACES OF THE BUILDINGS HEREIN CONVEYED, AND PARTY WALLS WITH SAID PORTLAND PUBLIC LIBRARY BUILDING;

N 34°50'W, 78.54 FEET;
THENCE N 55°41'40" E, 0.50 FEET;
THENCE N 32°41'30" W, 31.91 FEET;
THENCE N 55°02'40" E, 24.57 FEET;
THENCE N 32°33'W, 30.43 FEET;
THENCE N 56°55'E, 8.07 FEET;
THENCE N 31 °04'1 0" W, 43.44 FEET TO LAND NOW OR FORMERLY OF EAST END CORP.;

THENCE S 58°20'30" W, 122.35 FEET TO PREBLE STREET;
THENCE BY SAID PREBLE STREET S 30°57'40" E, 190.62 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH RIGHTS, EASEMENTS, TERMS AND CONDITIONS IN AND TO THE USE OF EMERGENCY PASSAGE AND RESTRICTION RELATING TO "RIGHT FROM CITY OF PORTLAND" AS TO PARCEL 2 DESCRIBED IN DEED FROM CROWN LIFE INSURANCE COMPANY TO OCTOBER CORPORATION DATED JUNE 12, 1995, AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 11974, PAGE 39, AS MODIFIED BY AGREEMENT BETWEEN THE CITY OF PORTLAND AND OCTOBER CORPORATION, DATED APRIL 16, 1996 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 12460, PAGE 168 AND IN QUITCLAIM DEED FROM CITY OF PORTLAND TO OCTOBER CORPORATION, DATED APRIL 12, 1996 AND RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 12460, PAGE 172.

Schedule B Exceptions

FIRST AMERICAN TITLE INSURANCE COMPANY
COMMITMENT FILE NO. BTC3484/TF7951 REV: V1 EFFECTIVE DATE: MARCH 1, 2024

6. EASEMENT AGREEMENT BY AND BETWEEN GRE CONGRESS CANAL LLC AND ATLANTIC NATIONAL HOLDINGS LLC DATED JUNE 2, 2008, RECORDED IN BOOK 26103, PAGE 335. NOTE: THE GARAGE PARCEL AND THE SKYWALK ARE NON-LOCUS. *–DRIVEWAY AND CURB EASEMENT BENEFITS SURVEYED PROPERTY AS SHOWN AND THE ACCESS EASEMENT SHOWN AFFECTS SURVEYED PROPERTY AS SHOWN.*

7. RIGHTS, EASEMENTS, TERMS AND CONDITIONS SET FORTH IN THAT CERTAIN DEED FROM MARCY, INC. TO THE CITY OF PORTLAND DATED OCTOBER 17, 1977, AND RECORDED IN BOOK 4118, PAGE 175, AS MODIFIED BY DEED TO RAM & CO., DATED AUGUST 17, 1981, AND RECORDED IN BOOK 4842, PAGE 131, AS AFFECTED BY AGREEMENT TO MODIFY EASEMENT BY AND BETWEEN THE CITY OF PORTLAND AND OCTOBER CORPORATION DATED APRIL 16, 1996, AND RECORDED IN BOOK 12460, PAGE 175. *–AFFECTS SURVEYED PROPERTY AS SHOWN.*

8. TERMS AND CONDITIONS OF STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION SITE LOCATION ORDER DATED MARCH 12, 1992, AND RECORDED IN BOOK 10001, PAGE 133, AND TRANSFER OF FINDINGS OF FACTS AND ORDER DATED SEPTEMBER 7, 1993, AND RECORDED IN BOOK 10965, PAGE 83. *–NON–SURVEY ITEM.*

9. COMMON LAW PARTY WALL RIGHTS. *–NON–SURVEY ITEM.*

10. RIGHTS, EASEMENTS, TERMS AND CONDITIONS IN AND TO THE USE OF EMERGENCY PASSAGE AND RESTRICTION RELATING TO "RIGHT FROM CITY OF PORTLAND" AS TO PARCEL 2 DESCRIBED IN DEED FROM CROWN LIFE INSURANCE COMPANY TO OCTOBER CORPORATION DATED JUNE 12, 1995, AND RECORDED IN BOOK 11974, PAGE 39, AS MODIFIED BY AGREEMENT BETWEEN THE CITY OF PORTLAND AND OCTOBER CORPORATION DATED APRIL 16, 1996, AND RECORDED IN BOOK 12460, PAGE 168, AND IN QUITCLAIM DEED FROM CITY OF PORTLAND TO OCTOBER CORPORATION DATED APRIL 12, 1996, AND RECORDED IN BOOK 12460, PAGE 172. *–BENEFITS THE SURVEYED PROPERTY AS SHOWN.*

11. RIGHTS, EASEMENTS, TERMS AND CONDITIONS SET FORTH IN EASEMENT DEED BETWEEN THE CITY OF PORTLAND AND OCTOBER CORPORATION DATED APRIL 11, 1997, AND RECORDED IN BOOK 13028, PAGE 74. *– AFFECTS SURVEYED PROPERTY AS SHOWN.*

12. TERMS AND CONDITIONS OF THAT CERTAIN DEPARTMENT OF ENVIRONMENTAL PROTECTION ORDER DATED JANUARY 13, 1999, AND RECORDED WITH AN AFFIDAVIT DATED MAY 26, 2006, AND RECORDED IN BOOK 24001, PAGE 217. *–NON–SURVEY ITEM.*

13. SUCH STATE OF FACTS DEPICTED ON AN UNRECORDED PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY #465 CONGRESS STREET PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR CONNECTICUT RIVER CAPITAL" PREPARED BY OWEN HASKELL, INC. DATED JANUARY 22, 2019, AND LAST REVISED JUNE 4, 2019, JOB #2019–003 P INCLUDING:

(1) POSSIBLE ENCROACHMENTS OF CITY OF PORTLAND PUBLIC LIBRARY ONTO PREMISES;
(2) POSSIBLE ENCROACHMENT OF AWNING OVERHANG INTO CONGRESS STREET APPROXIMATELY 6.3'; AND
(3) POSSIBLE ENCROACHMENT OF FASCIA AND EAVES OVERHANG INTO PREBLE STREET.

–ITEMS 1 AND 3 ARE SHOWN HEREON AS POSSIBLE ENCROACHMENTS "A" AND "C" RESPECTIVELY. THE AWNING DESCRIBED IN ITEM 2 HAS BEEN REMOVED.

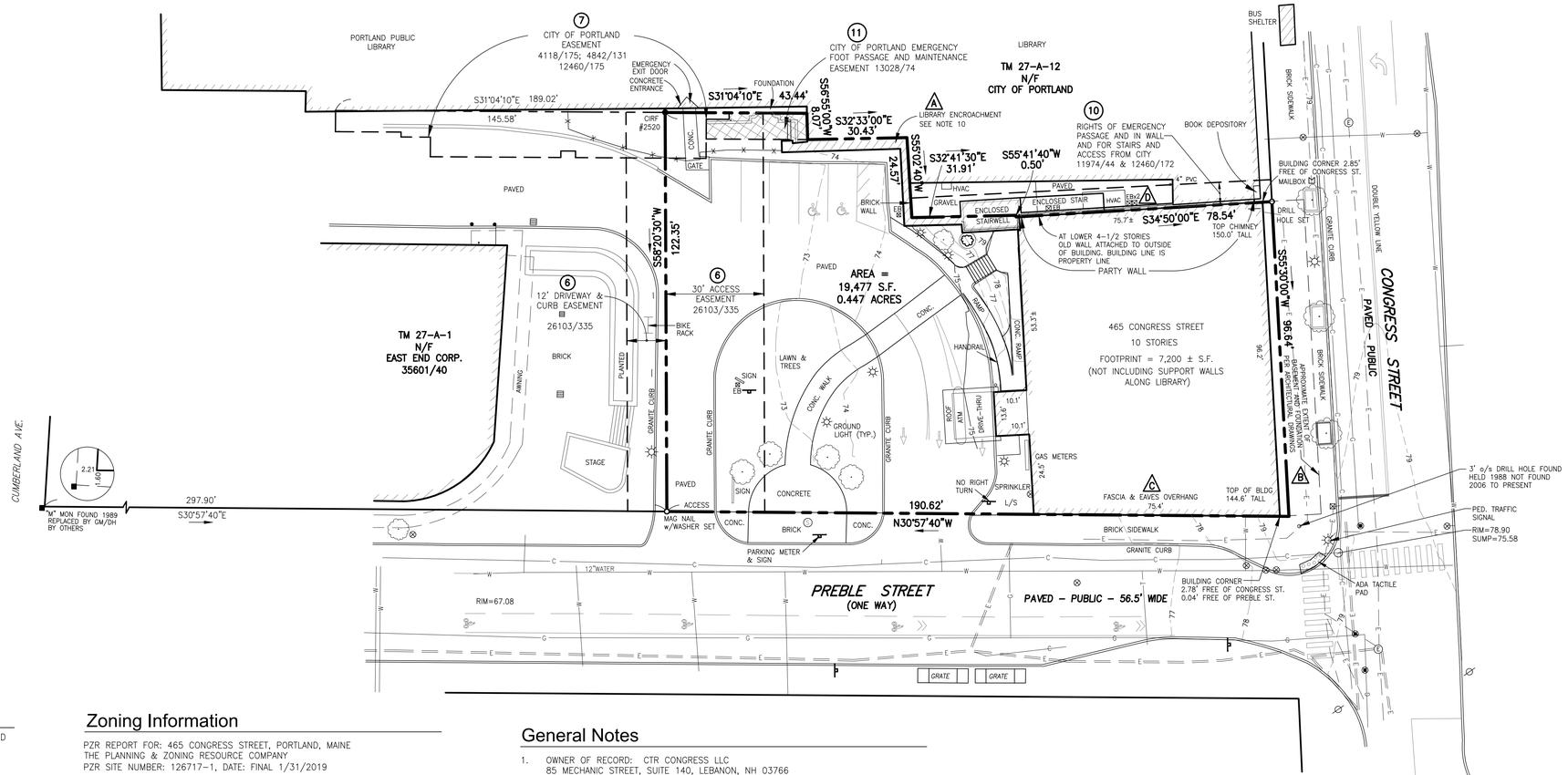
14. SUCH STATE OF FACTS DEPICTED ON AN UNRECORDED PLAN ENTITLED "BOUNDARY SURVEY AT #465 CONGRESS STREET, PORTLAND, MAINE, MADE FOR CONNECTICUT RIVER CAPITAL" PREPARED BY OWEN HASKELL, INC. DATED SEPTEMBER 9,2022, JOB #2021–003 P INCLUDING:

(1) POSSIBLE ENCROACHMENT OF CITY OF PORTLAND PUBLIC LIBRARY ONTO PREMISES; AND
(2) POSSIBLE ENCROACHMENT OF FASCIA AND EAVES OVERHANG INTO STREET.

–ITEMS 1 AND 3 ARE SHOWN HEREON AS POSSIBLE ENCROACHMENTS "A" AND "C" RESPECTIVELY.

15. RIGHTS OF THE FOLLOWING TENANTS UNDER UNRECORDED LEASES:
(1) M&T BANK, SUCCESSOR IN INTEREST TO PEOPLE'S UNITED BANK NA, SUCCESSOR IN INTEREST TO MAINE BANK & TRUST COMPANY;
(2) RICHARDSON, WHITMAN, LARGE & BADGER; AND
(3) MAINE FIBER COMPANY, LLC

–NON–SURVEY ITEMS.



Legend

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- GAS VALVE
- SIGN
- CATCH BASIN
- WATER VALVE OR SHUTOFF
- LIGHT POLE
- EB ELECTRICAL BOX/SWITCH
- MB MAILBOX
- DECIDUOUS TREE
- CURB
- OHW OVERHEAD WIRES
- E UNDERGROUND ELECTRIC
- C COMMUNICATION LINE
- W WATER LINE
- G GAS LINE
- T TELEPHONE
- 80 1' CONTOUR
- IPF/IRF IRON PIPE OR ROD FOUND
- N/F NOW OR FORMERLY
- 000/000 DEED BOOK / PAGE
- CONC. CONCRETE
- 1 SCHEDULE B EXCEPTION
- A POSSIBLE ENCROACHMENT

SCALE : 1" = 20'

0' 10' 20' 40'

Zoning Information

PZR REPORT FOR: 465 CONGRESS STREET, PORTLAND, MAINE
THE PLANNING & ZONING RESOURCE COMPANY
PZR SITE NUMBER: 126717–1, DATE: FINAL 1/31/2019

ZONING DESIGNATION:
"B–3" DOWNTOWN BUSINESS WITHIN THE DOWNTOWN ENTERTAINMENT OVERLAND AND PEDESTRIAN ACTIVITIES DISTRICT OVERLAY ZONES

BUILDING SETBACK LINES:
FRONT: ALL BUILDINGS OR STRUCTURES SHALL BE LOCATED WITHIN 5 FEET OF THE PROPERTY LINE ALONG STREET FRONTAGES
SIDE/REAR: NON REQUIRED

MAXIMUM BUILDING HEIGHT: 35 FEET WITHIN 50 FEET OF ANY STREET FRONTAGE MAXIMUM 190 FEET PER DOWNTOWN HEIGHT OVERLAY

MINIMUM STREET FRONTAGE: 15 FEET

MAXIMUM LOT COVERAGE: 100%

PARKING SPACES REQUIRED: 211 TOTAL PARKING SPACES

Flood Zone Note

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS LOCATED IN ZONE C (AREAS OF MINIMAL FLOODING), ON THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 230051–0013B, WHICH BEARS AN EFFECTIVE DATE OF JULY 17, 1986.

Possible Encroachments

A CITY OF PORTLAND PUBLIC LIBRARY USE OF WALL ON SUBJECT PROPERTY AS A STRUCTURAL OR WATERPROOFING ELEMENT.

B BUILDING BASEMENT MAY EXTEND BELOW THE SIDEWALK 10'± INTO CONGRESS STREET.

C FASCIA & EAVES OVERHANG INTO STREET.

D HVAC AND ELECTRICAL EQUIPMENT BELONGING TO THE SUBJECT PROPERTY ONTO CITY OF PORTLAND LAND 6'±.

General Notes

1. OWNER OF RECORD: CTR CONGRESS LLC
85 MECHANIC STREET, SUITE 140, LEBANON, NH 03766
CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 35700 PAGE 260

2. LOCUS IS SHOWN AS LOT 15–1 OF BLOCK A ON CITY OF PORTLAND'S PROPERTY MAP 27 (PARCEL ID# 27–A–15–1)

3. BEARINGS ARE MAGNETIC 1973 PER PLAN REFERENCE 7.

4. STREET LINES DETERMINED FROM CITY OF PORTLAND ENGINEERING DEPARTMENT RECORDS AS SHOWN ON PLAN REFERENCE 1.

5. NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, BUILDING ADDITIONS, OR RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WERE OBSERVED.

6. NO PROPOSED CHANGES IN STREET LINES IS KNOWN BY THIS SURVEYOR.

7. THE SUBJECT PROPERTY HAS DIRECT VEHICULAR AND PEDESTRIAN ACCESS TO AND FROM PREBLE STREET, A DEDICATED PUBLIC RIGHT OF WAY.

8. THERE ARE 3 REGULAR PARKING SPACES AND 2 HANDICAP SPACES ON SITE.

9. THE PARCELS CONTAINED IN THE LEGAL DESCRIPTION ARE CONTIGUOUS WITHOUT ANY GAPS, GORES OR OVERLAPS.

10. THE BRICK WALL ALONG THE PROPERTY LINE COMMON WITH THE CITY OF PORTLAND LIBRARY PARCEL IS BELIEVED TO BE THE REMNANTS OF AN EXTERIOR WALL OF A BUILDING WHICH USED TO BE SITUATED ON THE SUBJECT PARCEL AND HAS LONG SINCE BEEN REMOVED. THE EXTERIOR LINE OF THIS WALL (CITY OF PORTLAND SIDE) WAS SURVEYED BY THIS FIRM IN THE 1970'S PRIOR TO THE CONSTRUCTION OF THE LIBRARY. AT THAT TIME, THE BUILDING LINE WAS SHOWN TO BE ON OR JUST FREE OF THE PROPERTY LINE. IT APPEARS THAT THE CITY OF PORTLAND PUBLIC LIBRARY BUILDING WAS CONSTRUCTED RIGHT UP TO THAT EXISTING WALL INCLUDING USING THE WALL/BUILDING FOR FLASHING AND WATERPROOFING PURPOSES. IT IS NOT KNOWN TO WHAT EXTENT THE REMAINING WALL IS USED AS AN EXTERIOR WALL OF THE LIBRARY.

Plan References

1. STANDARD BOUNDARY SURVEY ON CONGRESS & PREBLE STREET, PORTLAND, MAINE FOR MONUMENT SQUARE ASSOC. DATED APRIL 24, 1989, REVISED 4–27–95 BY OWEN HASKELL, INC.

2. LAND TITLE SURVEY ON CUMBERLAND AVENUE AND PREBLE STREET, PORTLAND, MAINE FOR AUGUST CORPORATION DATED JULY 6, 1995 BY OWEN HASKELL, INC.

3. PLAN OF LAND AT CONGRESS AND ELM STREETS IN PORTLAND, MAINE FOR THE CITY OF PORTLAND DATED FEB. 17, 1997 BY OWEN HASKELL, INC.

4. STANDARD BOUNDARY AND TOPOGRAPHIC SURVEY ON CUMBERLAND AVE., PREBLE ST. & ELM ST., PORTLAND, MAINE MADE FOR AUGUST CORPORATION DATED OCT. 25, 1996 REVISED THRU 5–28–97 BY OWEN HASKELL, INC.

5. LAND TITLE SURVEY ON CUMBERLAND AVENUE & PREBLE STREET, PORTLAND, MAINE FOR AUGUST CORPORATION JULY 20, 1995 REVISED 9–5–95 OWEN HASKELL, INC. JOB NO. 95125P.

6. ALTA/ACSM LAND TITLE SURVEY ON CONGRESS STREET, CUMBERLAND AVENUE, PREBLE STREET & ELM STREET, PORTLAND, MAINE MADE FOR RECORD OWNER OCTOBER CORPORATION AUGUST 23, 2006 BY OWEN HASKELL, INC. JOB NO. 2006–134P.

7. ALTA/ACSM LAND TITLE SURVEY ON CONGRESS STREET, CUMBERLAND AVENUE, PREBLE STREET & ELM STREET, PORTLAND, MAINE MADE FOR RECORD OWNER GRE CONGRESS CANAL LLC DATED JAN. 10, 2007 BY OWEN HASKELL, INC. JOB NO. 2006–134P.

8. ALTA/ACSM LAND TITLE SURVEY, #465 CONGRESS STREET, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR CONNECTICUT RIVER CAPITAL DATED JANUARY 22, 2019 REVISED JUNE 4, 2019 BY OWEN HASKELL, INC. JOB NO. 2019–003P.

9. BOUNDARY SURVEY AT #465 CONGRESS STREET, PORTLAND, MAINE MADE FOR CONNECTICUT RIVER CAPITAL DATED SEPTEMBER 9, 2022 REVISED FEBRUARY 14, 2023 BY OWEN HASKELL, INC. JOB NO. 2019–003P.

ALTA / NSPS Land Title Survey

465 Congress Street
Portland, Cumberland County, Maine
Made For
Fidelity RR, LLC
80 Exchange Street, Suite 400, Portland, Maine

Surveyor's Certification

TO: FIRST AMERICAN TITLE INSURANCE COMPANY, MONUMENT HOTEL, LLC, A DELAWARE LIMITED LIABILITY COMPANY, FIDELITY RR, LLC, A DELAWARE LIMITED LIABILITY COMPANY, MASCOMA BANK, A BENEFIT CORPORATION ORGANIZED UNDER THE LAWS OF THE STATE OF NEW HAMPSHIRE, AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS ATIMA

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6(A), 7(A), 7(B)(1), 7(C), 8, 9, 10, 11(A), 13, 16, 17, 18, AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED IN JANUARY 2007 WITH A FIELD UPDATE ON MARCH 9, 2024.

SAMUEL D. GLIDDEN
PROFESSIONAL LAND SURVEYOR NO. 2520

DATE OF PLAT OR MAP: MARCH 26, 2024
DATE OF LAST REVISION: AUGUST 6, 2024

STATE OF MAINE · SAMUEL D GLIDDEN · 2520 · PROFESSIONAL LAND SURVEYOR

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105

DRAWN BY: SDG / JLW	FIELD BOOK: FILE	JOB NO.	2024-056 P
CHECKED BY: SDG	SCALE: 1" = 20'	DRWG. NO.	1



03 NTS **NORTH CORNER**



04 NTS **NORTHWEST ELEVATION**



02 NTS **WEST CORNER**



05 NTS **SOUTH CORNER**



03 NTS **SOUTHEAST ELEVATION**



01 NTS **EAST CORNER**

SHEET NOTES

GENERAL NOTES

AAmp.

AAMP STUDIO LLC
181 STATE ST
SUITE 301
PORTLAND, ME 04101
T 207.805.1212

FATHOM COMPANIES
80 EXCHANGE ST
PORTLAND, ME 04101

DESIGN SUBMISSION

△	DATE	DESCRIPTION

SEAL SIGNATURE

NOT FOR CONSTRUCTION

PROJECT
MONUMENT HOTEL

PROJECT NUMBER
240202

DRAWING TITLE
EXTERIOR PHOTOS

SCALE

SPA-A03

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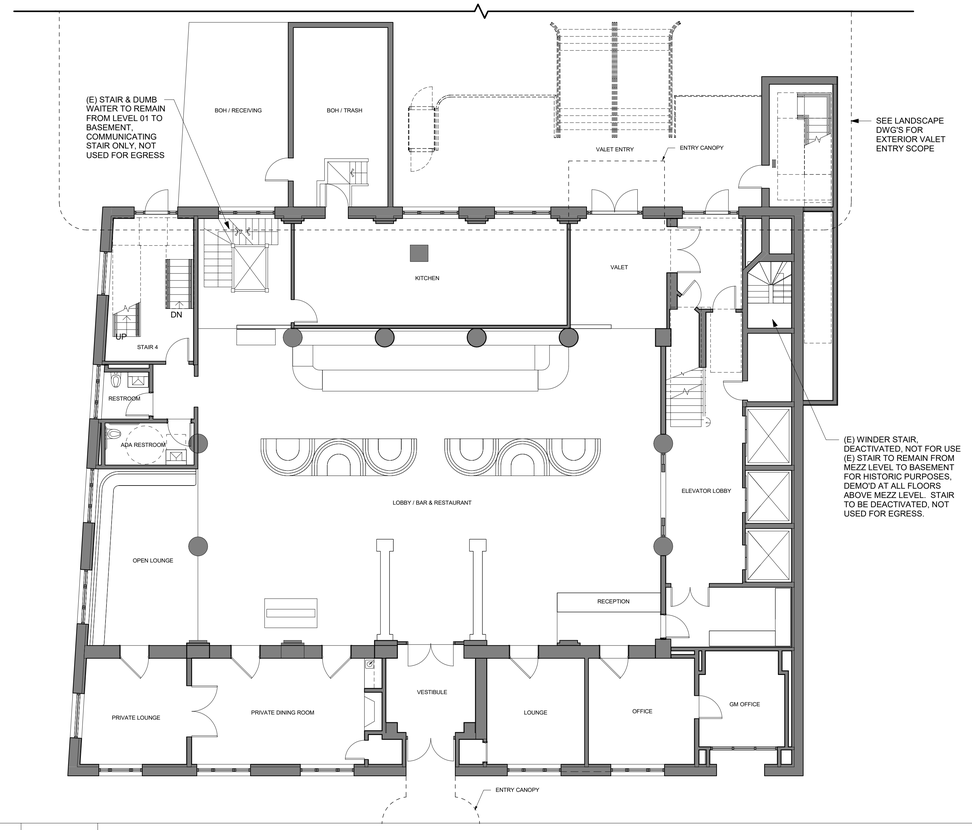
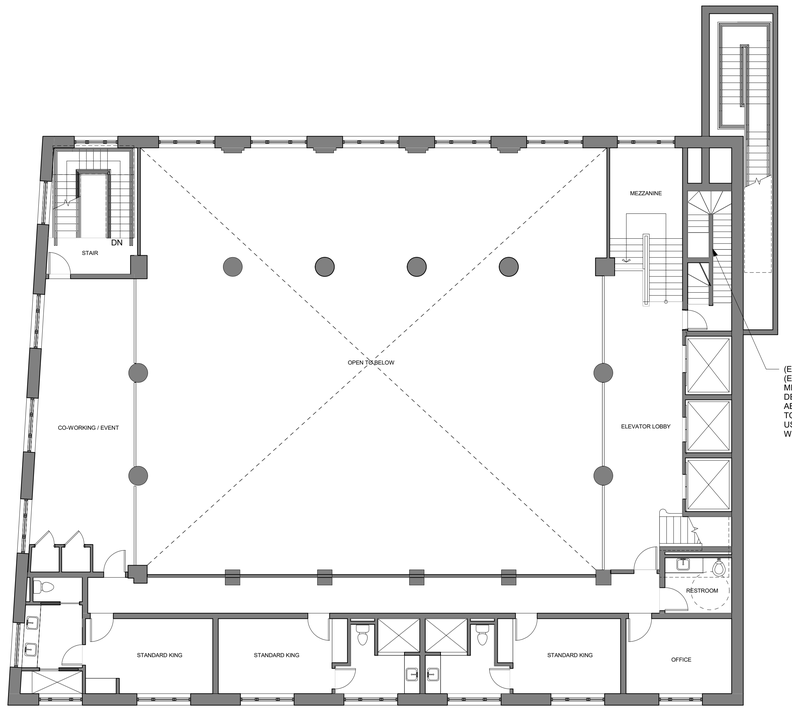
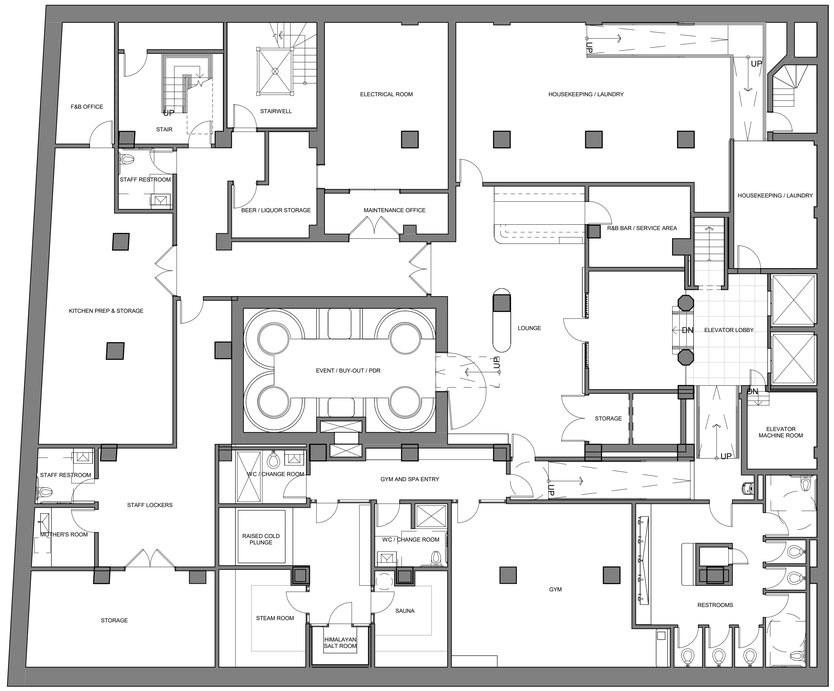
04 1/8" = 1'-0" **LEVEL 2**



02 1/8" = 1'-0" **GROUND**



03 1/8" = 1'-0" **MEZZANINE**



01 1/8" = 1'-0" **BASEMENT**

SHEET NOTES

GENERAL NOTES

AAmp.

AAMP STUDIO LLC
181 STATE ST
SUITE 301
PORTLAND, ME 04101
T 207.805.1212

FATHOM COMPANIES
80 EXCHANGE ST
PORTLAND, ME 04101

DESIGN SUBMISSION

△ DATE	DESCRIPTION

SEAL SIGNATURE

NOT FOR CONSTRUCTION

PROJECT
MONUMENT HOTEL

PROJECT NUMBER
240202

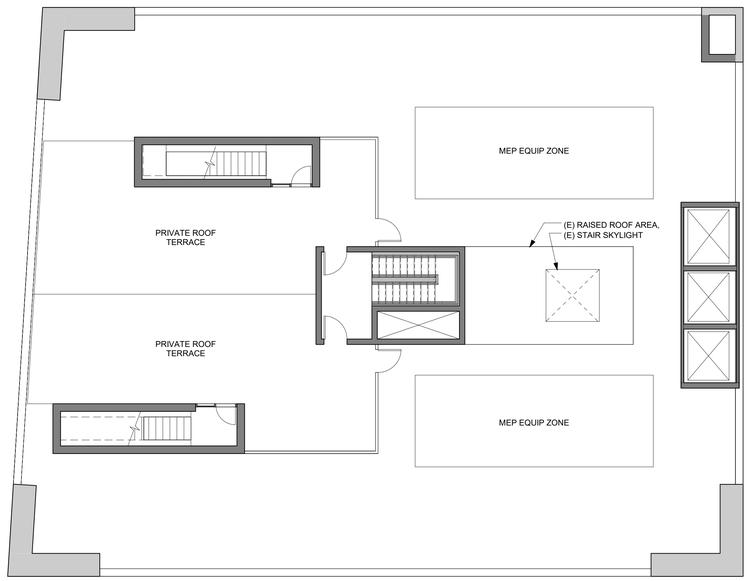
DRAWING TITLE
FLOOR PLANS

SCALE
1/8" = 1'-0"

SPA-A01

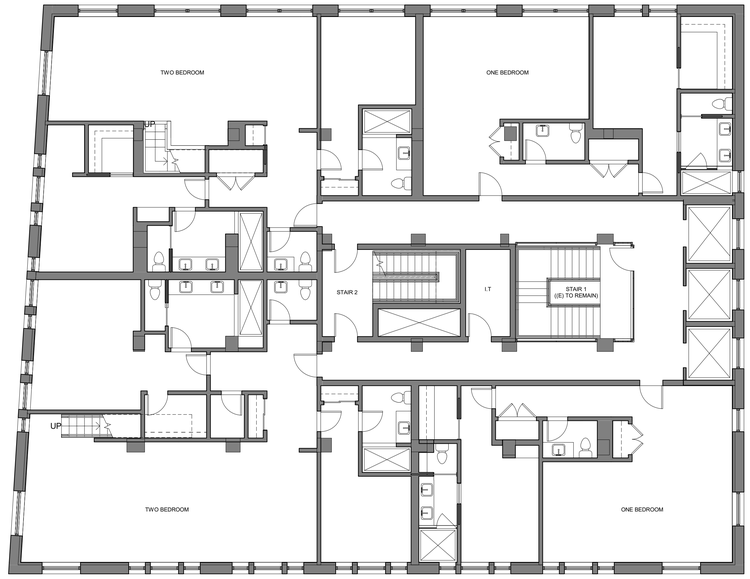
8/1/2024 3:33:22 PM Autodesk Docs://Monument Hotel/Monument Hotel_AAmp.rvt

04 1/8" = 1'-0" **NOT USED**



03 1/8" = 1'-0" **ROOF**

02 1/8" = 1'-0" **LEVEL 10**



01 1/8" = 1'-0" **LEVELS 3-9**



SHEET NOTES

GENERAL NOTES

AAmp.

AAMP STUDIO LLC
181 STATE ST
SUITE 301
PORTLAND, ME 04101
T 207.805.1212

FATHOM COMPANIES
80 EXCHANGE ST
PORTLAND, ME 04101

DESIGN SUBMISSION

△	DATE	DESCRIPTION

SEAL SIGNATURE

NOT FOR CONSTRUCTION

PROJECT
MONUMENT HOTEL

PROJECT NUMBER
240202

DRAWING TITLE
FLOOR PLANS

SCALE
1/8" = 1'-0"

SPA-A02

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SHEET NOTES

GENERAL NOTES

AAmp.

AAMP STUDIO LLC

181 STATE ST
SUITE 301
PORTLAND, ME 04101
T 207.805.1212

CLIENT / OWNER

FATHOM COMPANIES
80 EXCHANGE ST
PORTLAND, ME 04101

CIVIL
Woodard & Curran
12 Mountfort St
Portland, ME 04101
Tel (800) 426-4262

LANDSCAPE
Soren deNiord Design Studio
43 Wellwood Rd
Portland, ME 04103
Tel (207) 400-2450

STRUCTURAL
Thornton Tomasetti
14 York Street
Portland, ME 04101
Tel (207) 245-6060

MECH, ELEC & FIRE PROTECTION
WSP USA
100 Sumer Street, FL 13
Boston, MA 02110
Tel (617) 426-7330

DESIGN SUBMISSION

△ DATE	DESCRIPTION

STATE OF MAINE
LAUREN JANE SWETT
No. 12284
LICENSED PROFESSIONAL ENGINEER

SEAL SIGNATURE

NOT FOR CONSTRUCTION

PROJECT
465 CONGRESS STREET

PROJECT NUMBER
240202

DRAWING TITLE
EXISTING CONDITIONS PLAN

SCALE
1" = 10'

C-0-101

BAR SCALE
1" = 10'
CHECK GRAPHIC SCALE BEFORE USING

\\woodardcurran.net\shared\Projects\02\34831.00 monument hotel 465 congress redev\wip\Drawings\Civil\02534831.00-C-0-101.dwg, Sep 24, 2024 - 9:12am LSWETT

SHEET NOTES

GENERAL NOTES

AAmp.

AAMP STUDIO LLC

181 STATE ST
SUITE 301
PORTLAND, ME 04101
T 207.805.1212

CLIENT / OWNER

FATHOM COMPANIES
80 EXCHANGE ST
PORTLAND, ME 04101

CIVIL
Woodard & Curran
12 Mountfort St
Portland, ME 04101
Tel (800) 426-4262

LANDSCAPE
Soren deNiord Design Studio
43 Wellwood Rd
Portland, ME 04103
Tel (207) 400-2450

STRUCTURAL
Thornton Tomasetti
14 York Street
Portland, ME 04101
Tel (207) 245-6060

MECH, ELEC & FIRE PROTECTION
WSP USA
100 Sumer Street, FL 13
Boston, MA 02110
Tel (617) 426-7330

DESIGN SUBMISSION

△ DATE	DESCRIPTION
10/16/2024	SITE PLAN REVISION

STATE OF MAINE
LAUREN JANE SWETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

SEAL SIGNATURE

NOT FOR CONSTRUCTION

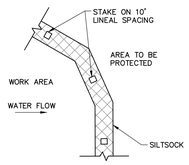
PROJECT
465 CONGRESS STREET

PROJECT NUMBER
240202

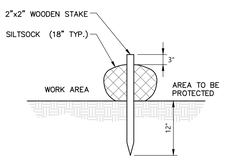
DRAWING TITLE
PROPOSED SITE PLAN

SCALE
as noted

C-0-102



PLAN VIEW



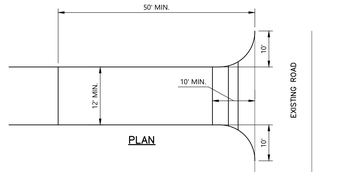
SECTION

NOTE:

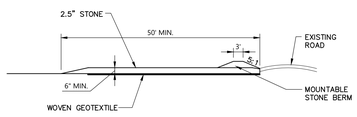
1. WHEN STAKING IS NOT POSSIBLE, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT BARRIER TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.

SEDIMENT BARRIER – SILT SOCK

N.T.S.



PLAN



PROFILE

NOTES:

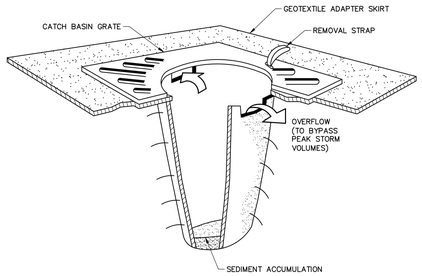
- CONSTRUCTION ENTRANCES MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
- WHEEL WASH PITS MAY ALSO BE USED, IF APPROVED.

MAINTENANCE: INSPECT FOR EFFECTIVE REMOVAL OF SOIL FROM VEHICLES PRIOR TO LEAVING THE SITE. SWEEP ANY SOIL FROM ADJACENT ROADWAYS.

REMOVAL: AT LEAST ONE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL ALL AREAS OF THE SITE ARE STABILIZED.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

N.T.S.



NOTES:

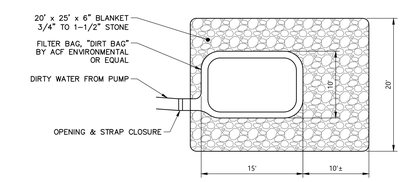
CATCH BASIN PROTECTION TO BE "SILTSACK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES).

INSERT TO BE EMPTIED IN AN APPROVED MANNER WHEN IT IS 1/2 FULL OF SEDIMENT.

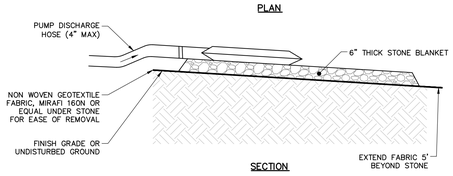
INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

TEMPORARY INLET PROTECTION

N.T.S.



PLAN



SECTION

NOTES:

1. LOCATE DISCHARGE SITE ON FLAT UPLAND AREAS AS FAR AWAY AS POSSIBLE FROM STREAMS, WETLANDS, OTHER RESOURCES AND POINTS OF CONCENTRATED FLOW.
2. DISCHARGE NOT PERMITTED WITHIN 100' OF A NATURAL RESOURCE.
3. DOWNGRADIENT RECEIVING AREA MUST BE WELL VEGETATED OR OTHERWISE STABLE FROM EROSION, I.E. FOREST FLOOR OR COARSE GRAVEL/STONE.
4. NEVER DISCHARGE TO AREAS THAT ARE BARE OR NEWLY VEGETATED.
5. DIRT BAG MATERIAL BASED ON PARTICLE SIZE IN DIRTY WATER, I.E., FOR COARSE PARTICLES A WOVEN MATERIAL; FOR SILTS/CLAYS A NON-WOVEN MATERIAL.
6. DO NOT OVER PRESSURIZE DIRT BAG OR USE BEYOND CAPACITY.
7. CHANNELS DUG FOR DISCHARGING WATER FROM THE EXCAVATED AREA NEED TO BE STABLE. IF FLOW VELOCITIES CAUSE EROSION WITHIN THE CHANNEL THEN A DITCH LINING SHOULD BE USED.
8. BUCKETED WATER SHOULD BE DISCHARGED IN A STABLE MANNER TO THE SEDIMENT REMOVAL AREA. A SPLASH PAD OF RIPRAP UNDERLAIN WITH GEOTEXTILE MAY BE NECESSARY TO PREVENT SCOURING OF SOIL.
9. DEWATERING IN PERIODS OF INTENSE, HEAVY RAIN, WHEN THE INFILTRATIVE CAPACITY OF THE SOIL IS EXCEEDED, SHOULD BE AVOIDED.
10. INSTALL DIVERSION DITCHES OR BERMS TO MINIMIZE THE AMOUNT OF CLEAN STORMWATER RUNOFF ALLOWED INTO THE EXCAVATED AREA.
11. DURING THE ACTIVE DEWATERING PROCESS, INSPECTION OF THE DEWATERING FACILITY SHOULD BE REVIEWED FREQUENTLY. SPECIAL ATTENTION SHOULD BE PAID TO THE BUFFER AREA FOR ANY SIGN OF EROSION AND CONCENTRATION OF FLOW THAT MAY COMPROMISE THE BUFFER AREA. OBSERVE WHERE POSSIBLE THE VISUAL QUALITY OF THE EFFLUENT AND DETERMINE IF ADDITIONAL TREATMENT CAN BE PROVIDED.
12. EROSION CONTROL BARRIERS ARE REQUIRED AROUND DEWATERING DISCHARGE SEDIMENT CONTROL DEVICE.

TEMPORARY INLET PROTECTION

N.T.S.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION CONTROL

CONTRACTOR SHALL PREPARE AND SUBMIT A SOIL EROSION AND WATER POLLUTION CONTROL PLAN TO ENGINEER. ANY TEMPORARY SEEDED VEGETATION, MULCH MATERIALS, OR EROSION CONTROL BLANKETS MUST BE REMOVED PRIOR TO INSTALLATION OF PERMANENT MEADOW SEED.

MEASURE	DATES FOR USE	TIMING, ACTIVITY, AND LOCATION
SEDIMENT BARRIER	ALL	BEFORE SOIL DISTURBANCE, INSTALL DOWNHILL OF AREAS TO BE DISTURBED AND AROUND MATERIAL STOCKPILES.
UP-SLOPE DIVERSION	ALL	BEFORE SOIL DISTURBANCE, INSTALL UPHILL OF AREAS TO BE DISTURBED AND MATERIAL STOCKPILES.
CATCH BASIN PROTECTION	ALL	BEFORE SOIL OR PAVEMENT DISTURBANCE, INSTALL ACF ENVIRONMENTAL, INC. HIGH FLOW SILTSACK, SILTSAVER INLET FILTER, OR EQUAL, INSTALLED PER MANUFACTURER'S REQUIREMENTS.
DUST CONTROL	ALL	DURING DRY WEATHER, APPLY WATER AND CALCIUM CHLORIDE TO CONTROL DUST.
TEMPORARY SEEDING	APRIL 15 TO OCT. 1	SOIL STOCKPILES THAT ARE NOT COVERED AND DISTURBED AREAS THAT WILL NOT BE DISTURBED AGAIN WITHIN 14 DAYS. IF GRASS GROWTH PROVIDES LESS THAN 95% SOIL COVERAGE BY NOV. 1, APPLY MULCH AND ANCHOR WITH EROSION CONTROL BLANKET.
MULCH	APRIL 15 TO SEPT. 15	ON ALL AREAS OF EXPOSED SOIL PRIOR TO RAIN EVENTS OR EVERY 7 DAYS, APPLY 100-150 LBS (2.5 BALES) PER 1,000 SQ FT. BY MECHANICAL BLOWER.
WINTER MULCH	SEPT. 16 TO OCT. 31	ON ALL AREAS OF EXPOSED SOIL PRIOR TO PRECIPITATION OR EVERY 7 DAYS, APPLY 150 TO 170 LBS. MULCH (4 BALES) PER 1,000 SQ. FT. BY MECHANICAL BLOWER, EROSION CONTROL BLANKET MAY BE USED AS A SUBSTITUTE FOR WINTER MULCH.
	NOV. 1 TO APRIL 14	ON ALL AREAS OF EXPOSED SOIL, APPLY 150 TO 170 LBS. MULCH (4 BALES) PER 1,000 SQ. FT. AND ANCHOR WITH NETTING AT THE END OF EACH WORKING DAY. EROSION CONTROL BLANKET MAY BE USED AS A SUBSTITUTE FOR WINTER MULCH.
INSPECTIONS	UNTIL SITE IS PERMANENTLY STABILIZED	INSPECT THE EROSION AND SEDIMENTATION CONTROL MEASURES DAILY, AND MAINTAIN AND REPAIR AS NECESSARY.

PERMANENT EROSION CONTROL:

MEASURE	DATES FOR USE	TIMING, ACTIVITY, AND LOCATION
PAVEMENT BASE COURSE FINAL COURSE	WHEN NO FROST IS IN GROUND	INSTALL ONLY IN AREAS SHOWN ON THE PLAN, SHORTLY AFTER PAVEMENT BASE IS BROUGHT TO FINAL GRADE. INSTALL NEAR COMPLETION OF PROJECT.
PERMANENT SEEDING	JUNE 1 TO AUG. 15	ON FINAL GRADE AREAS, WITHIN 7 DAYS OF GRADE PREPARATION, PREPARE SOIL PER SOIL SPECIFICATIONS AND DRAWINGS, FOLLOWED BY SEED AND RECP ON SLOPES GREATER THAN 3:1 SLOPE. REFER TO SECTION 329222 NATIVE MEADOW SEEDING SPECIFICATIONS FOR ANY AND ALL SITE PREPARATION, SEEDING AND SEEDING ESTABLISHMENT REQUIREMENTS.
DORMANT SEEDING	NOV. 15 TO DEC. 15	ON FINAL GRADE AREAS, WITH PREPARED TOPSOIL. APPLY SEED, AND FOLLOW WITH AN APPLICATION OF RECP. REFER TO SECTION 329222 NATIVE MEADOW SEEDING SPECIFICATIONS FOR ANY AND ALL SITE PREPARATION, SEEDING AND SEEDING ESTABLISHMENT REQUIREMENTS.
OUT OF SEEDING SEASON	AUG. 16 - NOV. 14 DEC. 16 - MAY 31	REFER TO SECTION 329222 NATIVE MEADOW SEEDING SPECIFICATIONS FOR ANY AND ALL SITE PREPARATION, SEEDING AND SEEDING ESTABLISHMENT REQUIREMENTS.
GROUND COVER, TREES, SHRUBS	APRIL 15 TO NOV. 1	INSTALL WITH FINAL LANDSCAPING.

INSPECTIONS:

REGULAR INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE MADE AT LEAST WEEKLY AND PRIOR TO AND FOLLOWING STORM EVENTS. MINIMUM INSPECTIONS SHALL BE MADE AS LISTED IN THE TABLE BELOW.

INSPECTED ITEM	LOOK FOR
MULCHED SURFACES	THIN MULCH OR INADEQUATE APPLICATION. WIND MOVEMENT.
SEEDED SURFACES	POOR SEED GERMINATION. LOSS OF MULCH. DEVELOPMENT OF RIVULETS. REFER TO SECTION 329222 NATIVE MEADOW SEEDING FOR SEEDING ESTABLISHMENT REQUIREMENTS.
SEDIMENT BARRIER	SEDIMENT BUILD-UP TO ONE HALF THE HEIGHT OF THE BARRIER. UNDERMINING OF THE BARRIER. SUPPORTING STAKES LOOSE, TOPPLED, OR UNMARKED. BREAKS IN BARRIER.
PERIMETER DIVERSION	DISCHARGE IS TO STABILIZED AREA. EROSION OR BREAKS IN BARRIER. SUPPORTING STAKES LOOSE, TOPPLED OR UNMARKED.
CATCH BASIN PROTECTION	SEDIMENT BUILD-UP AND STRUCTURE BLOCKAGES. SLOW FLOW/PONDING WATER. BREAKS IN FABRIC OR VOIDS IN BARRIER.
DEWATERING FILTER	BREAKS IN FABRIC OR SUPPORTING STRUCTURE. SLOW FLOW, INDICATING HIGH SEDIMENT BUILD-UP.
CONSTRUCTION ENTRANCE	SEDIMENTATION OF ROADWAYS. OFF-SITE DUST COMPLAINTS.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION CONTROL MEASURES MAY INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCES, HYDRAULIC MULCH, HAY AND STRAW MULCH, EROSION CONTROL BLANKET, TURF REINFORCED MATTING, RIPRAP AND TEMPORARY SEEDING. TEMPORARY SEDIMENT CONTROL MEASURES INCLUDE THE USE OF SEDIMENT BARRIER LIKE SILT SOCK, SILT FENCE, AND EROSION CONTROL MIX BERMS, CATCHBASIN TEMPORARY INLET PROTECT AND GEOTEXTILE FILTER BAGS. PERMANENT MEASURES INCLUDE PERMANENT VEGETATION OR PAVING.

GENERAL

A. THE PROJECT SHALL CONFORM WITH THE STANDARDS OF THE MAINE CONSTRUCTION GENERAL PERMIT.

B. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK PUBLISHED BY THE MAINE DEP UNLESS OTHERWISE NOTED IN THESE PLANS. HTTP://MAINE.GOV/DEP/BLWQ/DOCSTAND/ESCBMPS/

C. ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED BY THE CONTRACTOR.

D. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATER BODIES, OR WETLANDS AS A RESULT OF THIS PROJECT.

E. THE CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE SITE WHENEVER POSSIBLE WHILE ALLOWING PROPER SITE DEVELOPMENT.

F. CONSTRUCTION STAGING SHALL BE CONDUCTED IN A WAY TO MINIMIZE THE POTENTIAL FOR STORMWATER RUN-ON TO DISTURBED AREAS. SEDIMENT BARRIER AND ANY OTHER RELEVANT EROSION CONTROL MEASURES SHALL BE MOVED AND/OR ADDED TO, TO ACCOUNT FOR CHANGES IN DISTURBED AREA DUE TO CONSTRUCTION STAGING..

G. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE ABOVE PERSONNEL. DESCRIPTIONS OF PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:

i. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS THAT 90% OF THE DISTURBED AREA IS COVERED WITH REASONABLY THICK UNIFORM STAND OF PERMANENT SEEDED SPECIES, FREE FROM SIZABLE THIN OR BARE SPOTS AND PERNICIOUS WEEDS.
ii. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THAT COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE OFF.
iii. FOR MULCHED AREAS, PERMANENT STABILIZATION MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL.
iv. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE ASPHALT BINDER COURSE.

H. FOR ANY AND ALL SEEDING REQUIREMENTS, REFER TO SECTION 329222 NATIVE MEADOW SEEDING SPECIFICATIONS.

I. PROTECT ALL TEMPORARY SEEDED AREAS WITH MULCH OR RECP IN AREAS OF SHEET OR CONCENTRATED FLOWS. MULCH ALL TEMPORARY SEEDED AREAS SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. MULCH SHALL NOT BE USED WITH PERMANENT SEEDING, BUT RECP MAY BE USED. SCHEDULE SEEDING OR SODDING TO AVOID FAILURE DUE TO SUMMER DROUGHT AND FALL FROST. NEWLY SEEDED AREAS SHOULD BE PROTECTED FROM VEHICLE TRAFFIC, PEDESTRIAN TRAFFIC AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED. AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE OR SURFACE EROSION IS EVIDENT.

J. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 3:1 OR AS OTHERWISE NOTED, EROSION CONTROL BLANKET SHALL BE EAST COAST EROSION CONTROL EC-47 400 GRAM COIR MAT OR APPROVED EQUAL. EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

K. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURE UPON STABILIZATION OF PROJECT AREA & COST SHALL BE INCIDENTAL TO CONTRACT.

WINTER CONDITIONS

A. WINTER CONSTRUCTION IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF AREAS WITHIN THE CONSTRUCTION AREA ARE NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES OUTLINED ABOVE BY NOVEMBER 1 THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES THAT ARE SPECIFIC TO WINTER CONDITIONS.

GOOD HOUSEKEEPING AND POLLUTION PREVENTION

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 RUNOFF AND APPROPRIATE SPILL PREVENTION, CONTAINMENT AND RESPONSE PLANNING AND IMPLEMENTATION.

B. DURING CONSTRUCTION, PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUND OR SURFACE WATERS MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO INFILTRATION AREAS. AN "INFILTRATION AREA" IS ANY ARE OF THE SITE THAT BY DESIGN, OR AS A RESULTS OF SOIL AND TOPOGRAPHY, ACCUMULATES RUNOFF THAT INFILTRATES IN THE SOIL. DIKES, BERMS, SUMPS AND OTHER FORMS OF TEMPORARY 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. LOCATE ALL MATERIAL STOCKPILES WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.

D. TAKE ALL REASONABLE MEASURES TO MINIMIZE DUST RESULTING FROM THE PROJECT. OIL MAY NOT BE USED FOR DUST CONTROL.

E. LOCATE ALL LITTER, CONSTRUCTION DEBRIS AND CONSTRUCTION CHEMICALS WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.

F. TRENCH OR FOUNDATION DE-WATERING MUST BE SPREAD THROUGH SUFFICIENT NATURAL BUFFERS THAT HAVE CAPACITY TO INFILTRATE THE PUMPED WATER OR SHOULD BE PUMPED TO DESIGNED CONSTRUCTION DEWATERING DEVICES AS DESCRIBED IN THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK.

G. SEDIMENTS AND SOIL MATERIALS SHOULD BE SWEPT FROM PAVED SURFACES AT THE END OF EACH WORKDAY OR PRIOR TO RAIN EVENTS, WHENEVER POSSIBLE.

INSPECTION AND MAINTENANCE

A. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROLS, INCLUDING THE STANDARDS IN THE MAINE CONSTRUCTION GENERAL PERMIT, THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK OR ANY MUNICIPAL REQUIREMENTS MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF ADDITIONAL BMPS OR MODIFICATIONS TO BMPS ARE NECESSARY, THE MODIFICATIONS MUST BE IMPLEMENTED WITH 7 CALENDAR DAYS OR PRIOR TO ANY PRECIPITATION EVENT. ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

B. AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT BY THE CONTRACTOR, SUMMARIZING THE SCOPE OF THE INSPECTION, DATE, AND MAJOR OBSERVATIONS RELATING TO THE OPERATION OF EROSION AND SEDIMENT CONTROL BMPS, MATERIAL STORAGE AREAS, AND VEHICLE ACCESS POINTS TO THE CONSTRUCTION AREA. THE INSPECTION LOG SHOULD BE DELIVERED TO THE PROPERTY OWNER OR RESPONSIBLE CONTRACTING ENTITY UPON COMPLETION OF THE PROJECT.

NON STORMWATER DISCHARGES

A. PER MAINEDEP CHAPTER 500, THE FOLLOWING NON-STORMWATER DISCHARGES ARE ALLOWED AND STEPS SHOULD BE TAKEN TO ENSURE IMPLEMENTATION OF APPROPRIATE POLLUTION PREFENTION MEASURES FOR THE NON-STORMWATER COMPONENTS OF THE DISCHARGE.

1. DISCHARGES FROM FIREFIGHTING ACTIVITY;
2. FIRE HYDRANT FLUSHINGS;
3. VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
4. DUST CONTROL RUNOFF IN ACCORDANCE WITH MAINEDEP CHAPTER 500 REQUIREMENTS;
5. ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
6. 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;
7. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
8. UNCONTAMINATED GROUNDWATER OR SPRING WATER;
9. FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
10. UNCONTAMINATED EXCAVATION DEWATERING IN ACCORDANCE WITH MAINEDEP CHAPTER 500 REQUIREMENTS;
11. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND LANDSCAPE IRRIGATION.

B. PER MAINEDEP CHAPTER 500 THE FOLLOWING NON-STORMWATER DISCHARGES ARE NOT ALLOWED.

1. WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
2. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
3. SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
4. TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

SHEET NOTES

GENERAL NOTES

AAmp.

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LANDSCAPE
Soren deNiord Design Studio
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MECH, ELEC & FIRE PROTECTION
WSP USA
100 Sumer Street, FL 13
Boston, MA 02110
Tel (617) 426-7330

DESIGN SUBMISSION

△ DATE	DESCRIPTION

STATE OF MAINE
LAUREN JANE SWETT
No. 12284
Licensed PROFESSIONAL ENGINEER

SEAL SIGNATURE

NOT FOR CONSTRUCTION

PROJECT
465 CONGRESS STREET

PROJECT NUMBER
240202

DRAWING TITLE
DETAILS - 2

SCALE
as noted

C-99-901

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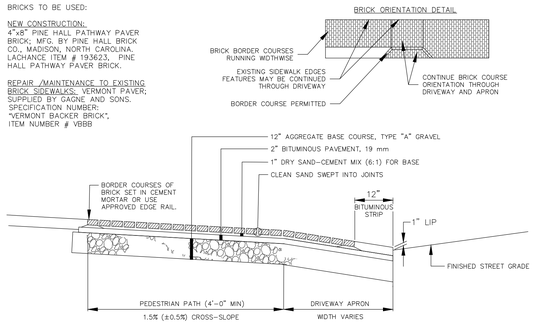
BRICKS TO BE USED:

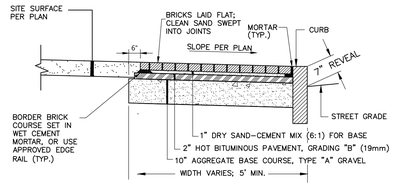
NEW CONSTRUCTION:
4"x8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM # 193623, PINE HALL PATHWAY PAVER BRICK.

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



SECTION

BRICK SIDEWALK DETAIL

N.T.S.

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.

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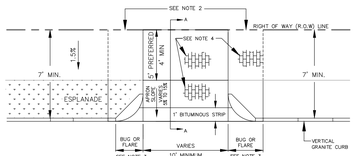
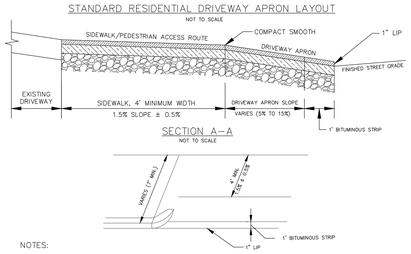


STANDARD RESIDENTIAL DRIVEWAY APRON LAYOUT

NOT TO SCALE



SECTION A–A

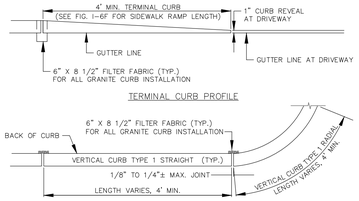
NOT TO SCALE

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. 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.
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.
5. THIS LAYOUT MAY BE REQUIRED AT MINOR DRIVEWAYS SERVING COMMERCIAL OR INDUSTRIAL USES.

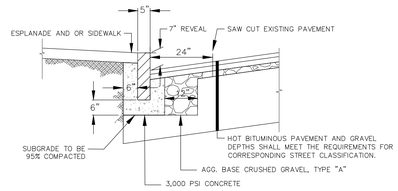
RESIDENTIAL DRIVEWAY APRON

NOT TO SCALE



TERMINAL CURB PROFILE

VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

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

SHEET NOTES

GENERAL NOTES

AAmp.

AAMP STUDIO LLC

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SUITE 301
PORTLAND, ME 04101
T 207.805.1212

CLIENT / OWNER

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WSP USA
100 Sumer Street, FL 13
Boston, MA 02110
Tel (617) 426-7330

DESIGN SUBMISSION

△ DATE	DESCRIPTION
10/16/2024	SITE PLAN REVISION

STATE OF MAINE
LAUREN JANE SWETT
No. 12284
LICENSED PROFESSIONAL ENGINEER
Lauren J. Swett

SEAL SIGNATURE

NOT FOR CONSTRUCTION

PROJECT
465 CONGRESS STREET

PROJECT NUMBER
240202

DRAWING TITLE
DETAILS - 1

SCALE
as noted

C-99-902

\\woodardcurran.net\shared\Projects\02354833.00 monument hotel 465 congress redev\wip\Drawings\Civil\02354833.00_C-99-901.dwg, Sep 24, 2024 - 9:13am LSWETT

100 W Commercial
Major Site Plan Application
PL-003033-2024
The New Yard, LLC Applicant

Submitted to:	Portland Planning Board	**Prepared By:**	Ameriz Gamez
Public Hearing Date:	November 12, 2024	**Date:**	November 8, 2024

I. INTRODUCTION

New Yard, LLC has submitted a Major Site Plan and Conditional Use application to facilitate the development of Phase VI of the Canal Landing New Yard Development, which involves the construction of a new 45,000 square foot building, identified as building H/I, which would be utilized for boat storage and maintenance. This site is located at 100 W Commercial Street within the -Waterfront Port Development Zone (WPDZ) 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 103 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the November 5, 2024 and November 6, 2024 edition of the Portland Press Herald.

Applicant: 100 W Commercial Street
Applicant Representatives: Gorrill Palmer Engineering Company

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan	Section 14.6

PROJECT DATA

Existing Zoning	Waterfront Port Development Zone (WPDZ)
Property Size	17.77 Acres
Existing Use	Boat Maintenance and Marine Activities Facility
Proposed Development Program	45,000 SF Boat Storage Structure

Waver Requests	Applicable Standards
1. The applicant is seeking a waiver of the flooding standard. The site discharges stormwater runoff to the Tidal conditions of the Fore River therefore quantity control is not required. Water quality treatment will continue to be provided by the permeable boatyard surface material. This waiver has been similarly granted as part of previously approved phases.	Technical Manual Section 5.III – Chapter 500 Flooding standard The applicant is seeking a waiver of the flooding standard, whereby stormwater water quantity control is not required.
2. Based upon the existing ambient light levels and the proposed lighting, the Applicant is comfortable that adequate lighting will be present at the property for the proposed uses. Comments from the residential neighbors during the previous review periods indicate that additional lighting to raise the overall level of light at the property is not desired.	Technical Manual Section 12 Site Lighting Standards Proposed lighting will raise the light levels needed for safe access and egress in and out of the property onto West Commercial Street to reasonable average levels of 1.25. Proposed lighting will provide for security, safety, and nighttime use of the new buildings and work yards.

III. EXISTING CONDITIONS AND SURROUNDING AREA

The existing site is parcels consist of approximately 17.77 acres of land that is composed of a total of three areas. The first parcel measures in 5.03 acres and consists of Building A and B which amounts to approximately 48,000 SF building. This site contains a boat ramp and boat yard area which is currently being utilized by Portland Yacht Services. The second is the street front parcel measuring in 6.75 acres containing buildings C and D. Portland Yacht Services occupies building C and is currently being used for boat maintenance and repairs and a separate tented occupies building D. The third is a 5.99-acre shorefront parcel and contains a travel lift and travel lift basin.



Figure 2: The existing site

IV. PROPOSED DEVELOPMENT

The proposed development is located at 100 W Commercial Street and is for phase VI of the Canal Landing New Yard which included the development of a 45,00 square foot building on the site's west end. The new building is to be located on the West Commercial Street frontage, just wet of building C and D. The Proposed development is within the Waterfront Port Development Zone district and follows the dimensional standards for this zoning. The proposed building is measuring to be 150 feet wide and 300 feet long, totaling in 45,000 square feet of floor area. The applicant is remaining consistent with the River Birch trees and is planting a total of twelve along the face of the building C along with assorted smaller shrub plantings along the street frontage. The applicant is proposing to provide access via West Commercial Street with ample turning movement provided at each street entrance. The applicant has had the internal circulation reviewed and designed to accommodate the typical used of passenger vehicles.

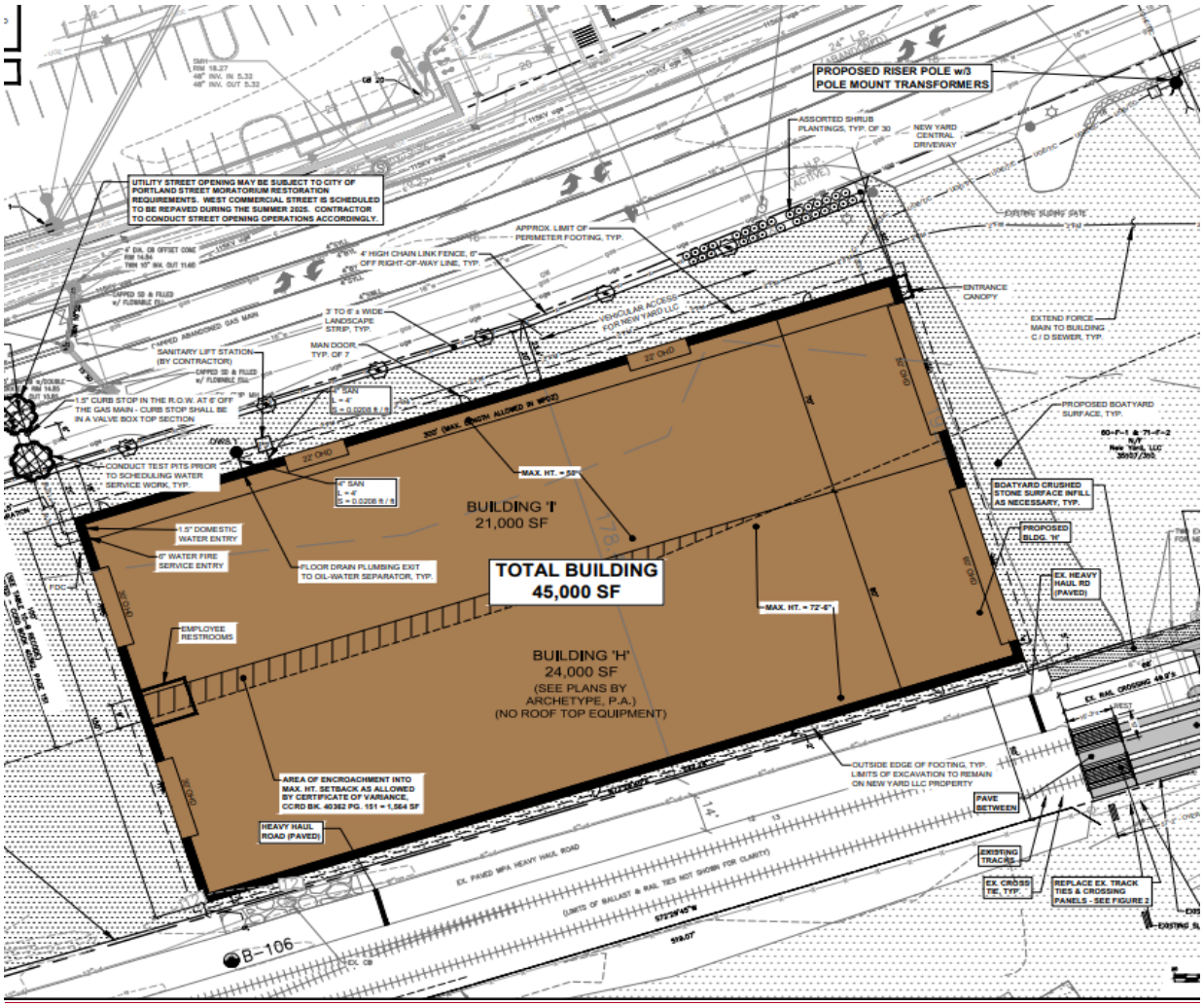


Figure 3: Site Plan

V. RIGHT, TITLE, & INTEREST

The applicant has submitted the deed showing ownership of the property by 100 West Commercial, LLC, which demonstrates right, title, and interest to complete the project.

VI. FINANCIAL & TECHNICAL CAPACITY

A letter of support has been submitted confirming that 100 West Commercial, LLC has the required financial support from Norway Savings Bank.

VII. ZONING ANALYSIS

The subject properties lie within the Waterfront Port Development Zone (WPDZ) the proposed use is a use that is permitted by right within the WPDZ. Relevant sections of the WPDZ purpose statements include:

- **WPDZ:** *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 deepwater 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 Waterfront 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. Non-marine activity may be allowed to the extent it will not have any adverse impact on marine uses.*

In addition to the zoning the applicant responsible for submitting documentation to the Planning Authority, from the Federal Aviation Administration verifying that the project as designed does not create a hazard to navigable airspace.

	Required	Proposed
Lot Size	None	17.77 Ac
Maximum Height (ft)	75 ft.	72ft
Lot Coverage	50%	15.4%
Pier Line Setback	5 ft	100 Ft

A. WATERFRONT PORT DEVELOPMENT STANDARDS

1. The proposed non-water dependent use will not displace an existing water-dependent use.

   The proposed project will serve as support space for maintenance of larger vessels and allow for greater indoor operational area. The applicant is considering this to be a water dependent use.

   Staff consider this standard to be met.

2. The proposed use will not reduce existing commercial vessel berthing spaces

   This project is located on the street frontage parcel will not reduce any existing commercial vessel spaces.

   Staff consider this standard to be met.

3. The proposed non-water dependent use, structure or activities, including but not limited to access, circulation, parking, dumpsters, exterior storage or loading facilities, and other structures, will not unreasonably interfere with the activities and operation of existing water-dependent uses or significantly impede access to vessel berthing or other access to the water by water-dependent uses.

   The proposed building H uses are water-dependent and do not interfere with any existing water dependent uses or activities on the site.

   Staff consider this standard to be met.

4. The siting of a proposed non-water dependent use will not substantially reduce or inhibit existing public access to marine or tidal waters.

   The proposed use falls within the marine use category, and will not reduce or inhibit existing public access to marine or tidal waters.

   Staff consider this standard to be met.

~~A.~~B. CONDITIONAL USE STANDARDS

1. Will not impede or preclude existing or potential water dependent development on other lots.

   The proposed building H will be an integral part of the marine's services provided on the property and it will specifically benefit from the marine travel lift access availability with the boat yard.

   Staff consider this standard met.

2. Allow for adequate access to the water

   The building is to be positions on the street side of the rail tracks and therefore will allow for continued use by the travel lift basin and it will not impede access to the two boat ramps on the site.

   Staff consider this standard met.

3. Be compatible with water dependent and marine uses

   The proposed Building H /I will be an integral part of the boat repair and maintenance operations to be provided at this site. It is considered absolutely compatible with water dependent and marine uses.

   Staff consider this standard met.

4. Operationally support one or more water dependent uses or be located in a building or structure that is physically adaptable or relocatable to make way for future development of water dependent uses.

   The proposed building H will be used for technical support related to vessel Maintenance and repairs and is therefore supportive of water dependent users.

   Staff consider this standard met.

5. Meet any additional performance and dimensional standards set forth below.

   The proposed building H will have a maximum height of 72' – 6" and is therefore compliant with the conditional use dimensional standards.

   Staff consider this standard met.

~~B.~~C. PERFORMANCE STANDARDS

1. Outdoor Storage of Materials
   The proposed Phase VI Building H/I activity includes the ongoing construction and expansion of marine related operations at the Canal Landing Yard. The facility does not involve large scale outdoor storage of materials although vessels, trailers and related equipment associated with the boat preparation, repair and maintenance operations may be placed outside. In no case will these materials exceed a height of 45 feet, except for boat masts which may be taller than 45 feet and the marine travel lift equipment. The yard area has been stabilized with the boat yard surface material which helps contain and manage stormwater runoff. The yard use complies with the practices outlined in the MaineDEP Brightwork Manual for boat yards and marine facilities.

   Staff consider this standard to be met.

2. Noise
   The proposed Phase VI facilities at Canal Landing involve a new 45,000 SF Building H/I. Typical working hours will be 7:00 am to 5:00 pm. The noise generated by the development is considered minor in nature and will not exceed the fifty-five (55) decibels level during the hours from 7:00 pm to 7:00 am.

   Staff consider this standard to be met.

3. Vibration
   The proposed Phase VI activities will not result in significant vibration as the activity is primarily associated with the development of a new maintenance building. No significant vibration sources are expected as a result of this development activity.

   Staff consider this standard to be met.

4. Federal and State Environmental Regulations

The boat repair and maintenance activities are performed in accordance with State and Federal emission regulations so actions such as sand blasting and related boat work are managed and controlled to minimize emissions.

Staff consider this standard to be met.

5. Discharges into Harbor Areas
The Canal Landing site is served by public wastewater collection so there are no onsite wastewater disposal systems.

Staff consider this standard to be met.

6. Storage of Vehicles
The project as proposed would involve the storage of marine vessels within an enclosed structure. The storage of automobiles for periods of greater than 60 days is not proposed.

Staff consider this standard to be met.

7. Landfill of Docking and Berthing Area
The proposed development does not involve landfill of docking or berthing areas. The Phase VI development involves only activity along the street front for Building H/I.

Staff consider this standard to be met.

8. Off-street Parking
The approximately 17 acre site area contains ample parking for the boat yard as well as Phase VI development activity.

Staff consider this standard to be met.

9. Off-street Loading
The proposed Tension Fabric Building G will contain overhead doors on each end to allow for movement in/out of the covered area. Building F does not require any loading space.

Staff consider this standard to be met.

10. Shoreland and flood plain management regulations
The proposed Building H/I activities are located beyond the Shoreland zone. There are no clearing restrictions on the site and activity will be compliant with any Shoreland and Flood Plain regulations. The Building H/I floor elevation will be at Elevation 13.9' to 16.1' which is 6 feet above the Fore River Flood elevation. The site grading will be completed to provide the finish gravel grade to elevation 13.0' or higher.

Staff consider this standard to be met.

11. Lighting

All proposed lighting conforms to the City of Portland's Technical Standards for site lighting, with all lights being full cutoff, meeting illumination and color temperature requirements. The positioning of the proposed lighting is not expected to interfere with vessels transiting the harbor, or have an unreasonable impact on adjacent residential zones.

Staff consider this standard to be met.

12. Signs
No new signs are proposed. All tenant signage will require a separate permit for which the tenant is responsible to secure a permit from the City.

Staff consider this standard to be met.

13. Storage of pollutants and oily waters
The Phase VI activity does not involve the bulk storage of pollutants or oily waste.

Staff consider this standard to be met.

14. Compatibility of non-marine uses with marine uses
The proposed Phase VI activity is a use that is considered marine related therefore, this design standard is not applicable.

Staff consider this standard to be met.

15. Design and visual character shall
The proposed Phase VI Building H/I has been designed to be consistent with the previously constructed structures within the Canal Landing site and to also work with nearby buildings and uses.

Staff consider this standard to be met.

VIII. 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.

1. **Transportation Standards (Section 14.6.1**
   A. Impact on surrounding street systems
   The applicant is not proposing any improvements along the westerly driveway. Based on the limited intensity of use, the project is expected to have an insignificant impact on traffic in the area. The vehicle and loading circulation to the building is intended to effectively move existing maintenance work indoors from the current outdoor conditions.
   The applicant calculated the trip generation for phase VI and it falls under the allowable amount previously approved on 2016. The new construction of the building is not predicted to result in an increase of employees, therefore not generating additional traffic to the site.

Staff consider this standard to be met.

B. Access and circulation
There is to be vehicular access along the north side of the building within the narrow area located between the front of the building and the right-of way. Vehicles will be able to utilize the westerly driveway as well during operational hours. This development was previously granted approval and a waiver to allow for the three existing driveways, all due to the extended street frontage. This driveway has been in place since Phase III when buildings C and D were constructed. The applicant is proposing to include a sliding gate that is similar to the others installed on the site.
The applicant previously received a waiver of the sidewalk and curbing requirement on a previous site plan application, and therefore, staff are not recommending that a waiver of this requirement be reconsidered. The Board granted this waiver previously, due to the applicant having constructed a crosswalk, which provides a pedestrian route to the existing sidewalk on the opposite side of West Commercial Street.

Staff consider this standard to be met.

C. Public transit access
It has been confirmed that there are no METRO transit routes along West Commercial Street.

Staff consider this standard to be met.

D. Parking
The applicant is providing parking for employees within the boat parking area around the site. The parking spaces and aisles have been designed to meet the dimensional requirements. The applicant is also proposing to provide outside parking capacity of six spaces in the area of the development.

Staff consider this standard to be met.

E. Transportation demand management (TDM)
This application does not exceed 50,000 square feet of total floor area and thus does not require a TDM plan.

Staff finding: Not applicable.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features
There are no known significant natural features on this site.

Staff consider this standard to be met.

B. Landscape preservation
The site currently has limited existing trees and in addition there is not a requirement for tree protection in the waterfront development zone

Staff consider this standard to be met.

C. Site landscaping and buffers
The applicant is proposing to add a total of twelve River Birch Clumps to the site along the right-of-way line there is directly in front of the proposed building. The proposed landscaping is consistent with what is currently featured on the site.

Staff consider this standard to be met.

D. Water quality/storm water management/erosion control
The project is required to comply with the Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 standard for stormwater management. With the prior projects to the site a special Boatyard gravel surface was approved to address stormwater management requirements, and the surface is being utilized for this project.
Staff if aware that this project is an expansion and that the applicant has been in the process of adding new buildings to the site. The applicant has submitted all required documents and it is confirmed by staff that they meet all requirements.

WAIVER REQUEST
The applicant is seeking one waiver
1. Chapter 500 Flooding Standard: The applicant is seeking a waiver of the flooding standard Technical Manual Section 5 Chapter 500 Flooding Standard, whereby stormwater water quantity control is not required. The site discharges stormwater runoff to the Tidal conditions of the Fore River stating that quantity control is not required. Water quality treatment will continue to be provided by the permeable boatyard surface material. This waiver has been similarly granted as part of previously approved phases.

Staff consider this standard to be met

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans
This site plan is consistent with the City's Comprehensive Plan.

Staff consider this standard to be met.

B. Public safety and fire prevention
There are to be no changes to emergency access conditions within the surrounding streets. There are fire hydrants that are located within the adjacent street systems, additionally there are fire hydrants installed within the site and are shown on plans that are previously on file with the city.

C. Availability and capacity of public utilities
The site currently contains utilities and sanitary sewer from the Portland Water District and power which is supplied by Central Maine. The applicant has provided a Wastewater Capacity Authorization, Water, and Power letter confirming capacity for this project.

Staff consider this standard to be met.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

The location and height of the proposed building has been designed to assure that it does not result in the impacts of abutting properties. The building height and location are consistent with the WPDZ requirements.

Staff finding: Met.

B. Shadows

No adverse shadow impacts are anticipated with this application.

Staff consider this standard to be met.

C. Snow and ice loading

The proposed building is designed to prevent snow and ice from loading or falling onto any adjacent properties and public ways. The snow is to be removed from the yard and stockpiled within the perimeter.

Staff consider this standard to be met.

D. View corridors

This standard is not applicable to this application.

Staff finding: Not applicable.

E. Historic resources

The proposed building does not lie within a historic district and is not subject to any Historic Preservation reviews.

Staff finding: Not applicable.

F. Exterior lighting

The proposed development will have mounted fixtures that are to match the fixtures places on the surrounding existing buildings. These light fixtures meet the requirement of Section 12 of the Technical Manual. The applicant is seeking a waiver based upon the existing ambient light levels and the proposed lighting. The applicant is comfortable that adequate lighting will be present at the property for the proposed uses. There have been comments from the residential neighbors during the previous review periods that indicate additional lighting to raise the overall level of light at the property is not what is desired.

WAIVER REQUEST

The applicant is seeking one waiver

1. Lighting Standards Section on 12: The Technical Manual Standard Section 12.1 Uniformity states that as measured in foot candles at grade, maximum to minimum illumination levels cannot exceed a ratio of twenty to one. Technical Manual Standard Section 12.2 Illumination Levels states that minimum, maximum, and average illumination levels for areas intended to be lighted as measured at grate shall be: Minimum 0.2 foot candles, Maximum 5.0 foot candles, and average 1.25 foot candles. The applicant is requesting a waiver from this standard on the basis that the existing ambient light levels at the property are between 0 and 0.3 foot candles a the interior, in addition the applicant believes that the proposed lighting will raise the light levels needed for a safe access and egress in and out of the property and onto West Commercial Street.

Staff consider this standard to be met.

G. Noise and vibration

The project is not expected to have any adverse impact related to noise and vibration, and all proposed equipment meets state and federal emission requirements. Any noise levels that are to occur on site will meet the permitted levels as outlined in the WPDZ Zone.

Staff finding: Met

H. Signage and wayfinding

There are to be several business-related signs that are either mounted to the building or freestanding that are positioned on the site more so at the site entrance. These signs are considered to meet the scale of the existing buildings, the freestanding signs will not affect the visibility of the access drives.

Staff finding: Met

IX. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held a neighborhood meeting on September 11, 5:30 Pm. The in-person meeting was held at 100 West Commercial Street. Five members of the public were in attendance.

A full sign-in sheet and meeting invitation are included as an attachment.

As of the writing of this report, one written public comment has been received on this application.

X. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, the Planning & Urban Development Department staff recommends that the Planning Board **finds/does not find** that the proposed 45,000 square foot building located at 100 West Commercial Street (PL-003033-2024) meets the applicable standards of Portland's Land Use Code.

XI. PROPOSED MOTIONS

1. WAIVERS

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 November 12, 2024 for application PL-003033-2024 at 400 Commercial relevant to the Site Plan Standards of the Land Use Code and the City of Portland's Technical Manual, and other regulations, and the testimony presented at the Planning Board hearing:

1) *Lighting Standards*

The Planning Board finds/does not find based upon the City's review, that the existing ambient light levels at the property are in compliance and due to there being no immediate adjacent residential properties the lighting installed for safety purposed at the site are in no way going to have a negative impact nor spill over to residential properties. The Technical Manual Standard Section 12.1 Uniformity states that as measured in foot candles at grade, maximum to minimum illumination levels cannot exceed a ratio of twenty to one. Technical Manual Standard Section 12.2 Illumination Levels states that minimum, maximum, and average illumination levels for areas intended to be lighted as measured at grate shall be: Minimum 0.2-foot candles, Maximum 5.0-foot candles, and average 1.25-foot candles. The applicant is requesting a waiver from this standard on the basis that the existing ambient light levels at the property are between 0- and 0.3-foot candles. The Planning Board waives/does not waive Technical Manual standard Section 12.1 and 12.2 allowing the applicant to install the proposed lighting.

2) Chapter 500 Flooding Standard

The Planning Board finds/does not find based on the City's review that the applicant's request of a waiver for flooding standard Technical Manual Section 5 Chapter 500 Flooding Standard, whereby stormwater water quantity control is not required, due to the site discharges stormwater runoff to the Tidal conditions of the Fore River stating that quantity control is not required. The Planning Board waives/does not waive Technical Manual standard Section 5.

2. 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 November 12, 2024 for application # PL-003033-2024 at 100 West Commercial Street 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

3. The applicant shall provide documentation to the Planning Authority, from the Federal Aviation Administration verifying that the project as designed does not create a hazard to navigable airspace.

PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board report for the public hearing on November 12, 2024 related to application PL-003033-2024 for 100 West Commercial Street, 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-003033-2024, and authorizes the Planning Board Chair to sign the approval letter as drafted.

ATTACHMENTS

Public Comment
As of the writing of this report, no written public comment has been received on this application.

Staff Materials
1. 100 West Commercial Site Plan Review Worksheet

Applicants Submittal

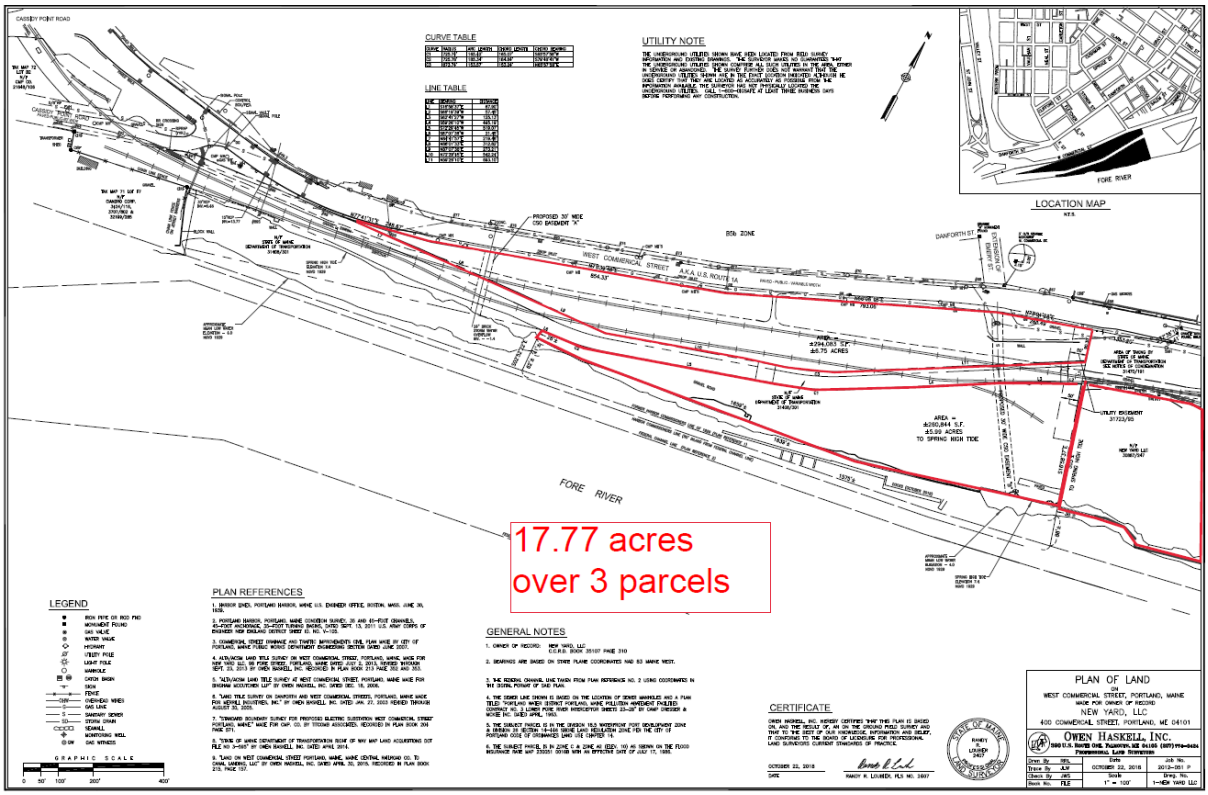
A. Project Description Final
B. Level III Application Checklist
C. Rights, Title, & Interest
D. Zoning Analysis
E. Waiver Request Final
F. Financial Capacity Final
G. Technical Capacity Final
H. Transportation Final
I. Environmental and Landscape Features Final
J. Environmental and Stormwater Final
K. Public Infrastructure and Safety Final
L. Site Design Final
M. Construction Management Final
N. CMP Service Confirmation
O. Certification Neighborhood Meeting
P. 100 W Commercial St PO - Ability to Serve
Q. Application Cover Letter New Yard
R. LOR #1 Final 2024.09.11
S. LOR #2 Gamez 2024.10.31
T. Phase VI Building H Stormwater Report
U. Wastewater Capacity Auth 2024.06.05 New Yard

Plans
1. First Floor Plan
2. Building Elevations
3. Building Elevations
4. Building H East View Rendering
5. Building H West View Rendering
6. Cover
7. Gen Notes
8. Boundary Survey

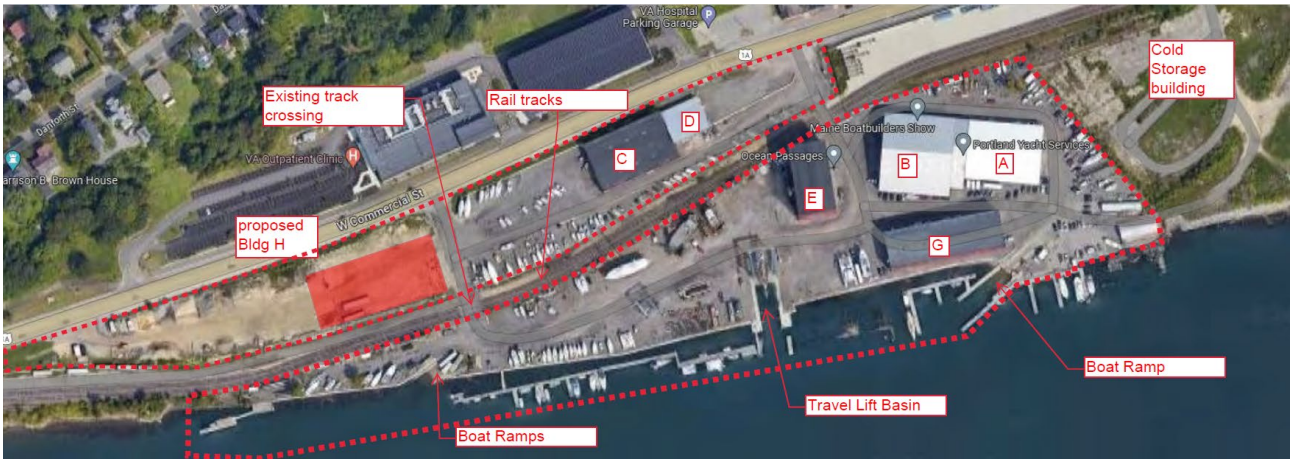
9. Ex Cond & Removal Plan
10. Building H & I Site Layout & Utility Plan
11. Circulation Plan
12. Overall Development Plan
13. Grading Drainage & Erosion Plan
14. Erosion Detain
15. Roof Height
16. Erosion NARR
17. Site & Misc Details
18. Water System Details
19. SD & Utility Details
20. Erosion Details
21. Erosion NARR
22. Site Cross Sections
23. Site Cross Sections
24. RP Crossing Expansion Details
25. Updated 11.8 C-3.0 BLDGS H & I SITE LAYOUT & UTILITY PLAN
26. Updated 11.8 C-5.0 OVERALL DEVELOPMENT PLAN
27. 27. Copy of Cost Estimate Form (XLSX) (1) bldg H new yard llc SRB edit 2024.10.09

PROJECT OVERVIEW

The New Yard, LLC property contains approximately 17.77 acres of land located prominently along the West Commercial Street waterfront. This land area includes 5.03 acres of remainder land that the Applicant retained after the MaineDOT acquired nearly 18 acres of land from New Yard, LLC for the IMT Expansion project to the east. That site is now home to the Maine International Cold Storage (MICS) under construction. As outlined in previously approved earlier phases, the Applicant acquired an additional 12.74 acres (6.75 acres on the street frontage and 5.99 acres on the waterfront) from Maine Central Railroad to fulfill their goals for a full-scale boat maintenance and marine related activities facility.



The development site includes previously approved buildings constructed over multiple phases along with constructed shorefront uses including a marine travel lift basin, two boat ramps, floats/docks, new or reconstructed piers, and ancillary support features. The current Level III Site Plan approval request is only for Phase VI activities which are listed below in the Proposed Development section. The image below shows the existing conditions.



The Phase VI project includes limited site development activities involving earthwork, grading, building construction, and utilities associated with the proposed Building (H/I[1]). Utility improvements for the new building H/I are proposed and include a water service from West Commercial Street, sewer, and underground power.

The following information provides greater detail regarding the site's existing conditions and the proposed development program.

SITE OWNERSHIP

According to the ALTA/ACSM Survey completed by Owen Haskell, Inc. in April 2015, the development site contains multiple parcels as identified in the City of Portland Tax Assessor's maps. These parcels are more fully described as follows in Table 1:

TABLE 1 – Land Ownership		
Chart-Block-Lot	Owner	Description
59-A-3 & 4	New Yard, LLC CCRD Book 30887; Page 2	Consists of 5.03 acres. Land retained following the MaineDOT land taking
60-F-1, 3 &4 71-F-2	New Yard, LLC CCRD Book 35107; Page 310	Consists of a 6.75-acre area between the IMT rail track and the street; also consists of 5.99 acres of area along the waterfront, out to mean low water

The site location is on West Commercial Street just west of the Casco Bay Bridge and between West Commercial Street and the waterfront. The combined parcels have approximately 2,159.55 LF of frontage along West Commercial Street.

[1] For the purpose of the application there is a single building that the applicant is referencing as Building H/I, as there will be two roof heights, as required by WPDZ zoning.

PROJECT PURPOSE AND NEED

The Canal Landing project has transformed an underutilized, yet prominent property, into an exemplary water dependent maritime use as was contemplated within the City's zoning and comprehensive plans. The project's community benefits continue to include:

- Enhanced commercial/marine related opportunity and rehabilitation of a deteriorated, older industrial property.
- Various remedial activities related to recognized environmental conditions on the properties will be performed, thus addressing several long-standing environmental issues.
- Revitalization of an important waterfront property that has excellent access to deep water, various utilities, City services, and related shorefront amenities.
- Furtherance of the purposes of the Waterfront Port Development Zone (WPDZ) as articulated in the Land Use Ordinance to "ensure the continued viability of the Port of Portland" by limiting use to "those uses which are dependent upon deep water and which contribute to port activity".
- Creation of new buildings and site use consistent with waterfront activities in a gateway location along the busy West Commercial Street corridor. The proposed Phase VI building includes new boat maintenance space specifically designed for the 300-ton travel lift and for larger vessels (100'+). Currently only Building E is sized for the travel lift, and Building E can only accommodate a single larger vessel. For additional information related to the building and the Undue Hardship variance granted by the Zoning Board of Appeals, see a copy of the Undue Hardship application in the appendix to this section.

EXISTING CONDITIONS

The total site parcels consist of approximately 17.77 acres of land that is composed of three primary areas described as follows:

1. Retained Parcel (Map 59A, Lots 3 & 4): Consists of the retained 5.03-acre area owned by New Yard, LLC and it represents the retained land originally permitted by the Applicant during late 2012 – 2013. Within this land area New Yard, LLC has constructed Buildings A & B amounting to approximately 48,000 SF of building space. This parcel contains a boat ramp and boat yard area currently in use by Portland Yacht Services.

2. Street Front Parcel (Map 60F, Lot 1): This 6.75-acre area contains approximately 2,160 LF of street front. Construction of the previously approved Buildings C & D is substantially completed. Portland Yacht Services occupies Building C and is using it for boat maintenance and repairs. A tenant occupies Building D. A previously approved building F has not been constructed. The proposed Building H/I will be located in the street front parcel just west of the central site driveway.

3. Shorefront Parcel (Map 60F, Lots 3 & 4): This area is irregularly shaped and contains approximately 1,581 LF of waterfront. The site area is approximately 5.99 acres. This area is home to the travel lift and travel lift basin on which construction was substantially completed in 2018 and Building E, which was completed in 2019. Building G was completed in 2022.

TOPOGRAPHY AND DRAINAGE

Owen Haskell, Inc. has previously completed a topographic survey of the property. The site is relatively flat with the highest points along the West Commercial Street frontage, sloping to the waterfront. Site elevations along West Commercial Street trend down from the center of the frontage outwards from Elevation 23' (NGVD 1929) to Elevation 19'. Site improvements include the placement of a boatyard surface material over most of the site, as was previously approved. This has raised site grades up several feet.

The site's runoff conditions are characterized by the "boatyard" gravel surface that covers the majority of the site area. The thick layer of crushed stone covers the site and results in very little runoff generation since the surface has the capacity to absorb a significant amount of rainfall, before any sort of sheet flow condition occurs. Under extreme rainfall conditions runoff can sheet directly to the waterfront within the shorefront parcel and it can sheet to several existing onsite catch basins and the railroad bedding material within the street side parcel.

The proposed Building H/I site areas will continue to use the "Boatyard" gravel surface as the primary surface covering, although there will also be limited paved areas and the roof area for the building. The building roof drainage will tie into a closed pipe system that will pass through previously installed casing under the rail tracks for direct discharge to the Fore River. This satisfies the MeDEP chapter 500 rules under Part 500.4(5)(f) whereby roof runoff only be treated for thermal impact and channel protection. In this case the roof runoff will travel underground for cooling and then directly discharge to tidal conditions, thus negating any need for flood storage. The boatyard surface provides rainfall collection and infiltration capacity to satisfy any water quality needs.

SOILS CONDITIONS

The following soils conditions have been identified on the site:

- 10 to 15 feet of sand and gravel fill – there is little to no organic surface layer throughout the site which is reflective of the site's rail yard history.
- 5 to 10 feet of silt and sand
- 10 to 40 feet of gray clay identified as the Presumpscot formation.
- 30 to 40 feet of dense silty marine sands
- An undetermined thickness of dense silty sand and gravel identified as glacial till overlaying bedrock.

According to various investigation data, depth to groundwater varies from 3 to 7 feet and this likely varies with tidal conditions in the Fore River. Generally, the groundwater flows from the northwest to the southeast across the site. The Phase VI project will not impact the underlying soils or groundwater conditions.

PROPOSED DEVELOPMENT

The Applicant proposes to continue development of the property in a manner consistent with the WPDZ Standards and as allowed by the Undue Hardship Variance granted by the Zoning Board of Appeals (see

Appendix A). The Phase VI development program includes construction of a 45,000 SF Marine-Related land use structure for vessel maintenance related services.



Proposed Building H/I -East view



Proposed Building H/I – West view



Building Height Comparison – New Yard

Offsite

Site access is maintained via the existing West Commercial Street driveways as well as from the Fore River. The Phase VI primary site entrance is proposed from the existing central entrance off West Commercial Street. Various improvements to the lane configurations along West Commercial Street were previously completed as part of the VA CBOC/garage site on the opposite side of the road. These include provisions for a combination of left turn lanes and center two way left turn lanes, bike lanes and a pedestrian cross walk.

LAND ORDINANCE REVIEW

The property currently lies within the City of Portland Waterfront Port Development Zone (WPDZ). Within the WPDZ district the following uses are permitted or conditioned:

Permitted Uses

- Marine repair services and machine shops
- Tugboat, fire boat, pilot boat and similar services
- Harbor and marine supplies and services and ship supply such as fueling and bunkering of vessels.
- Shipbuilding and facilities for construction, maintenance, and repair of vessels
- Boat repair yards
- Marine cargo handling facilities, including docking, loading, and related storage.
- Facilities for marine construction and salvage
- Facilities for marine pollution control, oil spill cleanup, and servicing of marine sanitation devices
- Commercial berthing
- Marine cargo container and chassis maintenance and repair
- Public uses including pedestrian and bicycle trails.

- Accessory uses customarily incidental and subordinate to the location, function, and operation of permitted uses.

Conditional Uses

- Marine retail and wholesale sales, including Yacht Brokerage
- Marine ship building and facilities for construction, maintenance, and repair of vessels.
- Boat storage facilities
- Seafood processing
- Seafood packing and packaging.
- Fabrication, storage, and repair of fishing equipment
- Icemaking services
- Fabrication of marine-related goods
- Fish by-products processions (with provisions)
- Intermodal transportation facilities principally for vessels with regularly scheduled destination service of for railroad transportation service
- Facilities for combined marine and general construction
- Cold storage facility, warehousing and storage of goods which are awaiting shipment via cargo carriers.
- Low impact industrial uses
- Utility substations
- Off-street parking lots, excluding parking structures.
- Renewable energy systems, as defined and allowed in Article X, Alternative Energy

The following dimensional requirements apply in the WPDZ District:

Dimensional Standard	Requirement
Minimum Lot Size	None
Minimum Frontage	None
Front Yard Setback	None
Side Yard Setback	None
Rear Yard Setback	None
Maximum Lot Coverage	50%
Maximum Building Height	55 feet or 75 feet (conditional use)[2]

Performance Standard Compliance

The Applicant will comply with all items listed and described in the performance standards for the WPDZ in the development of the proposed Phase VI project as well as through the day-to-day operational activity at the site once construction of Phase VI is complete.

[2] The proposed Building H/I will have a maximum height of 72'-6". An undue hardship variance has been granted by the Zoning Board of appeals to reduce the 100-foot setback from West Commercial Street which restricts the height of the building to 50 feet, to 91 feet in order for part of the building to be 72.5 ft high.

Brightwork Manual Overview

In 2005, the Maine Department of Environmental Protection released "Brightwork -- A Best Management Practices Manual for Maine's Boatyards and Marinas". The goal of the manual is to help site owners and operators of marinas and boatyards to reduce pollution from their facilities by providing environmental compliance benchmarks, common sense practices that enable the benchmarks to be met, a list of regulatory references that form the basis of the benchmarks, and a series of tools to enable easier benchmark progress measuring.

The manual describes in detail the types of toxic pollutants generated by boatyard and marina sites and the resulting environmental and economic impacts.

The manual provides guidance on how to carry out typical jobs and practices associated with boatyards and marinas and the associated benchmarks, best management practices, clean up and waste disposal, customer relations, legal requirements, etc. The practices described include:

- Hull Preparation
- Sandblasting
- Painting
- Boat Washing
- Engine Repair and Maintenance
- Stormwater Planning
- Fueling and Fuel Storage
- Waste Management

The manual provides best management practices for each practice including containment, indoor vs. outdoor recommendations, dust emissions, managing spills, storage, labeling and disposal of various waste products.

The Applicant currently complies with the Brightwork practices within their new facilities at the Canal Landing Yard. They will continue to utilize the Brightwork Manual as a reference and adhere to the requirements set forth for all activities at the proposed site. The construction of Building H/I will aid with the applicant's ability to work on larger vessels within a building space and not outdoors, this improving their ability to abide by the Brightwork Best Management Practices.

ACCESS CONDITIONS

The applicant has previously installed a total of three driveways (east, central, and west) to allow access to Canal Landing's business operations. The central driveway is typically used for heavy vehicle access to the waterfront as it aligns with a 50' wide rail track crossing. The applicant has worked with the Maine Port Authority, who now owns the rail tracks, for improving the central rail crossing. A new and widened crossing assembly will be constructed at the crossing to accommodate the movement of the 300-ton travel lift equipment. This access is normally gated for controlled access to the waterfront. The easterly driveway will continue to provide the primary access to the east end of the site including the existing buildings and easterly boat ramp. A third driveway, previously approved as part of the Phase III activity for Buildings C & D, was constructed at the far west end of the property. Improvements to West Commercial Street have been previously completed as part of the VA project and these include pavement marking improvements to create a two-way center left turn lane and bike lanes along the full length of the street from Cassidy Point to Beach Street. A pedestrian crosswalk of West Commercial Street was previously made part of the Building

C/D approval and a fee of $25,000 was previously collected by the City as paid by the applicant for this crossing. The crosswalk has been previously constructed.

UTILITIES

The site contains numerous utility lines. The primary utilities are identified as follows:

Sanitary Sewer – The Portland Water District maintains a 48" sanitary sewer interceptor sewer along some of the site's West Commercial Street frontage. A portion of this sewer is located within the site within a utility easement. The District/City also maintains a CSO line that discharges out to the Fore River and this line is located between Building D and the not yet constructed Building F, within a 30' wide easement. The previously completed Buildings A and B discharge to an onsite private pump station that ultimately discharges to a terminus manhole that then connects a short length of 8" gravity sewer into the 48" interceptor sewer. The Building E sanitary sewer also connects to the existing force main on the waterfront side of the tracks and these flows will continue to discharge to the 48" interceptor sewer. The sanitary sewer from Buildings C and D discharges to a combination septic tank and lift station located along the southeastern face of the building and it too, ultimately discharges to the 48" interceptor sewer. The proposed Phase VI building H/I sanitary sewer will connect to a new lift station adjacent the building and that will convey wastewater to the existing Building C/D lift station via a 2" force main. The existing private force main and these domestic flows will continue to discharge to the 48" interceptor sewer. An updated wastewater capacity authorization request has been submitted to DPW.

Water – The Portland Water District maintains a water main in West Commercial Street that varies from 12" to 16". A 2" Domestic and 6" Fire service will be used for the Phase VI Building H/I water supply. A determination letter has been requested from the PWD.

Natural Gas – Unitil maintains a high-pressure natural gas line along West Commercial Street. Currently, Buildings A, B and E are served by onsite LP fuel storage tanks. Buildings C and D are served by the high-pressure natural gas line. Building H/I is expected to be served by the Unitil existing gas line.

Power – Power to the site is supplied by Central Maine Power. Currently, there is an overhead service crossing West Commercial Street to two poles from which underground facilities extend to Buildings C and D. A new service to a pad mount transformer is shown on the plans. Power will extend underground from the transformer to the building. We have requested CMP provide a statement regarding their ability to continue supplying power to the development site.

CONSTRUCTION SCHEDULE

The project is currently under design with a targeted construction start date for December 2024 and construction completion in later 2025.

A Construction Management Plan has been prepared by Keeley Construction.

Appendix A

Undue Hardship application and Certificate of Variance Approval

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

August 17, 2023

Building Inspections Office
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509
ATTN: Ann Machado/Matthew Caldwell

Subject: Canal Landing– Proposed Building H – Prefab metal structure
100 West Commercial Street
Applicant: New Yard, LLC (dba Portland Yacht Services aka PYS)
Undue Hardship Variance Application

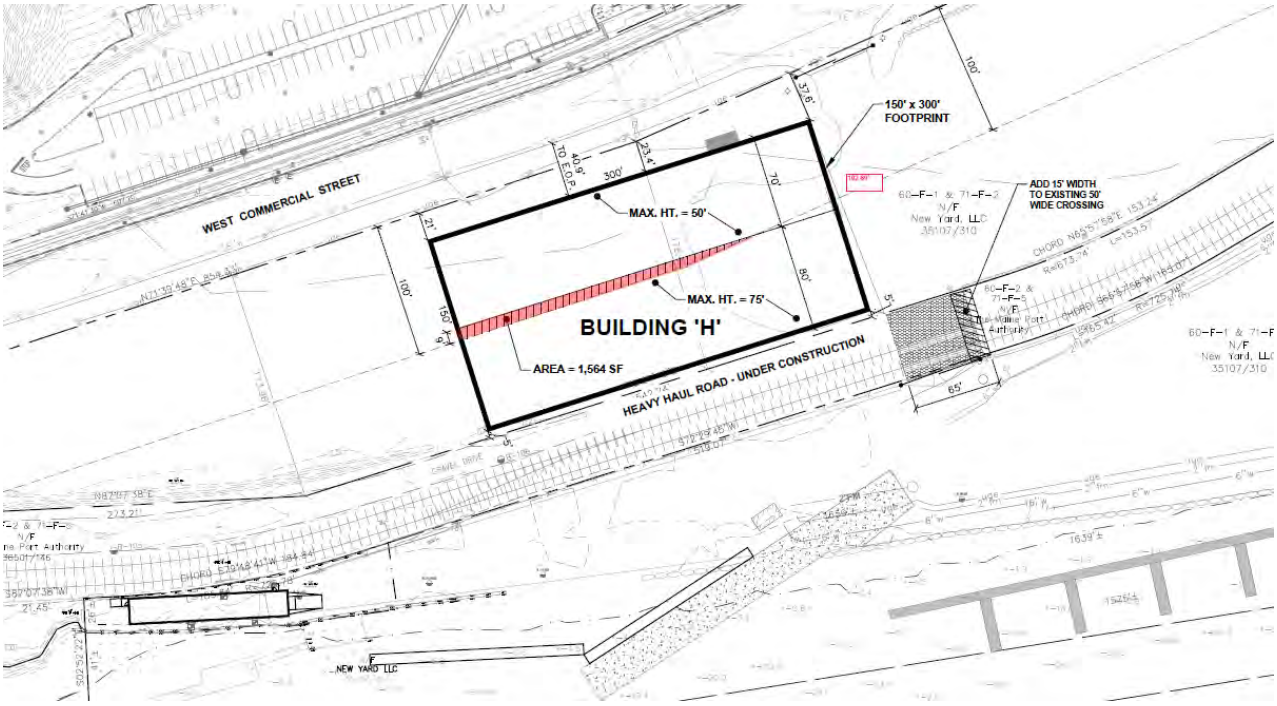
Dear Ann/Matthew:

As we have discussed and in accordance with ReCode Section 2.3.11, New Yard LLC is seeking an Undue Hardship variance approval from the Zoning Board of Appeals, as PYS pursues construction of a new Boat maintenance Building (H) at the Portland Yacht Services property at 100 West Commercial Street. The property is within the WPDZ Zoning District and from Table 10-B of the zoning Code, certain dimensional standards apply within the WPDZ. The proposed building is expected to measure 150' wide x 300' long (45,000 SF) which is conforming. We are proposing a maximum building height of 72'-6" for a portion of the building, thus qualifying the proposal to fall under the Conditional Use standards[1]. The building's height will vary according to the building width, with about 70' of the width closest to West Commercial Street having a height of 50' and about 80' of the width having a maximum height of 75'. The critical dimensional standard from Table 10-B, for which we are seeking a variance is the requirement that "*In no case may any conditionally permitted heights exceed 50 ft within 100 ft of West Commercial Street…*". The development proposal involves having a portion of the building with a height of greater than 50' be closer than 100' from the West Commercial Street ROW. The caption on the following page depicts the basic geometry, with the highlighted area showing the building height encroachment area.

The applicant is requesting a maximum pitched roof building height of 71'-0" to 71'-4" +/- feet be within 91' to 100' respectively from the West Commercial Street ROW[2]. The applicant proposes a tiered height building that would have a building area with maximum height of 50 feet for a width of 70 feet and a second area with a maximum height of 72'-6" feet for a width of 80 feet. A small area (1,564 SF or 6.5% of building area @71'-0" to 71'-4" ht.) of the higher building will encroach into the 100-foot setback zone that allows only a 50-foot maximum height. The positioning of the building is based on

[1] See Table 10-B: WPDZ Dimensional Requirements in City ReCode
[2] See building elevations at end of letter

providing a 5-foot setback from the Maine Port Authority rail tracks ROW line to allow for the necessary building foundation placement and exit door operations.



Proposed Site plan Building H

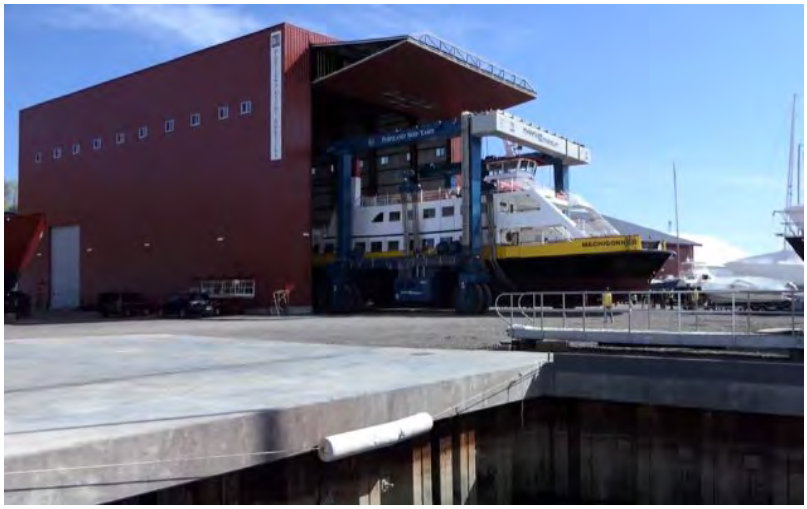
We have completed the accompanying *Undue Hardship Variance Application* and offer the following responses to each of the four conditions and questions within the application and per Section 2.3.11.B of the ReCode:

1. *The land in question cannot yield a reasonable return unless a variance is granted.*

Reason and supporting facts: The PYS campus consists of approximately 17.77 acres, all of which does not contain sufficient area to construct the proposed Building H that will accommodate the business's 300-ton travel lift. The location of various existing buildings and the rail tracks create this limitation. The tracks may be crossed only at two locations and the general boundaries of the site restrict the available space to position in another building large enough for the travel lift.

The applicant's proposed building will be primarily constructed for use and access to their 300-Ton Travel lift apparatus and larger vessels. As pictured, the travel lift is their largest piece of equipment that is specifically used for the movement of larger vessels in/out of their travel lift bay along the waterfront. They currently have a single building

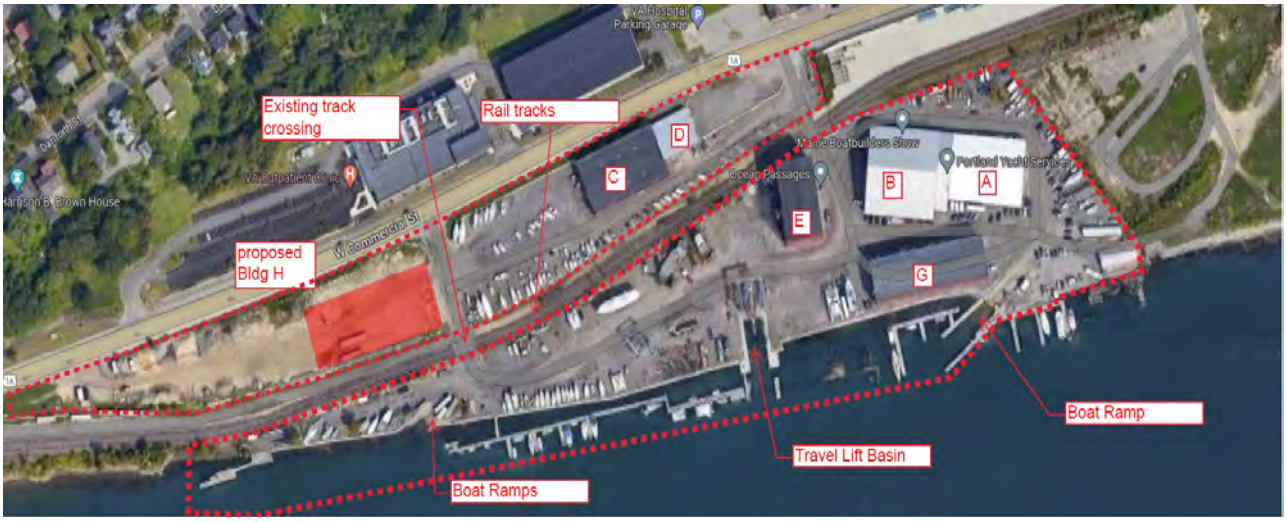
(aka Building E[3]) that is large enough for the 300-Ton travel lift and the large vessels that Portland Yacht Services now performs maintenance on. The applicant's business operations and current demand for services on larger vessels is a key driver of the need for additional building space made large enough for the 300-ton travel lift and the larger vessels.



PYS Building E and Travel Lift

Building E does not have enough capacity for the volume of vessels in need of service, especially service that is best done, if not must be done, inside a building. As shown the building can fit but one large vessel in certain circumstances. These vessels include those from the local Casco Bay Lines fleet, many locally privately owned vessels, and many aquaculture support vessels, among others. The applicant has made multi-million-dollar capital investments in the travel lift, the lift basin and related waterfront and yard improvements, all of which directly support and drive the basic business and financial need for PYS to serve many vessels, large and small, which call upon them. Without the ability to construct another building large enough for the travel lift, the business will suffer financial injury as the work on larger boats will need to be rejected due to lack of available building space, tall enough and wide enough to accommodate the 300-ton Marine Travel Lift. The site's economic return relies on adequate building space appropriately sized and located to support the equipment necessary to operate the business.

[3] Building E is the only onsite building used by the 300 Ton lift and it measures 80' wide x 150' long x 75' height.



Aerial View of New Yard

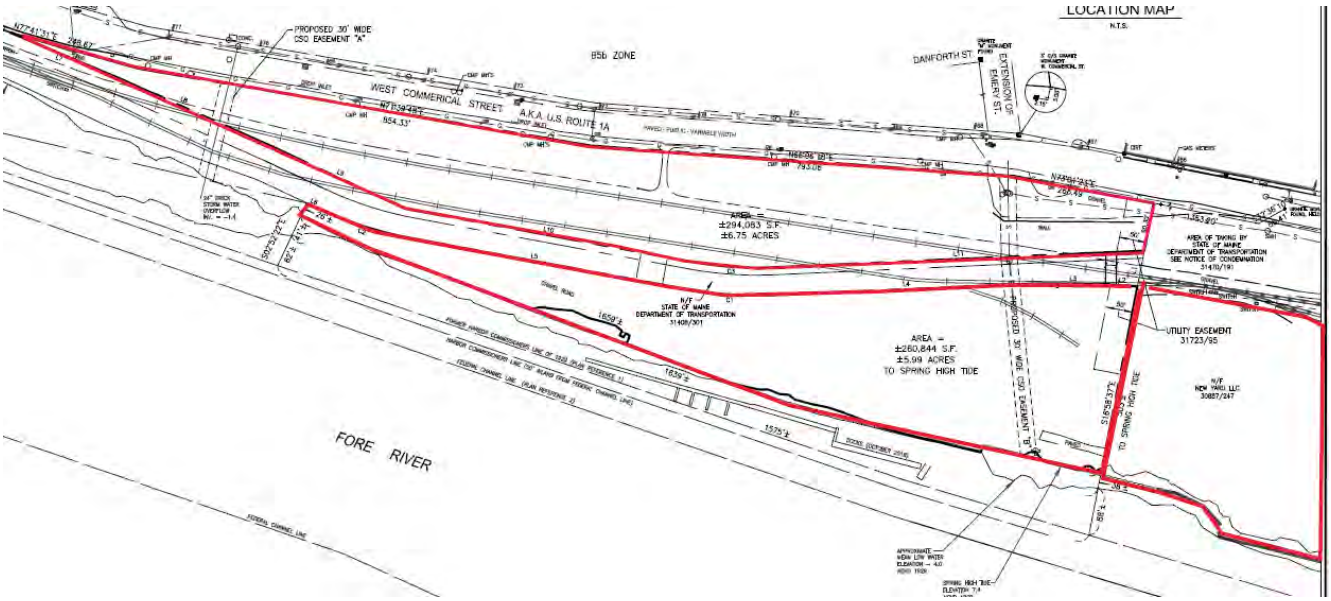
2. *The need for a variance is due to the unique circumstances of the property and not to the general conditions in the neighborhood.*

Reason and supporting facts: The New Yard site consists of three parcels. The original 5 ac+ development area contains Buildings A and B to the east side of the property. The 5-ac area is the remainder of an approximately 23-acre site the applicant controlled and that subsequently went through an eminent domain acquisition of 17 ac+/- by the MeDOT/State of Maine, as part of their IMT expansion, circa 2014/2015. The applicant subsequently acquired additional land containing approximately 12.74 acres, which is bisected by the Maine Port Authority rail tracks, originally constructed by the Maine Department of Transportation circa 2016. The parcel consists of 5.99 acres along the waterfront and another 6.75 acres that lies between the tracks and West Commercial Street[4]. The applicant owns approximately 17.77 acres that is bisected by a 42-ft wide Rail ROW, controlled by the Maine Port Authority.

The existing travel lift basin, Building E, and Building G are located within the waterfront area. Based on the required maneuvering area required for the 300-Ton Travel lift, it is necessary to construct the proposed Building H within the land area located to the west end of the site, between the rail tracks and West Commercial Street. This is the only available site area for the required building size suitable for the travel lift. As evidenced by the following figure, the land area is restricted by the positioning of the existing tracks, installed by the MeDOT. Without this requested variance the applicant's ability to construct an 80' wide x 75' height x 300' long building does not exist, and the applicant's opportunity to expand service to larger vessels from Portland Harbor as well

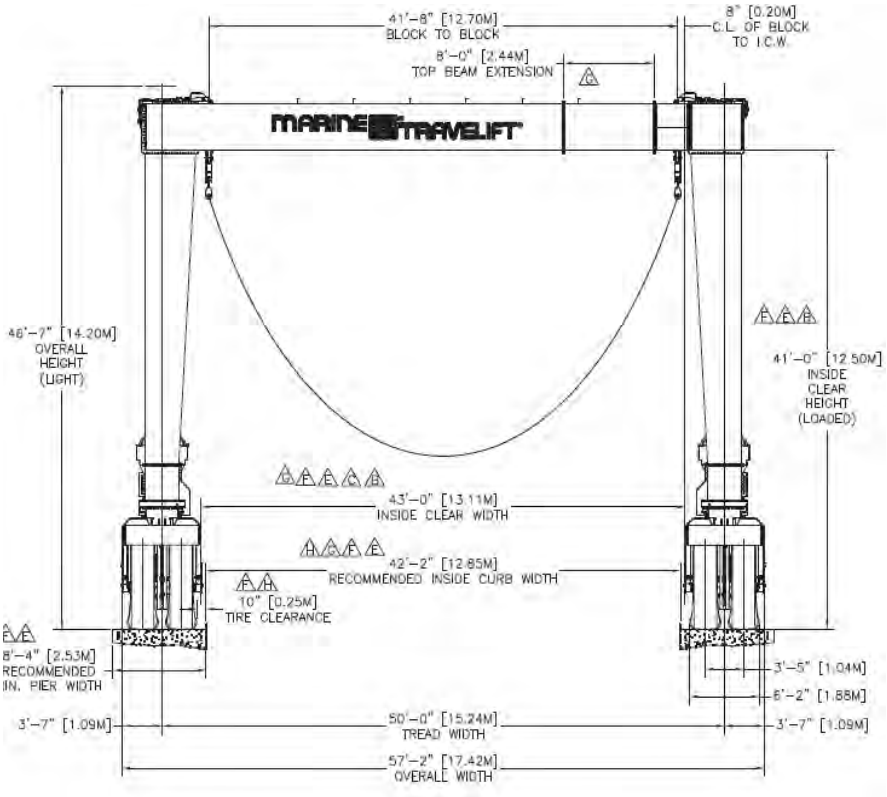
[4] See attached deed CCRD Book 35107 page 310.

as from the expanded Maine and southern New England waterfront will be significantly impacted.



New Yard Site

The design team is aware of the height restrictions in the WPDZ and therefore offer a building that seeks to use the maximum height of 50 feet within 100 feet of the ROW, except for a small area of the building that would be 71'-0" to 71'-4" in height at no closer than 91 feet to the ROW. The 300-ton travel lift and the vessels it will serve, require a minimum width of 80 feet for the structural steel members and the safe maneuvering of the lift in/out of the building, and a 72'-6" peak height to allow for the taller vessels and the nearly 47' marine lift height alone. The applicant is seeking to maximize the length of the building to the allowed 300-foot length, thus remaining in conformance for building length.



Marine Travel Lift section

Relying on this evidence we believe the need for a variance is based on the unique circumstances of the property.

3. The granting of the variance will not alter the essential character of the locality.

Reason and supporting facts: The proposed building will allow for larger vessels to be worked on inside of a building and not outside. As with all operations on the boat yard, compliance with all local, State and Federal applicable rules and regulations, including the Maine Department of Environmental Protection Brightwork Manual, is a priority. The proposed encroachment of a small amount of building exceeding the 50-foot maximum height within 100 feet of West Commercial Street is not expected to unreasonably effect the natural environment, nor will it impact special view corridors or access to the waterfront. The granting of a variance will allow for a specific water dependent use and activity that benefits the greater Port of Portland, Maine Coast in general, and New England Coastal region overall.

The proposed building is considered a continuation of existing services currently occurring on the property. The applicant proposes to construct a building that will match the character and style of the existing onsite structures including color, exterior siding, roof materials, and lighting. The building will be positioned to retain ample view corridors to the waterfront and in fact, will replace the most recent land use that consisted of a construction materials storage yard and seasonal snow dump. Imagery contained at the end of this submission highlight the existing conditions and general harmonious fit of the proposed building into the site. On this basis we believe the granting of a variance will not alter the essential character of the locality.

4. The hardship is not the result of action taken by the applicant or a prior owner.

Reason and supporting facts: The hardship was created as a result of the alignment of the rail tracks, which when designed and constructed by the MeDOT in 2015/2016, bisect the property. The tracks created two basic development areas on either side of the tracks, each of which are relatively long and narrow. Had the tracks not been placed, the site would contain more area to allow a building, as proposed, to satisfactorily be setback from the street while abiding by the height restrictions set forth in Table 10-B. To date, the applicant has best fit the various constructed buildings into the site's

available space, while closely allowing for the movement of the transportation equipment i.e., the 300-ton travel lift and a smaller travel lift, the temporary placement of vessels, and the maintenance of access routes for emergency services, operations staff, clients, and guests to the site. The imagery above clearly identifies the site limitations to accommodate all these necessary features.

As shown on the imagery, no other area exists on the site to place an 80' wide x 300' long x 75' height building other than as shown, without impacting a fire truck access route or otherwise be inaccessible to the 300-ton travel lift. Other site conditions contributing to the hardship include:

- **The undeveloped site area further to the west of the proposed building site becomes even narrower and that would exacerbate the encroachment of the taller building area into the 100' zoning height setback from West Commercial Street. These conditions were created by the alignment of the Rail ROW by the MeDOT.**
- **The waterfront area is basically encumbered by access routes, buildings, ramp access and travel lift basin access. No space exists between the rail tracks and the waterfront.**
- **Expansion of existing Building E is not feasible due to the need to maintain access paths for the travel lift, boat yard vessel parking, and fire department access through the yard. An existing City Combined Sewer pipeline lies within 30' of the building and also complicates any further Building E expansion opportunity.**
- **Area just west of existing Building C contains an emergency vehicle route and boat yard storage related to the activities within Building C. There is insufficient space for the building as sized, between or adjacent Building C to the Rail ROW.**

On this basis we believe the site conditions and Undue Hardship were created by the actions of others.

<u>Conditional Use Standards</u>

In accordance with Section 6.5.2 of the code we offer the following pertaining to these conditional use standards:

A. *The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement, and the number of parking spaces required are not substantially greater than would normally occur at surrounding uses of other allowable uses in the same zone.*

Evidence: The proposed building use will not create additional parking demand nor change the existing hours of operation of the facility. The building will allow more vessels to be placed inside.

B. *The proposed use will not create unsanitary or harmful conditions by reason of noise, glare, dust, sewage, disposal, emissions to the air, odor, lighting, or litter.*

Evidence: The proposed building will have public utility connections including to the municipal sewer system and the building will be consistent with the previously constructed structures on the property.

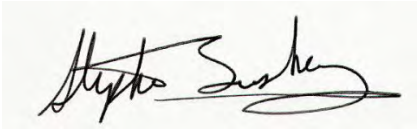
C. *The design and operation of the proposed use, including but not limited to landscaping, screening, signs, loading, deliveries, trash or waste generation, arrangement of structures, and materials storage will not have a substantially greater effect/impact on surrounding properties than those associated with surrounding uses or other allowable uses in the zone.*

Evidence: The proposed building will displace what has been used as a snow dump for several years as well as a construction materials storage yard. The proposed building and yard will be maintained consistent with the existing site area and is expected to improve the west end of the property from its current condition.

Based on this accompanying information we trust that you can complete the processing of the proposed **Building H** *Undue Hardship Variance Application*. We look forward to meeting with the Zoning Board of appeals at their next available meeting. If you have any questions or require any additional information, please contact our office.

Sincerely,

GORRILL-PALMER



Stephen Bushey, PE
Senior Associate
Phone: 207-772-2515 x286
sbushey@gorrillpalmer.com

Attachments

c: Jason Curtis – New Yard, LLC

U:\3561.05_Canal Landing Building H\P Applications\Local\Practical difficulty – zoning\ltr_machado Undue Hardship 2023.08.17.

From:	Jason Curtis
To:	Steve Bushey
Subject:	Fwd: New Yard Practical Difficulty Variance application - ZBA-002593-2023 / 232 (100) W Commercial ST
Date:	Thursday, July 20, 2023 3:20:07 PM
Attachments:	image002.png image001.png

Steve,

Will this work?

Thank You,
Jason Curtis
Vice President of Operations
Portland Yacht Services/Portland Ship Yard
100 West Commercial St.
Portland, Me. 04102
www.portlandyacht.com
Office 207 774-1067

Begin forwarded message:

> **From:** Phineas Sprague <halftiderock@gmail.com>
> **Date:** July 20, 2023 at 3:15:52 PM EDT
> **To:** Jason Curtis <jason@portlandyacht.com>
> **Subject: Re: New Yard Practical Difficulty Variance application - ZBA-002593-2023 / 232 (100) W Commercial ST**
>
> Jason,
>
> This email is to confirm that it is my intention, wish, and understanding that you and Steve Bushey will represent New Yard at the Variance meeting and other meetings to obtain permission to move forward with the next building application.
>
> If there are any questions or concerns please let me know.
>
> Phineas Sprague Jr.
> Manager New Yard LLC.
>
> " ..to observe keenly, to reason soundly, and to imagine vividly."
>
> On Thu, Jul 20, 2023, 14:33 Jason Curtis <jason@portlandyacht.com> wrote:
>> Phin,
>>
>> See below. Can you send an email to give me permission to represent New Yard

CITY OF PORTLAND
Permitting and Inspections Department

Zoning Board of Appeals

Variance Appeal Application

Applicant Information:

Applicant Name: New Yard LLC **Phone:** (_207_) _774__ - _1067____

Business Name (if applicable): Same **Email:** _jason@portlandyacht.com____

Mailing Address: 100 West Commercial Street Portland ME 04101

Is the applicant an agent, representative, or lessee of the property owner/purchaser? □ Yes x No

Name of Property Owner/Purchaser: Same **Phone:** (_207_) _774___ - __1067___

Business Name (if applicable): __Portland Yacht Services _____ **Email:** _____Same

Mailing Address: Same

Property and Project Information:

Property Address: __100 West Commercial Street **Zone:** ___WPDZ

Tax Assessor's CBL: _____ _____ _____ **Current Use of Property:** _Boat Maintenance Facility_____
Chart # Block # Lot #

Seeking a Variance from the Portland Land Use Ordinance, Chapter 14, Section _Table 10-B_____

Description of Proposed Variance: __See Accompanying Cover letter for Project Description and supporting evidence.

Please submit all applicable items listed on the **Application Process and Instructions** sheet. You are welcome to submit any additional documents and exhibits that may support your application. Provide answers to the Variance Addendum, found on page 2 of this form.

The undersigned hereby makes application for a variance as described above, and certifies that the information herein is true and correct to the best of his or her knowledge and belief.

Applicant signature: Stephen Bushey agent Date: 8/18/23

389 Congress Street, Room 315 • Portland, Maine 04101 • 207-874-8703
zoning@portlandmaine.gov • www.portlandmaine.gov

CITY OF PORTLAND

Permitting and Inspections Department

Addendum to Variance Appeal Application

The applicant will provide answers to the four statements below.

Section 2.3.11.B of the Land Use Ordinance states that a variance may be granted by the Zoning Board of Appeals only where strict application of the ordinance, or a provision thereof, to the petitioner and his property would cause undue hardship. The board will consider the answers and evidence provided the applicant in response to the four statements below in determining whether "undue hardship" exists.

1. The land in question cannot yield a reasonable return unless a variance is granted. [Note: "failure to yield a 'reasonable return' means 'the practical loss of all beneficial use of the land...Reasonable return does not mean maximum return." *Rowe v. City of South Portland, 730 A.2d 673, 675 (ME 1999)(citations omitted.)*]
   __x___Yes _____No
   Reason and supporting facts: See accompanying cover letter

2. The need for a variance is due to the unique circumstances of the property and not to the general conditions in the neighborhood.
   ___x__Yes _____No
   Reason and supporting facts: See accompanying cover letter.

3. The granting of the variance will not alter the essential character of the locality.
   ___x __Yes _____No
   Reason and supporting facts: See accompanying letter

4. The hardship is not the result of action taken by the applicant or a prior owner.
   ___x__Yes _____No
   Reason and supporting facts: See accompanying letter

389 Congress Street, Room 315 • Portland, Maine 04101 • 207-874-8703

zoning@portlandmaine.gov • www.portlandmaine.gov

QUITCLAIM DEED WITH COVENANT
Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **CANAL LANDING, LLC**, a Maine limited liability company with a place of business in the City of Portland, County of Cumberland, State of Maine, for consideration paid, grants to **NEW YARD, LLC**, a Maine limited liability company with a place of business in the City of Portland, County of Cumberland, State of Maine, whose mailing address is 400 Commercial Street, Portland, ME 04101, with **QUITCLAIM COVENANTS**, the land, together with any improvements, situated in the City of Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said CANAL LANDING, LLC has caused this instrument to be signed and sealed this 29th day of August, 2018.

WITNESS:

CANAL LANDING, LLC

By _____
Clinton Marshall
Sole Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

August 29, 2018

Then personally appeared the above named Clinton Marshall, in his said capacity, and acknowledged the foregoing instrument to be his free act and deed, and the free act and deed of said limited liability company, before me.

_____
Attorney at Law/~~Notary Public~~
Drew A. Anderson
Printed Name

EXHIBIT A

232 West Commercial Street:

A certain lot or parcel of land situated on the southerly side of West Commercial Street in the City of Portland, County of Cumberland and State of Maine as shown on a plan entitled "Land on West Commercial Street, Portland, Maine, Maine Central Railroad Company to Canal Landing, LLC, dated April 29, 2015 recorded in the Cumberland County Registry of Deeds in Plan Book 215, Page 157 (the "Plan"), bounded and described as follows:

Beginning at a point on the southerly sideline of West Commercial Street at the northwesterly corner of land now or formerly of New Yard, LLC recorded in the Cumberland County Registry of Deeds in Book 30887, Page 247;

Thence, S 16°58'37" E along the westerly line of land of said New Yard, LLC 90.30 feet to the northerly line of land now or formerly of the State of Maine Department of Transportation recorded in said Registry of Deeds in Book 31408, Page 301;

Thence, the following courses and distances along the northerly line of land of said State of Maine:

S 59°26'10" W 693.10 feet;

Thence, along a curve to the right with a radius of 673.74' feet, having an arc length of 153.57 feet, having a chord bearing of S 65°57'58" W and chord length of 153.24 feet;

S 72°29'45" W 542.24 feet;

S 87°07'38" W 273.21 feet;

S 86°01'33" W 312.82 feet;

S 84°41'57" W 219.48 feet to the southerly sideline of said West Commercial Street;

Thence the following courses and distances along the southerly sideline of West Commercial Street:

N 77°41'31" E 248.67 feet;

N 71°39'48" E 854.33 feet;

N 66°06'18" E 793.06 feet;

N 73°01'23" E 263.49 feet to the point of beginning. Containing 294,083 S.F. or 6.75 acres, more or less.

Also another certain lot or parcel of land situated on the southerly side but not adjacent to West Commercial Street in the City of Portland, County of Cumberland and State of Maine as shown on the Plan, bounded and described as follows:

Commencing at a point on the southerly sideline of West Commercial Street at the northwesterly corner of land now or formerly of New Yard, LLC recorded in said Registry of Deeds in Book 30887, Page 247;

Thence, S 16°58'37" E along the westerly line of land of said New Yard, LLC 158.20 feet to the point of beginning at the southerly line of land now or formerly of the State of Maine Department of Transportation recorded in said Registry of Deeds in Book 31408, Page 301;

Thence, S 16°58'37" E continuing along the westerly line of New Yard, LLC 503 feet, more or less, to the spring high tide line of the Fore River;

Thence, westerly along the spring high tide line of the Fore River 1659 feet, more or less, to land of the State of Maine;

Thence, the following courses and distances along the southerly line of land of said State of Maine:

N 02°52'22" W 26 feet, more or less;

N 87°07'38" E 21.45 feet;

Thence, along a curve to the left with a radius of 725.78 feet, having an arc length of 185.34 feet, having a chord bearing of N 79°48'41" E and chord length of 184.84 feet;

N 72°29'45" E 519.07 feet;

Thence, along a curve to the left with a radius of 725.74 feet, having an arc length of 165.42 feet, having a chord bearing of N 65°57'58" E and chord length of 165.07 feet;

N 59°26'10" E 495.19 feet;

N 62°41'27" E 125.13 feet;

N 66°19'39" E 57.45 feet to the point of beginning. Containing 260,844 S.F. or 5.99 acres, more or less.

Together with all right, title and interest that this grantor may have in the intertidal and submerged lands abutting the above described parcel.

The property is conveyed subject to and together with the benefits of:

1. Deed of Easement from Maine Central Railroad Company to Canal Landing, LLC, dated August 7, 2014 and recorded in said Registry of Deeds in Book 31723, Page 95.

2. The reservation of right to cross for the benefit of Portland Terminal Company and others as described in the deed from Portland Terminal Company to Central Maine Power Company, dated April 15, 1975 and recorded in Book 3669, Page 135.

3. Reservation of right to construct or erect railroad tracks or railroad fixtures over pipes as described in the Easement from Portland Terminal Company to Portland Water District, dated February 11, 1977 and recorded in Book 3975, Page 262.

4. Benefit of the Supplemental Agreement by and between the State of Maine, acting by and through its Department of Transportation, and New Yard, LLC, dated July 8, 2014 and as attached to the Affidavit of Drew A. Anderson, dated December 2, 2014 and recorded in Book 31947, Page 202.

5. Affidavit of Phineas Sprague, Jr. Re Private Crossing License Among New Yard, LLC, Canal Landing, LLC and the State of Maine Department of Transportation, dated November 14, 2016 and recorded in Book 33620, Page 37.

6. Affidavit of Phineas Sprague, Jr. Re Supplemental Agreement Among New Yard, LLC, Canal Landing, LLC and the State of Maine Department of Transportation, dated November 14, 2016 and recorded in Book 33620, Page 49.

7. Notice of Condemnation by the State of Maine, acting by and through its Department of Transportation, dated March 26, 2014 and recorded in Book 31408, Page 301 including exceptions as noted:

    a. Terms and conditions of rights and easement to maintain a drain or sewer as set forth in the instrument from John B. Brown, Horatio N. Jose and Portland Glass Company to the City of Portland, dated January 11, 1867 and recorded in Book 348, Page 337;
    b. Possible rights to install, maintain, repair, operate, replace and/or improve a sewer pipe as further described in the instrument from Portland Terminal Company to the City of Portland, dated November 10, 1975 and recorded in Book 3793, Page 217.

8. Lease from Portland Terminal Company to Central Maine Power Company, dated June 17, 2009 and recorded in Book 27094, Page 227.

9. Lease from Portland Terminal Company to Central Maine Power Company, dated June 17, 2009 and recorded in Book 27094, Page 232.

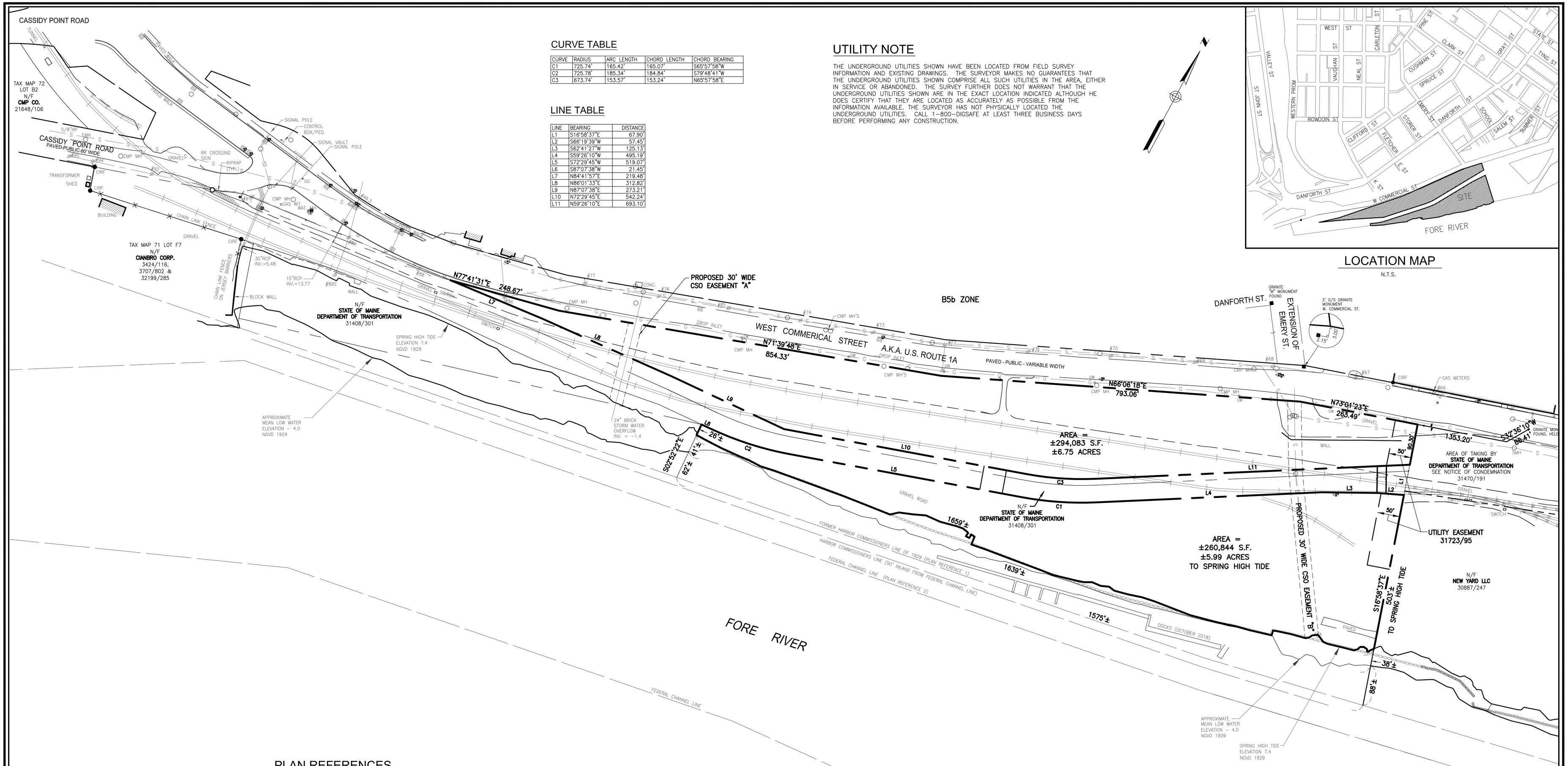
10. Deed of Easement from Maine Central Railroad Company to Canal Landing, LLC, dated August 7, 2014 and recorded in Book 31723, Page 95.

11. Terms and conditions of Supplemental Agreement by and between the State of Maine, acting by and through its Department of Transportation and New Yard, LLC, as attached to the Affidavit of Drew A. Anderson, dated July 8, 2014, and recorded in Book 31947, Page 202.

12. Terms and conditions of deed into Canal Landing, LLC by Maine Central Railroad Company, dated April 27, 2015 and recorded in Book 32239, Page 148.

Meaning and intending to convey and hereby conveying the same premises described in the Release Deed from Maine Central Railroad Company to Canal Landing, LLC, dated April 27, 2015 and recorded in said Registry of Deeds in Book 32239, Page 148.

Received
Recorded Register of Deeds
Aug 29,2018 01:59:07P
Cumberland County
Nancy A. Lane



CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	725.74'	165.42'	165.07'	S65°57'58"W
C2	725.78'	185.34'	184.84'	S79°48'41"W
C3	673.74'	153.57'	153.24'	N65°57'58"E

LINE TABLE

LINE	BEARING	DISTANCE
L1	S16°58'37"E	67.90'
L2	S66°19'39"W	57.45'
L3	S62°41'27"W	125.13'
L4	S59°26'10"W	495.19'
L5	S72°29'45"W	519.07'
L6	S87°07'38"W	21.45'
L7	N84°41'57"E	219.48'
L8	N86°01'33"E	312.82'
L9	N87°07'38"E	273.21'
L10	N72°29'45"E	542.24'
L11	N59°26'10"E	693.10'

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 SURVEY 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 THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-800-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.

LOCATION MAP

N.T.S.

LEGEND

- IRON PIPE OR ROD FND
- MONUMENT FOUND
- GAS VALVE
- WATER VALVE
- HYDRANT
- UTILITY POLE
- LIGHT POLE
- MANHOLE
- CATCH BASIN
- SIGN
- FENCE
- OHW — OVERHEAD WIRES
- G — GAS LINE
- S — SANITARY SEWER
- SD — STORM DRAIN
- SEAWALL
- MONITORING WELL
- GW — GAS WITNESS

GRAPHIC SCALE

0 50' 100' 200' 400'

PLAN REFERENCES

1. HARBOR LINES, PORTLAND HARBOR, MAINE U.S. ENGINEER OFFICE, BOSTON, MASS. JUNE 30, 1939.

2. PORTLAND HARBOR, PORTLAND, MAINE CONDITION SURVEY, 35 AND 45-FOOT CHANNELS, 45-FOOT ANCHORAGE, 35-FOOT TURNING BASINS, DATED SEPT. 13, 2011 U.S. ARMY CORPS OF ENGINEER NEW ENGLAND DISTRICT SHEET ID. NO. V-105.

3. COMMERCIAL STREET DRAINAGE AND TRAFFIC IMPROVEMENTS CIVIL PLAN MADE BY CITY OF PORTLAND, MAINE PUBLIC WORKS DEPARTMENT ENGINEERING SECTION DATED JUNE 2007.

4. ALTA/ACSM LAND TITLE SURVEY ON WEST COMMERCIAL STREET, PORTLAND, MAINE, MADE FOR NEW YARD LLC, 98 FORE STREET, PORTLAND, MAINE DATED JULY 2, 2013, REVISED THROUGH SEPT. 23, 2013 BY OWEN HASKELL, INC. RECORDED IN PLAN BOOK 213 PAGE 352 AND 353.

5. "ALTA/ACSM LAND TITLE SURVEY AT WEST COMMERCIAL STREET, PORTLAND, MAINE MADE FOR BINGHAM MCCUTCHEN LLP" BY OWEN HASKELL, INC. DATED DEC. 18, 2006.

6. "LAND TITLE SURVEY ON DANFORTH AND WEST COMMERCIAL STREETS, PORTLAND, MAINE MADE FOR MERRILL INDUSTRIES, INC." BY OWEN HASKELL, INC. DATED JAN. 27, 2003 REVISED THROUGH AUGUST 30, 2005.

7. "STANDARD BOUNDARY SURVEY FOR PROPOSED ELECTRIC SUBSTATION WEST COMMERCIAL STREET PORTLAND, MAINE." MADE FOR CMP. CO. BY TITCOMB ASSOCIATES. RECORDED IN PLAN BOOK 204 PAGE 571.

8. "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP LAND ACQUISITIONS DOT FILE NO 3-595" BY OWEN HASKELL, INC. DATED APRIL 2014.

9. "LAND ON WEST COMMERCIAL STREET PORTLAND, MAINE, MAINE CENTRAL RAILROAD CO. TO CANAL LANDING, LLC" BY OWEN HASKELL, INC. DATED APRIL 30, 2015. RECORDED IN PLAN BOOK 215, PAGE 157.

GENERAL NOTES

1. OWNER OF RECORD: NEW YARD, LLC
C.C.R.D. BOOK 35107 PAGE 310

2. BEARINGS ARE BASED ON STATE PLANE COORDINATES NAD 83 MAINE WEST.

3. THE FEDERAL CHANNEL LINE TAKEN FROM PLAN REFERENCE NO. 2 USING COORDINATES IN THE DIGITAL FORMAT OF SAID PLAN.

4. THE SEWER LINE SHOWN IS BASED ON THE LOCATION OF SEWER MANHOLES AND A PLAN TITLED "PORTLAND WATER DISTRICT PORTLAND, MAINE POLLUTION ABATEMENT FACILITIES CONTRACT NO. 3 LOWER FORE RIVER INTERCEPTOR SHEETS 23-28" BY CAMP DRESSER & MCKEE INC. DATED APRIL, 1963.

5. THE SUBJECT PARCEL IS IN THE DIVISION 18.5 WATERFRONT PORT DEVELOPMENT ZONE & DIVISION 26 SECTION 14-446 SHORE LAND REGULATION ZONE PER THE CITY OF PORTLAND CODE OF ORDINANCES LAND USE CHAPTER 14.

6. THE SUBJECT PARCEL IS IN ZONE C & ZONE A2 (ELEV. 10) AS SHOWN ON THE FLOOD INSURANCE RATE MAP 230051 0016B WITH AN EFFECTIVE DATE OF JULY 17, 1986.

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.

OCTOBER 22, 2018
DATE

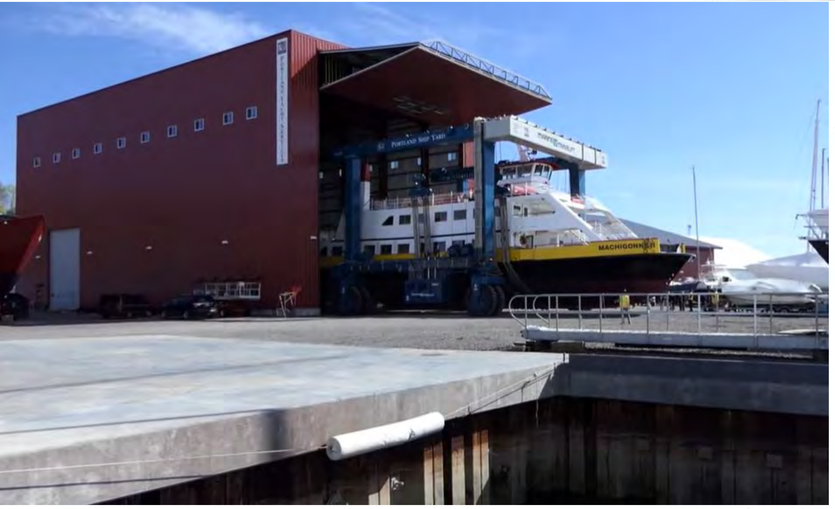
RANDY R. LOUBIER, PLS NO. 2407

STATE OF MAINE
RANDY R. LOUBIER 2407
PROFESSIONAL LAND SURVEYOR

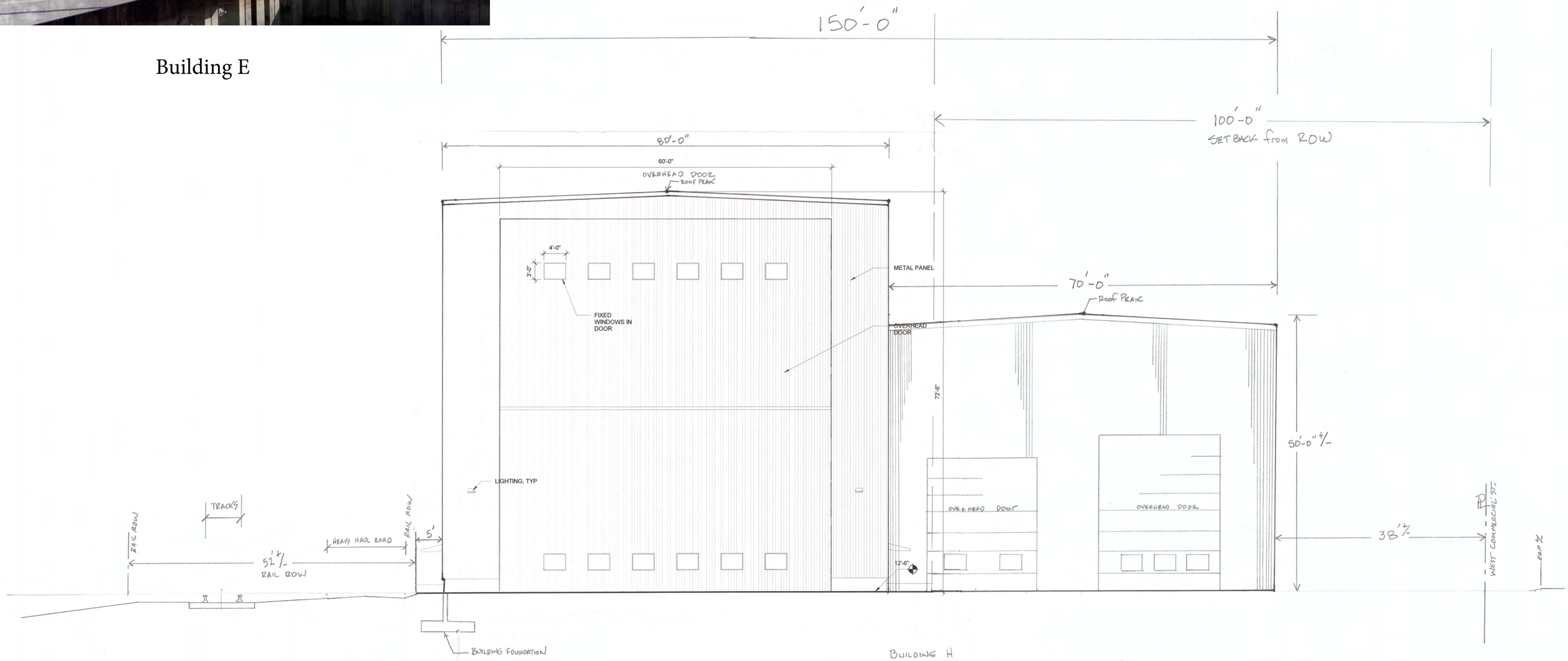
PLAN OF LAND
ON
WEST COMMERCIAL STREET, PORTLAND, MAINE
MADE FOR OWNER OF RECORD
NEW YARD, LLC
400 COMMERCAIL STREET, PORTLAND, ME 04101

OWEN HASKELL, INC.
390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207)774-0424
PROFESSIONAL LAND SURVEYORS

Drwn By	RRL	Date	Job No.
Trace By	JLW	OCTOBER 22, 2018	2012-051 P
Check By	JWS	Scale	Drwg. No.
Book No.	FILE	1" = 100'	1-NEW YARD LLC



Building E



BUILDING H

CROSS SECTION - EAST FACE OF BUILDING (EAST ELEVATION)

1/8" = 1'-0"

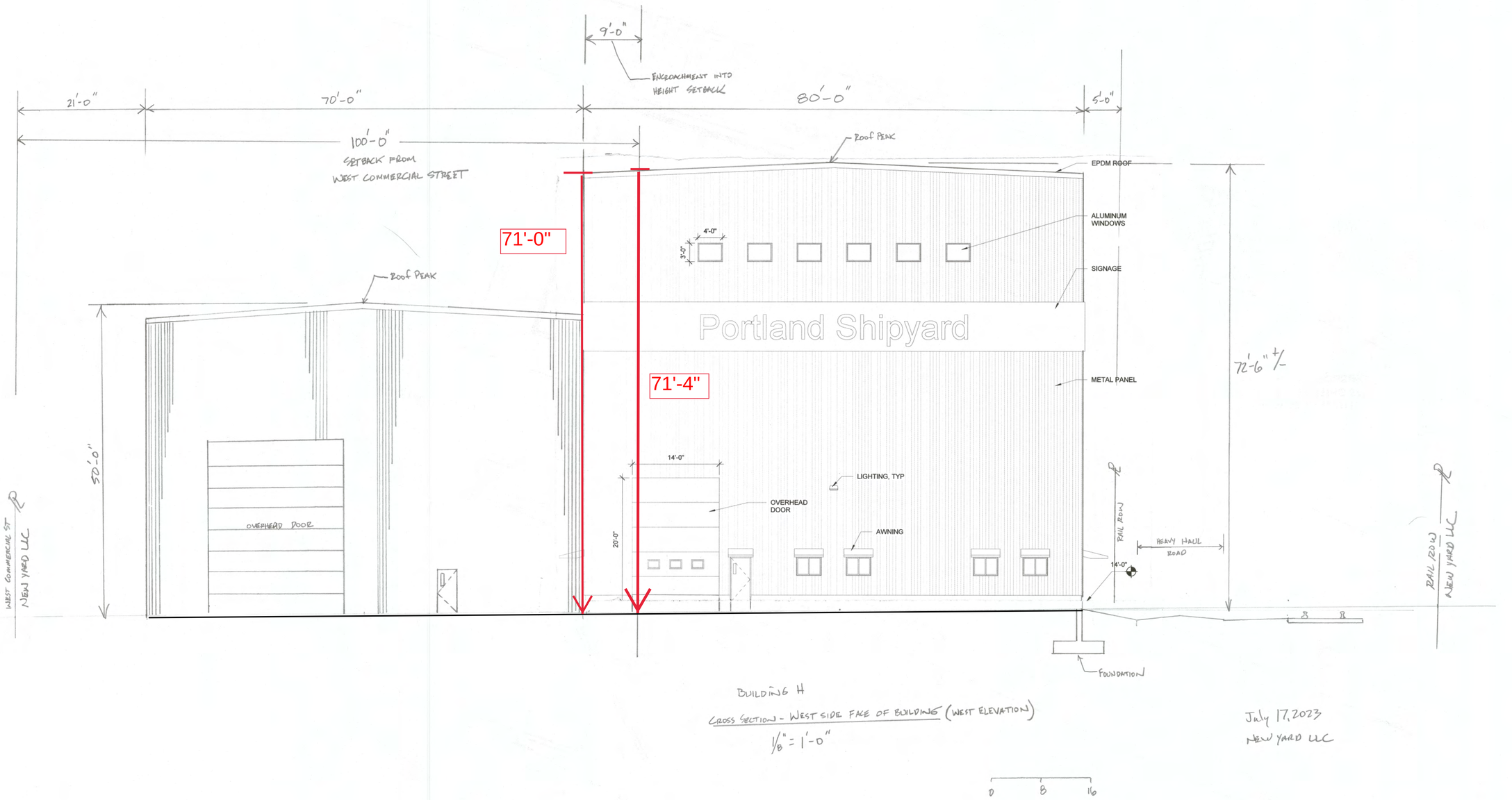
0 8 16

July 17, 2023

NEW YARD LLC

Sheet 1 of 2





BUILDING H

CROSS SECTION - WEST SIDE FACE OF BUILDING (WEST ELEVATION)

1/8" = 1'-0"

July 17, 2023
NEW YARD LLC

0 8 16

Sheet 2 of 2



Building	Height (to peak)
A	45’ +/-
B	55’-10”
C	23’ +/-
D	35’ +/-
E	72’-6”
G	42’-6” +/-
Proposed H	72’-6”/50’-0”
VA CBOC	42’-0”
VA Garage	47’-11”
MICS	55’-0”

New Yard LLC dba Portland Yacht Services


Proposed Bldg H
VA CBOC and Garage not shown
C
E
B
A
Maine International Cold Storage Building - under construction
New Yard LLC - Portland Yacht Services 100 West Commercial Street

WEST COMMERCIAL STREET

BUILDING 'H'

MAX. HT. = 50'

MAX. HT. = 75'

AREA = 1,564 SF

150' x 300'
FOOTPRINT

ADD 15' WIDTH
TO EXISTING 50'
WIDE CROSSING

HEAVY HAUL ROAD - UNDER CONSTRUCTION

GRAVEL DRIVE

NEW YARD LLC
35107/310

60-F-1 & 71-F-2
N/F
New Yard, LLC
35107/310

60-F-2 & 71-F-5
N/F
The Maine Port Authority
36501/146

60-F-2 & 71-F-5
N/F
The Maine Port Authority

Original notarized/ recorded document given to New Yard LLC for their records

Doc#: 32951 Bk:40362 Pg: 151

CITY OF PORTLAND, MAINE
CERTIFICATE OF VARIANCE APPROVAL

I, Joseph Zamboni, the duly appointed Chair of the Board of Appeals for the City of Portland, Cumberland County and State of Maine, hereby certify that on the 7th day of September, 2023, the following variance was granted pursuant to the provisions of 30-A M.R.S.A. Section 4353(5) and the City of Portland's Code of Ordinances.

1. **Current Property Owner: New Yard, LLC**

2. **Property: 100 (232) West Commercial Street, Portland Maine CBL: 060 F001**
   Cumberland County Registry of Deeds, **Book: 35107 Page: 310**
   Last recorded deed in chain of Title:**8/29/2018**

3. **Variance and Conditions of Variance**:
   To reduce the 100 foot setback from West Commercial St which restricts the height of the building to 50 feet (Table 10-B, Chapter 14 of the City of Portland Code of Ordinance) to 91 feet in order for part of the building to be 72.5' high.

IN WITNESS WHEREOF, I have hereto set my hand and seal this 11th day of September, 2023

, Chair of
City of Portland Zoning Board,
Joseph Zamboni

STATE OF MAINE
Cumberland, ss.

Then personally appeared the above-named Joseph Zamboni and acknowledged the above certificate to be his free act and deed in his capacity as Chair of the Portland Zoning Board of Appeals, with his signature witnessed on September 11, 2023.

SEAL

Received
Recorded Register of Deeds
Sep 15,2023 12:09:48P
Cumberland County
Jessica M. Spaulding

April Lee Woodcock

Notary Public
April Woodcock
My term expires

APRIL LEE WOODCOCK
NOTARY PUBLIC
CUMBERLAND COUNTY
MAINE
MY COMMISSION EXPIRES APRIL 22, 2028

PURSUANT TO 30-A M.R.S.A. SECTION 4353(5), THIS CERTIFICATE MUST BE RECORDED BY THE PROPERTY OWNER IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS WITHIN 90 DAYS FROM FINAL WRITTEN APPROVAL FOR THE VARIANCE TO BE VALID. FURTHERMORE, THIS VARIANCE IS SUBJECT TO THE LIMITATIONS SET FORTH IN SECTION 14-474 OF THE CITY OF PORTLAND'S CODE OF ORDINANCES.

CITY OF PORTLAND
Planning & Urban Development Department

LEVEL II and LEVEL III SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST

* Please upload each document and drawing as a separate PDF file
* Please upload all drawings in a 24 x 36 sheet size
* Please confirm each item by electronically checking the boxes to the left for each document/drawing
* Please fill out and upload separately the zoning assessment table and waiver table

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

GENERAL APPLICATION DOCUMENTS

Yes	NA	
☑	☐	**Project Description** • Cover Letter with detailed project description
☑	☐	**Completed Checklist – Level II and Level III Site Plan** (this document)
☑	☐	**Right, Title and Interest** • Deeds, leases, or purchase and sales agreements
☐	☑	**Evidence of State or Federal Approvals** • Permits or letters of non-jurisdiction, if applicable
☑	☐	**Zoning Assessment** • Table listing required and proposed uses and dimensional standards Zoning Assessment Table
☑	☐	**Existing and/or Proposed Easements or Covenants, applicable.** • Evidence of existing easements and any proposed easements
☑	☐	**Waiver Requests** • Written request for waiver describing request and reason Waiver Table
☑	☐	**Financial Capability** • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
☑	☐	**Technical Capability** • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN
STANDARDS AND SUBMISSION CHECKLIST

* Please provide assessment of compliance with standards and include supplemental documentation, as applicable
* Please upload each document as a separate PDF file

TRANSPORTATION

Yes	NA	
☐	☑	**Transportation Analysis- Traffic Impact (14-526 (a) 1)** • Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts • Traffic Impact Study (Technical Manual, Section 1) if applicable
☑	☐	**Access and Circulation (14-526 (a) 2 a)** • Access and internal circulation, addressing ADA access • Access and egress impacts on traffic flows • Description and use of drive-up features, if applicable
☑	☐	**Loading and Servicing (14-526 (a) 2 b)** • Loading and servicing needs, route and travel way geometrics for deliveries • Turning templates for delivery vehicles, if applicable
☑	☐	**Sidewalks (14-526 (a) 2 c)** • Sidewalks and condition along street frontages and internal walkways • Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
☐	☑	**Public Transit (14-526 (a) 3), if applicable** • Existing available transit services • Proposed site plan design details, such as easement, pad base, and shelter
☑	☐	**Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c)** • Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements • Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
☐	☑	**Bicycle Parking (14-526 (a) 4 b)** • Address bicycle parking requirements and identify locations on-site • Construction details for bike racks (Technical Manual, Section 1)
☑	☐	**Snow Storage (14-526 (a) 4 d)** • Management plan for snow removal and locate snow storage areas on plan
☐	☑	**Traffic Demand Management (TDM) (14-526 (a) 5), if applicable** • Develop TDM with Trip Reduction Targets and Strategies

ENVIRONMENTAL AND LANDSCAPE FEATURES	
Yes ☐ NA ☑	**Preservation of Significant Natural Features (14-526 (b) 1), if applicable** • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes ☐ NA ☑	**Landscaping and Landscape Preservation (14-526 (b) 2 a)** • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes ☑ NA ☐	**Site Landscaping (14-526 (b) 2 b)** • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes ☐ NA ☑	**Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable** • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes ☐ NA ☑	**Street Trees (14-526 (b) 2 b iii)** • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable
ENVIRONMENTAL AND STORMWATER	
Yes ☑ NA ☐	**Water Quality, Stormwater Management and Erosion Control (14-526 (b)3 a)** • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

PUBLIC INFRASTRUCTURE AND SAFETY	
Yes ☐ NA ☑	**Consistency with City Master Plans (14-526 (c) 1)** • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes ☑ NA ☐	**Public Safety and Fire Prevention (14-526 (c))** • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes ☑ NA ☐	**Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)** • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable
SITE DESIGN	
Yes ☑ NA ☐	**Massing, Ventilations and Wind Impact (14-526 (d) 1)** • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes ☐ NA ☑	**Shadows (14-526 (d) 2), if applicable** • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes ☑ NA ☐	**Snow and Ice Loading (14-526 (d) 3)** • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes ☐ NA ☑	**View Corridors (14-526 (d) 4), if applicable** • Protection of designated view corridors (Portland Design Manual, Appen. 1)

Yes ☐ NA ☑	**Historic Resources (14-526 (d) 5), if applicable** • Identify developments within Historic Districts or affecting Designated Landmarks • Certificate of Appropriateness or other evidence • Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required • Address preservation and documentation of Archaeological Resources
Yes ☑ NA ☐	**Exterior Lighting (14-526 (d) 6)** • Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) • Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes ☐ NA ☑	**Noise and Vibration (14-526 (d) 7)** • Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes ☑ NA ☐	**Signage and Wayfinding (14-526 (d) 8), if applicable** • Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff • Proposed commercial and directional signage on site
Yes ☑ NA ☐	**Zone Related Design Standards (14-526 (d) 5)** • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Construction Management Plan	
Yes ☑ NA ☐	**Construction Management Plan** • Construction Management Document and Plan

LEVEL II AND LEVEL III SITE PLAN DRAWINGS CHECKLIST

*** Please upload the following drawings with the listed details as separate pdfs**

(ALL drawings must be uploaded in a 24 x 36 sheet size)

RECENT BOUNDARY SURVEY (stamped by Maine Licensed Surveyor)

- [x] Must be in compliance with Technical Manual, Section 13

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

Existing Conditions

- [x] Approximate location of structures on abutting property
- [x] Topography
- [x] Locate water courses
- [ ] Delineate wetlands
- [x] Zone lines

Proposed Site Plan

- [x] Ground floor area, and grade elevations for all buildings

Access, Circulation, and Parking

- [x] Streets and intersections adjacent to site, any proposed geometric modifications
- [x] Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- [x] Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- [x] Location and dimensions of proposed loading areas
- [ ] Existing and proposed transit infrastructure with dimensions/ engineering specifications
- [x] Location of vehicle and bicycle parking with dimensions and engineering specifications

Site Considerations

- [x] Identify snow storage areas
- [x] Location of fire hydrants
- [x] Location of solid waste management facilities

UTILITY PLAN including:

- [x] Existing utilities on site and within public streets
- [x] Location, sizing and directional flows of all existing and proposed utilities
- [ ] Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- [x] Electric utility infrastructure

GRADING AND DRAINAGE PLAN including:

- [x] Existing grades and drainage
- [x] Proposed grades
- [x] Proposed stormwater management meeting Technical Manual (Section 5), standards
- [ ] Location and proposed alteration of a water course
- [ ] Preservation or alteration of wetlands

EROSION CONTROL

- [x] Must be in compliance with Technical Manual, Section 5

LANDSCAPE PLAN including:

- [ ] Existing vegetation to be preserved and preservation measures
- [x] Proposed landscaping and buffers
- [ ] Planting schedule

RECORDING PLAT, if applicable

- [ ] If Subdivision, must be in compliance with requirements of Section 14-496 (b)

ARCHITECTURAL PLANS AND RENDERINGS including:

- [x] Exterior building elevations, color renderings, illustrations of all sides
- [ ] Location and dimensions of all existing and proposed HVAC and mechanical equipment, all proposed screening
- [ ] Provide context drawings, if applicable (Design Manual, page 1)
- [x] Floor plans

GENERAL APPLICATION DOCUMENTS

RIGHT, TITLE & INTEREST

New Yard, LLC currently owns the property as evidenced in the Quitclaim deed with covenant recorded in CCRD Book 35107; Page 310 attached to this section.

QUITCLAIM DEED WITH COVENANT
Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **CANAL LANDING, LLC**, a Maine limited liability company with a place of business in the City of Portland, County of Cumberland, State of Maine, for consideration paid, grants to **NEW YARD, LLC**, a Maine limited liability company with a place of business in the City of Portland, County of Cumberland, State of Maine, whose mailing address is 400 Commercial Street, Portland, ME 04101, with **QUITCLAIM COVENANTS**, the land, together with any improvements, situated in the City of Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said CANAL LANDING, LLC has caused this instrument to be signed and sealed this 29 day of August, 2018.

WITNESS:

CANAL LANDING, LLC

By _____
Clinton Marshall
Sole Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

August 29, 2018

Then personally appeared the above named Clinton Marshall, in his said capacity, and acknowledged the foregoing instrument to be his free act and deed, and the free act and deed of said limited liability company, before me.

_____
Attorney at Law/~~Notary Public~~
Drew A. Anderson
Printed Name

EXHIBIT A

232 West Commercial Street:

A certain lot or parcel of land situated on the southerly side of West Commercial Street in the City of Portland, County of Cumberland and State of Maine as shown on a plan entitled "Land on West Commercial Street, Portland, Maine, Maine Central Railroad Company to Canal Landing, LLC, dated April 29, 2015 recorded in the Cumberland County Registry of Deeds in Plan Book 215, Page 157 (the "Plan"), bounded and described as follows:

Beginning at a point on the southerly sideline of West Commercial Street at the northwesterly corner of land now or formerly of New Yard, LLC recorded in the Cumberland County Registry of Deeds in Book 30887, Page 247;

Thence, S 16°58'37" E along the westerly line of land of said New Yard, LLC 90.30 feet to the northerly line of land now or formerly of the State of Maine Department of Transportation recorded in said Registry of Deeds in Book 31408, Page 301;

Thence, the following courses and distances along the northerly line of land of said State of Maine:

S 59°26'10" W 693.10 feet;

Thence, along a curve to the right with a radius of 673.74' feet, having an arc length of 153.57 feet, having a chord bearing of S 65°57'58" W and chord length of 153.24 feet;

S 72°29'45" W 542.24 feet;

S 87°07'38" W 273.21 feet;

S 86°01'33" W 312.82 feet;

S 84°41'57" W 219.48 feet to the southerly sideline of said West Commercial Street;

Thence the following courses and distances along the southerly sideline of West Commercial Street:

N 77°41'31" E 248.67 feet;

N 71°39'48" E 854.33 feet;

N 66°06'18" E 793.06 feet;

N 73°01'23" E 263.49 feet to the point of beginning. Containing 294,083 S.F. or 6.75 acres, more or less.

Also another certain lot or parcel of land situated on the southerly side but not adjacent to West Commercial Street in the City of Portland, County of Cumberland and State of Maine as shown on the Plan, bounded and described as follows:

Commencing at a point on the southerly sideline of West Commercial Street at the northwesterly corner of land now or formerly of New Yard, LLC recorded in said Registry of Deeds in Book 30887, Page 247;

Thence, S 16°58'37" E along the westerly line of land of said New Yard, LLC 158.20 feet to the point of beginning at the southerly line of land now or formerly of the State of Maine Department of Transportation recorded in said Registry of Deeds in Book 31408, Page 301;

Thence, S 16°58'37" E continuing along the westerly line of New Yard, LLC 503 feet, more or less, to the spring high tide line of the Fore River;

Thence, westerly along the spring high tide line of the Fore River 1659 feet, more or less, to land of the State of Maine;

Thence, the following courses and distances along the southerly line of land of said State of Maine:

N 02°52'22" W 26 feet, more or less;

N 87°07'38" E 21.45 feet;

Thence, along a curve to the left with a radius of 725.78 feet, having an arc length of 185.34 feet, having a chord bearing of N 79°48'41" E and chord length of 184.84 feet;

N 72°29'45" E 519.07 feet;

Thence, along a curve to the left with a radius of 725.74 feet, having an arc length of 165.42 feet, having a chord bearing of N 65°57'58" E and chord length of 165.07 feet;

N 59°26'10" E 495.19 feet;

N 62°41'27" E 125.13 feet;

N 66°19'39" E 57.45 feet to the point of beginning. Containing 260,844 S.F. or 5.99 acres, more or less.

Together with all right, title and interest that this grantor may have in the intertidal and submerged lands abutting the above described parcel.

The property is conveyed subject to and together with the benefits of:

1. Deed of Easement from Maine Central Railroad Company to Canal Landing, LLC, dated August 7, 2014 and recorded in said Registry of Deeds in Book 31723, Page 95.

2. The reservation of right to cross for the benefit of Portland Terminal Company and others as described in the deed from Portland Terminal Company to Central Maine Power Company, dated April 15, 1975 and recorded in Book 3669, Page 135.

3. Reservation of right to construct or erect railroad tracks or railroad fixtures over pipes as described in the Easement from Portland Terminal Company to Portland Water District, dated February 11, 1977 and recorded in Book 3975, Page 262.

4. Benefit of the Supplemental Agreement by and between the State of Maine, acting by and through its Department of Transportation, and New Yard, LLC, dated July 8, 2014 and as attached to the Affidavit of Drew A. Anderson, dated December 2, 2014 and recorded in Book 31947, Page 202.

5. Affidavit of Phineas Sprague, Jr. Re Private Crossing License Among New Yard, LLC, Canal Landing, LLC and the State of Maine Department of Transportation, dated November 14, 2016 and recorded in Book 33620, Page 37.

6. Affidavit of Phineas Sprague, Jr. Re Supplemental Agreement Among New Yard, LLC, Canal Landing, LLC and the State of Maine Department of Transportation, dated November 14, 2016 and recorded in Book 33620, Page 49.

7. Notice of Condemnation by the State of Maine, acting by and through its Department of Transportation, dated March 26, 2014 and recorded in Book 31408, Page 301 including exceptions as noted:

    a. Terms and conditions of rights and easement to maintain a drain or sewer as set forth in the instrument from John B. Brown, Horatio N. Jose and Portland Glass Company to the City of Portland, dated January 11, 1867 and recorded in Book 348, Page 337;
    b. Possible rights to install, maintain, repair, operate, replace and/or improve a sewer pipe as further described in the instrument from Portland Terminal Company to the City of Portland, dated November 10, 1975 and recorded in Book 3793, Page 217.

8. Lease from Portland Terminal Company to Central Maine Power Company, dated June 17, 2009 and recorded in Book 27094, Page 227.

9. Lease from Portland Terminal Company to Central Maine Power Company, dated June 17, 2009 and recorded in Book 27094, Page 232.

10. Deed of Easement from Maine Central Railroad Company to Canal Landing, LLC, dated August 7, 2014 and recorded in Book 31723, Page 95.

11. Terms and conditions of Supplemental Agreement by and between the State of Maine, acting by and through its Department of Transportation and New Yard, LLC, as attached to the Affidavit of Drew A. Anderson, dated July 8, 2014, and recorded in Book 31947, Page 202.

12. Terms and conditions of deed into Canal Landing, LLC by Maine Central Railroad Company, dated April 27, 2015 and recorded in Book 32239, Page 148.

Meaning and intending to convey and hereby conveying the same premises described in the Release Deed from Maine Central Railroad Company to Canal Landing, LLC, dated April 27, 2015 and recorded in said Registry of Deeds in Book 32239, Page 148.

Received
Recorded Register of Deeds
Aug 29,2018 01:59:07P
Cumberland County
Nancy A. Lane

GENERAL APPLICATION DOCUMENT

ZONING ANALYSIS

See attached Zoning Analysis Table and project site plans for additional information.

ZONING ANALYSIS Relevant Zone(s) WPDZ Buildings H

All Projects:

	Required	Proposed
Lot Size	N/A	17.77 AC
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%	15.4%
Minimum Lot Coverage	N/A	
Maximum Height	75 Feet	72'-6"
Open Space	N/A	
Maximum Impervious Area	N/A	
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	29	>40
Loading Bays	0	0
Other 1 Pier Line Setback	5 Feet	>100 Feet
Other 2		
Other 3		

NOT APPLICABLE

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
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			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

GENERAL APPLICATION DOCUMENT

WAIVER REQUESTS

The Accompanying Waiver Table provides a description of the applicable waiver requests and supporting evidence for these requests.

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'.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Manual Section 14-320.3 Performance Standards – Division 18.5 Waterfront Port Development Zone	*b. Noise: In measuring sound levels under this section, sounds with a continuous duration of less than sixty (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 sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ1).*	The applicant is seeking a waiver for this requirement for further noise assessments.	We are seeking this waiver for any further noise measurements for the site, based on the applicant's operating history and absence of any complaints regarding noise generated from the Canal Landing site. Based on the prevalence of nearby land uses, including the IMT, Sprague Energy, Portland Jetport, rail operations and general commercial development, it is believed that the Canal Landing operations are and will continue to be an insignificant generator of noise in the region.
Technical Manual Section 14-320.3 Performance Standards – Division 18.5 Waterfront Port Development Zone	*h. Off-street Parking: Off-street parking is required as provided in division 20 (off-street parking) of this article.*	We are seeking a waiver for this requirement.	The approximately 17 acre site area contains ample parking for the boat yard as well as Phase VI development activity. The applicant is requesting a waiver of Section 14-332 (h) which indicates a parking requirement of 1 parking space for each one thousand (1000) SF of space not used for bulk storage. The applicant will continue to manage parking throughout the yard in a manner that keeps yard areas flexible for the parking of vehicles and vessels. The applicant is also not in favor of any paved parking areas within the site since those areas contribute unnecessarily to runoff and are otherwise unsuitable for vessel placement since pavement does not work well with the use of jack stands, on which many vessels are placed. The applicant will provide suitable surfaces for any ADA parking and access route in accordance with National Park service or similar standards.

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'.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Manual Section 14-320.3 Performance Standards – Division 18.5 Waterfront Port Development Zone	*j. Shoreland and flood plain management regulations: Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.*	We are seeking a waiver of the provisions pertaining to floodproofing and related standards.	The proposed Building H/I activities are located beyond the Shoreland zone. Building H/I will be located within 250 feet off the site's waterfront revetment. There are no clearing restrictions on the site and activity will be compliant with any Shoreland and Flood Plain regulations. The Building H/I floor elevation will be at Elevation 13.9' to 16.16' which is 6 feet above the Fore River Flood elevation. The site grading will be completed to provide the finish gravel grade to elevation 13.0' or higher. A Flood Hazard Area Development Permit will be submitted as part of the application materials.
Technical Manual Section 5.III – Chapter 500 Flooding standard	*MeDEP Chapter 500 provisions related to Stormwater management*	The applicant is seeking a waiver of the flooding standard, whereby stormwater water quantity control is not required.	The site discharges stormwater runoff to the Tidal conditions of the Fore River therefore quantity control is not required. Water quality treatment will continue to be provided by the permeable boatyard surface material. This waiver has been similarly granted as part of previously approved phases.
Technical Manual Section 12 Site Lighting Standards	*1. <u>Uniformity</u>: As measured in foot candles at grade, maximum to minimum illumination levels shall not exceed a ratio of twenty (20) to one (1.)* *2. <u>Illumination Levels:</u> Minimum, Maximum, and Average illumination levels for areas intended to be lighted, as measured at grade, shall be:* *Minimum 0.2 foot candles (fc)* *Maximum 5.0 foot candles (fc)* *Average 1.25 foot candles (fc)*	*Based upon the existing ambient light levels and the proposed lighting, the Applicant is comfortable that adequate lighting will be present at the property for the proposed uses. Comments from the residential neighbors during the previous review periods indicate that additional lighting to raise the overall level of light at the property is not desired.*	1. Existing ambient light levels at the property are between 0 and 0.3 foot-candles at the interior and 0.8 to 1.5 fc at the edges of the lot; 2. Proposed lighting will raise the light levels needed for safe access and egress in and out of the property onto West Commercial Street to reasonable average levels of 1.25; and

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'.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
			3. Proposed lighting will provide for security, safety, and nighttime use of the new buildings and work yards; and 4. Illumination of the property to the levels required by the City Ordinance might impact the residences located uphill within the west end and is therefore discouraged.
Section 14-526 (a) 3 Public Transit Access	*a. For any residential development consisting of twenty (20) or more dwelling units or commercial or institutional development of at least 20,000 square feet gross floor area, a transit facility shall be constructed where the following criteria are met*	New Transit Stop is not proposed.	*The Applicant requests a waiver of the transit facility requirement due to its usage. There is currently no METRO transit route on West Commercial Street. The #8 route traverses Danforth Street, north of the site, yet is not reasonably accessible from the site. The #1 route traverses St. John Street, over ½ mile west of the site and it too is relatively inaccessible from the site.*
Section 14-526 (a) 4 b Bicycle Parking	*(i) The site plan shall provide secure bicycle parking in conformance with Section 1 of the Technical Manual and shall meet the following requirements:* *(a) Residential structures. Two (2) bicycle parking spaces for every five (5) dwelling units shall be required.* *(b) Non-residential structures. Two (2) bicycle parking spaces for every ten (10) vehicle parking spaces for the first one hundred (100) required vehicle parking spaces, plus one (1) bicycle parking space for every twenty (20) required motor vehicle parking space over one hundred (100) required vehicle parking spaces.* *© Development with zero (0) to ten (10) required vehicle parking spaces shall provide at least two (2) bicycle parking spaces.*	Building H/I will be used for boat preparation services and should not qualify for requiring any bike parking.	The proposed development is expected to generate a reduced demand for bicycle parking due to the site's uses. Since Building H/I will have employees who may use a bike for site access, several bike racks will be provided for their use and convenience. A total of 6 spaces will be provided.

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'.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Section 14-526 (a) 4 c Motorcycle/Scooter Parking	*c. Motorcycle and Scooter Parking.* *(i) The site plan shall accommodate access and parking for two-wheeled motorized vehicles such as motorcycles and scooters.*	The Applicant requests a waiver of the Motorcycle/Scooter parking requirement.	The proposed development is expected to generate a reduced demand for motorcycle/ scooter parking due to the site's primarily industrial use, however 2 motorcycle spaces will be identified on the site plan.
Section 14-526 (b) 2 a) Landscaping and Landscape Preservation	*(iv) Waiver: Where the applicant can demonstrate that preservation of existing vegetation would compromise development of the site, the Reviewing Authority may permit the substitution of replacement landscaping in other areas of the site, and/or a financial contribution to the City of Portland Tree Fund for an amount proportionate to the cost of trees removed, as described below:* *(a) For each tree required to be preserved that is removed and is greater than 16" in caliper DBH, two (2) replacement trees of a species identified on the City of Portland Recommended Tree List shall be planted on the site as detailed in Section 4 of the Technical Manual).* *(b) For each tree required to be preserved that is removed and is between ten (10) and sixteen (16) inch DBH, one (1) replacement tree of a species identified on the City of Portland Recommended Tree List shall be planted on the site as detailed in Section 4 of the Technical Manual).* *(c) Where the planting of replacement trees on the site is not feasible, the applicant shall contribute an amount proportionate to the cost of required replacement trees to the City of Portland Tree Fund, as detailed in Section 4 of the Technical Manual.*	The Applicant is seeking a waiver of the Landscape Preservation requirement.	The site's existing tree population is limited, and the City's Shoreland Zoning vegetation management provisions do not require tree protection in the Waterfront Development Zone. There are no trees within the Phase VI work limits.

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'.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Section 14-526 (b) 2 b ii) Parking Lot Landscaping	*(ii) Parking Lot Landscaping:* *(a) Developments with five (5) or more parking spaces shall include at least two (2) trees (or one (1) tree and three (3) shrubs) per five (5) parking spaces planted in landscaped islands to screen shade and break up parking. Trees and shrubs in parking lots may be in informal groups, straight rows, or concentrated in clusters as detailed in Section 4 of the Technical Manual.* *(b) Landscaped islands shall be distributed so that uninterrupted pavement does not exceed forty (40) parking spaces.* *(c) Landscaped islands shall be curbed and a minimum of eight (8) feet in width, not including curbing. The incorporation of bioretention into landscaped islands is strongly encouraged.* *(d) Vehicle display lots shall be subject to the parking lot landscaping standards of this section.* *(e) Waiver: Where site constraints prevent implementation of all or a portion of required parking lot landscaping, as determined by the Reviewing Authority, the requirements may be all or partially waived and the applicant shall contribute an amount proportionate to the cost of required parking lot trees to the City of Portland Tree Fund.*	The applicant is seeking a waiver of the Parking Lot Landscaping Standards.	The applicant is requesting a waiver of the landscape requirements based on the proposed boatyard use and the need for flexibility with respect to boat parking and heavy vehicle maneuvering. This need remains applicable for the Phase VI building which will be located within the heart of the boatyard.

GENERAL APPLICATION DOCUMENT

FINANCIAL CAPACITY

The Applicant has the means at its disposal for financing the proposed Canal Landing project. A letter from their lender is attached as evidence of their support of the project.

A breakdown of the preliminary project cost for Phase V includes the following:

- Phase VI Site Work <$750,000
- Structure $8 million to $10 million

These values are considered preliminary and approximate and are subject to change as building design and project layout is refined.

Norway Savings Bank

July 25, 2024

Kevin Kraft
Director of Planning & Urban Development
City of Portland
389 Congress Street, 4th Floor
Portland, Maine 04101

Re: New Yard LLC – Financial Capacity

Dear Kevin:

On behalf of Norway Savings Bank, I am pleased to provide this letter of support of New Yard LLC. on their plans for a new building at 100 West Commercial Street, Portland, Maine. Based on our review of financials and our understanding of the project, I believe New Yard LLC. has the financial capacity to successfully complete this $10 million project.

While this letter is not a commitment to lend, New Yard LLC. and its principal have been customers of Norway Savings Bank for over 17 years. We have worked successfully with them on similar projects in the past and believe they have the financial capacity and management skills to develop this site and complete the project.

With permission from our client, I am happy to provide additional information you may require. I can be reached at ldarcy@NorwaySavingsBank.com or at (207)482-7959.

Norway Savings Bank looks forward to working with New Yard LLC. as this project moves forward in the development process.

Sincerely,

Larissa Darcy
Vice President
Commercial Lending

cc: Phineas Sprague Jr,
Jason Curtis
James Keeley

GENERAL APPLICATION DOCUMENT

TECHNICAL CAPABILITY

The applicant has retained a highly qualified team of professionals to undertake planning, permitting and design tasks on this project. Services will be provided by the following companies and their respective team leaders:

Civil Engineer	Stephen Bushey, P.E. Gorrill-Palmer Consulting Engineers 300 Southborough Drive Suite 200 South Portland, Maine 04106 (207) 772-2515 – Work sbushey@gorrillpalmer.com
Architect	Bill Hopkins Archetype PA 48 Union Wharf Portland, ME 04101 (207) 772-6022 https://www.archetype-architects.com/
Surveyor	Randy Loubier, PLS Owen Haskell, Inc. 390 US Route 1, Unit 10 Falmouth, ME 04105 (207) 774-0424 – Work rloubier@owenhaskell.com
Attorney	Michael Traister Murray Plumb & Murray 75 Pearl Street Portland, ME 04104 (207) 773-5651 – Work mtraister@mpmlaw.com
Geotechnical	Tim Boyce, P.E. S. W. Cole Engineering 286 Portland Road Gray, ME 04039 (207) 657-2866 – Work TBoyce@SWCole.com
Environmental	Rip Patten, P.E. Credere Associates, LLC 776 Main Street Westbrook, ME 04092 (207) 828-1272 – Work rpatten@crederellc.com
Construction Manager	Jim Keeley Keeley Construction P.O. Box 1074 Portland, ME 04104 (207) 885-0035 jim@keeleycrane.com

The team of consultants retained by developer has expertise and experience in the design of similar commercial projects. Resumes of key personnel for development team can be provided upon request.

The Applicant also has significant experience in the development and management of large commercial projects having managed Portland Yacht Services and the Canal Landing Site for many years.

TRANSPORTATION

The following statements are provided in accordance with the Section 14.6.1 of the ordinance.

TRANSPORTATION

(a) Transportation Standards

Transportation Analysis – Traffic Impact

- *Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts*
- *Traffic Impact Study (Technical Manual, Section 1) if applicable*

1. Impact on Surrounding Street Systems:

The development will fit in with the existing street system, as it will continue to use improved access locations off West Commercial Street. Based on the limited intensity of use, the project is expected to have an insignificant impact on traffic in the neighborhood. Vehicle and loading circulation to the building are accounted for on the plan. The proposed building is intended to effectively move existing maintenance work indoors from the existing outdoor conditions. The previous Phase III approval review in January 2016 included a Traffic Movement Permit which we understand remains in force. Gorrill Palmer has calculated the trip generation for Phase VI of the project and the anticipated trip generation falls within the allowable amount previous approved in the 2016 Traffic Movement Permit. The previously approved trip generation included 19,800 SF of Marine retail land use which generated the bulk of the trips that triggered the TMP during Phase 3[1]. That retail use was previously thought to be the Hamilton Marine store that was to relocate from Fore Street to this site. Hamilton however did not move to the site and instead relocated to Presumpscot Street. Portland Yacht Services is now occupying the 19,800 SF in building C and using it for boat storage and maintenance activities and generating very little traffic. The proposed Phase VI activities include the construction of Building H/I. The building will not result in an increase of employees at this time. Based on an employee count of 30 or fewer employees the peak hour trip generation will be well below the 70 trips previously allocated to the now defunct Hamilton Marine retail use.

Access and Circulation

- *Access and internal circulation, addressing ADA access*
- *Access and egress impacts on traffic flows*
- *Description and use of drive-up features, if applicable*

2. Access and Circulation:

[1] Per the December 21, 2015 letter to Tim Errico that included trip generation values, the 19,800 SF Marine retail was estimated to generate 70 trips in each of the AM, PM and Sat. peak hours. Those trips never occurred since Hamilton Marine moved to Presumpscot street.

a. Site Access and Circulation.

(i) The development provides access via West Commercial Street. Ample turning movement is provided at each street entrance. Internal circulation has been reviewed and designed to accommodate the typical use of passenger cars. Semi-trailer and boat-trailer access use is accommodated within the yard area. The driveways have been operating satisfactorily over the course of the past years and are expected to continue into the future. Maneuvering area for emergency vehicles will always be provided around the site and the building H/I positioning will continue to allow emergency access to the east and west sides of the site and shorefront.

(ii) Access and egress have been designed to avoid conflict with existing West Commercial Street turning movements and traffic flows.

(iii) The site does not feature drive up services as mentioned in this requirement.

(iv) Site access has been designed so as not to impede potential future connection to adjacent streets.

Loading and Servicing

- *Loading and servicing needs, route and travel way geometrics for deliveries*
- *Turning templates for delivery vehicles, if applicable*

2. Access and Circulation:

b. Loading and Servicing:

(i) The site layout has been configured to accommodate the typical movements of large boat delivery vehicles, travel lift, and access to the boat ramps.

Sidewalks

- *Sidewalks and condition along street frontages and internal walkways*
- *Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)*

2. Access and Circulation:

c. Sidewalks:

(i) A crosswalk has been previously constructed along the site frontage as part of the proposed West Commercial Street improvements associated with the approved VA Clinic and parking garage facilities. There is an existing multi-modal path on the north side of West Commercial Street. The applicant requests a waiver of providing sidewalk or curb on the south side of West Commercial Street as none exists currently on that side of the street in either direction.

Public Transit

- *Existing available transit services*
- *Proposed site plan design details, such as easement, pad base, and shelter*

3. Public Transit Access.

a. The development contains no residential/institutional uses.

b. A new Transit stop is not proposed.

c. A new Transit stop is not proposed.

d. Waiver: The Applicant requests a waiver of the transit facility requirement due to its usage and since there are no METRO transit routes along West Commercial Street in the vicinity of the development.

Off-Street Parking: Vehicle & Motorcycle/Scooter

- *Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements*
- *Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan*

4. Parking.

a. Location and Required Number of Vehicle Parking Spaces.

(i) The Applicant is providing parking for their employees within the boat parking area around the site. The Applicant is seeking flexibility to move vehicular parking around the site to meet variable vessel parking demand therefore no specific vehicular spaces are identified on the site plans. The proposed project will not involve any increase to employee or patron parking demand.

(ii) The Applicant has not prepared a TDM strategy, as it is not applicable to the intended uses.

(iii) The Applicant proposes the amount of parking which is appropriate for the anticipated uses of this site.

(iv) Parking spaces and aisles have been designed to meet the dimensional requirements of the Technical Manual.

(v) Vehicle parking areas have been designed to withstand site conditions.

c. Motorcycles and Scooter Parking.

(i) The Applicant will provide two motorcycle/scooter parking spaces in the area of Building H/I.

Bicycle Parking

- *Address bicycle parking requirements and identify locations on-site*
- *Construction details for bike racks (Technical Manual, Section 1)*

4. Parking.

b. Location and Required Number of Bicycle Parking Spaces.

(ii) The Applicant will provide outside parking capacity for 6 spaces in the area of Building H/I.

Snow Storage

- *Management plan for snow removal and locate snow storage areas on plans*

4. Parking.

d. Snow Storage.

(i) Snow storage management will employ two strategies:

1. On-site snow storage around the perimeter of the site.

2. Snow removal and off-site storage. Generally speaking, the nature of the proposed site use precludes the need for significant snow removal.

Traffic Demand Management (TDM) if applicable

- *Develop TDM with Trip Reduction Targets and Strategies*

5. Transportation Demand Management (TDM).

a. A TDM plan is not required for the proposed project.

ENVIRONMENTAL AND LANDSCAPE FEATURES

The following statements are provided in accordance with the Section 14.6.2 of the ordinance.

(b) Environmental Quality Standards

Preservation of Significant Natural Features, if applicable

- *Trees, plants, habitats listed on State or Federal list of endangered or threatened*
- *High and moderate value waterfowl and wading habitat*
- *Aquifers on Casco Bay Islands*
- *Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains)*
- *Proposed preservation areas and protection measures*
- *Documentation from environmental consultants, determinations from applicable state agencies*

1. *Preservation of Significant Natural Features:*

   a. The development site does not contain any significant natural features including wetlands, vernal pools or other protected resources except for the shorefront edge adjacent the Fore River. The site has been developed for a period greater than 150 years and there is generally no land area that has not been disturbed or otherwise developed. The applicant previously has contacted various resource agencies regarding the site's potential to contain significant wildlife habitat, historic or archaeological resources. Findings from each of the agencies has been previously provided to the City. No further evidence will be provided for the Phase VI proposal, unless requested.

   b. The Applicant is not requesting a waiver from this standard.

Landscaping and Landscape Preservation

- *Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4)*
- *Protection measures of existing vegetation during construction*
- *Protection measures within Shoreland Zone, if applicable*

2. *Landscaping and Landscape Prevention:*

   a. Landscape Preservation.

   (i) The site's existing tree population is limited and the City's Shoreland Zoning vegetation management provisions do not require tree protection in the Waterfront Development Zone. There are no trees within the Phase VI work limits.

   (ii) Not applicable.

   (iii) Not applicable.

   (iv) Not Applicable

   (v) Not applicable to Phase VI, Building H/I

Site Landscaping

a. Screening and buffering of service areas and between non-residential and residential uses
b. Planting plans with plant schedule and sizes

2. Landscaping and Landscape Prevention:

b. Site Landscaping:

(i) Landscaped Buffers:

(a) There are no service or loading areas observable from nearby sidewalks or residential properties.

(b) The development is not subject to zoning setbacks or buffering requirements.

(c) Not applicable.

(d) Not applicable.

Parking Lot Landscaping if applicable

- *Landscaped islands within parking areas (Technical Manual, Section 4)*

2. Landscaping and Landscape Preservation:

a. Site Landscaping.

(ii) Parking Lot Landscaping:

a) thru d) The applicant is requesting a waiver of the landscape requirements based on the proposed boatyard use and the need for flexibility with respect to boat parking and heavy vehicle maneuvering. This need remains applicable for the Phase VI building which will be located within the heart of the boatyard. The site plan does contain the planting of twelve (12) River birch clumps consistent with those along the face of Building C. Plus, some assorted smaller shrub plantings along the street frontage.



Existing Building C street plantings – River Birch

Street Trees

- *Existing Heritage or Feature Trees on site and measures to preserve*
- *Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable*

2. Landscaping and Landscape Preservation:

b. Site Landscaping.

(iii) Street Trees:

(a) Consistent with the previously approved plans for the Phase III Buildings C & D, various street trees will be provided along the West Commercial Street frontage directly in front of the Proposed Building H/I.

ENVIRONMENTAL AND STORMWATER

The following statements are provided in accordance with the submission checklist and Section 14.6.2.D of the ordinance.

(b) Environmental Quality Standards

Water Quality, Stormwater Management and Erosion Control

- *Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable*
- *Erosion control plan and measures*
- *Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable*
- *Subsurface sanitary sewage disposal and groundwater protection*

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) The site's runoff conditions are primarily self-contained and runoff infiltrates or sheets to the Fore River; therefore, issues related to offsite or downstream flooding are not applicable. The Boatyard Surface, consisting of a thick section of granular and crushed stone soils, provides for nearly 100% absorption, other than for very heavy rainfall events, thus water quality treatment is also achieved. The Applicant requests a waiver from the City's Flooding Standards due to the site's proximity to Tidal Conditions in the Fore River. This request has been previously granted on phase I thru V approvals. We propose the placement of the "Boatyard Surface" as the primary means of water quality treatment for the site. Roof runoff will be discharged via a closed/underground pipe system to the Fore River, thus achieving thermal treatment, as allowed by Chapter 500. No runoff from the building H/I site enters into the City/PWD CSO.

(ii) All stormwater runoff is proposed to discharge to the Fore River. The project will not adversely impact adjacent lots or the City street system.

(iii) All stormwater runoff is proposed to discharge to the Fore River. The project will not adversely impact adjacent lots or the City street system.

(iv) All stormwater runoff is proposed to discharge to the Fore River. The project will not adversely impact adjacent lots or the City street system.

b. Flooding Standards:

The Phase VI project is not located within the AE Flood zone as depicted on the City's GIS mapping. The Phase VI building H/I will be constructed with a finish floor elevation of at least 13.9 to 16.1 feet, which is 3.9 to 6 feet higher than the 100-year flood elevation of 10.0 feet.

The project will ultimately meet the General Standards under Chapter 500, Stormwater Law (City of Portland Technical Manual, Section 5 – Portland Stormwater Management and MaineDEP Ch. 500, 3 (e)). The Basic Standards will apply to this project and a detailed Soil Erosion and Sediment Control Plan has been developed to address this. Because of the placement of the crushed stone surface over most of the property, there is little to no exposure for erosion or sediment transport off the site.

c. Not applicable, not located within an Urban Impaired Stream.

d. Not applicable – not a residential development.

e. Construction at the site will be required to follow Local, State and Federal regulations. Post-construction activities will be performed in accordance with the Brightworks Manual that is applicable to boat repair facilities and these activities are not considered as posing a risk of groundwater contamination .

f. The project will be connected to the public sanitary sewer system which is adequately sized for the anticipated project flows.

PUBLIC INFRASTRUCTURE AND SAFETY

The following statements are provided in accordance with the submission and Section 14.6.3 of the ordinance.

(c) Public Infrastructure and Community Safety Standards.

Consistency with City Master Plans

- *Identify consistency with master plans*
- *Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable*

1. *Consistency with City Master Plans:*

    a. The project has been designed to be consistent with the City's Zoning Ordinance and specifically the Waterfront Port Development Zone. The Phase VI development also continues to fit with the offsite infrastructure conditions and the City's long-term plans for West Commercial Street.

    b. The Applicant will coordinate with utility representatives for the maintenance of easements related to utility infrastructure crossing the site. This includes the Fore River Interceptor Sewer easement and the CSO easement. The proposed Building H/I is positioned well away from these encumbrances.

Public Safety and Fire Prevention

- *Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3)*
- *Emergency vehicle access*
- *Address consistency with public safety standards (Technical Manual, Section 3)*
- *Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist*

2. *Public Safety and Fire Prevention:*

    a. The site has been designed to promote a safe and inviting customer access. The primary purpose for site lighting for Canal Landing is for security in the vicinity of the buildings and to provide lighting at key operational access points to the Fore River. Nighttime operations for the boatyard are atypical and no night operations are anticipated at the proposed Building H/I space. Security at the site will be supplemented by infrared cameras mounted on the buildings. To date, safety and security at the site have not been an issue. The applicant maintains relatively stringent controls on site activities simply due to the amount of large and valuable assets that are on the site at any one time. During the COVID crisis, waterfront access has been gate controlled at the rail crossings. The majority of waterfront access occurs at the most easterly Rail crossing where a sliding gate is controlled by a button code keypad. Fire hydrants remain in place throughout the yard area. The nearest fire hydrants to Building H/I are located less than 100 feet from the building.

b. No changes to emergency access conditions within the surrounding streets is proposed.

c. Fire hydrants are located within the adjacent street system. Additional fire hydrants have been installed within the site and are shown on plans previously on file with the City.

Availability and Adequacy of Public Utilities (Technical Manual, Sections 2 & 9)

- *Electrical services, including providing underground services*
- *Identify existing and proposed connections for public utilities and required public utility upgrades*
- *Sewer line connections are required, if there is a main within 200 feet*
- *Proposed solid waste management facilities on-site and management for the site*
- *Written evidence of the ability to serve from utility companies, as applicable*

3. Availability and Adequate Capacity of Public Utilities

a. The Applicant had previously secured letters from all applicable utilities stating their ability to serve the site and systems have been previously installed that are available to serve Building H/I. We await the determination letter from the PWD as well as wastewater capacity confirmation from the DPW.

b. All new electrical services to the Building H/I will be underground. With the exception of the primary service from West Commercial Street, all electrical and communications feeds are underground on the property.

c. All new utility infrastructures will meet the provisions of the Technical Manual.

d. The project will use an existing force main and gravity connection to the interceptor sewer located along the property frontage.

e. The proposed use will generate regular solid waste: Regular non-hazardous waste will be stored on site in a dumpster(s) and collected by a local solid waste company with whom the Applicant currently maintains an annual contract.

f. Not applicable.

Ability to serve letters will be forwarded to the planning office upon receipt.

The following statements are provided in accordance with the submission and Section 14-14.6.4 of the ordinance.

Site Design Standards.

Massing, Ventilations and Wind Impact (14.6.4 A)

- *Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable.*
- *Bulk, location or height impacts on adjoining structures*
- *Identify and locate HVAC equipment and venting away from public spaces and residential properties*
- *Identify screening and manufacturing specifications for noise, if applicable*

1. *Massing, Ventilation and Wind Impact:*

   a. The bulk, location, and height of the proposed Building H/I have been designed to not result in adverse impacts to abutting properties.

   b. The bulk, location, and height of the proposed Building H/I are consistent with WPDZ requirements as allowed by a variance approval and there are no nearby developed lots that may be negatively impacted. The IMT expansion area is an industrial waterfront use. The existing Star Match building and the proposed VA parking garage will not be negatively impacted by the proposed Building. Land to the west includes more waterfront industrial land uses and buildings. Land to the east will contain the proposed Cold Storage Building.

   c. HVAC venting, if necessary, will be directed through building roof top mounted units and will not impact any adjacent public spaces or residential properties.

Shadows (B), if applicable

- Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)

2. *Shadows:*

   a. The proposed building H/I will not cast significant shadows onto neighboring properties, or block access to direct sunlight for structures utilizing solar energy. The Site Layout Plan and Grading and Drainage Plan show the proposed site improvements and their relationships to property lines. The site plan shows the relative elevations of the building with respect to elevations along the property lines.

Snow and Ice Loading (C)

- *Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways.*

3. *Snow and Ice Loading:*

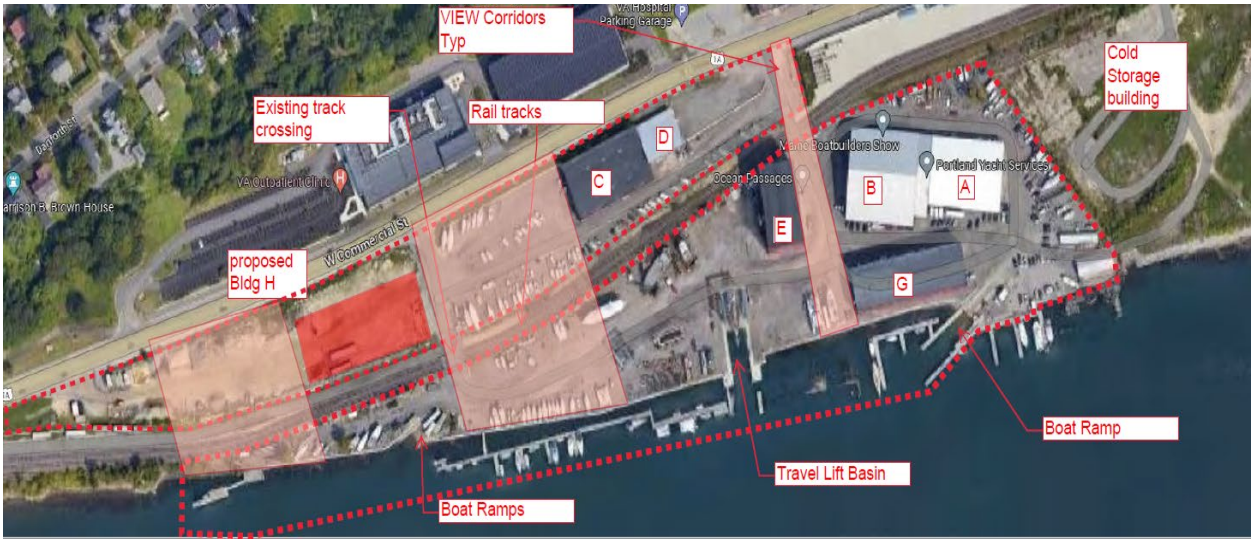
a. The proposed building has been designed and located such that accumulated snow and ice will not fall onto adjacent properties or public ways. Snow will be removed from the yard and stockpiled within the site perimeter or if necessary removed from the site.

View Corridors (D), if applicable

- *Protection of designated view corridors (Portland Design Manual, Appendix 1)*

4. View Corridors:

a. The project site is located outside the Downtown Vision Corridor Protection Plan. A 90' or greater wide view corridor will be provided between buildings as shown below.



Historic Resources (E), if applicable

- *Identify developments within Historic Districts or affecting Designated Landmarks*
- *Certificate of Appropriateness or other evidence*
- *Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required*
- *Address preservation and documentation of Archaeological Resources*

5. 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 or within 100 feet of a designated landmark, historic district, or historic landscape district.

c. There are no known remaining archaeological resources on the site except for the location of the former Cumberland and Oxford Canal and the former Portland Glassworks. There are no known aspects of the Canal visible at the site. The applicant had previously cooperated with officials from MHPO as they conducted an archeological investigation of the Glass Works site in the past.

Exterior Lighting (F)

- *Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12)*
- *Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)*

6. Exterior Lighting:

a. Site Lighting

(i) Exterior lighting will include building mounted fixtures to match the fixtures placed on the existing buildings to meet the requirements of Section 12 of the Technical Manual. Based upon the existing ambient light levels and the proposed lighting, the Applicant is comfortable that adequate lighting will be present at the property for the proposed uses. Comments from the residential neighbors during the previous review periods indicate that additional lighting to raise the overall level of light at the property is not desired.

The Applicant is requesting that the Planning Staff support a waiver by the Planning Board of the lighting standards of Technical Manual Section 12.3 1. Uniformity and 2. Illumination Levels, based upon the following:

1. Existing ambient light levels at the property are between 0 and 0.3 foot-candles at the interior and 0.8 to 1.5 fc at the edges of the lot;
2. Proposed lighting will raise the light levels needed for safe access and egress in and out of the property onto West Commercial Street to reasonable average levels of 1.25; and
3. Proposed lighting will provide for security, safety, and nighttime use of the new buildings and work yards; and
4. Illumination of the property to the levels required by the City Ordinance might impact the residences located uphill within the west end and is therefore discouraged.

b. Architectural and Specialty Lighting

(i) Not applicable to the project.
(ii) Not applicable to the project.

c. Street Lighting

(i) There are existing streetlights along West Commercial Street. It is important to note that light sources from abutting properties cast direct and indirect illumination onto the property. The adjacent light sources include cobra head sodium lights on utility poles along West Commercial Street. No changes are currently contemplated to the existing streetlight conditions.

Noise and Vibration (G)

- *Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements*

7. Noise and Vibration:

The project noise levels will be designed to meet the permitted levels as outlined in the WPDZ Zone. It is the Applicant's intention to comply with the noise and vibration standards above. Nighttime activity will be minimal.

The site is well separated from noise sensitive sites with no direct abutting impacts to abutting residential neighborhoods. The nearest residential building is approximately 500' away from the edge of the proposed building and is located on Danforth Street.

The site is surrounded by commercial/industrial uses including the International Marine Terminal to the east, and commercial activity including Nova Seafood and Graybar Electric operate out of buildings on the north side of West Commercial Street. Other adjacent noise generating sources include the Casco Bay Bridge and the flight path of the Portland International Jetport. To the best of our understanding, the operations of the site over the past few years have not resulted in neighborhood complaints or issues. All HVAC and mechanical equipment is proposed to be mounted on the roof, or otherwise ground mounted and concealed from nearby properties.

Signage and Wayfinding (H), if applicable

- *Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff*
- *Proposed commercial and directional signage on site*

8. 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) There are several business related signs that are either building mounted or freestanding that are positioned on the site and specifically at the site entrances. These signs are considered to meet the scale of the existing buildings or if freestanding do not affect visibility at the access drives.

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

Zone Related Design Standards

- Address Historic Preservation Design Review, if applicable
- Address any applicable design review standards by zone
- Address submission requirements from Design Manual, page 1, addressing neighborhood context
- Description of exterior materials, color, finish, and samples

9. Zoning Related Design Standards:

In accordance with Section 10.4.2 (no adverse impact on marine uses) the following statements support the project intentions:

Criteria (a) The proposed non-water dependent use will not displace an existing water-dependent use.

Supporting Evidence: The proposed project will serve as support space for the maintenance of larger vessels and allow greater indoor operational area. We consider the occupancy of Building H/I to be a water dependent use.

Criteria (b) The proposed use will not reduce existing commercial vessel berthing spaces.

Supporting Evidence: The project is located on the street frontage parcel and, therefore, will not reduce any existing commercial vessel berthing spaces.

Criteria (c) The proposed non-water dependent use, structure or activities, including but not limited to access, circulation, parking, dumpsters, exterior storage or loading facilities, and other structures, will not unreasonably interfere with the activities and operation of existing water-dependent uses or significantly impede access to vessel berthing or other access to the water by water-dependent uses.

Supporting Evidence: The proposed Building H/I uses are water-dependent and do not interfere with any existing water dependent uses or activities on the site.

Criteria (d) The siting of a proposed non-water dependent use will not substantially reduce or inhibit existing public access to marine or tidal waters.

Supporting Evidence: The project is not non-water dependent, and it will not reduce or inhibit existing public access to marine or tidal waters.

In accordance with Section 10.4.4 – Conditional Use Standards, we offer the following evidence in support of the use:

A. Not impede or preclude existing or potential water dependent development on other lots.

Supporting Evidence: The proposed Building H/I will be an integral part of the marine services provided on the property and it will specifically benefit from the marine travel lift access availability with the boat yard. The building placement will not impede uses or future activities at the IMT or Cassidy Point.

B. Allow for adequate access to the water.

Supporting Evidence: The proposed Building H/I has been positioned on the street side of the rail tracks and therefore will allow for continued use by the travel lift basin and it will not impede access to the two boat ramps on the site

C. Be compatible with water dependent and marine uses.

Supporting Evidence: The proposed Building H/I will be an integral part of the boat repair and maintenance operations to be provided at this site. It is considered absolutely compatible with water dependent and marine uses.

D. Operationally support one or more water dependent use(s) or be located in a building or structure that is physically adaptable or relocatable to make way for future development of water dependent uses.

Supporting Evidence: The proposed Building H/I will be used for technical support related to vessel Maintenance and repairs and is therefore supportive of water dependent uses.

E. *Meet any additional performance and dimensional standards set forth below.*

Supporting Evidence: The proposed Building H/I will have a maximum height of 72'-6" and is therefore compliant with the conditional use dimensional standards. Building elevations supplied by Archetype PA are contained in the project plan materials.

Section 10.4.8 Performance Standards –Waterfront Port Development Zone

In accordance with ReCode Section 10.4.8, the following attachment includes an Impact Mitigation Narrative to address compliance with the standards.

IMPACT MITIGATION

Sec. 10.4.8. Performance Standards – Waterfront Port Development Zone

In accordance with Section 10.4.8, the following impact mitigation narrative is offered to address compliance with the following standards:

(a) Outdoor Storage of Materials: The proposed Phase VI Building H/I activity includes the ongoing construction and expansion of marine related operations at the Canal Landing Yard. The facility does not involve large scale outdoor storage of materials although vessels, trailers and related equipment associated with the boat preparation, repair and maintenance operations may be placed outside. In no case will these materials exceed a height of 45 feet, except for boat masts which may be taller than 45 feet and the marine travel lift equipment. The yard area has been stabilized with the boat yard surface material which helps contain and manage stormwater runoff. The yard use complies with the practices outlined in the MaineDEP Brightwork Manual for boat yards and marine facilities.

(b) Noise:

1. The proposed Phase VI facilities at Canal Landing involve a new 45,000 SF Building H/I. Typical working hours will be 7:00 am to 5:00 pm. The noise generated by the development is considered minor in nature and will not exceed the fifty-five (55) decibels level during the hours from 7:00 pm to 7:00 am. There is existing background noise attributable to the nearby streets, Jetport flight path and related commercial activities that are considered greater than those activities at the boat yard.

2. The applicant requests a waiver of any further noise measurements for the site, based on their operating history and absence of any complaints regarding noise generated from the Canal Landing site. Based on the prevalence of nearby land uses, including the IMT, Sprague Energy, Portland Jetport, rail operations and general commercial development, it is believed that the Canal Landing operations are and will continue to be an insignificant generator of noise in the region.

3. The proposed Phase VI activity will employ HVAC equipment that will not exceed the City's noise standards at the property line.

(c) Vibration: The proposed Phase VI activities will not result in significant vibration as the activity is primarily associated with the development of a new maintenance building. No significant vibration sources are expected as a result of this development activity.

(d) **Federal and State Environmental Regulations:** The boat repair and maintenance activities are performed in accordance with State and Federal emission regulations so actions such as sand blasting and related boat work are managed and controlled to minimize emissions.

(e) **Discharges into Harbor Areas:** The Canal Landing site is served by public wastewater collection so there are no onsite wastewater disposal systems. The yard contains several sources of collection for domestic wastewater from vessels and this wastewater is discharged to the municipal collection system. Other bilge related waste sources are handled in accordance with the State regulations and no discharges of hydrocarbons or related waste are allowed to enter the sewer flows going to the WWTP. The applicant does not foresee activities including the construction of Building H/I, requiring a Waste Discharge License from the MaineDEP.

(f) **Storage of Vehicles:** The Canal Landing development does not involve the storage of automobiles. Any storage is typically related to vessels due for repairs and maintenance. Some Vessels do remain on the site for greater than 60 days simply due to the amount of work required on them.

(g) **Landfill of Docking and Berthing Areas:** The proposed development does not involve landfill of docking or berthing areas. The Phase VI development involves only activity along the street front for Building H/I.

(h) **Off-street Parking:** The approximately 17 acre site area contains ample parking for the boat yard as well as Phase VI development activity. The applicant is requesting a waiver of Section 14-332 (h) which indicates a parking requirement of 1 parking space for each one thousand (1000) SF of space not used for bulk storage. The applicant will continue to manage parking throughout the yard in a manner that keeps yard areas flexible for the parking of vehicles and vessels. The applicant is also not in favor of any paved parking areas within the site since those areas contribute unnecessarily to runoff and are otherwise unsuitable for vessel placement since pavement does not work well with the use of jack stands, on which many vessels are placed.

(i) **Off-street Loading:** The proposed Tension Fabric Building G will contain overhead doors on each end to allow for movement in/out of the covered area. Building F does not require any loading space.

(j) **Shoreland and Flood Plain Management Regulations:** The proposed Building H/I activities are located beyond the Shoreland zone. There are no clearing restrictions on the site and activity will be compliant with any Shoreland and Flood Plain regulations. The Building H/I floor elevation will be at Elevation 13.9' to 16.1' which is 6 feet above the Fore River Flood elevation. The site grading will be completed to provide the finish gravel grade to elevation 13.0' or higher.

(k) **Lighting:** All onsite lighting will be shielded and of low intensity. Building mounted lights on the Phase VI building will be cutoff style and be installed for safety and

security and will be placed around the perimeter of the building. The fixtures will match those previously installed on the other onsite buildings.

(l) Signs: No new signs are proposed. All tenant signage will require a separate permit for which the tenant is responsible to secure a permit from the City.

(m) Storage of Pollutants and Oily Wastes: The Phase VI activity does not involve the bulk storage of pollutants or oily waste. Canal Landing does collect oily waste and either recycles or disposes of this material. They generally burn collected oil waste in their two waste oil heaters. All other waste items are collected and disposed of by a qualified third party following MaineDEP regulations and protocols. Manifests of shipped waste products can be provided upon request.

(n) Compatibility of non-marine uses with marine uses: The proposed Phase VI activity is a use that is considered marine related therefore, this design standard is not applicable.

(o) Design and Visual Character shall:

1. The proposed Phase VI Building H/I has been designed to be consistent with the previously constructed structures within the Canal Landing site and to also work with nearby buildings and uses. Building H/I has been positioned to align parallel with the street front and in alignment with Buildings C/D, thus anchoring its presence to the street, as well as affording a view corridor from the street to the waterfront.

2. The Building H/I is reasonably sized structure intended to complement existing onsite Buildings. The space between Building H/I and other onsite buildings will provide a view corridor from the street as well as from the multi-modal pedestrian trail on West Commercial Street.

3. The building elevations renderings prepared by Archetype PA attempt to show consistency between the proposed building H/I space and the existing Buildings C/D.

4. The accompanying building elevations again attempt to address this standard by the use of windows, colors and accents.

5. Building H/I is located within 50 feet of West Commercial Street and has a roof line step back to adhere to the height requirements within 100 feet of the street.



CONSTRUCTION MANAGEMENT PLAN

A Construction Management Plan has been prepared by Keeley Construction and is appended to this section.

Construction Management Plan
Canal Landing New Yard – Phase VI – Building H/I
Canal Landing, LLC

This document and its subsequent attachments comprise The Construction Management Plan being submitted to the City of Portland for the Canal Landing development at 100 West Commercial Street. The Construction Management Plan contains information pertaining to the overall planning and coordination of Phase VI of the project.

Phase V involves the construction of Building H/I to be located along the West Commercial Street frontage. The buildings will be used by Portland Yacht Services for the maintenance of vessels, consistent with their ongoing operations. Site improvements include yard improvements, rail crossing, and utilities for the building as well as the rest of the boatyard.

A. Construction Management Principles

The impact of this project on the public will be minimized via the following construction management principles:

- The construction zone for the buildings will be fully secured with hard barriers/fencing preventing any access into the site by the public. Barriers are not expected to extend into the Public R.O.W or Maine Port Authority Rail/Heavy Haul Road ROW. If barriers in the ROW are required the contractor will coordinate with DPW/MPA representatives to assure all safety measures are upheld.
- All construction activities will occur within the construction barriers/fencing to ensure the public is never exposed to any risks caused by the activities.
- There will be an onsite staging and unloading area for all deliveries which will prevent any impacts caused by offsite staging of trucks.
- All deliveries will be coordinated and scheduled to ensure that there is no offsite queuing required in West Commercial Street. The Owner plans to schedule as many deliveries as possible in the early morning to limit impact on the surrounding area.
- All construction activities will occur within normal daytime working hours to minimize sound impacts to the surrounding area.

B. Development Review of Construction Management Plan

The Owner will use a site-specific safety program for all team members who work on the construction site. The public will not be put at risk at any point throughout this project, as all work will be completed within the fenced off jobsite. At no point of the project will the public have access to this job site. Minimizing impacts to areas surrounding the building/construction site will be a primary consideration in the process.

The Planning Authority and the Department of Public Works have the right to 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. Such a condition may involve a delay in commencement of construction, if necessary.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

All fees, permits, and guarantees will be paid/issued prior to construction commencing.

This project will require public street openings for utility tie-ins. All required permits will be requested and granted by the Department of Public Works prior to any street openings occurring. Street openings will need to occur on West Commercial Street. MUTCD plans will be submitted to and approved by the City of Portland for any traffic disruptions caused by street openings.

D. Construction Administration and Communication

The contact persons for all construction activities for the project will be:

Jason Curtis
207-329-5403
jason@portlandyacht.com

Jim Keeley
207-615-1458
jim@keeleycrane.com

Temporary signage will be posted onsite with additional contact information for the contractor.

E. Construction Schedule

The preliminary construction schedule for the project starts in December 2024 and runs through Fall 2025.

All construction activities will be completed during daytime hours, there will be no need for night work. All deliveries for this project will also occur during normal daytime hours.

F. Security & Public Safety

See the Site Plans for fencing and barriers to be used to isolate the construction site from the public. All gates into the project will have Knox locking devices to allow for emergency access.

The fire safety program onsite will consist of the following:

- Fire extinguishers placed throughout the construction site for the duration of the project.
- The new fire alarm system installation will be ongoing throughout the project duration.
- All team members will be briefed on the emergency evacuation plan for the project site prior to starting work.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: This project will require street openings on West Commercial Street. These openings are required to tie the building into the water system. Prior to any of this work starting, permits will be submitted for and approved by the Street Opening Clerk at the Department of Public Works.

2. Sewer: This building will need to discharge to the public sewer system via the onsite private collection system. No new connection is required.

3. Traffic Control Plans: There will be periods of time throughout the project where construction activity may impact the existing public street system. Prior to any interruptions, a MUTCD plan will be created and submitted to the City for approval. The MUTCD will ensure that traffic and safe passage for the public is maintained in a satisfactory manner.

H. Site Management and Controls

The following actions will be taken by the Owner as regular site management and control activities:

- Construction site signage will be provided, installed, and maintained by the Owner throughout the duration of the project.
- Access to the site will be controlled.
- Trash and debris will be removed from site via a construction dumpster which will be changed out as needed on a regular basis.
- Street cleaning will not be required on a regular basis, but if it is deemed necessary the Owner will coordinate the cleaning of any excess dirt that has resulted from construction activities.
- Onsite snow removal will be the Owner's responsibility.

I. Erosion Control and Preservation of Trees

Erosion control measures will be installed onsite prior to any work commencing. A complete erosion control plan will be put together and reviewed with the City at the preconstruction meeting. Some of the measures that will be taken are utilization of silt sacks and fences to protect to surrounding area from any silt run off from the site. The control measures will be maintained daily and inspected weekly or after any major rain event. The inspections will be documented for review by the City of Portland, Maine Department of Environmental Protection, or the U.S. Environmental Protection Agency.

All stored materials onsite will be located away from any trees or vegetation.

J. Construction Staging Area

All trucks will be unloaded within the construction site's footprint to avoid impacts on public traffic. An offsite marshalling area will not be required for this project. All materials will be stored onsite and in a manner to avoid impacts to ongoing Boat Yard operations and emergency vehicle access to the property.

K. Parking During Construction

Construction parking will be provided onsite. No parking of construction vehicles will be allowed in the West Commercial Street R.O.W.

L. Dewatering Plans

The Building H/I construction is expected to not require dewatering associated with groundwater based on past experiences constructing other buildings on the site. Trench or foundation excavation dewatering resulting from rainfall is also expected to be minimal due to the underlying granular soils on the site. If any minor dewatering is required a small sump pump and hose will be used and the discharge placed in a crushed stone bedding over filter fabric covering the existing boatyard crushed stone surface, to allow reabsorption to the ground. No dewatering effluent will be discharged to either the onsite sewer or drainage systems. Nor will any dewatering effluent be pumped to the Fore River. No discharge of dewatering flow will be allowed during a precipitation event.

M. Special Measures as Necessary

There will be no special measures necessary for this project.

Please do not hesitate to contact me with any comments, questions, or concerns regarding the Canal Landing Phase VI project and subsequent Construction Management Plan.

Att. N

From: COUGH, JAMES
To: Steve Bushey
Cc: "Jim Keeley"
Subject: CMP Three Phase Service Process and Ability to Serve Letter Expansion of Portland Yacht Services/New Yard LLC - 100 West Commercial Street
Date: Thursday, May 9, 2024 6:15:13 AM
Attachments: Easement_Information_Worksheet.doc
Standard Easement Sample.pdf
blank W9.pdf
EDET May 2024.xlsx
C-3.0 BLDGS H & I SITE LAYOUT & UTILITY PLAN.pdf

Stephen Bushey| Senior Associate
Gorrill Palmer
300 Southborough Drive, Suite 200 | South Portland, ME 04106

RE: Portland Yacht Services/New Yard LLC - 100 West Commercial Street Expansion
SAP TBD

Project Description:

45,000 SF maintenance building for large vessels, basically in the lot area just west of their middle entrance off West Commercial Street.

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. Final details of CMP equipment (poles, transformers etc…) locations will be determined after an engineering review and site visits. 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.

- Call 800-750-4000 option 4 to establish a new account (if needed) and an SAP work order. Please provide both of these to me.
- 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 up to two 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). Please email them at your earliest convenience. If you are returning an Easement Form, a 1190 or State Permit please be sure to send those documents to lineclerknewservice@cmpco.com, All W9's should be sent to gettingconnected@cmpco.com. All other forms including the EDET (load sheet) and technical information should be sent to me.

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
207.415.4300

Please consider the environment before printing this email.
If you have received this message in error, please notify the sender and immediately delete this message and any attachment hereto and/or copy hereof, as such message contains confidential information intended solely for the individual or entity to whom it is addressed. The use or disclosure of such information to third parties is prohibited by law and may give rise to civil or criminal liability. The views presented in this message are solely those of the author(s) and do not necessarily represent the opinion of Avangrid, Inc. or any company of its group. Neither Avangrid, Inc. nor any company of its group guarantees the integrity, security or proper receipt of this message. Likewise, neither Avangrid, Inc. nor any company of its group accepts any liability whatsoever for any possible damages arising from, or in connection with, data interception, software viruses or manipulation by third parties.

GORRILL PALMER

300 Southborough Drive, Suite 200
South Portland, Maine 04106
207.772.2515

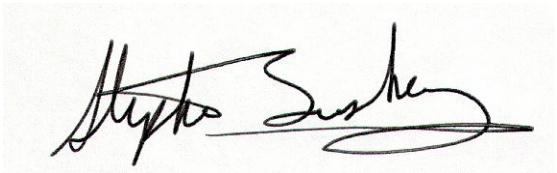
Att. O

I, Stephen Bushey, of Gorrill Palmer, hereby certify that a Neighborhood Meeting was held on Wednesday September 11, 2024, at 5:30 P.M. at 100 West Commercial Street PYS Building B for the proposed Building H/I development to occur on the PYS boatyard in Portland, ME.

I also certify that on August 21, 2024 (which is at least ten (10) days prior to the Neighborhood Meeting) 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 or within 1,000 feet of a proposed industrial subdivision or industrial zone change.
2. Residents on the "interested parties" list.

Signed,



Stephen Bushey, Sr. Associate — September 12, 2024 Date

Attached to this certification are:

1. Copy of the Invitation Sent
2. Meeting Minutes

U:\3561.05_Canal Landing Building H\E Meeting Notes\2024.09.11 neighborhood meeting\2024.09.12 certification_neighborhood-meeting

GORRILL PALMER
An LJB Engineering Company

300 Southborough Drive, Suite 200, South Portland, ME 04106
(207) 772-2515 | GorrillPalmer.com

August 21, 2024

Dear Neighbor:

Please join us for a Neighborhood Meeting to discuss the proposed Major Site Plan application (PL-003033-2024) for a 45,000 SF Boat Maintenance building (H) at the existing Portland Yacht Services site at 100 West Commercial Street in Portland, ME.

Meeting Location: **Portland Yacht Services Building B – look for signs- enter off West Commercial Street East entrance, cross tracks and Building B is on left (PYS main office). Portland, ME 04103**

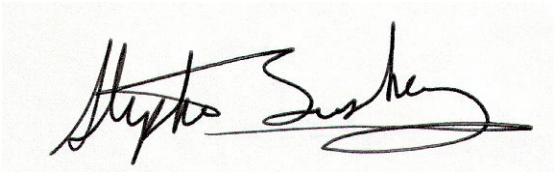
Meeting Date: **Wednesday September 11, 2024**

Meeting Time: **5:30 PM – 6:30 PM**

The City Code requires that property owners within 500 feet (except notices must be sent to property owners within 1,000 feet for industrial zoning map amendments and industrial subdivisions) of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. We will take attendance and submit a sign-in sheet to the Planning Board. The meeting will last no more than 60 minutes. If you have any questions, please feel free to contact Stephen Bushey 207.772.2515 x286.

Sincerely,

GORRILL PALMER



Stephen Bushey, PE
Senior Associate
sbushey@gorrillpalmer.com/Sbushey@ljbinc.com
207-772-2515 ext. 286

Note: Under Section 14-32(C) and 14-525 of the City Code of Ordinances, an applicant for a Major Site plan development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting within three weeks of submitting a preliminary application or two weeks of submitting a final site plan application, if a preliminary plan was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street, Portland, ME 04101.

U:\3561.05_Canal Landing Building H\G Abutters\neighborhood meeting notice 2024.08.20.docx

PYS – New Yard LLC

Neighborhood Meeting September 11, 2024 – 100 West Commercial Street

Attendance List

Name	Property Location	Contact information
Steve Bushey	Engineer	sbushey@gorrillpalmer.com
Andrew Butcher	neighbor	butcher.drew@gmail.com
Julie Pezzino	neighbor	julie.pezzino@gmail.com
Carl Pezzino	neighborhood	carl.pezzino@gmail.com
SONIA Robertson	"	robertsonsonia@hotmail.com
DAVID PERRY	Neighbor - Danforth ST	DLPERRY362@GMAIL.COM

New Yard LLC – Building H/I
Neighborhood Meeting
September 11, 2024 at 5:30 PM

MEETING MINUTES

1. ATTENDEES

Presenters
Steve Bushey (SB), Gorrill Palmer
Jason Curtis (JC) New Yard/PYS

Neighbors
Andrew Butcher (AB)
Julie Pezzino (JP)
David Perry (DP)
Several other names added to the list by JP so they can be provided information.

2. MINUTES

- Attendee introductions
- **AB** asked whether the team had seen Constance Bloomfields comments. He emailed them to **SB** and **JC**.
- **Steve Bushey (SB):** Overview of Building H/I project and site plan, project timeline including background on overall campus, history, and the Hardship Variance granted by the ZBA last fall.
- **SB presented various site plans and renderings to provide a sense of scale etc.**
- The group had a casual discussion and various topics were raised as follows:
    - What sort of activity will occur in the new building? Primarily vessel maintenance and storage. The Larger building will allow operation of the 300-ton travel lift and larger vessels up to 120 long.
    - Comments were made about past sandblasting noise. **JC** indicated that PYS was also not happy with the noise created by a third party on the site while sandblasting a vessel several years ago. They have since not allowed that to occur onsite.
    - Questions about the snow dump that was routinely in the westerly yard area over the past few years. With the new building no more snow dump will occur.
    - A question about the area west of the proposed building was asked. This area will be used for boat parking. No activity will occur west off the existing small buildings located near the existing westerly driveway.
    - Question about the roof. It was noted there will be no roof top mounted equipment.
    - **JC** noted that the building will likely generate up to an additional 10 job positions with PYS. Current staffing is about 65 full-time, year-round positions.

- **AB** mentioned issues with coal dust emanating from the Sprague Terminal at Cassidy Point. **JC** indicated the PYS hasn't seen a specific issue with coal dust, however, they would be concerned if they found it to be causing an issue with boat parking etc.
- **AB** asked about tree plantings along West Commercial Street. **SB** noted that birch plantings are proposed.
- **PYS** may seek to occupy the Building H prior to the completion of Building I, as early as next fall. It's hoped that both pieces will be complete within 12 months of the commencement of construction**.**

Company Name	First Name	Last Name	Street Number	City	State	Zip
	Anthony	Donovan	27 Riverview Street	Portland	ME	04102
	Barbara	Wood	125 Emery Street	Portland	ME	04102
	David	Nowlin	215 Oxford Street	Portland	ME	04102
	Deb	Keenan	28 Dorothy Street	Portland	ME	04103
	Devon	Platte	26 North Street, 33	Portland	ME	04101
	Edward	Suslovic	46 Kenwood Street	Portland	ME	04103
	Janice	Carpenter	9 W. Commonwealth Drive	Portland	ME	04103
	Jennifer	Munson	389 Congress Street, 4th Floor	Portland	ME	04101
Kaplan Thompson Architects	Jesse	Thompson	100 Exchange Street	Portland	ME	04103
	Lynn	Clarkson	145 Marlborough Road	Portland	ME	04103
	Mary	Griffity	6 E. Prom, Unit 2	Portland	ME	04103
	Nancy	Bartlett	PO Box 7965	Portland	ME	04112
	Pam	Burnside	64 Lester Drive	Portland	ME	04103
	Paul	Dubois	1915 Congress Street	Portland	ME	04102
	Peggy	Morin	66 Farnham Street	Portland	ME	04101
	Philip	Haughey	1660 Soldiers Field Road	Boston	MA	02135
	Priscilla	LaVallee	190 US Route 1, Unit 2	Falmouth	ME	04105
Waste Management of Mair	Rebecca	Halla	2000 Forest Avenue	Portland	ME	04103
	Glenn	Cummings	24 Nevens Street	Portland	ME	04103
	Robert	Hains	250 Holm Avenue	Portland	ME	04102-1208

COMPANY	FIRST NAME
481 DANFORTH STREET LLC	
92 SALEM STREET CONDO	
AHP INVESTMENTS LLC	
	WILLIAM
	MARK
	JASON
	CONSTANCE
	SARAH
BRIDGEPORT ASSOCIATES	
	JOSHUA
	MICHAEL
BROWN J B & SONS	
	MICHAEL
	RICHARD
	ELIZABETH
	ANDREW
	MARSHA
CENTRAL MAINE POWER COMPANY	
CIANBRO CORPORATION	
CODMAN-PORTLAND ASSOC	
	SARA
	SOREN
	SARAH
	RICHARD
	ERIC
	WILLIAM
	VICTORIA
	FRANCES
	JAN
	REEVEN
	DAVID
	DARREN
	GARRET
FOREVIEW CONDO	
	JUSTIN
	HENRY
	DEVENS
	LAURA
	TERRACE
	WALTER
	NATHANIEL
	BARBARA
	JAMES
	KURT
	DAN
MAINE PORT AUTHORITY	

	WILLIAM
	BENJAMIN
	SUZANNE
	NANCY
	SARA
	THOMAS
	SEAN
NERVOUS WATER LLC	
NEW YARD LLC	
	ALISON
NORTHERN UTILITIES INC	
ORANGE STREET CONDO	
	ALONZO
PENINSULA HOUSING LLC	
	SUSAN
	DARCY
PORTLAND HOUSING AUTHORITY	
PORTLAND TERMINAL CO	
	DANIEL
	BRIAN
	BRIAN
	SONIA
	THOMAS
	ANDREW
	MARJORIE
SOUTHRISE CONDO	
	LAURA
SPRAGUE OPERATING RESOURCES LLC	
	MEGAN
SUN I-HONG & SHUI-SHANG SUN TRUSTEES	
	DENISE
	DEBORAH
	MARGOT
	DYLAN
WAXING VENTURES LLC	
WAYNFLETE SCHOOL THE	
WILLIAM VAUGHAN HOUSE	

LAST NAME	ADDRESS
	481 DANFORTH ST
	92 SALEM ST
	1 DANA ST
BENNETT	20 ORCHARD ST
BESSIRE	314 DANFORTH ST
BICKNELL	37 PARK CIR
BLOOMFIELD	382 DANFORTH ST # 2
BOUCHER	82 SALEM ST
	555 COMMERCIAL ST
BRODER	414 DANFORTH ST
BROSNAN	58 VILLAGE RD
	PO BOX 207
BRUENJES	342 DANFORTH ST
BRYANT	PO BOX 4510
BURROUGHS	PO BOX 129
BUTCHER	380 DANFORTH ST
CAMPBELL	108 SALEM ST
	ONE CITY CENTER 5TH FLOOR
	PO BOX 1000
	536 GRANITE ST # 301
CODY	78 SALEM ST
MULLER-CRAIG	46 WESTERN PROMENADE
DAIGNAULT	350 DANFORTH ST
DAVY	418 DANFORTH ST
DEXTER	52 WESTERN PROMENADE
DUGGAN	420 DANFORTH ST
DYLEWSKI	88 SALEM ST
DYRO	34 EMERY ST
EAKINS	416 DANFORTH ST
ELFMAN	48 WESTERN PROMENADE
FENTON	50 WESTERN PROMENADE
FISHELL	92 SALEM ST # 3
FITZGERALD	52 RIVERVIEW ST
	382 DANFORTH ST
FUNK	619 SHEDD RD
GENT	92 SALEM ST # 1
HAMLEN	358 DANFORTH ST
HANEY	120 SALEM ST
HARBOR	14 BAXTER BLVD
HOLEMANS	4823 ALTON PLACE NW
HYDE	49 SUMMER ST
KEILSON	116 SALEM ST
KELSO	361 DANFORTH ST
KLEBE	389 DANFORTH ST # 2
KONIGSBURG	369 DANFORTH ST
	601A DANFORTH ST

MARSHALL	467 DANFORTH ST
MCCOLLISTER	3 ORANGE ST # 2
MCDONOUGH	12 BOND ST
MERWIN	32 ORCHARD ST
MILLER	96 SALEM ST
MOULTON	395 DANFORTH ST
MURPHY	394 DANFORTH ST
	415 CONGRESS ST STE 202A
	100 W COMMERCIAL ST
NOILES	382 DANFORTH ST
	6 LIBERTY LN W
	1 ORANGE ST
OSGOOD	1 ORANGE ST
	14 BAXTER BLVD
PERRY	362 DANFORTH ST
POOR	15 VAUGHAN ST
	14 BAXTER BLVD
	IRON HORSE PARK
PULITANO	346 DANFORTH ST
RANDALL	381 DANFORTH ST
RANDALL	PO BOX 1558
ROBERTSON	336 DANFORTH ST
ROBINSON	320 DANFORTH ST
SCHILLER	3 CANTERBURY LN
SHAW	400 DANFORTH ST
	414 DANFORTH ST
SPRAGUE	28 ORCHARD ST
	185 INTERNATIONAL DR
STRACKBEIN	354 DANFORTH ST
	PO BOX 45
TALBOT	51 SUMMER ST
TOWLE	100 SALEM ST
TROUT	216 HILLSDALE RD
VANDEMARK	387 DANFORTH ST # 1
	380 DANFORTH ST
	256 SPRING ST REAR
	387 DANFORTH ST

CITY	STATE	ZIP
PORTLAND	ME	04102
PORTLAND	ME	04101
PORTLAND	ME	04101
PORTLAND	ME	04102
PORTLAND	ME	04102
CAPE ELIZABETH	ME	04107
PORTLAND	ME	04102
PORTLAND	ME	04102
PORTLAND	ME	04101
PORTLAND	ME	04102
SHELBURNE	NH	03581
PORTLAND	ME	04112
PORTLAND	ME	04102
PORTLAND	ME	04112
BOWDOINHAM	ME	04008
PORTLAND	ME	04102
PORTLAND	ME	04102
PORTLAND	ME	04101
PITTSFIELD	ME	04967
BRAINTREE	MA	02184
PORTLAND	ME	04102
PORTLAND	ME	04101
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PORTLAND	ME	04101
NORWAY	ME	04268
PORTLAND	ME	04102
PORTLAND	ME	04102
PORTLAND	ME	04102
PORTLAND	ME	04101
WASHINGTON	DC	20016
PORTLAND	ME	04102
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HAMPTON	NH	03842
PORTLAND	ME	04101
PORTLAND	ME	04102
PORTLAND	ME	04101
PORTLAND	ME	04102
PORTLAND	ME	04102
PORTLAND	ME	04101
NORTH BILLERICA	MA	01862
PORTLAND	ME	04102
PORTLAND	ME	04102
PORTLAND	ME	04104
PORTLAND	ME	04102
PORTLAND	ME	04102
HOLDEN	MA	01520
PORTLAND	ME	04102
PORTLAND	ME	04102
PORTLAND	ME	04102
PORTSMOUTH	NH	03801
PORTLAND	ME	04102
HARRISVILLE	RI	02830
PORTLAND	ME	04102
PORTLAND	ME	04102
GREAT BARRINGTON	MA	01230
PORTLAND	ME	04102
PORTLAND	ME	04101
PORTLAND	ME	04102
PORTLAND	ME	04102

Portland Water District

From Sebago Lake to Casco Bay

Att. P

August 9,2024

Stephen Bushey
Senior Associate

Re: 100 W Commercial St, PO
Ability to Serve with PWD Water

Dear Mr. Bushey:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on April 25, 2024. Based on the information provided per plans dated August 9,2024, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed and is valid for eighteen (18) months after the date of issue. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 1.5- inch domestic service with a 1.5-inch meter may be installed from the water main in W Commercial Street. The service should enter through the property's frontage on W Commercial Street at least 10 feet from any side property lines. An approved Testable Double Check Valve Assembly (**DCVA**) prevention device must be installed on the service line directly after the meter prior to service activation.

- A new 6-inch fire service may be installed from the water main in W Commercial Street. The service should enter through the property's frontage on W Commercial Street at least 10-feet from any side property lines. An approved Testable Double Check Assessmbly (**DCVA**) check backflow prevention must be installed on service line prior to service activation. Please refer to the PWD website for more information on cross-connection control policies.

- The existing water services will provide water demand to the existing buildings

- The Portland Water District does not have record of any other existing infrastructure in public road and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.

225 Douglass Street P.O. Box 3553 Portland, Maine 04104-3553
Phone: 207.774.5961 Fax: 207.761.8307 Web: www.pwd.org

Prior to construction, the owner or contractor will need to complete a Service Application and pay all necessary fees for each proposed service. When the project is ready for construction, an Application for each service can be requested by contacting the MEANS Group at MEANS@pwd.org or 207-774-5961 ext. 3199. Once a completed Application has been submitted with payment, please allow seven (7) days for processing.

Existing Site Service

According to District records, the project site does currently have existing water service. A 2-inch diameter copper domestic, a 6-inch fire and an 8-inch combined service line provide water service to the site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is a 16-inch diameter CAST water main in W Commercial Street and a public fire hydrant located approximately 450 feet from the site. The estimated static pressure in the area is 107 psi.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the City of Porland fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high-water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted condition. If the data is out to date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

GORRILL PALMER
An LJB Engineering Company

300 Southborough Drive, Suite 200, South Portland, ME 04106
(207) 772-2515 | GorrillPalmer.com

July 26, 2024

Mr. Kevin Kraft, Director
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Canal Landing New Yard – Phase VI (Building H/I)
100 West Commercial Street
Level III Preliminary Site Plan Application
Applicant: New Yard, LLC

Dear Kevin:

On behalf of **New Yard, LLC,** we are pleased to provide the accompanying package of submission materials related to **Phase VI** of the Canal Landing New Yard development off West Commercial Street. This submission package is intended to meet the City's Submission Requirements as outlined in the Level III Application procedures.

As you are aware, the applicant has previously completed five phases of building development commencing with:

- Two buildings (A and B) constructed in 2013 to 2015 on the 5.03-acre remainder property positioned just to the southeast corner of the IMT Expansion project. The Portland Planning Authority previously approved these activities beginning in the fall of 2013.
- In January 2018, the Planning Board approved the Phase III Site Plan for Buildings C & D and these buildings were completed around 2019. Building C is occupied by Portland Yacht Services and Building D is occupied by a marine engineering and design firm;
- In February 2018, the Planning Authority approved a Level II Site Plan for the Travel Lift Basin construction and various waterfront and boat yard improvements that were constructed and completed in 2019.
- The Portland Planning Authority approved the Phase IV Site Plan for Building E in December 2018 and this building has also been completed and is occupied by Portland Yacht Services.
- In 2021 the Planning Authority approved Phase V activities including proposed Building F that has not been constructed and is on permanent hold and maintenance Building G, which has been constructed along the site's waterfront.

This current application is for **Phase VI** which will include the development of a 45,000 SF building H/I[1] on the site's west end. The new building will be located on the West Commercial Street frontage just west of Buildings C and D.

In accordance with ReCode Section 2.3.11, New Yard LLC was previously granted an Undue Hardship variance approval from the Zoning Board of Appeals, for the construction of a new Boat maintenance Building (H). The property is within the WPDZ Zoning District and from Table 10-B of the zoning Code, certain dimensional standards apply within the WPDZ. The proposed building is expected to measure 150' wide x 300' long (45,000 SF) which is conforming. We are proposing a maximum building height of 72'-6" for a portion of the building, thus qualifying the proposal to fall under the Conditional Use standards[2]. The building's height will vary according to the building width, with about 70' of the width closest to West Commercial Street having a height of 50' and about 80' of the width having a maximum height of 75'. The critical dimensional standard from Table 10-B, for which the applicant was granted a variance is the requirement that "*In no case may any conditionally permitted heights exceed 50 ft within 100 ft of West Commercial Street…*". The development proposal involves having a portion of the building with a height of greater than 50' be closer than 100' from the West Commercial Street ROW. The caption on the following page depicts the basic geometry, with the highlighted area showing the building height encroachment area.

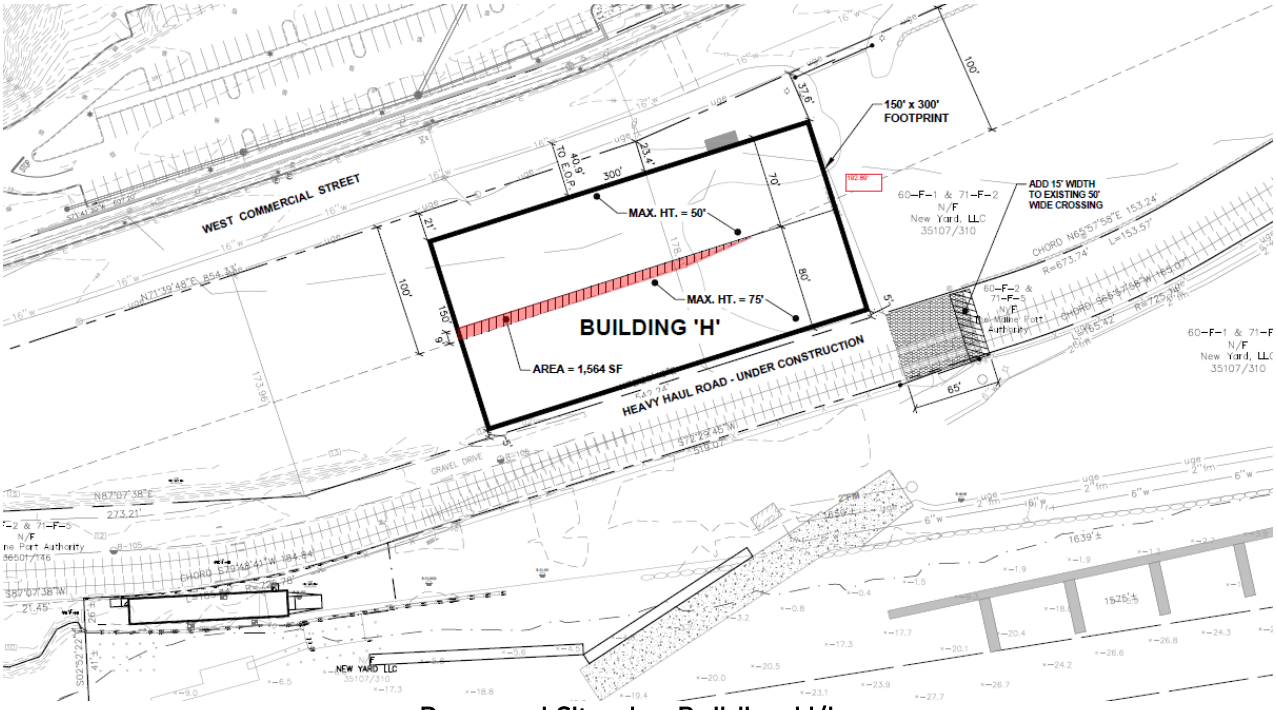
The applicant is requesting a maximum pitched roof building height of 72'-6" be within 91' to 100' respectively from the West Commercial Street ROW. The applicant proposes a tiered height building that would have a building area with maximum height of 50 feet for a width of 70 feet and a second area with a maximum height of 72'-6" feet for a width of 80 feet. A small area (1,564 SF or 6.5% of building area @72'-6") of the higher building will encroach into the 100-foot setback zone that allows only a 50-foot maximum height. The positioning of the building is based on providing a 5-foot setback from the Maine Port Authority rail tracks ROW line to allow for the necessary building foundation placement and exit door operations.

A certificate of variance approval was granted by the Zoning Board of appeals dated September 11, 2023 and the document was recorded at the Cumberland County Registry of deeds in Book 40362, page 151. A copy of the ZBA application narrative and the recorded Certificate of Variance Approval are attached to the Project Description section of this application.

The proposed Building H primary function will be for the placement of larger vessels brought into the yard via the 300-ton marine travel lift. The applicant has seen an increase is large vessel maintenance opportunities and they believe that the proposed building will help fulfill their ability to undertake these opportunities. Currently only building E on the site is large enough for the 300-ton travel lift. There is no available space on the site's shorefront parcel to position a similar sized building, thus the proposed design places the building within the street side parcel fronting West Commercial Street. The building will be highly compatible with the existing onsite structures in architectural style and the proposed positioning retains ample view corridors thru the site from the street to the waterfront. As considered and approved by the ZBA, we believe the project will not later the essential character of the locality and is entirely

[1] Building H/I is a single 45,000 SF structure with 24,000 SF at max height of 72'-6" (H) and 21,000 SF at max. height of 50'-0" (I).
[2] See Table 10-B: WPDZ Dimensional Requirements in City ReCode

consistent with the comprehensive plans and long-term vision and goals for the City's working marine waterfront.



Proposed Site plan Building H/I



Architectural Rendering of Building H/I – from West Commercial St



Building	Height (to peak)
A	45' +/-
B	55'-10"
C	23' +/-
D	35' +/-
E	72'-6"
G	42'-6" +/-
Proposed H	72'-6"/50'-0"
VA CBOC	42'-0"
VA Garage	47'-11"
MICS	55'-0"

CLOSURE

As outlined in the Level III Site Plan submission requirements and checklist, we will upload the following materials upon authorization by City staff:

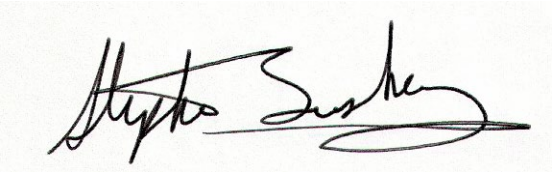
- General Application Documents
  - Project Description
  - Level III Application Checklist
  - Right, Title and Interest
  - Zoning Assessment
  - Existing and/or Proposed Easements (please see Survey Plan)
  - Waiver Request and Waiver Table
  - Financial Capacity
  - Technical Capability
- Transportation
  - Transportation Narrative
- Environmental and Landscape Features
  - Narrative to Address Standards
- Environmental and Stormwater
  - Narrative to Address Standards
- Public Infrastructure and Safety
  - Narrative to Address Standards
- Site Design
  - Narrative to Address Standards
- Construction Management Plan
- Site Plans and Architectural Plans

On behalf of **New Yard, LLC**, we look forward to your assistance on the project and we look forward to the next available workshop meeting with the Planning Board. As is required the applicant will be conducting a Neighborhood Meeting. We anticipate this meeting will be conducted prior to the workshop meeting.

If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

GORRILL-PALMER



Stephen Bushey, PE
Senior Associate
Phone: 207-772-2515 x286
sbushey@gorrillpalmer.com

Attachments

c: Jason Curtis. – Canal Landing, LLC
Clint Marshall – New Yard LLC
Jim Keeley – Keeley Construction

U:\3561.05_Canal Landing Building H\P Applications\Local\Major Site plan \0_application cover letter NEw Yard LLC 2024.07.26.docx

GORRILL PALMER
An LJB Engineering Company

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(207) 772-2515 | GorrillPalmer.com

September 11, 2024

Ms. Ameriz Gamez
City of Portland Planning
City Hall Congress Street
Portland, Maine 04101

RE: New Yard LLC – PL-003033-2024
Letter of Response #1
Response to Design Review and Department Staff comments

Dear Ameriz,

We offer the following supporting information and a summary of plan modifications that address the design review comments, and Department staff comments we have received thus far for the proposed Building H development on West Commercial Street. We offer each of the relevant staff comments warranting a response (in *Italic*) followed by our supporting information in **Bold**.

Transportation Standards (Sec 14.6.1)

Impact on Surrounding Street Systems
Updates Requested:

- *Confirm if any improvements are proposed for the westerly driveway and if it meets the City Tech Standards.*

Response: There are no improvements proposed for the westerly driveway. The development was previously granted approval and a waiver to allow for the three existing driveways, due to the extended street frontage the property contains. The driveway has been in place since the Phase III period when Buildings C & D were constructed. In the past the westerly driveway has been used for the winter snow dump operations and as access for other temporary materials storage activities. This entrance is not currently gated, but the applicant is considering a sliding gate similar to what has previously been installed at the existing center driveway. We note that the applicant was previously granted a waiver to allow a 40' driveway under Project ID 2017-293 approved on January 23, 2018, as excerpted below:

3. The Planning Board finds that due to circulation needs for trucks transporting large boats, the Planning Board waives the Technical Standard for Driveway Design: Maximum driveway width, Section 1.7.1.4. to allow a maximum width of 40 feet for the proposed driveways

Access and Circulation

Updates Requested:

- *Make the connection to the existing ADA ramp in W Commercial ROW (please see attached photo)*

Response: The applicant proposes to install signage at the south (site) side of the existing ramp to identify this location for users seeking to cross the street to/from the site to the West Commercial Street pathway. The boatyard surface material will also be provided flush to the edge of the existing pavement at the south side crossing location.



Existing West Commercial Street crosswalk

- *Clarify the internal circulation plan to access the west side of Building H/I. Is the intent for vehicles to enter back onto Commercial Street? Is it proposed to have vehicular access along the North side of the buildings H/I? (C-4.0).*

Response: The intent is for vehicular access along the north side of the building within the narrow area between the front of the building and the ROW. At its narrowest the space will be 18' wide which is sufficient for the occasional passenger vehicle or PYS equipment to pass. Alternatively, vehicles can also go through the building if needed to get from the east end to the west end. The westerly driveway will also be a primary access to the west end of the site, although the driveway is expected to be gated outside of normal business hours. The applicant does not foresee the need for much vehicular traffic to move from the east side of Building H to the west side, therefore they do not foresee site generated traffic accessing the street for movement to/from the east or west sides of Building H.

- *Provide as built drawings for the previous phases of this development prior to the approval of this site plan.*

Response: We have completed record plans for the overall site development and have

provided those to Max Martin and Jon Giles for their review.

- *A sidewalk waiver is required for this project, the waiver requirements are outlined in the code. Should you provide a sidewalk, please be aware that an acceptable ADA-accessible driveway crossing must also be provided. If a sidewalk is not provided, a contribution (separate from required impact fees) will be sought for nearby sidewalk and/or path facilities. Refer to DPW's comments on providing a connection to the existing West Commercial Street crosswalk.*

Response: The applicant is reliant on the previous sidewalk and curb waivers granted to the property on the basis of the existing West Commercial Pathway that has been constructed on the north side of the street. The basis of past waivers of new curb and sidewalk along the south side of West Commercial Street has included the following:

- **The City retains the gravel shoulder for the benefit of large tractor trailer parking associated with the International Marine Terminal as well as for other on-Peninsula special event parking etc.**
- **Additionally, the West Commercial Street Masterplan did not include a sidewalk along the south side of the street due to the heavy emphasis on locating marine industrial uses along the waterfront and providing additional space for truck staging. Therefore, the south side of West Commercial Street is less appropriate for encouraging heavy pedestrian use.**
- **The applicant previously contributed $65,000 towards the reconstruction of West Commercial Street and $25,000 towards the construction of the crosswalk shown below.**
- **Finally, there are no sidewalks or curbing on the south side of the street to either the west or east side of the property except at the crosswalk location.**
- **There are no crosswalks on West Commercial in front of the proposed Building H, however there is a crosswalk located east of the site, nearer the easterly driveway. That crosswalk has RRFB's on each side and a protective island in the middle of the street for crossing pedestrians.**



Existing Crosswalk on W. Commercial St.

Environmental Quality Standards (Sec 14.6.2)

Site Landscaping and Buffers
Updates Requested:

- *Staff will review the request for a waiver; however, we are looking at the possibility of adding additional street trees along Commercial Street.*

Response: We note that the proposed site plan contains a total of 12 River Birch Clumps to be planted along the Right of Way line in front of the Building H area. These clumps are offered to be consistent with existing plantings in front of Buildings C/D. We believe the current proposal is satisfactory, however we are amenable to further staff input.



Existing Tree plantings – PYS West Commercial St

Water Quality, Stormwater Management and Erosion Control
Updates Requested:

- *Basic Standards – The Applicant has provided for silt fence along the project property line. Erosion control measures are required for the work beyond the property line, including the work within the rail corridor and the installation of the proposed outfall.*

Response: Additional erosion control measures have been added to Sheet C-6.0. As the boatyard is covered in crushed stone the opportunity for erosion and sediment transport is highly minimized. Tracking of any mud will be monitored and maintained to prevent dirt from being transported into the road. Stockpiles of materials will be monitored and covered if necessary to avoid dust and erosion. The outfall pipe will be installed in the existing revetment above the high-water mark and will avoid any need for in-water activity.

- *The Applicant should clarify how stormwater treatment is accounted for with this surface. The stormwater management report should include areas for documentation.*

Response: As evidenced in previous submissions for the property we've noted that the native soils/gravels have infiltrative properties that meet the requirements of the Maine DEP BMP for manmade pervious surfaces. The soils conditions include:

- 10 to 15 feet of sand and gravel fill, there is little to no organic surface layer throughout the site.
- 5 to 10 feet of silt and sand.
- 10 to 40 feet of gray clay identified as the Presumpscot formation.
- 30 to 40 feet of dense silty marine sands.
- An undetermined thickness of dense silty sand and gravel identified as glacial till overlaying bedrock.

The manmade pervious Boatyard surface will consist of a clean 6" layer of crushed stone surface overlaying a 12" to 24" subbase course equivalent to the MDOT Type D aggregate. This surface will be provided around the perimeter of Building H/I to allow for the absorption of rainfall and minimization of any surface runoff. These conditions have been in place over all the previously developed boat yard and have worked successfully. Note: A waiver is being sought for infiltration testing. Evidence from the previously developed area for earlier phases and the shorefront area supports the proposition that the soils are highly infiltrative. Meanwhile the Building H/I roof runoff will be collected with interior roof drains and discharged through a closed pipe system out to an outfall in the existing shorefront stone revetment. Maine DEP Chapter 500, Part 4.C(5)(f) states that roof runoff from non -asphalt roofs or non-industrial facilities need only be treated for thermal impact and for channel protection only. For the New Yard Site, a waiver is requested from the flooding standard, as the site discharges to tidal conditions[1]. By capturing roof runoff in a closed, below grade drainage system, thermal cooling will be provided and thus serving as a thermal treatment as required under the standards. This approach has been previously approved for nearby development including the VA CBOC on the north side of the street.

- *A new outfall is proposed. This will require permits from the Board of Harbor Commissioners, DEP, and Army Corps. As currently shown on the plans, the outfall and stormwater line does not include any proposed invert elevations.*

Response: The team is preparing the Permit by Rule and Harbor Commission application for the drain outfall and copies of these permits will be provided to the City upon submission to the agencies.

Public Infrastructure and Community Safety Standards (14.6.3)

Public Utilities
Updates Requested

- *W Commercial St is set to be paved by DOT in 2025, it is recommended to have utility connections that will cut into W Commercial Street done prior to this. Please note that if utility cuts are done after W. Commercial Street has been paved, you will be subject to the memorandum replacement standards.*

[1] Waivers have been granted for all previous applications for this property.

Response: The applicant is aware of the moratorium conditions and requirements for pavement restoration. We are targeting the work to be completed prior to the street being repaved. Notes have been added to the site plan regarding the moratorium conditions.

Site Design Standards (Sec 14.6.4)

Massing Ventilation and Wind Impact
Updates Requested

- *Submit a roof plan rendering view to visualize the proposed roof top to confirm the locations of the HVAC equipment and assure that all is properly screened. (same comment for Noise)*

Response: There will be no roof top mounted equipment, so the roof is expected to look similar to the other existing buildings, and specifically Building E, on the site.



Existing site conditions

Noise and Vibration
Updates Requested

- *Submit a roof plan rendering view to visualize the proposed roof top to confirm the locations of the HVAC equipment and assure that all is properly screened.*

Response: There will be no roof top mounted equipment, so the roof is expected to look similar to the other existing buildings on the site.

Design Standards
Updates Requested

- *See the attached Design Review worksheet.*
- *The building itself meets all dimensional standards with the height variance approval.*

- *The proposed building is located within close proximity to West Commercial Street, Staff recommends further articulation at the corner to establish an entry that is easily*

distinguishable from the street (e.g. glazing similar to building D, overhead canopy or recessed entry with material change).

Response: See the updated renderings depicting an additional storefront door with sidelight and canopy above.

- *Staff request that the Applicant provide proposed façade materials for the roof and garage doors, it is assumed that these exterior surfaces are metal.*

Response: See the updated renderings. All materials, including the siding, garage doors, and canopies, are metal. The roof will be EPDM.

- *Staff recommends further articulation at the street facing façade to scale the building to relate more at the street level (e.g. additional windows aligned vertically and canopies above doors).*



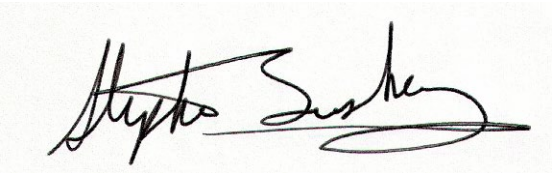
Updated Building rendering with Windows and canopies

Response: See the attached updated renderings from the project architect. The renderings show added windows and canopies over the garage doors. The siding between the windows is smooth metal panel.

We trust these responses, revised plans and attached information satisfies the staff comments and we look forward to your continued review of the project and scheduling of a public hearing in October.

Sincerely,

GORRILL-PALMER



Stephen Bushey, PE

Senior Associate

Phone: 207-772-2515 x286
sbushey@gorrillpalmer.com

Attachments See Eplan

c: Jason Curtis – New Yard LLC
Jim Keeley, Keeley Construction

U:\3561.05_Canal Landing Building H\P Applications\Local\Major Site plan\2024.09.04 LOR#1

GORRILL PALMER
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October 31, 2024

Ms. Ameriz Gamez
City of Portland Planning
City Hall Congress Street
Portland, Maine 04101

RE: New Yard LLC – PL-003033-2024
Letter of Response #2
Response to Design Review and Department Staff comments

Dear Ameriz,

We offer the following supporting information to address the Site plan Worksheet Submission #2 for the proposed Building H development on West Commercial Street. There was one remaining unmet item pertaining to Water Quality, Stormwater Management and Erosion Control. We offer the comment warranting a response (in *Italic*) followed by our supporting information in **Bold**.

Environmental Quality Standards (Sec 14.6.2)

Water Quality, Stormwater Management and Erosion Control

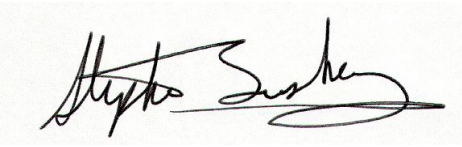
- *Staff is still requesting that sufficient documentation be provided to show the stormwater management report. This is so that the city has accurate documentation on the area being treated.*

Response: The accompanying stormwater management report contains a description and numerical summaries of the site's compliance with the Local Stormwater management standards.

We trust this information satisfies the staff comments and we look forward to your continued review of the project and scheduling of a public hearing in November.

Sincerely,

GORRILL-PALMER



Stephen Bushey, PE

Senior Associate

Phone: 207-772-2515 x286
sbushey@gorrillpalmer.com

Attachments – Stormwater report

c: Jason Curtis – New Yard LLC
Jim Keeley, Keeley Construction

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STORMWATER MANAGEMENT REPORT
(GENERAL STANDARDS)

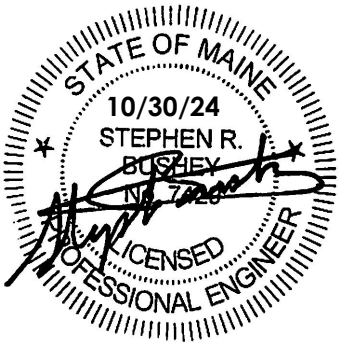
CANAL LANDING NEW YARD
PHASE VI – BUILDING H
100 WEST COMMERCIAL STREET
PORTLAND, ME

PREPARED FOR

New Yard, LLC
100 WEST COMMERCIAL STREET
PORTLAND, MAINE 04101
(207) 774-1067

PREPARED BY

GORRILL PALMER CONSULTING ENGINEERS
300 SOUTHBOROUGH DRIVE- SUITE 200
SOUTH PORTLAND, MAINE 04106
(207) 772-2515



October 2024

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7.0	Assumptions	5
8.0	Stormwater Management Objectives	6
9.0	Stormwater Management Quality Summary	6
10.0	Chapter 500 Treatment Percent Compliance	8
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13.0	Operations and Maintenance	10
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Figures and Photographs (Previously provided in Phase III – Available upon request)

Figure 2 – USGS Location Map
Figure 3 – Tax Map
Figure 4 – Zoning Map
Figure 5 – Aerial Photograph
Figure 7 – FEMA Flood Map
Figure 8 – USDA SCS Soils Map
Figure 9 – GIS Sand and Gravel Aquifer Map
Figure 10 – Surficial Geology Map
Figure 11 – NWI Map

STORMWATER MANAGEMENT REPORT

1.0 INTRODUCTION

New Yard, LLC owns and operates the existing boat maintenance and repair yard within approximately 17.77 acres of land located prominently along the West Commercial Street waterfront. The project represents an ideal marine related use within the Waterfront Port Development Zone.

The project includes multiple buildings that have been constructed over multiple phases along with new shorefront uses including two boat ramps, docks, new or reconstructed piers and a travel lift basin. The applicant's current plan includes a new free-standing 45,000 SF Building H, located along the west end of the site's West Commercial Street frontage. This building location is within a yard area that has functioned for materials storage, boat and trailer parking, and seasonal snow storage in the past. As with the entire site, historically the site was a railyard for a century or more.

The Phase VI project includes very limited site development activities involving the building, limited earthwork and grading, utilities services into building H, and a limited amount of groundwork around the immediate building area. The building is within an unimproved graveled surface area that has been used for the operations of temporary vessel parking, maintenance operations and overall boatyard activities.

This section of the Major Site Plan permit application presents the Stormwater Management Plan designed for the building H project activities. The stormwater management design presented herein will show that the site continues to meet the criterion of the City of Portland stormwater requirements and the adopted MeDEP Chapter 500 Regulations.

The site discharges to the mouth of the Fore River where it meets the ocean. Due to these tidal conditions, **the applicant is requesting a waiver of the flooding standards as has been previously and consistently granted for earlier project phases**. As discussed below the site's current conditions are characterized by the substantial use of a pervious Boatyard Surface material over much of the site. The surface consists of clean crushed stone overlying a thick (>24" layer) of heavy granular fill and geotextile fabric material. The surface is ideal for the support of heavy travel lift equipment and the placement of vessels where jack standards and related supports are used to hold up larger boats that are not otherwise on a trailer.

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USGS, aerial photographs, and related maps have been previously supplied to the City in previous applications and are available upon request.

The applicant has prepared this report to show the proposed Phase VI Building H Stormwater Management Plan meets the City's General Stormwater Standards.

2.0 EXISTING SITE CONDITIONS

The overall site consists of approximately 17.77 acres of land that is composed of three primary areas described as follows:

1. **Retained Parcel (Map 59A, Lots 3 & 4)**: Consists of the retained 5.03-acre area owned by New Yard, LLC and it represents the retained land originally permitted by the Applicant during late 2012 – 2013. Within this land area New Yard, LLC has constructed Building A and Building B amounting to approximately 48,000 SF of building space. This parcel contains a concrete boat ramp and boat yard area currently in use by Portland Yacht Services.
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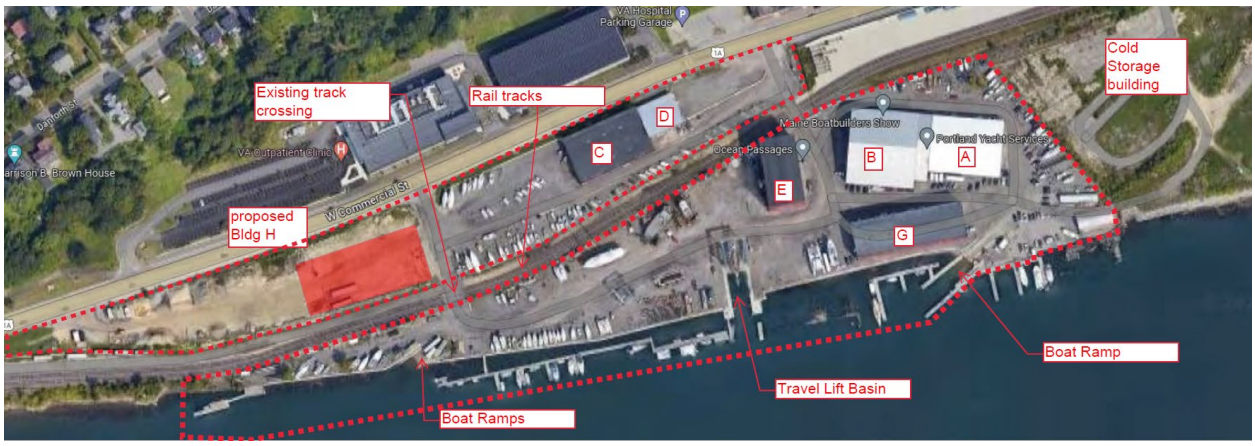

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- That detention will not be required to reduce the peak flow rate or meet the flooding standards. **A waiver of the flooding standards is again requested on the basis that similar waivers have been granted in the past.** The site is directly adjacent to the Tidal Conditions of the Fore River, thus precluding any need for the flooding standard.
- That the native soils/gravels will have infiltrative properties that meet the requirements of the Maine DEP BMP proposed. Note: **A waiver is being sought for infiltration testing**. Evidence from the previously developed area for earlier phases and the shorefront area for the Travel lift operations supports the proposition that the soils are highly infiltrative. The same approach will be continued around the perimeter of the Building H site locations. Building H roof runoff will be collected and discharged through an underground storm drain before discharge into the drainage line passing under the tracks and discharging to the river. The Maine DEP Chapter 500 Section 4 (C)(5)(f) pertaining to roof exceptions, stated that non-asphalt roofs of non-industrial facilities need to be treated for thermal impact and for channel protection only. As the proposed Building H roof satisfies the criteria, and the roof runoff will be collected and conveyed in a closed underground pipe system, thermal treatment will be provided since cooling is achieved when conveying runoff underground.

8.0 STORMWATER MANAGEMENT OBJECTIVES

The goal of the Stormwater Management Plan is to design, operate, and maintain the development to avoid downstream erosion or significant water quality impairment.

This goal will be achieved by:

- Designing the project to meet the Portland Stormwater Management Standards adopted 7/19/10 and General Stormwater Standards of MeDEP (revised October 2010).
- Designing water quality measures to provide long-term removal of non-point contaminants including the use of manmade pervious surfaces and runoff cooling by underground conveyance.
- Implementing a plan to control erosion, sedimentation, or fugitive dust emissions during construction. The site contains primarily granular soils thus minimizing erosion potential and fugitive dust will be handled by spraying water around the site during drier periods.
- Implementing operational processes to avoid toxic pollutants from boat yard activities, both organic chemicals and heavy metals, from entering ground and adjacent water bodies.
- Maintenance of the Stormwater Management System in accordance with the Stormwater O&M Manual (provided as a separate document) and MeDEP Brightwork Manual.

The plan has therefore been designed in accordance with the City of Portland Stormwater Rules.

9.0 STORMWATER MANAGEMENT QUALITY SUMMARY

Approach

To meet the General Standards, our office reviewed the list of options of MeDEP's accepted Best Management Practice (BMP) options to provide water quality treatment including grassed underdrained filter, bio-filter, proprietary devices, and infiltration trenches for the expanded New Yard site. Following this review and incorporating knowledge of the site and the goals of the client, it was realized that developing a method for providing stormwater quality treatment that utilizes the proposed crushed stone surface (desirable to applicant for boatyard use and related activities) and infiltrating the runoff into the underlying soils would be preferable both functionally and economically. According to the MaineDEP BMPs this is known as a "Manmade Pervious Surface" approach to stormwater quality treatment.

A pervious pavement consists of a permeable surface material and subbase materials that allow penetration of runoff into the underlying soils. The system must be designed to store and infiltrate the water quality volume (1.0" of impervious area and 0.4" pervious area) with the remainder (larger storm events) discharged through an 'over-flow' device. The effectiveness of the system depends heavily on long-term inspection and maintenance.

Following a review of the design criteria for a "Manmade Pervious Surface", it was determined that the selection of at least a 3" to 6" thick crushed stone surface across the entire 'prepared surface' area designated on the site plan is appropriate. This layer of stone will act as a reservoir for the 1" storm event. The material may be placed over a thicker (>24" thick layer) of heavier granular soils and geotextile fabric and infiltration into the existing underlying gravel will meet the requirements of this BMP. Runoff from the site is nearly non-existent as even during higher rainfalls exceeding 3", the installed surfaces have functioned to absorb and store rainfall. Proper management of parked vessels and adherence to the Brightwork manual will minimize the potential for petroleum and other contaminants from site activities, etc. to enter the stone areas.

Our office has laid out a plan which utilizes the "Manmade Pervious Surface" BMP to provide water quality treatment as described in Chapter 7.7 of the MeDEP Volume III BMPs Technical Design Manual meeting the minimum treatment standards as required by the General Standards. The project drawings provide limits and details of the manmade pervious surface proposed. This pervious surface is represented by the 'prepared surface for boatyard' on the site.

The basis of design of treatment method is as follows:

Compliance with BMP Design Criteria:

Traffic Volumes:

Traffic volumes will be low around the Building H areas as is the case around most of the site. Seasonal boat parking also limits the vehicular travel zones. Some heavy vehicles including tractor trailer trucks, and the Marine Travel Lift will maneuver across the crushed stone surface. However, much of the surface will be utilized for boat storage. The applicant proposes to manage the crushed stone surface by routinely raking and grading to minimize the buildup of fine particles that might impact the materials absorptive capacity. Removal and replacement of this gravel layer may be required over time.

Grading:

Grades across the crushed stone area will range from 1 - 2%, thus meeting the <5% slope recommendation.

Sediment Loading:
The crushed stone area is not expected to receive high volumes of sediments. Over time any buildup of fines that impact the stone surface absorption capacity will be removed and replaced. In the winter, calcium chloride may be placed to minimize icing.

Reservoir Course:

The reservoir course will consist of clean double washed 3/4" stone free of debris. The stone depth will be 3" to 6" typically.

Pretreatment Layer

A pretreatment layer will be achieved by providing a 12" -24" subbase gravel layer (like MDOT Type D) beneath the crushed stone.

Separation to Groundwater:

Based on the test pit data included in previous subsurface explorations, the groundwater table throughout the site is six to nine feet below existing grade thus there is ample separation from any underlying groundwater resources

Infiltration Testing:

The applicant is seeking a waiver from the infiltration testing requirement. The applicant has observed the existing site after heavy rain events and observed ponding for only a couple of hours. The existing site has a surface gravel/sand layer, and it is expected that the proposed stone surface will not negatively impact the infiltration properties below.

Flooding Standard:

Due to the direct discharge to the Fore River, **a waiver from the flooding standard is being requested**.

Storm events larger than the 3-inch storm may result in sheet flow to one of the following:

- The shorefront parcel will generate overland flow to the waterfront and the river.
- Roof runoff from Building H will be piped underground for direct discharge to the Fore River.
- High rainfall events may generate runoff on the street front parcel that may reach one or more catch basins in the rail ROW that bisects the site, and which also discharge directly to the Fore River.

10.0 CHAPTER 500 TREATMENT PERCENT COMPLIANCE

The proposed Phase VI Building H project creates 45,000 SF of improved surface area (roof) and 35,000 SF of boatyard surface. The pervious boat yard surface area will be installed around the building perimeter for a total disturbed area of about 1.83 acres.

The following summarizes overall conditions on the site:

Description	Area	Treatment
Total site area	17.77 acres or **774,061 SF**	
Total Roof area – Existing	107,000 SF	Runoff from roofs sheets onto

		boatyard surface for infiltration.
Roof Area proposed	45,000 SF	Closed interior roof drainage and underground conveyance for thermal treatment.
Total Roof area	**152,000 SF**	All roofs receive treatment and the runoff sheets onto Boatyard surface or will be piped.
Other Existing Impervious area – Ramps and pad area for Travel Lift	**15,445 SF**	
Total Roof and Concrete	**167,445 SF**	
Boatyard Surface – existing	516,840 SF	
Boatyard surface proposed	42,341 SF	Area around Bldg. H.
Total Boatyard surface	**559,181 SF**	
Undeveloped area	47,435 SF	Located at far west end of site and vegetated
Total Developed area	726,626 SF	
Total Developed area Treated	**711,181SF**	**97.8% treated**

11.0 BOATYARD ACTIVITY PLANNING

A priority associated with boatyard and marine related use is the proximity to the shorefront. Any pollutants that are generated on the site may eventually reach the water. As such, the applicant has continually implemented thoughtful planning and processes to avoid toxic pollutants including organic chemicals and heavy metals from spills.

Activities such as hull prep, sandblasting, painting, washing, engine repairs and maintenance are performed in accordance with the guidelines set forth in the Brightworks manual. In fact, Building H is expected to allow many maintenance activities to be conducted inside. Storage, handling, and disposal of waste material from these activities is carried out in accordance with the manual and the applicant utilizes local waste companies who specialize in this environment. A plan is in place to manage spills if they occur. This plan will identify potential spill sources, hazardous materials stored, prevention measures (including training, security, etc.), spill emergency procedures (including health and safety measures, notification information, spill containment, etc.), emergency phone numbers, location of spill containment and control materials and a drainage plan. The applicant is a current boatyard operator and is very familiar with the guidelines and requirements set forth in the Brightwork Manual. They have successfully complied with these requirements for many years, and they are confident that similar operations will be maintained at the current site.

12.0 EROSION CONTROL

An Erosion Control Narrative, Plan, and Details have been previously prepared for the project and are part of the project record. These materials continue to apply as they relate to the Phase VI construction activities. There is very little earthwork involved during the building construction except for foundation work and excavated granular material is stored onsite for reuse and non-granular material is generally deposited in yard areas and covered with boatyard surface material.

13.0 OPERATIONS AND MAINTENANCE

An Operations & Maintenance Manual has been previously prepared and is part of the project record. The requirements of this O&M Manual continue to apply to this Phase VI project.

14.0 PERMIT REQUIREMENTS

City of Portland review and permitting of the Stormwater Management Plan is required and will be completed with the review of the Site Plan Application submitted to the City of Portland Planning Authority.

STORMWATER MANAGEMENT REPORT
(GENERAL STANDARDS)

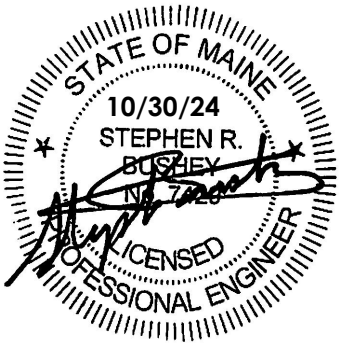
CANAL LANDING NEW YARD
PHASE VI – BUILDING H
100 WEST COMMERCIAL STREET
PORTLAND, ME

PREPARED FOR

New Yard, LLC
100 WEST COMMERCIAL STREET
PORTLAND, MAINE 04101
(207) 774-1067

PREPARED BY

GORRILL PALMER CONSULTING ENGINEERS
300 SOUTHBOROUGH DRIVE- SUITE 200
SOUTH PORTLAND, MAINE 04106
(207) 772-2515



October 2024

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Figures and Photographs (Previously provided in Phase III – Available upon request)

Figure 2 – USGS Location Map
Figure 3 – Tax Map
Figure 4 – Zoning Map
Figure 5 – Aerial Photograph
Figure 7 – FEMA Flood Map
Figure 8 – USDA SCS Soils Map
Figure 9 – GIS Sand and Gravel Aquifer Map
Figure 10 – Surficial Geology Map
Figure 11 – NWI Map

STORMWATER MANAGEMENT REPORT

1.0 INTRODUCTION

New Yard, LLC owns and operates the existing boat maintenance and repair yard within approximately 17.77 acres of land located prominently along the West Commercial Street waterfront. The project represents an ideal marine related use within the Waterfront Port Development Zone.

The project includes multiple buildings that have been constructed over multiple phases along with new shorefront uses including two boat ramps, docks, new or reconstructed piers and a travel lift basin. The applicant's current plan includes a new free-standing 45,000 SF Building H, located along the west end of the site's West Commercial Street frontage. This building location is within a yard area that has functioned for materials storage, boat and trailer parking, and seasonal snow storage in the past. As with the entire site, historically the site was a railyard for a century or more.

The Phase VI project includes very limited site development activities involving the building, limited earthwork and grading, utilities services into building H, and a limited amount of groundwork around the immediate building area. The building is within an unimproved graveled surface area that has been used for the operations of temporary vessel parking, maintenance operations and overall boatyard activities.

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The site discharges to the mouth of the Fore River where it meets the ocean. Due to these tidal conditions, **the applicant is requesting a waiver of the flooding standards as has been previously and consistently granted for earlier project phases**. As discussed below the site's current conditions are characterized by the substantial use of a pervious Boatyard Surface material over much of the site. The surface consists of clean crushed stone overlying a thick (>24" layer) of heavy granular fill and geotextile fabric material. The surface is ideal for the support of heavy travel lift equipment and the placement of vessels where jack standards and related supports are used to hold up larger boats that are not otherwise on a trailer.

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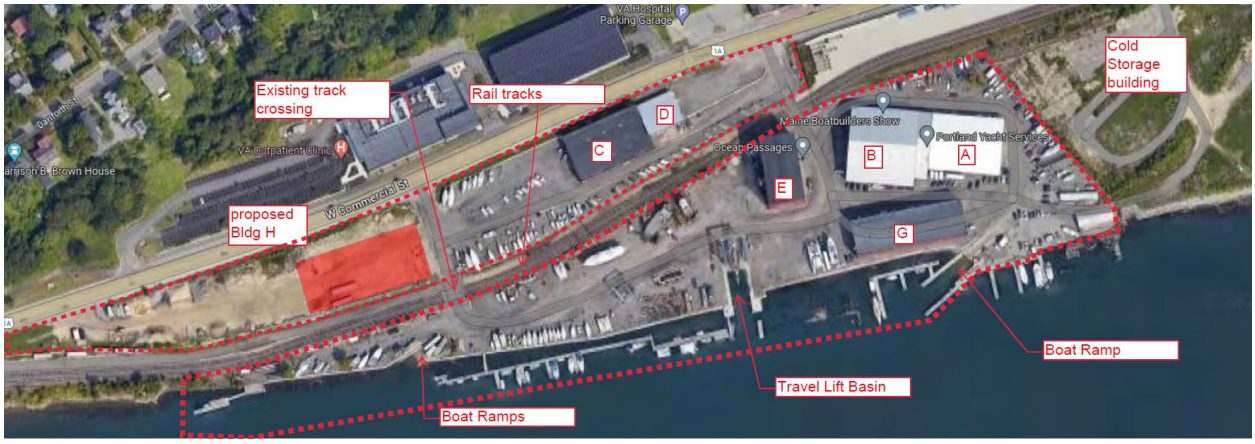

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- Designing the project to meet the Portland Stormwater Management Standards adopted 7/19/10 and General Stormwater Standards of MeDEP (revised October 2010).
- Designing water quality measures to provide long-term removal of non-point contaminants including the use of manmade pervious surfaces and runoff cooling by underground conveyance.
- Implementing a plan to control erosion, sedimentation, or fugitive dust emissions during construction. The site contains primarily granular soils thus minimizing erosion potential and fugitive dust will be handled by spraying water around the site during drier periods.
- Implementing operational processes to avoid toxic pollutants from boat yard activities, both organic chemicals and heavy metals, from entering ground and adjacent water bodies.
- Maintenance of the Stormwater Management System in accordance with the Stormwater O&M Manual (provided as a separate document) and MeDEP Brightwork Manual.

The plan has therefore been designed in accordance with the City of Portland Stormwater Rules.

9.0 STORMWATER MANAGEMENT QUALITY SUMMARY

Approach

To meet the General Standards, our office reviewed the list of options of MeDEP's accepted Best Management Practice (BMP) options to provide water quality treatment including grassed underdrained filter, bio-filter, proprietary devices, and infiltration trenches for the expanded New Yard site. Following this review and incorporating knowledge of the site and the goals of the client, it was realized that developing a method for providing stormwater quality treatment that utilizes the proposed crushed stone surface (desirable to applicant for boatyard use and related activities) and infiltrating the runoff into the underlying soils would be preferable both functionally and economically. According to the MaineDEP BMPs this is known as a "Manmade Pervious Surface" approach to stormwater quality treatment.

A pervious pavement consists of a permeable surface material and subbase materials that allow penetration of runoff into the underlying soils. The system must be designed to store and infiltrate the water quality volume (1.0" of impervious area and 0.4" pervious area) with the remainder (larger storm events) discharged through an 'over-flow' device. The effectiveness of the system depends heavily on long-term inspection and maintenance.

Following a review of the design criteria for a "Manmade Pervious Surface", it was determined that the selection of at least a 3" to 6" thick crushed stone surface across the entire 'prepared surface' area designated on the site plan is appropriate. This layer of stone will act as a reservoir for the 1" storm event. The material may be placed over a thicker (>24" thick layer) of heavier granular soils and geotextile fabric and infiltration into the existing underlying gravel will meet the requirements of this BMP. Runoff from the site is nearly non-existent as even during higher rainfalls exceeding 3", the installed surfaces have functioned to absorb and store rainfall. Proper management of parked vessels and adherence to the Brightwork manual will minimize the potential for petroleum and other contaminants from site activities, etc. to enter the stone areas.

Our office has laid out a plan which utilizes the "Manmade Pervious Surface" BMP to provide water quality treatment as described in Chapter 7.7 of the MeDEP Volume III BMPs Technical Design Manual meeting the minimum treatment standards as required by the General Standards. The project drawings provide limits and details of the manmade pervious surface proposed. This pervious surface is represented by the 'prepared surface for boatyard' on the site.

The basis of design of treatment method is as follows:

Compliance with BMP Design Criteria:

Traffic Volumes:

Traffic volumes will be low around the Building H areas as is the case around most of the site. Seasonal boat parking also limits the vehicular travel zones. Some heavy vehicles including tractor trailer trucks, and the Marine Travel Lift will maneuver across the crushed stone surface. However, much of the surface will be utilized for boat storage. The applicant proposes to manage the crushed stone surface by routinely raking and grading to minimize the buildup of fine particles that might impact the materials absorptive capacity. Removal and replacement of this gravel layer may be required over time.

Grading:

Grades across the crushed stone area will range from 1 - 2%, thus meeting the <5% slope recommendation.

Sediment Loading:
The crushed stone area is not expected to receive high volumes of sediments. Over time any buildup of fines that impact the stone surface absorption capacity will be removed and replaced. In the winter, calcium chloride may be placed to minimize icing.

Reservoir Course:

The reservoir course will consist of clean double washed 3/4" stone free of debris. The stone depth will be 3" to 6" typically.

Pretreatment Layer

A pretreatment layer will be achieved by providing a 12" -24" subbase gravel layer (like MDOT Type D) beneath the crushed stone.

Separation to Groundwater:

Based on the test pit data included in previous subsurface explorations, the groundwater table throughout the site is six to nine feet below existing grade thus there is ample separation from any underlying groundwater resources

Infiltration Testing:

The applicant is seeking a waiver from the infiltration testing requirement. The applicant has observed the existing site after heavy rain events and observed ponding for only a couple of hours. The existing site has a surface gravel/sand layer, and it is expected that the proposed stone surface will not negatively impact the infiltration properties below.

Flooding Standard:

Due to the direct discharge to the Fore River, **a waiver from the flooding standard is being requested**.

Storm events larger than the 3-inch storm may result in sheet flow to one of the following:

- The shorefront parcel will generate overland flow to the waterfront and the river.
- Roof runoff from Building H will be piped underground for direct discharge to the Fore River.
- High rainfall events may generate runoff on the street front parcel that may reach one or more catch basins in the rail ROW that bisects the site, and which also discharge directly to the Fore River.

10.0 CHAPTER 500 TREATMENT PERCENT COMPLIANCE

The proposed Phase VI Building H project creates 45,000 SF of improved surface area (roof) and 35,000 SF of boatyard surface. The pervious boat yard surface area will be installed around the building perimeter for a total disturbed area of about 1.83 acres.

The following summarizes overall conditions on the site:

Description	Area	Treatment
Total site area	17.77 acres or **774,061 SF**	
Total Roof area – Existing	107,000 SF	Runoff from roofs sheets onto

		boatyard surface for infiltration.
Roof Area proposed	45,000 SF	Closed interior roof drainage and underground conveyance for thermal treatment.
Total Roof area	**152,000 SF**	All roofs receive treatment and the runoff sheets onto Boatyard surface or will be piped.
Other Existing Impervious area – Ramps and pad area for Travel Lift	**15,445 SF**	
Total Roof and Concrete	**167,445 SF**	
Boatyard Surface – existing	516,840 SF	
Boatyard surface proposed	42,341 SF	Area around Bldg. H.
Total Boatyard surface	**559,181 SF**	
Undeveloped area	47,435 SF	Located at far west end of site and vegetated
Total Developed area	726,626 SF	
Total Developed area Treated	**711,181SF**	**97.8% treated**

11.0 BOATYARD ACTIVITY PLANNING

A priority associated with boatyard and marine related use is the proximity to the shorefront. Any pollutants that are generated on the site may eventually reach the water. As such, the applicant has continually implemented thoughtful planning and processes to avoid toxic pollutants including organic chemicals and heavy metals from spills.

Activities such as hull prep, sandblasting, painting, washing, engine repairs and maintenance are performed in accordance with the guidelines set forth in the Brightworks manual. In fact, Building H is expected to allow many maintenance activities to be conducted inside. Storage, handling, and disposal of waste material from these activities is carried out in accordance with the manual and the applicant utilizes local waste companies who specialize in this environment. A plan is in place to manage spills if they occur. This plan will identify potential spill sources, hazardous materials stored, prevention measures (including training, security, etc.), spill emergency procedures (including health and safety measures, notification information, spill containment, etc.), emergency phone numbers, location of spill containment and control materials and a drainage plan. The applicant is a current boatyard operator and is very familiar with the guidelines and requirements set forth in the Brightwork Manual. They have successfully complied with these requirements for many years, and they are confident that similar operations will be maintained at the current site.

12.0 EROSION CONTROL

An Erosion Control Narrative, Plan, and Details have been previously prepared for the project and are part of the project record. These materials continue to apply as they relate to the Phase VI construction activities. There is very little earthwork involved during the building construction except for foundation work and excavated granular material is stored onsite for reuse and non-granular material is generally deposited in yard areas and covered with boatyard surface material.

13.0 OPERATIONS AND MAINTENANCE

An Operations & Maintenance Manual has been previously prepared and is part of the project record. The requirements of this O&M Manual continue to apply to this Phase VI project.

14.0 PERMIT REQUIREMENTS

City of Portland review and permitting of the Stormwater Management Plan is required and will be completed with the review of the Site Plan Application submitted to the City of Portland Planning Authority.

Department of Public Works
Mike Murray
Director

City of portland

Date: June 5, 2024
Re: Wastewater Capacity Authorization
Address: 100 West Commercial Street – Building H & I
Applicant: New Yard, LLC
Planner: Ameriz Gamez

Estimate of Anticipated Wastewater Flows				
Development	**Unit Size**	**Number of Units**	**Gallons per Day per Unit**	**Total Gallons per Day**
Existing Flow to Remain				
Vacant				
Proposed flow				
Employees at place of employment with no showers	# Employees	35	12 GPD/Employee	420
Net Change				**+ 420**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

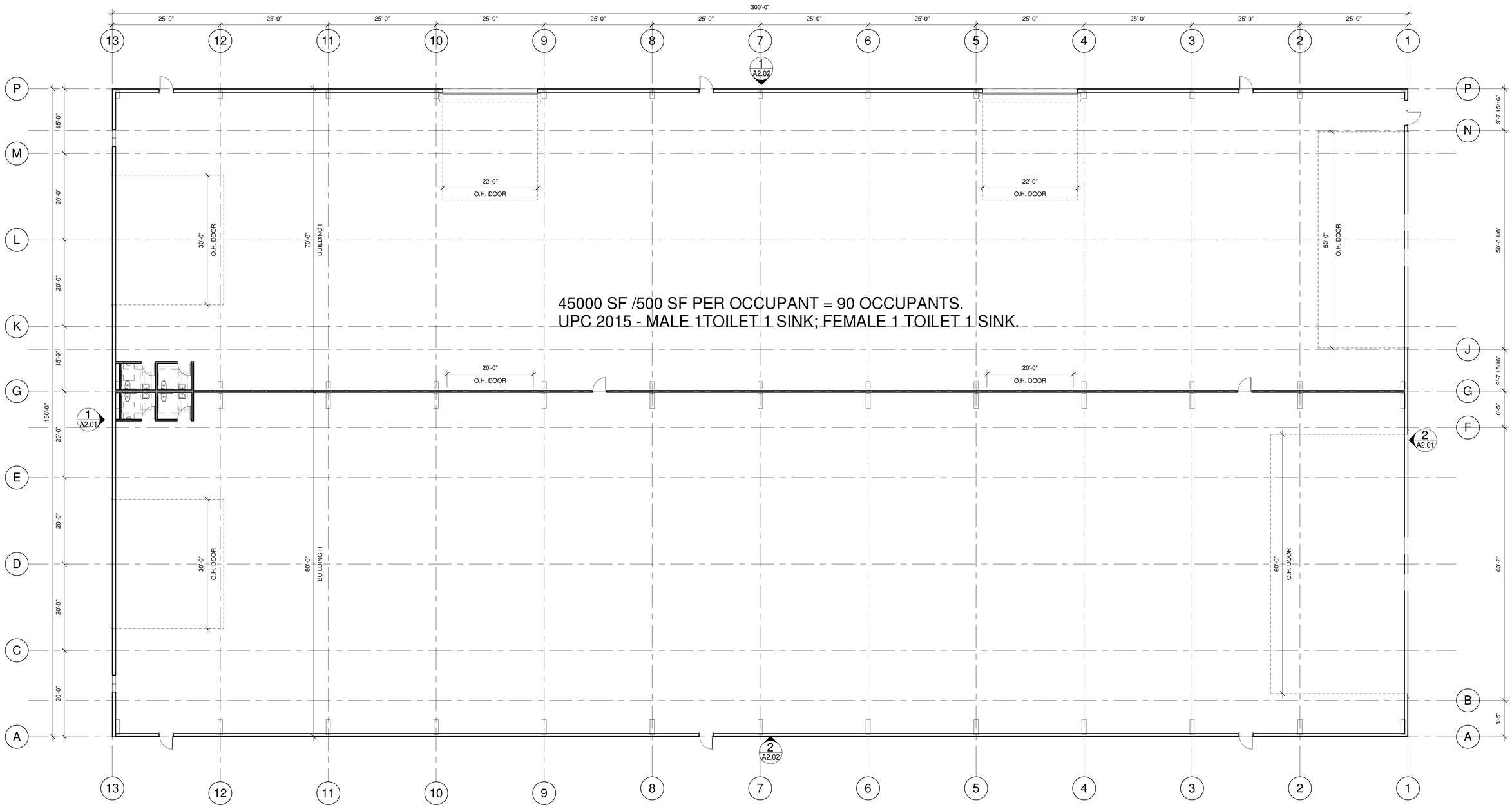
Comments:
The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

If the City can be of further assistance, please contact me at 207-874-8840 or brad@portlandmaine.gov

Sincerely,

Bradley A. Roland, P.E.,
Senior Project Engineer

WEST COMMERCIAL STREET



1 1ST FLOOR
3/32" = 1'-0"

Prepared For:

Consultant:

Architect:
ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
207.772.6022 archetype@archetypepa.com

Project:
PYS BUILDING H
WEST COMMERCIAL STREET
PORTLAND, MAINE

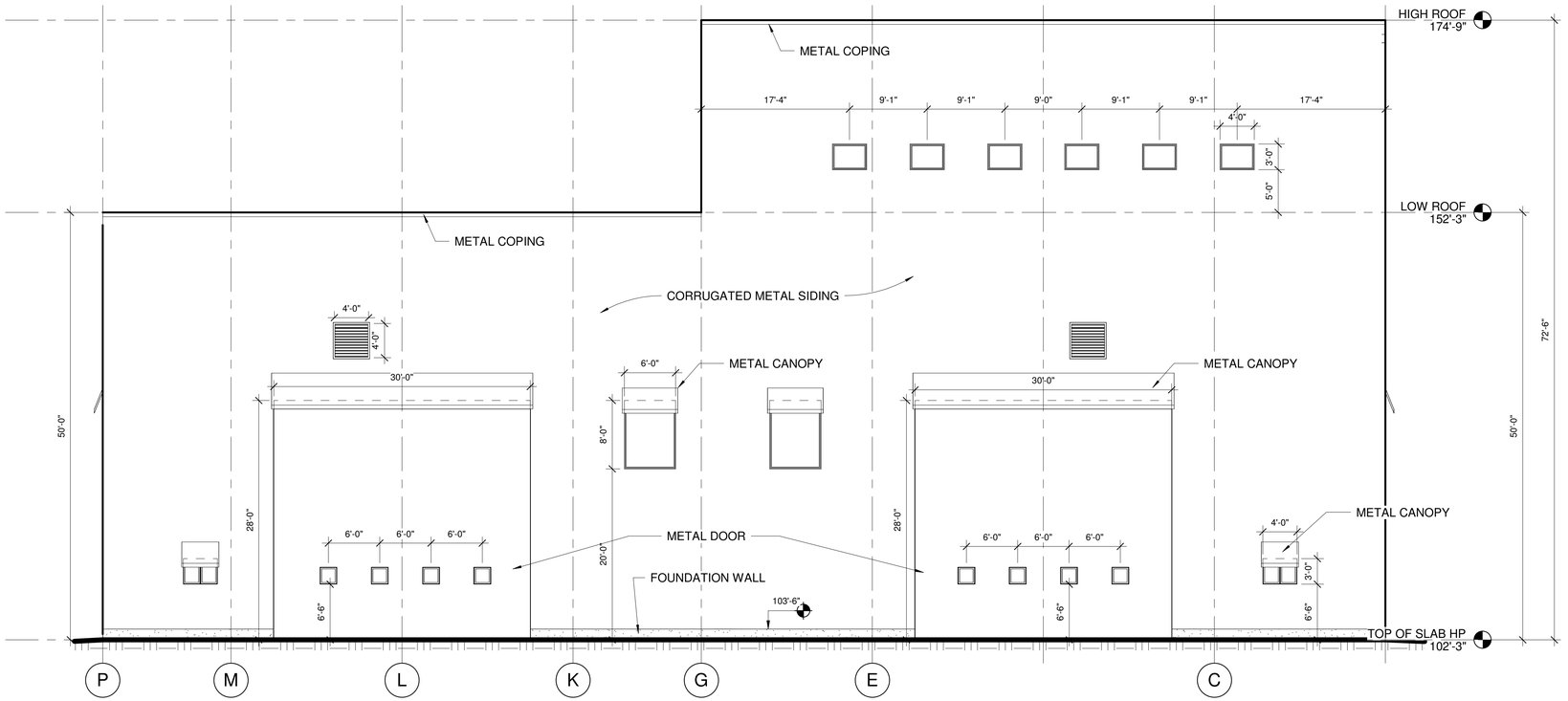
Revisions:

Scale: 3/32" = 1'-0"

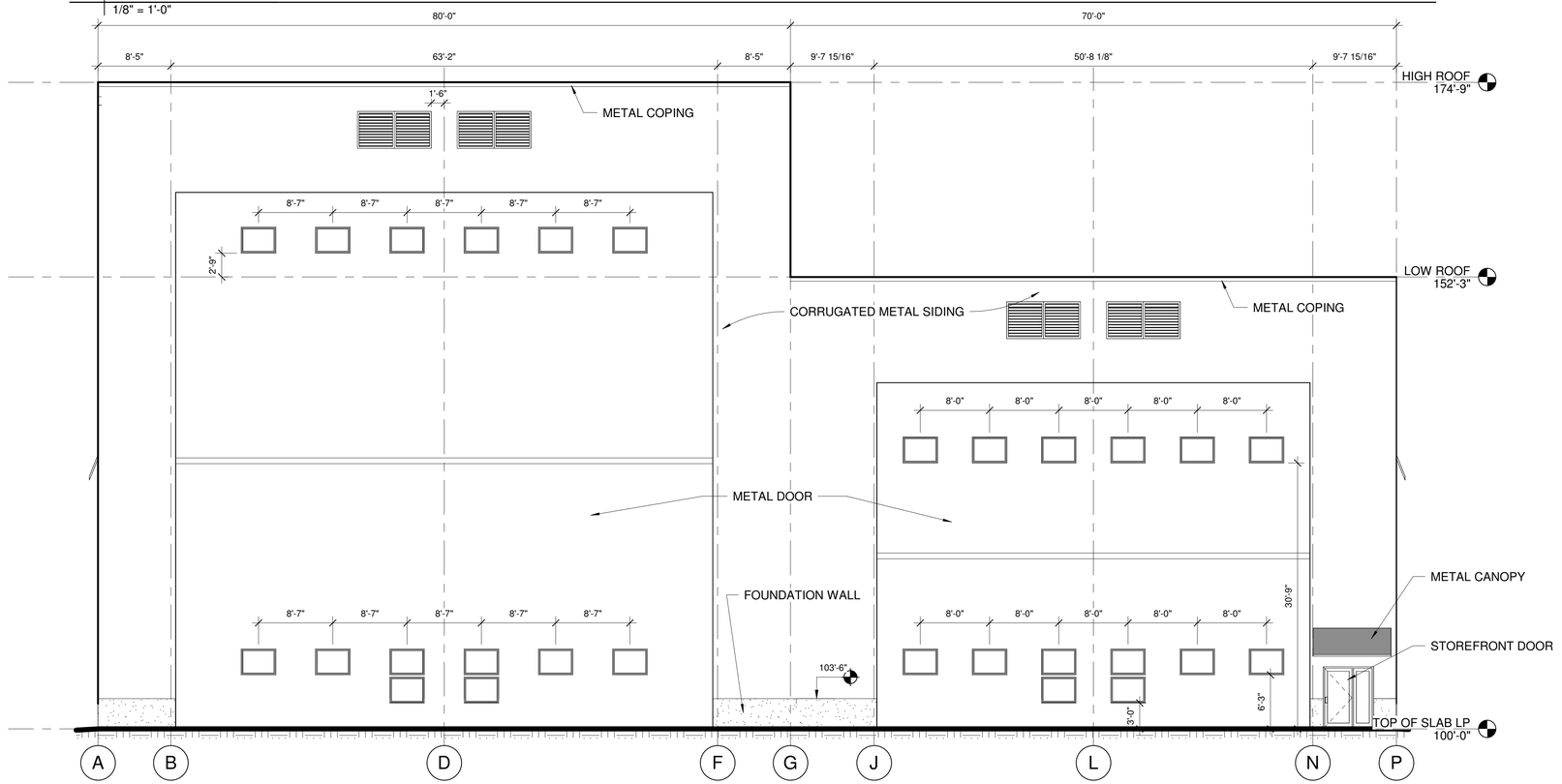
Date: 09-10-2024

First Floor

A1.01



1 | WEST BUILDING ELEVATION
1/8" = 1'-0"



2 | EAST BUILDING ELEVATION
1/8" = 1'-0"

Prepared For:

Address
City, State

Consultant:

Architect:
ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
207.772.6022 archetype@archetypepa.com

Project:
PYS BUILDING H
WEST COMMERCIAL STREET
PORTLAND, MAINE

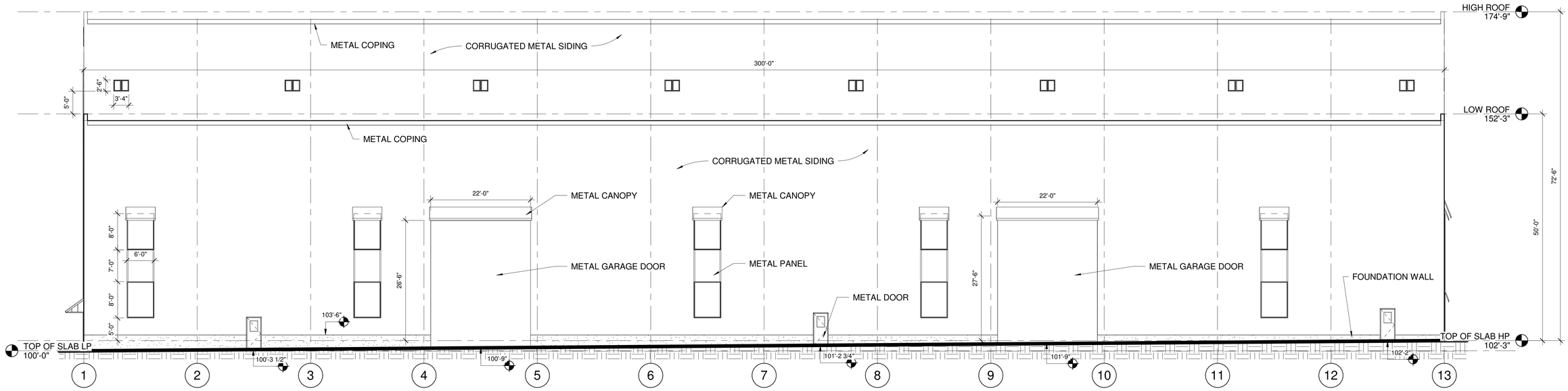
Revisions:

Scale:
1/8" = 1'-0"

Date:
09-11-2024

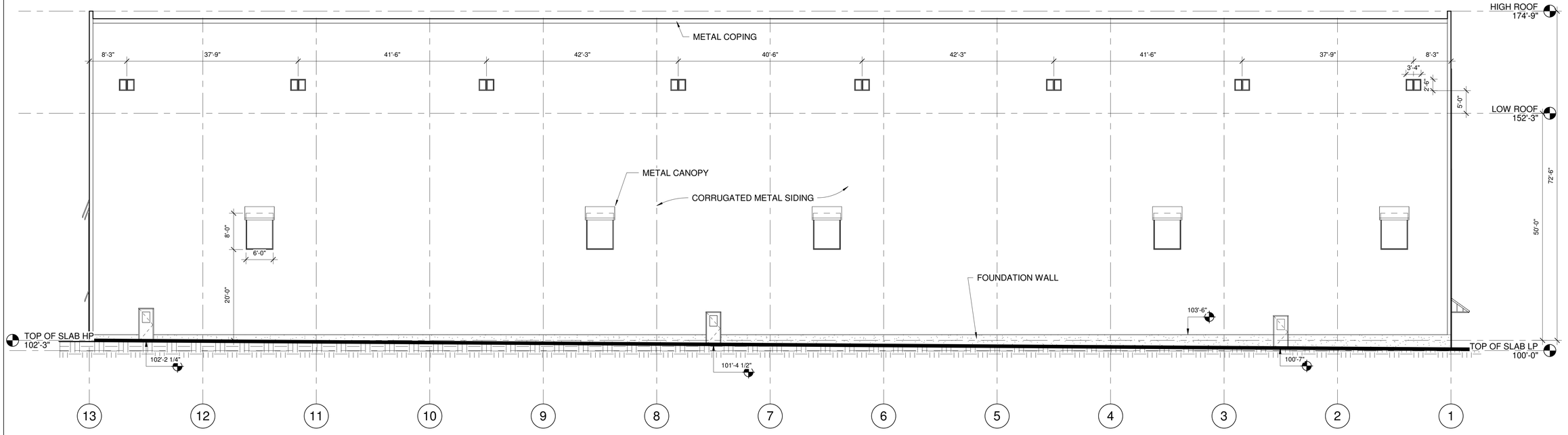
Building Elevations

A2.01



1 NORTH BUILDING ELEVATION

3/32" = 1'-0"



2 SOUTH BUILDING ELEVATION

3/32" = 1'-0"

Prepared For:

Address
City, State

Consultant:

Architect:
ARCHETYPE ARCHITECTS
48 Union Wharf Portland, Maine 04101
207.772.6022 archetype@archetypepa.com

Project:
PYS BUILDING H
WEST COMMERCIAL STREET
PORTLAND, MAINE

Revisions:

Scale: 3/32" = 1'-0"

Date: 09-11-2024

Building Elevations

A2.02





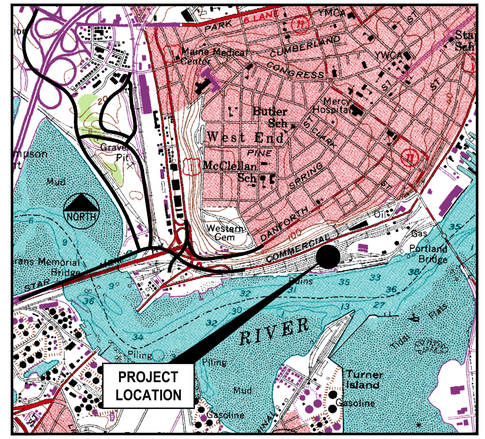
PROJECT PARCEL SITE			
ZONING: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)			
PORTLAND TAX ASSESSOR'S MAP AND LOT NUMBERS			
MAP	BLOCK	LOTS	OWNER
59	A	1, 2, 5, 6, 7,8, 9, 10, 11	MAINE DEPARTMENT OF TRANSPORTATION
59	A	3, 4	NEW YARD LLC
60	F	1,2,3, 4	NEW YARD LLC
71	F	2,4,5,6	NEW YARD LLC

OWNER / APPLICANT:
NEW YARD, LLC
100 WEST COMMERCIAL STREET
PORTLAND, ME 04102
ATTN: PHINEAS SPRAGUE, JR / JASON CURTIS - DIRECTOR OF OPERATIONS
207.774.1067

C.C.R.D. BOOK 35107, PAGE 310

REFERENCE PLANS:
1. STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP "LAND ACQUISITIONS" BY OWEN HASKELL, INC. DATED APRIL 2014. D.O.T. FILE No. 3-595.
2. "BOUNDARY AND TOPOGRAPHIC SURVEY - WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB & THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014. D.O.T. FILE NO. 3-595.
3. "LAND ON WEST COMMERCIAL STREET, PORTLAND, MAINE MAINE CENTRAL RAILROAD, CO. TO CANAL LANDING LLC" BY OWEN HASKELL, INC. DATED APRIL 29,2015.

SITE DEVELOPMENT PLANS
FOR
CANAL LANDING
NEW YARD EXPANSION - PHASE VII
BUILDINGS H & I - BOAT MAINTENANCE & REPAIR BUILDINGS
PORTLAND, MAINE
PERMIT DOCUMENTS
APRIL 2024



LOCATION MAP
N.T.S.

INDEX

C-1.0 COVER SHEET
C-1.1 GENERAL NOTES & LEGEND
C-1.2 BOUNDARY SURVEY
C-2.0 EXISTING CONDITIONS & REMOVALS PLAN
C-3.0 BUILDINGS H & I SITE LAYOUT & UTILITY PLAN
C-4.0 CIRCULATION PLAN
C-5.0 OVERALL DEVELOPMENT PLAN
C-6.0 GRADING, DRAINAGE & EROSION CONTROL PLAN
C-6.1 ROOF HEIGHT PLAN
C-7.0 SITE & MISCELLANEOUS DETAILS
C-7.1 WATER SYSTEM DETAILS
C-7.2 STORM DRAIN & UTILITY DETAILS
C-7.3 EROSION AND SEDIMENT CONTROL DETAILS
C-7.4 EROSION AND SEDIMENT CONTROL NARRATIVE
C-8.0 SITE CROSS SECTIONS
C-8.1 SITE CROSS SECTIONS
C-9.0 RAIL CROSSING EXPANSION PLAN & DETAILS

UTILITIES

WATER:
PORTLAND WATER DISTRICT
225 DOUGLASS STREET
P.O. BOX 3553
PORTLAND, MAINE 04104
207.761.8310
CONTACT: ROBERT BARTELS
rbartels@pwd.org

SEWER:
CITY OF PORTLAND
PUBLIC SERVICES DIVISION
212 CANCO ROAD
PORTLAND, MAINE 04103
207.874.8840
CONTACT: KEITH GRAY / BRAD ROLAND

ELECTRIC:
CENTRAL MAINE POWER
162 CANCO ROAD
PORTLAND, MAINE 04103
207.842.2367
CONTACT: PAUL DUPERRE / JAMIE COUGH

TELEPHONE:
CONSOLIDATED COMMUNICATIONS
5 DAVIS HILL FARM ROAD
PORTLAND, MAINE 04103
207.797.1866
CONTACT: PATRICK MORRISON

NATURAL GAS:
NORTHERN UTILITIES / UNITIL
376 RIVERSIDE INDUSTRIAL PARKWAY
PORTLAND, MAINE 04103
207.797.8002, EXT. 6220
CONTACT: SCOTT CARPENTER
207.650.6716

CABLE TV:
TIME WARNER CABLE / SPECTRUM
115 JOHNSON ROAD
PORTLAND, MAINE 04102
207.253.2324
CONTACT: MARK PELLETIER

DIG SAFE:
CALL BEFORE YOU DIG
DIAL 811 (AT LEAST 72 HRS IN ADVANCE)

PERMITS / APPROVALS

LOCAL	GOVERNING BODY	STATUS
MAJOR SITE PLAN APPLICATION	CITY OF PORTLAND PLANNING AUTHORITY CITY HALL 389 CONGRESS STREET PORTLAND, MAINE 04101 207.874.8719 CONTACT: TBD	SUBMISSION MADE: APRIL 30, 2024
BUILDING AND DEMOLITION PERMITS	CITY OF PORTLAND CODE ENFORCEMENT OFFICE CITY HALL 389 CONGRESS STREET PORTLAND, MAINE 04101 207.874.8703 CONTACT: TBD	TO BE FILED PRIOR TO CONSTRUCTION BY CONTRACTOR
FLOOD HAZARD DEVELOPMENT PERMIT	CITY OF PORTLAND ZONING DEPARTMENT CITY HALL 389 CONGRESS STREET PORTLAND, MAINE 04101 207.874.8703 ATTN: ANN MACHADO	TO BE FILED AS PART OF BUILDING PERMIT SUBMISSION
STREET OPENING PERMIT	CITY OF PORTLAND PUBLIC SERVICES DIVISION 212 CANCO ROAD PORTLAND, MAINE 04103 207.874.8801	TO BE FILED PRIOR TO CONSTRUCTION BY CONTRACTOR
UNDUE HARDSHIP VARIANCE	CITY OF PORTLAND ZONING BOARD OF APPEALS CITY HALL - 389 CONGRESS STREET PORTLAND, MAINE 04101 207.874.8703 ATTN: ANN MACHADO	VARIANCE GRANTED SEPTEMBER 11, 2023 TO REDUCE THE 100 FOOT SETBACK FROM WEST COMMERCIAL ST. THAT RESTRICTS THE HEIGHT OF THE BLDG. TO 50 FEET, TO 91 FEET IN ORDER FOR PART OF THE BLDG. TO BE 72'-6" HIGH (RECORDED SEPTEMBER 15, 2023 IN C.C.R.D. BOOK 40362, PAGE 151)

CONDITIONS OF APPROVAL

STANDARD CONDITIONS OF APPROVAL

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.Third Party Inspections For all sites with one acre or greater of disturbance, the applicant shall retain the services of a third-party inspector for the duration of construction until final site stabilization is in place.The inspection is required in order to ensure that all construction and stabilization activities comply with the approved drawings and specifications; that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations; and that any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan is communicated to the City of Portland for additional review and approval.

9.The inspector will submit weekly written reports to the Stormwater Coordinator(s) in the Water Resources Division of Public Works. Reports must include: project ID, project address, the date(s) and time(s) of inspection(s), site photographs of areas under construction, and the date(s) and approximate duration(s) of any rainfall events. The report will identify and describe any erosion problems or discharge of pollutants and what actions will be taken to address these issues and repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.

10.Defect Guarantee A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

11.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.

12.Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure inthe subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

13.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, visithttps: //www.portlandmaine.gov/2409/Impact-Fees

CONSULTANT LIST

CIVIL ENGINEER:
Gorrill Palmer
300 SOUTHBOROUGH DRIVE, SUITE 200
SOUTH PORTLAND, MAINE 04106
207.772.2515
ATTN: STEVE BUSHEY
sbushey@gorrillpalmer.com

SURVEYOR:
Owen Haskell, Inc
390 U.S. ROUTE 1, UNIT 10
FALMOUTH, ME 04105
207.774.0424
ATTN: RANDY LOUBIER, P.L.S.
www.owenhaskell.com

GEOTECHNICAL:
S.W. Cole Engineering, Inc
286 PORTLAND ROAD
GRAY, ME 04039
207.657.2866
ATTN: TIM BOYCE, P.E.
www.swcole.com

CONTRACTOR:
Keeley Construction
1 LINCOLN STREET
SOUTH PORTLAND, ME 04106
207.885.0035
ATTN: JIM KEELEY
JIM@KEELEYCRANE.COM

ALL PERMITS ARE ANTICIPATED TO HAVE CONDITIONS ATTENDANT WITH THEIR APPROVAL. THE CONTRACTOR SHALL REVIEW ALL PERMITS AND THE CONDITIONS ATTENDANT WITH APPROVALS PRIOR TO THE START OF THE WORK. UNLESS OTHERWISE STIPULATED BY THE CONTRACT DOCUMENTS, THE CONTRACTOR IS REQUIRED TO COMPLY AND FULFILL ALL CONDITIONS OF APPROVAL.

I HEREBY ACKNOWLEDGE THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MAINE AND THAT I AM COMPETENT TO PREPARE THIS DOCUMENT.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
09.11.24
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
5	2024.09.11	REVISED PER CITY STAFF REVIEW
4	2024.08.26	REVISED RR CROSSING DETAILS – ADDED ROOF HT PLAN
3	2024.08.09	REVISED WATER SERVICES PER PWD COMMENTS
2	2024.07.18	ADDED RAIL CROSSING EXPANSION DETAILS
1	2024.04.30	MAJOR SITE PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2023
Checked: SRB	Scale: AS NOTED	Job No.: 3561.05
File Name: 356105-H-COVER.dwg		

This plan shall not be modified without written permission from Gorrill Palmer. Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to Gorrill Palmer.

GORRILL PALMER
An LJB Engineering Company
Gorrill Palmer, an LJB Engineering Company
GorrillPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name:	COVER SHEET
Project:	CANAL LANDING PHASE VII - BUILDINGS H & I West Commercial Street, Portland, Maine
Client:	NEW YARD LLC 100 West Commercial Street, Portland, Maine 04102
Drawing No.	C-1.0

U:\3561.05_Canal Landing Building H\Z - CAD\DWG\356105-H-COVER.dwg 9/11/2024 2:05 PM

GENERAL NOTES

1. IN ADDITION TO THESE PLANS AND NOTES, THE CONTRACTOR SHALL REFER TO THE PROJECT MANUAL OR MOST CURRENT MAINE DEPARTMENT OF TRANSPORTATION (MAINE DOT) SPECIFICATIONS FOR CONSTRUCTION SPECIFICATIONS AND BIDDING PROCEDURES.

2. THIS PROJECT WILL BE SUBJECT TO THE TERMS AND CONDITIONS OF ALL PERMITS ISSUED BY LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.

3. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL & FOUNDATION PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCE, PAVING, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS. ENTRANCES IN MOST LOCATIONS REQUIRE STRUCTURAL SLABS. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR INFORMATION ON THE STRUCTURAL SLAB ENTRANCES.

4. ALL REQUIRED AND NECESSARY INSPECTIONS AND OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSIONS AND THE FINAL SERVICE CONNECTIONS.

5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, AT ITS SOLE COST.

6. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE APPLICANT AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER, THEIR REPRESENTATIVES, OR THE CITY, AT NO ADDITIONAL COST TO THE OWNER.

7. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.

8. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE PROJECT SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SHALL APPLY AT NO EXTRA COST TO THE OWNER.

9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RECORD DRAWINGS THROUGHOUT THE PROJECT AND PROVIDING THE OWNER WITH A SET OF ELECTRONIC FINAL RECORD DRAWINGS WHEN THE PROJECT IS COMPLETE.

10. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES INCLUDING THE MAINE DOT IMT RAIL TRACKS & HEAVY HAUL ROAD AND EXISTING PORTLAND YACHT SERVICES FACILITIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN SAFE VEHICLE AND PEDESTRIAN ACCESS THROUGH OUT THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACT OR CHANGES TO SITE ACCESS CONDITIONS.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE SITE PLAN REVIEW PERMIT FROM THE CITY OF PORTLAND WHICH WILL BE MADE A PART OF THE CONTRACT BID DOCUMENTS. THE CONSTRUCTION WILL BE GOVERNED BY THE ZONING ORDINANCES WHICH ARE AVAILABLE FOR VIEWING AT THE OFFICE OF THE ENGINEER OR THE MUNICIPAL OFFICE.

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.

SITE LAYOUT NOTES

1. BITUMINOUS CONCRETE CURB, SLIPFORM CONCRETE CURB AND GRANITE CURB SHALL MEET THE REQUIREMENTS OF MDOT 702.001, 703.07 AND 609.04.

2. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB OR THE FACE OF THE BUILDING.

3. EXCEPT WHERE INDICATED OTHERWISE, THE PAVEMENT IS TO BE HEAVY DUTY PAVEMENT.

4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & STANDARDS OF THE MAINE DEPARTMENT OF TRANSPORTATION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITIONS AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.

GRADING & DRAINAGE NOTES:

1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N = 0.012 OR LESS.

2. AN "AS-BUILT" CERTIFICATION AND PLANS OF THE STORMWATER DRAINAGE SYSTEM IS REQUIRED PRIOR TO THE OWNER ACCEPTING ANY BUILDINGS AND PROPERTY. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ANY DEVIATION FROM THE PLANS MAY DELAY THE ACCEPTANCE OF THE PROJECT, WITH CONTRACTOR RESPONSIBLE FOR ANY ASSOCIATED COSTS.

3. A DETAILED O&M MANUAL FOR STORMWATER MANAGEMENT SYSTEMS IS (WILL BE) FILED WITH THE CITY OF PORTLAND DURING THE PERMIT REVIEW PROCESS. A SPECIFIC MANUAL HAS BEEN PREPARED FOR O&M OF THE DRAINAGE SYSTEM.

4. SEE EXISTING CONDITIONS FOR BENCHMARK INFORMATION.

5. SEE GRADING, DRAINAGE AND EROSION/SEDIMENT CONTROL FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.

6. ALL DISTURBED AREAS NOT TO BE PAVED, GRAVELED, SODDED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.

7. COMPACTION REQUIREMENTS:

LOCATION	MINIMUM COMPACTION*
SUBBASE AND BASE GRAVEL BELOW PAVED OR CONCRETE AREAS	95%
SUBGRADE FILL BELOW PAVED AREAS	90%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%
STRUCTURAL FILL WITHIN PROPOSED BUILDING AREA	95%
SELECT FILL ADJACENT BUILDING FOUNDATIONS, EXTERIOR FOUNDATIONS AND WITHIN 8 INCHES OF THE SLAB-ON-GRADE	95%

*ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM-D-1557.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

9. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND EXIT RAMPS ADJACENT TO THE BUILDING AND ALONG NEW CURBED AREAS.

10. PROVIDE STABILIZATION OR SEPARATION GEOTEXTILE FABRIC OVER UNSTABLE SOILS AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND IN ACCORDANCE WITH THE FINAL GEOTECHNICAL RECOMMENDATIONS.

11. NATIVE SOILS RANGE FROM URBAN FILL TO GRANULAR TO CLAYEY AND SILTY. CARE MUST BE EXERCISED TO LIMIT DISTURBANCE OF THE BEARING SOILS. ANY CLAYEY OR SILTY SOILS SHOULD NOT BE PROOF-ROLLED. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHOULD BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO EXTRA EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

LOCAL APPROVALS, WAIVERS AND VARIANCES

THE CONSTRUCTION PLANS ARE TO BE SUBMITTED TO THE CITY OF PORTLAND FOR THEIR REVIEW, APPROVAL AND RECORDS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

UTILITY NOTES

1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED AND CONSTRUCTED BY THE SITE CONTRACTOR TO WITHIN 5 FEET OF THE BUILDINGS, AT A LOCATION COORDINATED WITH THE MEP CONTRACTOR(S) AND THE BUILDING PLANS. SITE WORK WITHIN 5 FEET OF UNDERSLAB UTILITIES SHALL CONSIST OF TRENCHING AND BACKFILLING. ACTUAL UTILITY INSTALLATION SHALL BE BY THE MEP CONTRACTOR. ALL REQUIRED CONNECTION FEES SHALL BE PAID BY THE GENERAL CONTRACTOR.

2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF AND/OR RELOCATION OF OVERHEAD AND UNDERGROUND TELEPHONE WITH CONSOLIDATED COMMUNICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUITS, PULL WIRES, TRENCHING AND BACKFILLING NECESSARY TO COMPLETE THE WORK.

3. ALL SANITARY SEWER WORK SHALL MEET THE STANDARDS OF THE MAINE STATE PLUMBING CODE AND CITY OF PORTLAND PUBLIC SERVICES DIVISION.

4. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRIC SERVICE WITH CENTRAL MAINE POWER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, CONDUIT AND BACKFILLING ASSOCIATED WITH UNDERGROUND POWER, COMMUNICATIONS AND CABLE.

5. COORDINATE ALL OTHER UTILITY WORK WITH THE APPROPRIATE UTILITY COMPANY. ALL UTILITY WORK SHALL CONFORM TO THE STANDARDS OF THE UTILITY COMPANY AND PROJECT SPECIFICATIONS, WHICHEVER IS MORE STRINGENT, AT NO EXTRA EXPENSE TO THE OWNER.

6. THE LOCATIONS OF THE NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE SERVING UTILITY COMPANY, PROJECT ARCHITECTS AND MEP DESIGNERS.

7. UNDERGROUND ELECTRICAL, CONDUIT MATERIAL AND INSTALLATION SHALL CONFORM TO CENTRAL MAINE POWER STANDARDS AND PROJECT SPECIFICATIONS, WHICH EVER IS MORE STRINGENT.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OR WORK TO FINISH GRADE.

9. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.

10. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.

11. 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.

12. A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18 INCH OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.

13. THE CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION AND PROVIDE TEMPORARY SERVICES AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO THE JOB SITE. TEMPORARY SERVICES SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. COORDINATE ALL TEMPORARY SERVICES WITH UTILITY COMPANY, OWNER AND AFFECTED BUSINESSES.

EROSION CONTROL NOTES:

1. PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES, CLEARING AND GRADING LIMITS SHALL BE STAKED BY THE CONTRACTOR BASED ON THE LIMITS OF GRADING SHOWN ON THE DRAWINGS AND ACCEPTED BY THE OWNER'S REPRESENTATIVE IN THE FIELD. AFTER THE CLEARING AND GRADING LIMITS HAVE BEEN ACCEPTED, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES, SEDIMENT BARRIERS AND THE CONSTRUCTION ENTRANCES ASSOCIATED WITH THE PROJECT.

2. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCHED AS SOON AS POSSIBLE. TEMPORARY/PERMANENT SEED MIXTURES SHALL CONFORM TO THE SEEDING PLAN CONTAINED IN THE EROSION CONTROL PROJECT PREPARED FOR THIS PROJECT.

3. PRIOR TO PAVING OR GRAVEL PLACEMENT, THE CONTRACTOR SHALL REMOVE SILT FROM ALL STORM LINES AND APPURTANCES.

4. ALL STORM DRAIN INLETS AND OUTLETS NOT IN PAVED AREAS ARE TO RECEIVE RIPRAP PROTECTION APRONS DURING CONSTRUCTION.

5. SILT BARIRIERS SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL NOTES SHOWN ON THE EROSION CONTROL DETAIL SHEET.

6. THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION ENTRANCES AS IT BECOMES SATURATED WITH MUD TO ENSURE THAT IT FUNCTIONS TO CAPTURE MUD FROM THE TIRES OF CONSTRUCTION VEHICLES DURING CONSTRUCTION. THE PURPOSE OF THE CONSTRUCTION ENTRANCE IS TO KEEP ADJACENT STREETS CLEAR OF DIRT AND MUD. SWEEPING OF THE ROADWAYS SHALL BE PERFORMED BY THE CONTRACTOR ON AN AS NEEDED BASIS, BUT AT A MINIMUM ONCE A WEEK.

7. SILT REMOVED FROM AROUND INLETS AND BEHIND THE SILT FENCES SHALL BE PLACED ON A TOPSOIL STOCKPILE AND MIXED INTO TOPSOIL FOR USE IN LANDSCAPING OPERATIONS.

8. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE WHICH CAUSE THE LEAST PRACTICAL UNPROTECTED DENUDED AREAS ON THE SITE DURING CONSTRUCTION.

9. THE CONTRACTOR IS CAUTIONED THAT FAILURE TO COMPLY WITH THE SEQUENCE OF CONSTRUCTION, EROSION/SEDIMENT CONTROL PLAN, AND OTHER PERMIT REQUIREMENTS MAY RESULT IN MONETARY PENALTIES AS ENFORCED BY THE MEDEP OR LOCAL AGENCIES. THE CONTRACTOR SHALL BE ASSESSED ALL SUCH PENALTIES AT NO COST TO THE OWNER OR PERMITTEE.

10. A FULL EROSION/SEDIMENTATION CONTROL PLAN ACCOMPANIES THIS DRAWING SET AND IS ALSO CONTAINED IN THE DIV 312513 SPECIFICATIONS.

11. PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS AS SHOWN AND MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.

12. INSPECT EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH RAIN STORM OF 0.25 INCHES OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE FILTER EFFICIENCY. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 OF THE STRUCTURE HEIGHT.

13. INSTALL CURLEX EROSION CONTROL MAT OR EQUAL ON ALL SLOPES STEEPER THAN 4:1. TURF REINFORCEMENT (NORTH AMERICAN GREEN OR EQUAL) SHALL BE USED ON SLOPES STEEPER THAN 3:1 IF NOT CALLED OUT FOR RIPRAP STABILIZATION.

14. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES, CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, 2014".

LEGEND

EXISTING

- IRON PIPE OR ROD FND
- MONUMENT FOUND
- GAS VALVE
- WATER VALVE
- HYDRANT
- UTILITY POLE
- LIGHT POLE
- COMMUNICATION MANHOLE
- DRAINAGE MANHOLE
- ELECTRIC MANHOLE
- SEWER MANHOLE
- CATCH BASIN
- SIGN
- FENCE
- EDGE OF PAVEMENT
- CURB
- OHW — OVERHEAD WIRES
- UGE — UNDERGROUND ELECTRIC
- T — TELEPHONE
- W — WATER LINE
- G — GAS LINE
- SS — SANITARY SEWER
- SD — STORM DRAIN
- 15 — 1' CONTOUR
- MONITORING WELL
- × 15.23 — SPOT ELEVATION
- TREE
- TREE LINE OR LIMIT OF CLEARING
- BUILDING
- RAIL TRACKS
- RIPRAP
- STONE BASE AT RAILROAD CROSSING
- TIMBERS AT RAILROAD CROSSING
- BOATYARD SURFACE
- RETAINING WALL

PROPOSED

- BARRIER FREE SYMBOL
- SIGN
- SIGN LABEL
- GUIDERAIL - METAL
- GUIDERAIL - TIMBER
- FENCE - CHAINLINK
- FENCE - WOOD
- BUILDING / BUILDING ACCESS
- RETAINING WALL
- PEDESTRIAN CROSSWALK
- BOLLARD
- VERTICAL GRANITE CURB
- SLOPED GRANITE CURB
- CB — CATCH BASIN
- 22 — CONTOUR LABEL
- DMH — DRAIN MANHOLE
- RIPRAP INLET / OUTLET APRON
- 1 2 2:1 — SLOPE DESIGNATION
- 18.73 — SPOT GRADE
- 28.58 TW / 16.20 BW — SPOT GRADE AT RETAINING WALL (TW = TOP WALL / BW = BOTTOM WALL)
- WATER MARK
- 10"UD — UNDERDRAIN
- 12" SD L = 188' S = 0.005 — STORM DRAIN
- CURB STOP
- HYDRANT
- LIGHT POLE WITH FIXTURE(S)
- SMH — SANITARY SEWER MANHOLE
- TEST PIT
- T — TRANSFORMER PAD
- UTILITY POLE
- VALVE
- 6" SAN — SANITARY SEWER
- 6"W — WATER MAIN
- 2"G — GAS MAIN
- UGE — UNDERGROUND ELECTRIC
- OHE — OVERHEAD ELECTRIC
- CONCRETE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE — STEPHEN R. BUSHEY — 09.11.24 — LICENSED PROFESSIONAL ENGINEER

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

Rev.	Date	Revision
5	2024.09.11	REVISED PER CITY STAFF REVIEW
4	2024.08.26	REVISED RR CROSSING DETAILS – ADDED ROOF HT PLAN
3	2024.08.09	REVISED WATER SERVICES PER PWD COMMENTS
2	2024.07.18	ADDED RAIL CROSSING EXPANSION DETAILS
1	2024.04.30	MAJOR SITE PLAN APPLICATION

Design: SRB | Draft: CDD | Date: NOV. 2023
Checked: SRB | Scale: AS NOTED | Job No.: 3561.05
File Name: 356105-H-GEN NOTES.dwg

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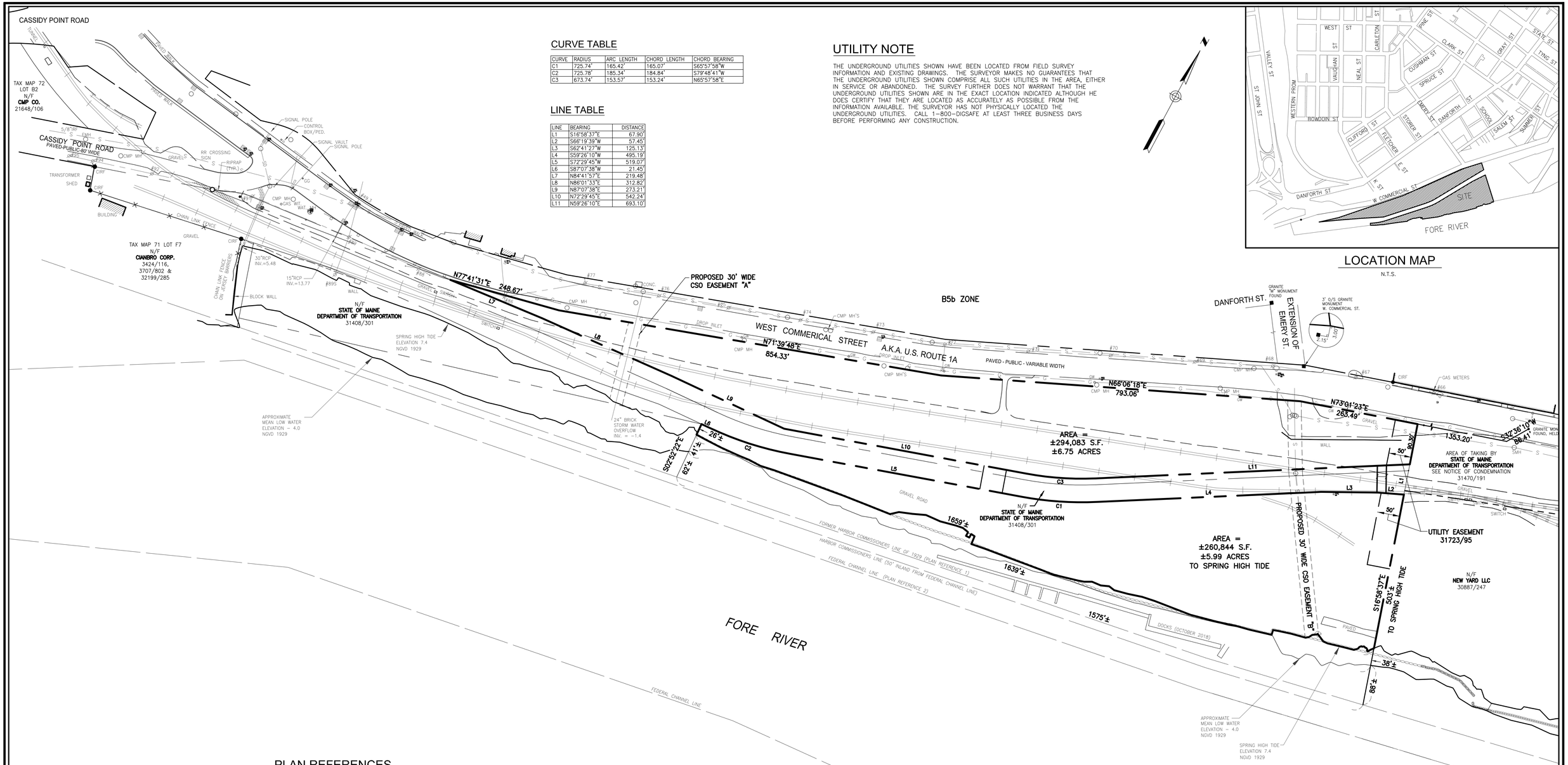
GORRILL PALMER
An LJB Engineering Company
Gorrill Palmer, an LJB Engineering Company
GorrillPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name: GENERAL NOTES & LEGEND
Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine
Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-1.1

U:\3561.05_Canal Landing Building H\Z - CAD\DWG\356105-H-GEN NOTES.dwg 9/11/2024 3:15 PM



CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	725.74'	165.42'	165.07'	S65°57'58"W
C2	725.78'	185.34'	184.84'	S79°48'41"W
C3	673.74'	153.57'	153.24'	N65°57'58"E

LINE TABLE

LINE	BEARING	DISTANCE
L1	S16°58'37"E	67.90'
L2	S66°19'39"W	57.45'
L3	S62°41'27"W	125.13'
L4	S59°26'10"W	495.19'
L5	S72°29'45"W	519.07'
L6	S87°07'38"W	21.45'
L7	N84°41'57"E	219.48'
L8	N86°01'33"E	312.82'
L9	N87°07'38"E	273.21'
L10	N72°29'45"E	542.24'
L11	N59°26'10"E	693.10'

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 SURVEY 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 THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-800-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.

LOCATION MAP

N.T.S.

LEGEND

- IRON PIPE OR ROD FND
- MONUMENT FOUND
- GAS VALVE
- WATER VALVE
- HYDRANT
- UTILITY POLE
- LIGHT POLE
- MANHOLE
- CATCH BASIN
- SIGN
- FENCE
- OHW — OVERHEAD WIRES
- G — GAS LINE
- S — SANITARY SEWER
- SD — STORM DRAIN
- SEAWALL
- MONITORING WELL
- GW — GAS WITNESS

GRAPHIC SCALE

0 50' 100' 200' 400'

PLAN REFERENCES

1. HARBOR LINES, PORTLAND HARBOR, MAINE U.S. ENGINEER OFFICE, BOSTON, MASS. JUNE 30, 1939.

2. PORTLAND HARBOR, PORTLAND, MAINE CONDITION SURVEY, 35 AND 45-FOOT CHANNELS, 45-FOOT ANCHORAGE, 35-FOOT TURNING BASINS, DATED SEPT. 13, 2011 U.S. ARMY CORPS OF ENGINEER NEW ENGLAND DISTRICT SHEET ID. NO. V-105.

3. COMMERCIAL STREET DRAINAGE AND TRAFFIC IMPROVEMENTS CIVIL PLAN MADE BY CITY OF PORTLAND, MAINE PUBLIC WORKS DEPARTMENT ENGINEERING SECTION DATED JUNE 2007.

4. ALTA/ACSM LAND TITLE SURVEY ON WEST COMMERCIAL STREET, PORTLAND, MAINE, MADE FOR NEW YARD LLC, 98 FORE STREET, PORTLAND, MAINE DATED JULY 2, 2013, REVISED THROUGH SEPT. 23, 2013 BY OWEN HASKELL, INC. RECORDED IN PLAN BOOK 213 PAGE 352 AND 353.

5. "ALTA/ACSM LAND TITLE SURVEY AT WEST COMMERCIAL STREET, PORTLAND, MAINE MADE FOR BINGHAM MCCUTCHEN LLP" BY OWEN HASKELL, INC. DATED DEC. 18, 2006.

6. "LAND TITLE SURVEY ON DANFORTH AND WEST COMMERCIAL STREETS, PORTLAND, MAINE MADE FOR MERRILL INDUSTRIES, INC." BY OWEN HASKELL, INC. DATED JAN. 27, 2003 REVISED THROUGH AUGUST 30, 2005.

7. "STANDARD BOUNDARY SURVEY FOR PROPOSED ELECTRIC SUBSTATION WEST COMMERCIAL STREET PORTLAND, MAINE." MADE FOR CMP. CO. BY TITCOMB ASSOCIATES. RECORDED IN PLAN BOOK 204 PAGE 571.

8. "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP LAND ACQUISITIONS DOT FILE NO 3-595" BY OWEN HASKELL, INC. DATED APRIL 2014.

9. "LAND ON WEST COMMERCIAL STREET PORTLAND, MAINE, MAINE CENTRAL RAILROAD CO. TO CANAL LANDING, LLC" BY OWEN HASKELL, INC. DATED APRIL 30, 2015. RECORDED IN PLAN BOOK 215, PAGE 157.

GENERAL NOTES

1. OWNER OF RECORD: NEW YARD, LLC
C.C.R.D. BOOK 35107 PAGE 310

2. BEARINGS ARE BASED ON STATE PLANE COORDINATES NAD 83 MAINE WEST.

3. THE FEDERAL CHANNEL LINE TAKEN FROM PLAN REFERENCE NO. 2 USING COORDINATES IN THE DIGITAL FORMAT OF SAID PLAN.

4. THE SEWER LINE SHOWN IS BASED ON THE LOCATION OF SEWER MANHOLES AND A PLAN TITLED "PORTLAND WATER DISTRICT PORTLAND, MAINE POLLUTION ABATEMENT FACILITIES CONTRACT NO. 3 LOWER FORE RIVER INTERCEPTOR SHEETS 23-28" BY CAMP DRESSER & MCKEE INC. DATED APRIL, 1963.

5. THE SUBJECT PARCEL IS IN THE DIVISION 18.5 WATERFRONT PORT DEVELOPMENT ZONE & DIVISION 26 SECTION 14-446 SHORE LAND REGULATION ZONE PER THE CITY OF PORTLAND CODE OF ORDINANCES LAND USE CHAPTER 14.

6. THE SUBJECT PARCEL IS IN ZONE C & ZONE A2 (ELEV. 10) AS SHOWN ON THE FLOOD INSURANCE RATE MAP 230051 0016B WITH AN EFFECTIVE DATE OF JULY 17, 1986.

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.

OCTOBER 22, 2018
DATE

RANDY R. LOUBIER, PLS NO. 2407

STATE OF MAINE
RANDY
R.
LOUBIER
2407
PROFESSIONAL
LAND SURVEYOR

PLAN OF LAND
ON
WEST COMMERCIAL STREET, PORTLAND, MAINE
MADE FOR OWNER OF RECORD
NEW YARD, LLC
400 COMMERCAIL STREET, PORTLAND, ME 04101

OWEN HASKELL, INC.
390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207)774-0424
PROFESSIONAL LAND SURVEYORS

Drwn By	RRL	Date	Job No.
Trace By	JLW	OCTOBER 22, 2018	2012-051 P
Check By	JWS	Scale	Drwg. No.
Book No.	FILE	1" = 100'	1-NEW YARD LLC

PLAN REFERENCES:

1. "BOUNDARY AND TOPOGRAPHIC SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
2. PLAN TITLED "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP" "LAND ACQUISITIONS" BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
3. PLAN SET TITLED "STATE OF MAINE DEPARTMENT OF TRANSPORTATION" CITY OF PORTLAND , CUMBERLAND COUNTY, PORTLAND INTERNATIONAL MARINE TERMINAL – EXISTING LAYDOWN AND CONNECTING CORRIDOR CONNECTION WIN: 022809.20
4. PORTLAND HARBOR, PORTLAND, ME AFTER DREDGE SURVEY – 35 FOOT CHANNEL AND TURNING BASINS BY THE U.S. ARMY CORPS OF ENGINEERS. SHEETS V–101 THROUGH V–104, DATED APRIL 16, 2014.
5. PLAN SET TITLED " SITE DEVELOPMENT PLANS FOR U.S. DEPARTMENT OF VETERANS AFFAIRS COMMUNITY BASED OUTPATIENT CLINIC" PREPARED BY GORRILL PALMER, DATED MARCH 25, 2020.
6. PLAN SET TITLED "SITE DEVELOPMENT PLANS FOR CANAL LANDING NEW YARD EXPANSION – PHASE IV (FOR CONSTRUCTION OF BUILDING E)" PREPARED BY STANTEC, DATED FEBRUARY 12, 2019.
7. "TOPOGRAPHIC SURVEY OF BUILDING H – 232 WEST COMMERCIAL ST., PORTLAND, ME, MADE FOR KEELEY CONSTRUCTION, P.O. BOX 1074 PORTLAND, ME 04104", BY OWEN HASKELL, INC., DATED 11/22/2023.

PARKING GARAGE
101 West Commercial Street

VA OUTPATIENT CLINIC
141 West Commercial Street

EX. BUILDING D
4,800 SF
1st Floor FFE 28.83
Basement FFE 16.00
OFFICES

EX. BUILDING C
19,800 SF
FFE 16.00
SMALL ENGINE REPAIRS

WEST COMMERCIAL ST (width varies)

N/F Deborah J. Kruk 26933/030

061 I003 N/F William McFarlane & Constance Bloomfield JTS 21615/268

061 H001 N/F Susan Jane Noonan 7400/261

061 H002 N/F Hamlen Samar Post Jamali 32457/099

061 H012 N/F Michael R. Curtis Margaret T. Curtis 27799/302

60–F–1 & 71–F–2 N/F New Yard, LLC 35107/310

60–F–2 & 71–F–5 N/F The Maine Port Authority 36501/146

BENCHMARK: SPIKE SET IN UTILITY POLE #71½ EL. 17.17

PRECAST VAULT / CONTROLS

EXISTING PRECAST CONCRETE RETAINING WALL

EXISTING SLIDING GATE

EXISTING 16" WATER MAIN

EXISTING UNDERGROUND PRIMARY POWER (CMP)

EXISTING 115KVA OIL–ENCASED UNDERGROUND POWER

APPROXIMATE LOCATION OF EXISTING SINGLE COURSE CONCRETE BLOCK RETAINING WALL ALONG EDGE OF BOATYARD SURFACE AT PROPERTY LINE

EXISTING GRAVEL BOATYARD SURFACE (TYP.)

EXISTING 6' HIGH CHAIN LINK FENCE

EX. PAVED MPA HEAVY HAUL ROAD

± HEAVY HAUL ROAD

TWO EX. 24" RCP CLASS V UTILITY SLEEVES FOR NEW YARD USE (TEST PIT REQUIRED)

EXISTING STRUCTURE (VERIFY LOCATION)

TEST PIT EXISTING UTILITIES, TYP.

BUILDING & FOUNDATION CONSTRUCTION ADJACENT MPA HEAVY HAUL ROAD SUBJECT TO APRIL 16, 2024 NEW YARD BUILDING H / I FOUNDATION CONSTRUCTION MEMORANDUM TO MPA, TYP.

PROPOSED BUILDINGS 'H' & 'I' LOCATION

STOCKPILE TO BE REMOVED

EXISTING BOAT/BOAT TRAILER PARKING AND MAINTENANCE AREA

EXISTING CONCRETE TEST POOL FOR OUTBOARD MOTORS (TYP.)

EXISTING PRECAST CONCRETE VAULT / CONTROL STRUCTURE (TYP.)

REMOVE / RESET CHAIN LINK FENCE

RELOCATE FIRE HYDRANT

EXISTING PRIVATE FIRE HYDRANT

EXISTING STRUCTURE (VERIFY IN FIELD) (ADJUST TO GRADE)

EXISTING RAILROAD CROSSING (TO BE WIDENED TO 65'±)

EXISTING BOATYARD SURFACE AREA

EXISTING FIRE HYDRANT

EXISTING GRAVEL BOATYARD SURFACE (TYP.)

EXISTING RAILROAD TRACKS TO IMT

EXISTING 30' WIDE SO EASEMENT "A"

EXISTING GRAVEL BOATYARD SURFACE

EXISTING GRANITE REVETMENT WALL

EXISTING BOAT RAMP

BOAT RAMP

EXISTING FLOATS

GANGWAY

EXISTING FIRE HYDRANT, TYP.

SPRING HIGH TIDE EL. 7.4 NGVD 1929

EXISTING FLOATS

DOCK

EX. WAYNFLETE SHELL STORAGE BLDG.

APPROX. MEAN HIGH WATER FALLS ALONG REVETMENT WALL (TYP.)

WAYNFLETE LEASE AREA LIMIT

EXISTING DOCK

EXISTING PILINGS, TYP.

100-YEAR FLOOD EL. 10.0 (NGVD 29)

PYS RAMP #2

APPROX. MEAN LOW WATER EL. -4.28 (NGVD 29)

MUD FLAT

HIGH ANNUAL TIDE

FORE RIVER

250' SHORELAND ZONE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

1 inch = 40 ft.

NORTH

STATE OF MAINE — STEPHEN R. BUSHEY — 09.11.24 — LICENSED PROFESSIONAL ENGINEER

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

Rev.	Date	Revision

Rev.	Date	Revision
5	2024.09.11	REVISED PER CITY STAFF REVIEW
4	2024.08.26	REVISED RR CROSSING DETAILS – ADDED ROOF HT PLAN
3	2024.08.09	REVISED WATER SERVICES PER PWD COMMENTS
2	2024.07.18	ADDED RAIL CROSSING EXPANSION DETAILS
1	2024.04.30	MAJOR SITE PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2023
Checked: SRB	Scale: AS NOTED	Job No.: 3561.05
File Name: 356105–H–EXISTING.dwg		

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Gorrill Palmer, an LJB Engineering Company
GorrillPalmer.com
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300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name: EXISTING CONDITIONS & REMOVALS PLAN

Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine

Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-2.0

U:\3561.05_Canal Landing Building H\Z – CAD\DWG\356105–H–EXISTING.dwg 9/11/2024 3:13 PM

PLAN REFERENCES

1. "BOUNDARY AND TOPOGRAPHIC SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
2. PLAN TITLED "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP" "LAND ACQUISITIONS" BY OWEN HASKELL INC. DATED APRIL 4, 2014.
3. PLAN SET TITLED "STATE OF MAINE DEPARTMENT ON TRANSPORTATION" CITY OF PORTLAND, CUMBERLAND COUNTY, PORTLAND INTERNATIONAL MARINE TERMINAL - EXISTING LAYDOWN AND CONNECTING CORRIDOR CONNECTION WIN: 022809.20
4. PORTLAND HARBOR, PORTLAND, ME AFTER DREDGE SURVEY - 35 FOOT CHANNEL AND TURNING BASINS BY THE U.S. ARMY CORPS OF ENGINEERS. SHEETS V-101 THROUGH V-104, DATED APRIL 16, 2014.

STRUCTURES WITHIN PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH PORTLAND CITY CODE, SECTION 14-450.8 FLOOD PLAIN MANAGEMENT.

NORTH

UTILITY STREET OPENING MAY BE SUBJECT TO CITY OF PORTLAND STREET MORATORIUM RESTORATION REQUIREMENTS. WEST COMMERCIAL STREET IS SCHEDULED TO BE REPAVED DURING THE SUMMER 2025. CONTRACTOR TO CONDUCT STREET OPENING OPERATIONS ACCORDINGLY.

BUILDING 'I'
21,000 SF

BUILDING 'H'
24,000 SF
(SEE PLANS BY ARCHETYPE, P.A.)
(NO ROOF TOP EQUIPMENT)

TOTAL BUILDING 45,000 SF

MAX. HT. = 50'

MAX. HT. = 72'-6"

300' (MAX. LENGTH ALLOWED IN WPDZ)

AREA OF ENCROACHMENT INTO MAX. HT. SETBACK AS ALLOWED BY CERTIFICATE OF VARIANCE, CCRD BK. 40362 PG. 151 = 1,564 SF

APPROX. LIMIT OF PERIMETER FOOTING, TYP.

4' HIGH CHAIN LINK FENCE, 6" OFF RIGHT-OF-WAY LINE, TYP.

3' TO 6' ± WIDE LANDSCAPE STRIP, TYP.

VEHICULAR ACCESS FOR NEW YARD LLC

MAN DOOR, TYP. OF 7

SANITARY LIFT STATION (BY CONTRACTOR)

4" SAN
L = 4'
S = 0.0208 ft / ft

OWS 1

PS

ASSORTED SHRUB PLANTINGS, TYP. OF 30

NEW YARD CENTRAL DRIVEWAY

6" BOLLARD, TYP.

EXISTING SLIDING GATE

9' x 9' CMP TRANSFORMER PAD

ENTRANCE CANOPY

EXTEND FORCE MAIN TO BUILDING C / D SEWER, TYP.

PROPOSED BOATYARD SURFACE, TYP.

60-F-1 & 71-F-2
N/F
New Yard, LLC
35107/310

BOATYARD CRUSHED STONE SURFACE INFILL AS NECESSARY, TYP.

PROPOSED BLDG. 'H'

EX. HEAVY HAUL RD (PAVED)

16" x 1.5" TAPPING SADDLE DOMESTIC WATER SERVICE, TYPE K COPPER

16" x 6" TAPPING SLEEVE & 6" GATE VALVE (FIRE SERVICE)

1.5" CURB STOP IN THE R.O.W. AT 6' OFF THE GAS MAIN - CURB STOP SHALL BE IN A VALVE BOX TOP SECTION

CONDUCT TEST PITS PRIOR TO SCHEDULING WATER SERVICE WORK, TYP.

1.5" DOMESTIC WATER ENTRY

6" WATER FIRE SERVICE ENTRY

FLOOR DRAIN PLUMBING EXIT TO OIL-WATER SEPARATOR, TYP.

EMPLOYEE RESTROOMS

FDC

RIVER BIRCH CLUMP, TYP. OF 12

APPROXIMATE LIMITS OF PROPOSED BOATYARD SURFACE, TYP.

OUTSIDE EDGE OF FOOTING, TYP. LIMITS OF EXCAVATION TO REMAIN ON NEW YARD LLC PROPERTY

HEAVY HAUL ROAD (PAVED)

EX. PAVED MPA HEAVY HAUL ROAD

(LIMITS OF BALLAST & RAIL TIES NOT SHOWN FOR CLARITY)

S72°29'45"W 519.07'

EX. CB

B-106

EX. 6' HIGH CHAIN LINK FENCE

EXISTING BOATYARD SURFACE AREA

EXISTING RAILROAD TRACKS TO IMT

SWITCH

EXIST. 24" RCP CLASS V UTILITY SLEEVE (TEST PIT REQUIRED)

EXIST. 52' x 24" RCP CLASS V DRAINAGE LINE

WAYNFLETE LEASE AREA LIMIT

WEST COMMERCIAL STREET (with varies - speed limit 40)

VARIANCE GRANTED (SEE TABLE 10-B RECORDS) CCRD BOOK 40362, PAGE 151

SEPARATION

854.33'

17.39'

1659'±

SHIM HEAVY HAUL ROAD PAVEMENT AS NEEDED FOR TRANSITION TO RAIL CROSSING EXPANSION

TWO EX. 24" RCP CLASS V UTILITY SLEEVES FOR NEW YARD USE (TEST PIT REQUIRED)

EXISTING STRUCTURE (ADJUST TO GRADE) (VERIFY LOCATION)

NEW YARD LLC TO ADJUST BLOCK WALL POSITIONING

ADJUST ELEC. BOX TO GRADE

60-F-2 & 71-F-5
H/F
The Maine Port Authority

PAVED TO CROSSING TIMBER

REPLACE EX. TRACK TIES & PROVIDE NEW CROSSING PANELS, TYP. - SEE FIGURE 2

EXPANSION 16'±

EAST

WEST

EX. RAIL CROSSING 49.9'±

PAVE BETWEEN

EXISTING TRACKS

EX. CROSS TIE, TYP.

REPLACE EX. TRACK TIES & CROSSING PANELS - SEE FIGURE 2

EXISTING SLIDING GATE (GATE SYSTEM TO BE MODIFIED TO 66' WIDTH, TYP.)

57'-2" - OVERALL WIDTH

41'-0" TRACK CUT IN RELEASE

EXISTING PRIVATE FIRE HYDRANT (RELOCATE)

EXISTING STRUCTURE (VERIFY IN FIELD) ADJUST TO GRADE & ADD NEW FRAME & GRATE

RELOCATE PRIVATE HYDRANT

HEAVY HAUL ROAD

CHORD N65°57'58"E 153.24'

CHORD S85°57'58"W 145.07'

L=165.42'

B-18-05

EXISTING FIRE HYDRANT, TYP.

EXISTING BOAT RAMP

EXISTING GRANITE REVE

1 inch = 20 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
10.15.24
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

SPACE AND BULK INFORMATION

ZONE: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)

PERMITTED USES: MARINE REPAIR SERVICES / BOAT REPAIR YARD / VESSEL CONSTRUCTION

TABLE 10-B: WPDZ DIMENSIONAL REQUIREMENTS	REQUIRED / ALLOWED		PROVIDED
	Permitted Use Dimensional Standards	Conditional Use Dimensional Standards	
Setbacks (min.)	N/A	N/A	
Lot size (min.)	N/A	5 acres, limited to 1 building greater than the maximum applicable height allowed under the permitted use dimensional standards.	17.77 ACRES
Setback from pier line, wharf, or bulkhead (including any attached aprons)(min.)[2]	5 ft.	5 ft.	> 5 FT
Lot coverage (max.)	50% east of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.	50% east of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.	3.54 ACRES/ 17.77 ACRES = 20%
	100% west of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.	100% west of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.	
Building height (inclusive of roof forms and rooftop appurtenances)(max.)[1]	55 ft. east of a line projected due south from the centerline intersections of West Commercial Street and the easterly most Cassidy Point Drive and west of Casco Bay Bridge.	60 ft. west of the Casco Bay Bridge[3], except as follows: 75 ft. in the area east of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive and west of Casco Bay Bridge, on lots 5 contiguous acres or larger.[4] 190 ft. for bulk storage[5] facilities west of the projection of the westerly most Cassidy Point Drive segment.	72' - 6"*
	60 ft. west of a line projected due south from the centerline intersections of West Commercial Street and the easterly most Cassidy Point Drive.		
	In no case may any permitted heights exceed 90ft within 100ft of W. Commercial Street and all area of the WPDZ east of the Casco Bay Bridge.[3]	In no case may any conditionally permitted heights exceed 90ft within 100ft of W. Commercial Street and all area of the WPDZ east of the Casco Bay Bridge.[3]	
Building length (max.)[6]	450 ft.	450 ft.	300 FT
	300 ft. within 100 ft. of W. Commercial Street and all area of the WPDZ east of the Casco Bay Bridge.	300 ft. within 100ft of W. Commercial Street and all area of the WPDZ east of the Casco Bay Bridge.	
	300 ft. for buildings or portions of buildings exceeding the maximum applicable height allowed under the permitted use dimensional standards.		

[1] The setback area may be used for activities related to the principal uses in the structure, but shall not be used for off-street parking.
[2] Buildings and/or structures shall be limited to an absolute height measured from average grade with no portion of the structural roof system or roof top appurtenances exceeding the limits set forth under Table 10-B with the exception of moveable elements or connection devices as listed under Subsection 10-4.7
[3] Bulk storage dedicated to materials delivered and distributed by means of floating transportation.
[4] Lot greater than 5 contiguous acres owned as of the date of adoption of the ordinance by the owner of the boundary of the WPDZ.
[5] Height limitations east of the Casco Bay Bridge are intended to protect views of the harbor from public open space.
[6] As measured by a line parallel with the southern edge of the West Commercial Street right-of-way.
* Only those conditional uses so designated in Note 1 of the Waterfront Port Development Zone Table 10-A may be located in buildings taller than 60 ft.

***SEE CERTIFICATE OF VARIANCE APPROVED C.C.R.D. BK 40362, PG 151**

Rev.	Date	Revision

Rev.	Date	Revision
6	2024.10.15	UPDATED BUILDING PER ARCHITECT
5	2024.09.11	REVISED PER CITY STAFF REVIEW
4	2024.08.26	REVISED RR CROSSING DETAILS - ADDED ROOF HT PLAN
3	2024.08.09	REVISED WATER SERVICES PER PWD COMMENTS
2	2024.07.18	ADDED RAIL CROSSING EXPANSION DETAILS
1	2024.04.30	MAJOR SITE PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2023
Checked: SRB	Scale: AS NOTED	Job No.: 3561.05
File Name: 356105-H-SITE.dwg		

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300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name: BUILDINGS H & I SITE LAYOUT & UTILITY PLAN
Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine
Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-3.0

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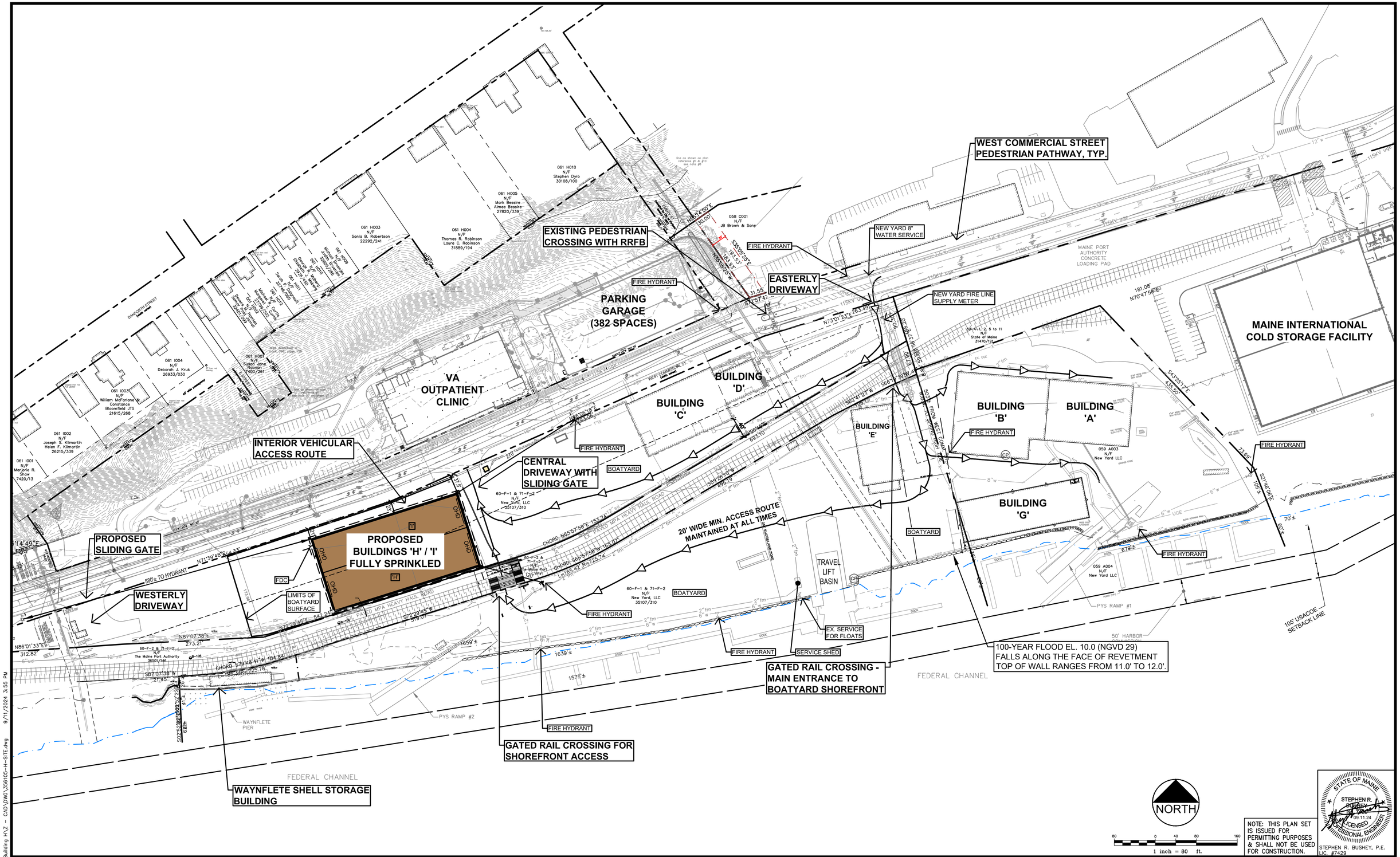

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
09.11.24
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

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Design: SRB	Draft: CDD	Date: NOV. 2023
Checked: SRB	Scale: AS NOTED	Job No.: 3561.05
File Name: 356105-H-SITE.dwg		

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300 Southborough Drive - Suite 200
South Portland, ME 04106

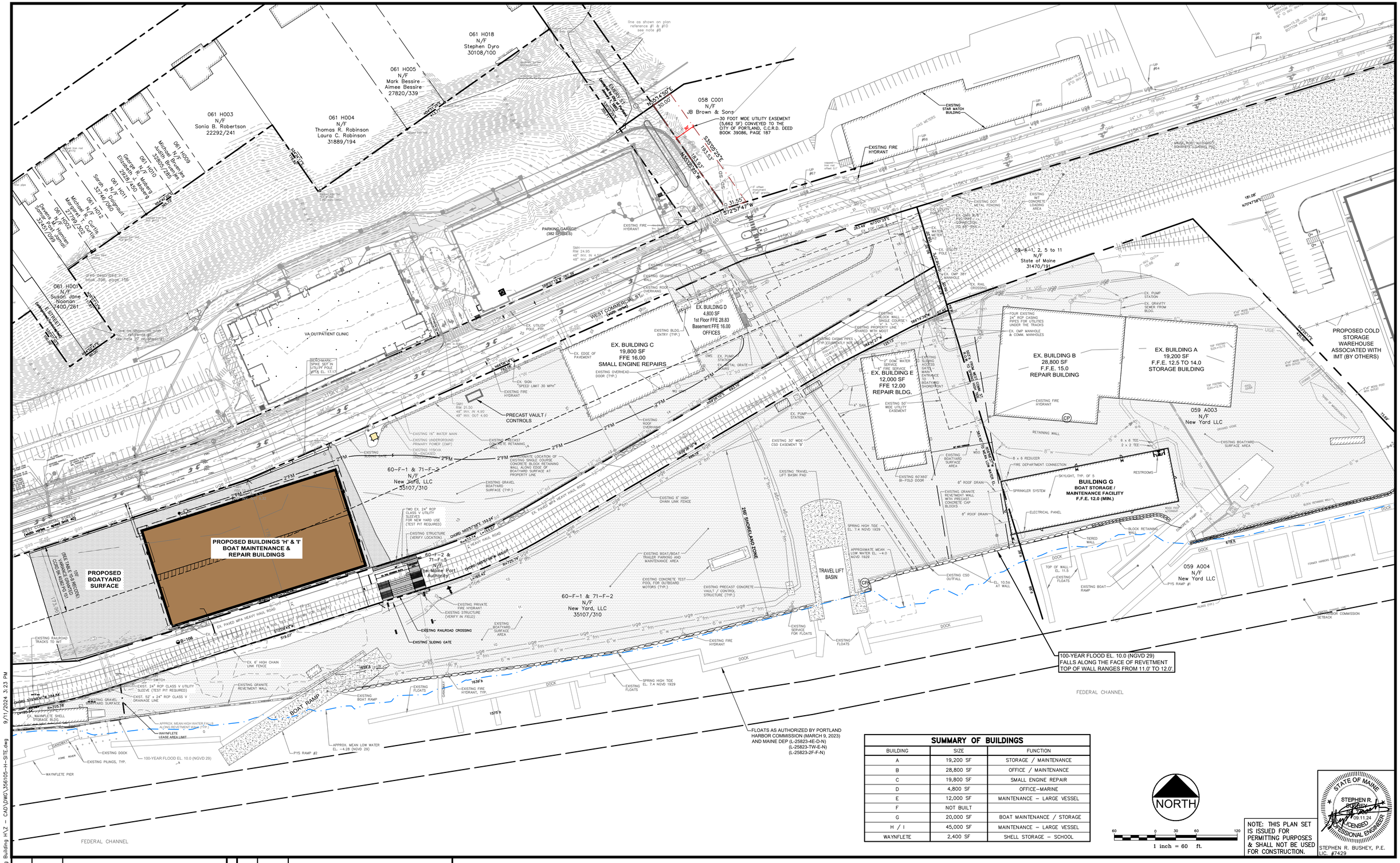
Drawing Name: CIRCULATION PLAN

Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine

Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-4.0

U:\3561.05_Canal Landing Building H\Z - CAD\DWG\3561O5-H-SITE.dwg 9/11/2024 3:55 PM


061 H018
N/F
Stephen Dyro
30108/100
061 H005
N/F
Mark Bessire
Aimee Bessire
27820/339
061 H003
N/F
Sonia B. Robertson
22292/241
061 H004
N/F
Thomas R. Robinson
Laura C. Robinson
31889/194
061 H009
Michael N. Bruen
Trustee
32805/285
061 H010
N/F
George J. Maberg
Elizabeth J. Maberg
2228/450
061 H011
Sarah N. Dingmann
32746/360
061 H012
Michael N. R. Curtis
Trustee
27790/392
061 H002
N/F
Dawn M. Hamlin
Murphy
32457/289
061 H001
N/F
Susan Jane
Noonan
1400/261
area described in
book 398, page 155
058 C001
N/F
JB Brown & Sons
30 FOOT WIDE UTILITY EASEMENT
(5,662 SF) CONVEYED TO THE
CITY OF PORTLAND, C.C.R.D. DEED
BOOK 39086, PAGE 187
59-A-1, 2, 5 to 11
N/F
State of Maine
31470/191
059 A003
N/F
New Yard LLC
059 A004
N/F
New Yard LLC
60-F-1 & 71-F-2
N/F
New Yard, LLC
35107/310
60-F-2 & 71-F-5
N/F
Maine Port Authority
EX. BUILDING C
19,800 SF
FFE 16.00
SMALL ENGINE REPAIRS
EX. BUILDING D
4,800 SF
1st Floor FFE 28.83
Basement FFE 16.00
OFFICES
EX. BUILDING B
28,800 SF
F.F.E. 15.0
REPAIR BUILDING
EX. BUILDING A
19,200 SF
F.F.E. 12.5 TO 14.0
STORAGE BUILDING
EX. BUILDING E
12,000 SF
FFE 12.00
REPAIR BLDG.
BUILDING G
BOAT STORAGE /
MAINTENANCE FACILITY
F.F.E. 12.0 (MIN.)
PROPOSED COLD
STORAGE
WAREHOUSE
ASSOCIATED WITH
IMT (BY OTHERS)
PROPOSED BUILDINGS 'H' & 'I'
BOAT MAINTENANCE &
REPAIR BUILDINGS
PROPOSED
BOATYARD
SURFACE
VA OUTPATIENT CLINIC
PARKING GARAGE
(382 SPACES)
WEST COMMERCIAL ST.
(width varies)
EX. PAVED MPA HEAVY HAUL ROAD
EXISTING RAILROAD CROSSING
EXISTING SLIDING GATE
PRECAST VAULT /
CONTROLS
EXISTING FIRE
HYDRANT
EXISTING STAM MATCH
BUILDING
EXISTING IMT
CONCRETE
LOADING
AREA
EXISTING DOT
METAL FENCING
EXISTING CMP 36"
MANHOLE
EX. RAIL
CROSSING
EX. PUMP
STATION
EX. GRAVITY
SEWER FROM
BLDG.
EX. CMP MANHOLE
& COMM. MANHOLES
FOUR EXISTING
24" RCP CASING
PIPES FOR UTILITIES
UNDER THE TRACKS
EXISTING
BOATYARD
SURFACE AREA
EXISTING
BOATYARD
RAMP
EXISTING
FLOATS
EXISTING
SERVICE
FOR FLOATS
TRAVEL LIFT
BASIN
EXISTING CSO
OUTFALL
EXISTING
GRANITE
REVETMENT WALL
WITH PRECAST
CONCRETE CAP
BLOCKS
EXISTING
GRANITE
REVETMENT WALL
EXISTING
CONCRETE
RETAINING
WALL
EXISTING
GRAVEL
BOATYARD
SURFACE
EXISTING
BOATYARD
SURFACE AREA
EXISTING
BOAT
RAMP
EXISTING
FLOATS
EXISTING
FIRE
HYDRANT
EXISTING
FIRE
HYDRANT, TYP.
EXISTING
SERVICE
FOR FLOATS
EXISTING
FLOATS
EXISTING
BOAT
RAMP
EXISTING
FLOATS
EXISTING
FIRE
HYDRANT
EXISTING
FLOATS
EXISTING
FLOATS
EXISTING
FLOATS

MAINTAIN WEST COMMERCIAL STREET FREE AND CLEAR OF MUD & DEBRIS AT ALL TIMES, TYP.

TEMPORARY SEDIMENT BARRIER DURING CONSTRUCTION

INSTALL & MAINTAIN STABILIZED CONSTRUCTION ENTRANCE (TYP.)

PROPOSED 15" SD
L = 14' ±
S = 0.005 ft/ft MIN.

PROPOSED CB
RIM 14.1±
15" INV. IN T.B.D.
15" INV. OUT T.B.D.

PROPOSED 15" SD
L = 108' ±
S = 0.005 ft/ft MIN.

PROPOSED CB
RIM 13.8
15" INV. IN T.B.D.
15" INV. OUT T.B.D.

15" ROOF DRAIN LEADER

EAST F.F.E. 13.9'± (TO BE CONFIRMED WITH TOP OF RAIL GRADES)

PROPOSED CB
RIM MATCH EXIST.
15" INV. IN T.B.D.
15" INV. OUT T.B.D.

SLOPED FLOOR AT 0.0075 FT./FT., TYP.

WEST F.F.E. 16.15'±

FOOTING AT 2' OFF FACE OF BUILDING

SILT FENCE AT PROPERTY LINE / LIMIT OF WORK, TYP. AVOID DISTURBANCE IN RAILROAD R.O.W.

PROVIDE SILTSACK™ INLET PROTECTION, TYP.

OUTSIDE EDGE OF FOOTING, TYP. LIMITS OF EXCAVATION TO REMAIN ON NEW YARD LLC PROPERTY

TEST PIT EXISTING UTILITIES, TYP.

PROPOSED 15" SD
L = 120' ±
S = 0.005 ft/ft MIN.
NO STOCKPILING OF TRENCH SPOILS WITHIN 75' OF SHOREFRONT

PROPOSED OUTFALL THROUGH REVETMENT - OUTLET INVERT T.B.D.
NO EARTHMOVING BELOW LOW WATER ALLOWED. MeDEP PBR & HARBOR COMMISSION APPROVAL REQUIRED.

PROPOSED 15" SD
L = 60' ±
S = 0.005 ft/ft MIN.

BUILDING 'I'
21,000 SF

BUILDING 'H'
24,000 SF
(SEE PLANS BY ARCHETYPE, P.A.)

WEST COMMERCIAL STREET
(width varies – speed limit 40)

VA CLINIC
PROPOSED PARKING

PROPOSED MANHOLE
(BY OTHERS)

CONCRETE COLLAR CONNECTION
(3' LENGTH x 4' WIDTH x 6' MIN. THICKNESS)

CMP MH TO BE REMOVED

PROPOSED CURB
BY OTHERS

DMH 11

DMH 1

SD 1

SD 15

SD 19

4' DIA. CB OFFSET CONE
RIM 14.84
TWIN 10" INV. OUT 11.60

CAPPED SD & FILLED
w/ FLOWABLE FILL

4' DIA. DMH
RIM 15.67
TWIN 10" INV. IN 11.40
15" INV. IN 10.76
18" INV. OUT 10.66

5' DIA. CB w/DOUBLE GRATE – RIM 14.85
15" INV. OUT 10.85

CAPPED ABANDONED GAS MAIN

EX. CMP MH

EX. CB

B-106

B-21-101

B-18-05

EX. 6' HIGH CHAIN LINK FENCE

EX. PAVED MPA HEAVY HAUL ROAD

(LIMITS OF BALLAST & RAIL TIES NOT SHOWN FOR CLARITY)

S72°29'45"W
519.07'

1659'±

EXISTING 16" WATER MAIN

EXISTING UNDERGROUND PRIMARY POWER (CMP)

EXISTING 115KVA OIL-ENCASED UNDERGROUND POWER

EXISTING PRECAST CONCRETE RETAINING WALL

EXISTING SLIDING GATE

EXISTING BOATYARD SURFACE AREA

60-F-1 & 71-F-2
N/F
New Yard, LLC
35107/310

TWO EX. 24" RCP CLASS V UTILITY SLEEVES (PREVIOUSLY INSTALLED DURING ORIGINAL RAILROAD CONSTRUCTION) FOR NEW YARD USE (TEST PIT REQUIRED)

EXISTING STRUCTURE (ADJUST TO GRADE) (VERIFY LOCATION)

S68°E 153.74'
L=153.57'
R=673.74'

HEAVY HAUL ROAD

60-F-2 & 71-F-5
N/F
The Maine Port Authority

CHORD S65°57'58"W 165.07'
L=165.42'

EXISTING PRIVATE FIRE HYDRANT

EXISTING STRUCTURE (VERIFY IN FIELD) (ADJUST TO GRADE AND ADD NEW FRAME & GRATE)

EXISTING RAILROAD CROSSING

EXISTING SLIDING GATE

60-F-1 & 71-F-2
N/F
New Yard, LLC
35107/310

EXISTING BOATYARD SURFACE AREA

EXISTING FIRE HYDRANT, TYP.

EXISTING BOAT RAMP

EXISTING GRANITE REVETMENT WALL

EXISTING BOATYARD SURFACE AREA

SWITCH

EXIST. 24" RCP CLASS V UTILITY SLEEVE (TEST PIT REQUIRED)

EXIST. 52' x 24" RCP CLASS V DRAINAGE LINE

WAYNFLETE LEASE AREA LIMIT

NORTH

1 inch = 20 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
09.11.24
LICENSED PROFESSIONAL ENGINEER

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

Rev.	Date	Revision
5	2024.09.11	REVISED PER CITY STAFF REVIEW
4	2024.08.26	REVISED RR CROSSING DETAILS – ADDED ROOF HT PLAN
3	2024.08.09	REVISED WATER SERVICES PER PWD COMMENTS
2	2024.07.18	ADDED RAIL CROSSING EXPANSION DETAILS
1	2024.04.30	MAJOR SITE PLAN APPLICATION

Design: SRB | Draft: CDD | Date: NOV. 2023
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File Name: 356105-H-GRADING EROSION.dwg

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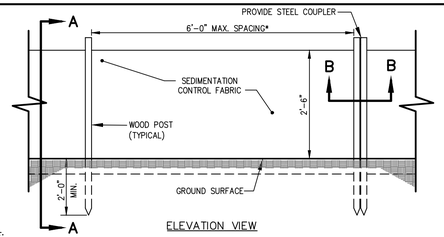
GorrillPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name: GRADING, DRAINAGE & EROSION CONTROL PLAN
Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine
Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

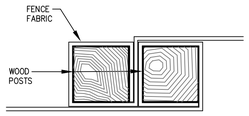
Drawing No. C-6.0

U:\3561.05_Canal Landing Building H\Z – CAD\DWG\356105-H-GRADING EROSION.dwg 9/11/2024 3:09 PM

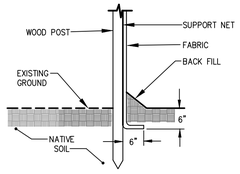


ELEVATION VIEW

*NOTE:
THE SILT FENCE SHOULD HAVE A MAXIMUM STAKING DISTANCE OF 6' UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT A MAXIMUM 14 GAUGE AND WITH A MINIMUM MESH SPACING OF 6".



SECTION B–B



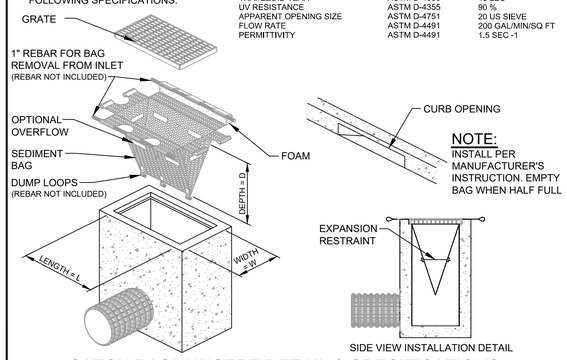
SECTION A–A

NOTE:
BOTTOM OF SILT FENCE MUST BE TOED INTO GROUND OR NO PAYMENT SHALL BE MADE.

(A) SILTATION FENCE DETAIL
N.T.S.

NOTE: THE CATCH BASIN INSERT WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

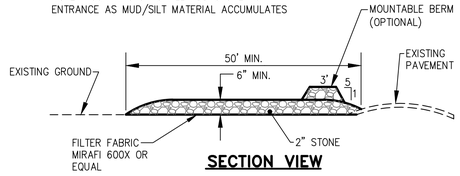


NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTION. EMPTY BAG WHEN HALF FULL

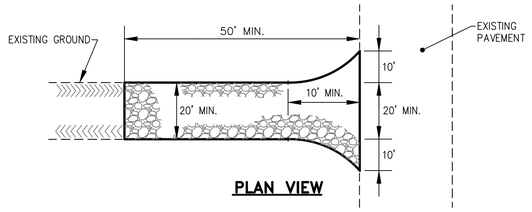
SIDE VIEW INSTALLATION DETAIL

(D) CATCH BASIN INSERT DETAIL & SPECIFICATIONS
N.T.S.

NOTE: CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES



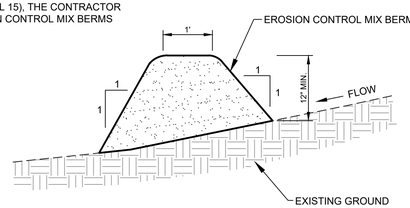
SECTION VIEW



PLAN VIEW

(B) STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

NOTE:
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:

THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).

(C) EROSION CONTROL MIX BERM DETAIL
N.T.S.

SPECIFICATIONS AND REQUIREMENTS FOR DEWATERING

THIS PROJECT WILL REQUIRE THE DISCHARGE OF CONSTRUCTION DEWATERING AND TURBID LADEN RUNOFF, FROM THE REMEDIAL CONSTRUCTION OF THE EXISTING STORMWATER BASIN, TO BE DIRECTED AND DISCHARGED THROUGH A DIRTBAG, WITHIN A DEWATERING SUMP. THIS DESCRIPTION ALSO CONTAINS APPENDED MATERIALS DESCRIBING THE DIRTBAGS REFERRED TO IN THIS NARRATIVE.

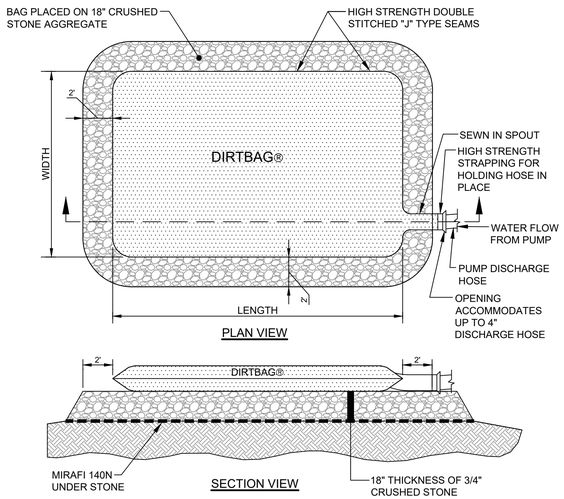
REQUIREMENTS FOR DIRTBAGS:

AT ALL TIMES THERE MUST BE AN UNUSED DIRTBAG AVAILABLE FOR EMERGENCY USE.

AT ALL TIMES (AFTER INITIAL SITE PREPARATION), THE CONTRACTOR SHALL HAVE ONE DIRTBAG ACTIVE OR READY FOR USE. THE DIRTBAGS SHALL BE FIELD LOCATED BY THE CONTRACTOR BUT ARE NOT TO BE INSTALLED WITHIN 100 FEET OF THE WETLANDS. THE DIRTBAG SHALL BE INSTALLED ON A PREPARED SUBGRADE. THIS SUBGRADE SHALL CONSIST OF THE INSTALLATION OF A LAYER OF MIRAFI 140N, AND 18 INCHES OF 3/4 INCH CRUSHED STONE. THE PLAN DIMENSION OF THE CRUSHED STONE PAD SHALL EXCEED THE PLAN AREA OF THE DIRTBAG BY AT LEAST TWO FEET IN ALL DIRECTIONS. THE DIRTBAG SHALL NOT BE INSTALLED ON AN UNDERLYING SLOPE OF GREATER THAN 15 PERCENT.

CONSTRUCTION DEWATERING OPERATIONS:

ALL CONSTRUCTION-DEWATERING OPERATIONS ARE THE RESPONSIBILITY OF THE SITE CONTRACTOR. IT SHALL BE THE SITE CONTRACTOR WHO IS RESPONSIBLE FOR SELECTING THE SITE FOR THE DIRTBAG, THE SELECTION OF THE USE OF THE DIRTBAG OR THE SEDIMENTATION BASIN FOR DIRECTING DEWATERING, EXCEPT THAT THE OWNER MAY DIRECT THE SITE CONTRACTOR TO ALTER THE SELECTED OPERATION IF TURBID DISCHARGE TO A WETLAND IS OBSERVED.



(E) DIRTBAG® DETAIL AND SPECIFICATIONS
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE — STEPHEN R. BUSHEY — 04.30.24 — LICENSED PROFESSIONAL ENGINEER

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

Rev.	Date	Revision
1	2024.04.30	MAJOR SITE PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2023
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GORRILL PALMER
300 Southborough Drive, Suite 200
South Portland, Me 04106
207.772.2515 / www.gorrillpalmer.com
Relationships. Responsiveness. Results.

Drawing Name: EROSION AND SEDIMENT CONTROL DETAILS
Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine
Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-6.1

U:\3561.05_Canal Landing Building H\2 — CAD\DWG\356105-H-DETAILS.dwg 5/1/2024 2:55 PM

GROUND ELEV. = 16.15'
TOP OF PARAPET ELEV. = 63.69'
TOP OF PARAPET HEIGHT = 47'-6½" (47.54')

GROUND ELEV. = 16.15'
TOP OF PARAPET ELEV. = 87.73'
TOP OF PARAPET HEIGHT = 71'-7" (71.58')
ROOF ELEV. = 84.73'
ROOF HEIGHT = 68'-7" (68.58')

GROUND ELEV. = 16.15'
TOP OF PARAPET ELEV. = 87.73'
TOP OF PARAPET HEIGHT = 71'-7" (71.58')
ROOF ELEV. = 86.40'
ROOF HEIGHT = 70'-3" (70.25')

GROUND ELEV. = 13.9'
TOP OF PARAPET ELEV. = 63.69'
TOP OF PARAPET HEIGHT = 49'-9½" (49.79')

GROUND ELEV. = 13.9'
TOP OF PARAPET ELEV. = 87.73'
TOP OF PARAPET HEIGHT = 73'-10" (73.83')
ROOF ELEV. = 84.73'
ROOF HEIGHT = 70'-10" (70.83')

GROUND ELEV. = 13.9'
TOP OF PARAPET ELEV. = 87.73'
TOP OF PARAPET HEIGHT = 73'-10" (73.83')
ROOF ELEV. = 83.40'
ROOF HEIGHT = 72'-6" (72.50')

BUILDING 'I'
21,000 SF

BUILDING 'H'
24,000 SF
(SEE PLANS BY ARCHETYPE, P.A.)

WEST COMMERCIAL STREET
(width varies – speed limit 40)

VA CLINIC
PROPOSED PARKING

PROPOSED MANHOLE
CONCRETE COLLAR CONNECTION (3' LENGTH x 4' WIDTH x 6' MIN. THICKNESS)

PROPOSED CURB BY OTHERS

DMH 1
DMH 11
SD 1
SD 19
CB 20

4' DIA. CB OFFSET CONE
RIM 14.84
TWIN 10" INV. OUT 11.60

CAPPED SD & FILLED w/ FLOWABLE FILL

4' DIA. DMH
RIM 15.67
TWIN 10" INV. IN 11.40
15" INV. IN 10.76
18" INV. OUT 10.66

5' DIA. CB w/DOUBLE GRATE – RIM 14.85
15" INV. OUT 10.85

CAPPED ABANDONED GAS MAIN

EX. CMP MH

4"SWLL
4"SYLL
4"BYL

115KV UGE

EXISTING SLIDING GATE

EXISTING 16" WATER MAIN

EXISTING UNDERGROUND PRIMARY POWER (CMP)

EXISTING 115KVA OIL-ENCASED UNDERGROUND POWER

EXISTING PRECAST CONCRETE RETAINING WALL

EXISTING BOATYARD SURFACE AREA

60-F-1 & 71-F-2
N/F
New Yard, LLC
35107/310

TWO EX. 24" RCP CLASS V UTILITY SLEEVES FOR NEW YARD USE (TEST PIT REQUIRED)

EXISTING STRUCTURE (VERIFY LOCATION)

60-F-2 & 71-F-5
N/F
The Maine Port Authority

HEAVY HAUL ROAD

R=673.74'
CHORD N65°57'58"E 153.74'
L=153.57'

CHORD S65°57'58"W 165.07'
L=165.42'

EXISTING PRIVATE FIRE HYDRANT

EXISTING STRUCTURE (VERIFY IN FIELD)

EXISTING RAILROAD CROSSING

EXISTING SLIDING GATE

60-F-1 & 71-F-2
N/F
New Yard, LLC
35107/310

EXISTING BOATYARD SURFACE AREA

EX. PAVED MPA HEAVY HAUL ROAD

(LIMITS OF BALLAST & RAIL TIES NOT SHOWN FOR CLARITY)

S72°29'45"W
519.07'

EX. CB

EX. 6' HIGH CHAIN LINK FENCE

B-18-05

B-21-101

1659'±

EXISTING FIRE HYDRANT, TYP.

EXISTING BOAT RAMP

EXISTING GRANITE REVETMENT WALL

EXISTING BOATYARD SURFACE AREA

SWITCH

EXIST. 24" RCP CLASS V UTILITY SLEEVE (TEST PIT REQUIRED)

EXIST. 52' x 24" RCP CLASS V DRAINAGE LINE

WAYNFLETE LEASE AREA LIMIT

NORTH

1 inch = 20 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
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09.11.24
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
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Rev.	Date	Revision

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Design: SRB	Draft: CDD	Date: NOV. 2023
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File Name: 356105-H-GRADING EROSION.dwg		

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300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name: ROOF HEIGHT PLAN

Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine

Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-6.1

U:\3561.05_Canal Landing Building H\Z – CAD\DWG\356105-H-GRADING EROSION.dwg 9/11/2024 2:01 PM

A. INTRODUCTION

NEW YARD, LLC PROPOSES TO CONSTRUCT, OWN, AND OPERATE BUILDING 'H / I' AS A NEW BOAT MAINTENANCE AND REPAIR FACILITY WITHIN THE EXISTING CANAL LANDING FACILITY.

THE PROPOSED PHASE VII PROJECT INCLUDES BUILDING 'H' TO BE CONSTRUCTED ALONG THE WEST COMMERCIAL STREET FRONT. THE APPLICANT IS CURRENTLY SEEKING PHASE VII APPROVAL FOR THE CONSTRUCTION OF BUILDING 'H / I'.

THE PROJECT INCLUDES SITE DEVELOPMENT ACTIVITIES INVOLVING EARTHWORK, GRADING, BUILDING CONSTRUCTION, UTILITIES AND OVERALL SITE STABILIZATION.

THIS SECTION PRESENTS THE EROSION SEDIMENT CONTROL PLAN DESIGNED FOR THE PROJECT. THE EROSION CONTROL PLANS WILL BE CONTAINED IN THE CONTRACT DOCUMENTS FOR IMPLEMENTATION BY THE CONTRACTOR. SIMILARLY, THE APPLICANT'S OWN WORK FORCE WILL ALSO COMPLY WITH THESE REQUIREMENTS. FUGITIVE DUST EMISSIONS WILL BE CONTROLLED, THE REQUIREMENTS OF THIS EROSION CONTROL PLAN, AND ALL PERMIT REQUIREMENTS WILL BE FULFILLED. WINTER CONSTRUCTION WILL BE REQUIRED. SPECIFIC EROSION CONTROLS STIPULATED BY THE PLAN AND THIS REPORT ARE MINIMUM REQUIREMENTS.

B. EXISTING CONDITIONS

OWEN HASKELL, INC. HAS COMPLETED A TOPOGRAPHIC SURVEY OF THE PROPERTY. THE SITE IS RELATIVELY FLAT WITH THE HIGHEST POINTS ALONG THE WEST COMMERCIAL STREET FRONTAGE, SLOPING TO THE MIDDLE OF THE SITE. SITE ELEVATIONS ALONG WEST COMMERCIAL STREET TREND DOWN FROM WEST TO EAST FROM ELEVATION 23' (NGVD 1929) TO ELEVATION 15'. THE SITE'S LOW AREAS ARE NEAR ELEVATION 9'-12' WHILE MOST OF THE WATERFRONT TOP OF BANK IS NEAR ELEVATION 9'. THE HIGH ANNUAL TIDE LINE (HAT) FOR THE FORE RIVER IS ELEVATION 7.4' AND MEAN LOW WATER IS APPROXIMATELY ELEVATION -4.0'. OWEN HASKELL, INC. HAS ALSO COMPLETED BATHYMETRIC SURVEY DATA COLLECTION AND FOUND WATER DEPTHS WITHIN 50' OF THE LOW WATER LINE TO BE 10' TO 30'. THE FEDERAL CHANNEL IS ALSO REPRESENTED ON THE PROJECT'S DRAWINGS AND IT IS GENERALLY LOCATED 60' TO 120' OFF THE SHOREFRONT. NO ACTIVITIES ARE PROPOSED BEYOND THE FEDERAL CHANNEL LINE.

GENERALLY SPEAKING, THE SITE'S RUNOFF INFILTRATES INTO THE GROUND OR DRAINS DIRECTLY TO THE FORE RIVER VIA OVERLAND FLOW. THERE ARE NO DRAINAGE SYSTEMS ON SITE, ALTHOUGH THERE IS A CLOSED STORM DRAINAGE SYSTEM WITHIN WEST COMMERCIAL STREET.

ACCORDING TO VARIOUS INVESTIGATION DATA, DEPTH TO GROUNDWATER VARIES FROM 3 TO 7 FEET AND THIS LIKELY VARIES WITH TIDAL CONDITIONS IN THE FORE RIVER. GENERALLY SPEAKING, THE GROUNDWATER FLOWS FROM THE NORTHWEST TO THE SOUTHEAST ACROSS THE SITE.

C. PROPOSED PROJECT

THE APPLICANT PROPOSES TO REDEVELOP THE PROPERTY IN A MANNER CONSISTENT WITH THE WPDZ STANDARDS. THE DEVELOPMENT PROGRAM INCLUDES THE FOLLOWING COMPONENTS:

PHASE VI - WILL INCLUDE:

- SITE CLEARING, STABILIZATION AND GENERAL CLEAN UP.
- CONSTRUCTION OF A 45,000 SF BUILDING 'H' FOR BOAT DESIGN, TESTING AND MAINTENANCE OPERATIONS.
- INSTALLATION OF UTILITIES FOR BUILDING USE.
- SITE WORK FOR BOATYARD SURFACES AND UTILITIES.

D. OVERVIEW OF SOIL EROSION AND SEDIMENTATION CONCERNS

THE PRIMARY EMPHASIS OF THE EROSION AND SEDIMENTATION CONTROL PLAN TO BE IMPLEMENTED FOR THIS PROJECT IS AS FOLLOWS:

- **TEMPORARY MEASURES:** PLANNING THE PROJECT TO HAVE EROSION RESISTANT MEASURES IN PLACE BY IMPLEMENTING MEASURES INTENDED TO PREVENT EROSION FROM OCCURRING.
- **PHASING SEQUENCING:** THE PLAN INCLUDES MEASURES TO INTERCEPT AND CONVEY RUNOFF TO TEMPORARY SEDIMENT SUMPS AS THE CONSTRUCTION OF THE PROJECT OCCURS. THE USE OF SMALL TEMPORARY COLLECTION SUMPS WITH A CLEAN SAND FILTER ABOVE AN UNDERDRAINED DISCHARGE IS RECOMMENDED TO SUPPLEMENT THE PRINCIPAL SUMPS TO HELP REDUCE TURBIDITY.
- **USE OF TYPE 1 SETTLING:** INSTALLING SEDIMENT SUMPS AND SWALES EARLY IN THE CONSTRUCTION SEQUENCE TO PROVIDE SECONDARY RELIEF FOR EROSION CONTROL MEASURES WITHIN THE SITE UNTIL LATE IN THE PROJECT WHEN THE SEDIMENTATION AREAS NEED TO BE REMOVED FOR FINAL RESTORATION.
- **RESTABILIZATION:** STABILIZATION OF AREAS DENUDED TO UNDERLYING PARENT MATERIAL MUST OCCUR WITHIN STIPULATED TIME FRAME TO MINIMIZE THE PERIOD OF SOIL EXPOSURE AND STABILIZATION OF DRAINAGE PATHS TO AVOID RILL AND GULLY EROSION.
- **INTERIM ENTRAPMENT:** THE USE OF ON-SITE MEASURES TO CAPTURE SEDIMENT (HAY BALES/SILT FENCE, ETC.) BEFORE IT IS CONVEYED TO SEDIMENT SUMPS.
- **LONG TERM SITE PROTECTION:** THE IMPLEMENTATION OF LONG-TERM MEASURES FOR EROSION/SEDIMENT AND POLLUTANT TREATMENT THROUGH THE CONSTRUCTION OF PERMANENT BOATYARD SURFACES.
- **SPECIAL WINTER CONSTRUCTION MEASURES:** THESE WILL BE REQUIRED FOR WORK BETWEEN SEPTEMBER 15 AND APRIL 15.

E. DESCRIPTION AND LOCATION OF LIMITS OF ALL PROPOSED EARTH MOVEMENTS

THE CONSTRUCTION OF THE PROJECT WILL DISTURB ABOUT 1.5 ACRES OF LAND. THE LIMIT OF DISTURBANCE IS GENERALLY COINCIDENT WITH THE LIMIT OF GRADING.

THE EARTH MOVING WILL INCLUDE TRENCHING FOR UNDERGROUND UTILITIES, EARTHWORK TO RESHAPE THE SITE, EARTHWORK TO PREPARE AND SHAPE THE PREPARED BOATYARD SURFACE, AND EXCAVATION ATTENDANT WITH THE BUILDING AND EXCAVATION AND BORROW FOR THE PROJECT IMPROVEMENTS.

F. CRITICAL AREAS

CRITICAL RESOURCE AREAS INCLUDE THE FORE RIVER AND ASSOCIATED SHORELINE STABILIZATION. NO SPECIAL SPECIES HABITATS HAVE BEEN IDENTIFIED. IT IS NOTED THAT THE STORMWATER SYSTEM CONSISTING OF A INFILTRATION THROUGH THE PROPOSED PREPARED BOATYARD STONE SURFACE SHALL NOT BE ACTIVATED UNTIL THE TRIBUTARY AREAS HAVE BEEN STABILIZED.

G. EROSION/SEDIMENTATION CONTROL DEVICES

AS PART OF THE SITE DEVELOPMENT, THE CONTRACTOR WILL BE OBLIGATED TO IMPLEMENT THE FOLLOWING EROSION AND SEDIMENT CONTROL DEVICES. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED WITHIN THIS REPORT. FOR FURTHER REFERENCE ON THESE DEVICES, SEE THE *MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION EROSION AND SEDIMENT CONTROL BMPS MANUAL (MARCH, 2003).*

1. SILTATION BARRIER SHALL BE INSTALLED DOWN SLOPE OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS REVEGETATED. THE SILT BARRIER SHALL BE INSTALLED PER THE DETAIL PROVIDED IN THE PLAN SET AND INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THE CONTRACTOR SHALL MAKE REPAIRS IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE BARRIER LINE. IF SUCH EROSION IS OBSERVED, THE CONTRACTOR SHALL TAKE PROACTIVE ACTION TO IDENTIFY THE CAUSE OF THE EROSION AND TAKE ACTION TO AVOID ITS REOCCURRENCE. TYPICALLY, THIS REQUIRES THAT STABILIZATION MEASURES BE UNDERTAKEN. PROPER PLACEMENT OF STAKES AND KEYING THE BOTTOM OF THE SILT BARRIER FABRIC INTO THE GROUND IS CRITICAL TO THE BARRIER'S EFFECTIVENESS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE BARRIER, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM AND MEASURES TAKEN TO AVOID THE CONCENTRATION OF FLOWS NOT DIRECTED TO THE SILT BARRIER.

H. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES

THE FOLLOWING ARE PLANNED AS TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION:

1. CRUSHED STONE-STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ANY CONSTRUCTION ACCESS POINTS FROM ADJACENT STREETS OR THE EXISTING PARKING LOT. THE LOCATIONS OF THE CONSTRUCTION ENTRANCES SHOWN ON THE DRAWINGS SHOULD BE CONSIDERED ILLUSTRATIVE AND WILL NEED TO BE ADJUSTED AS APPROPRIATE AND LOCATIVE AT ANY AREA WHERE THERE IS THE POTENTIAL FOR TRACKING OF MUD AND DEBRIS ONTO EXISTING ROADS OR STREETS. STONE STABILIZED CONSTRUCTION ENTRANCES WILL REQUIRE THE STONE TO BE REMOVED AND REPLACED, AS IT BECOMES COVERED OR FILLED WITH MUD AND MATERIAL TRACKED BY VEHICLES EXITING THE SITE.
2. CONDITION 1 AND 2 SILT BARRIER SHALL BE INSTALLED ALONG THE DOWNGRADIENT SIDE OF THE PROPOSED IMPROVEMENT AREAS. THE SILT BARRIER WILL REMAIN IN PLACE AND PROPERLY MAINTAINED UNTIL THE SITE IS ACCEPTABLY RE-VEGETATED. CONDITION 3 SILT BARRIER IS TO BE USED ALONG THE CONTOUR OF SIGNIFICANT FILL SLOPES AS ILLUSTRATED ON THE EROSION CONTROL PLAN SITE DRAWINGS. SILT BARRIER NEEDS TO BE CHECKED TO INSURE THE BOTTOM IS PROPERLY KEYED IN AND INSPECTED AFTER SIGNIFICANT RAINS. WOOD CHIPS OR EROSION CONTROL MIX IS OFTEN USED ON THE CONSTRUCTION SIDE OF THE SILT BARRIER TO PROVIDE AN EXTRA MARGIN OF SAFETY AND SECURITY FOR THE SILT BARRIER. THIS PRACTICE IS ENCOURAGED, PROVIDED THE CHIPS ARE REMOVED WHEN THE BARRIER IS REMOVED.
3. DIRTBAGS™ SHALL BE USED IN ACCORDANCE WITH THE DETAILS IN THE PLAN SET. THE PURPOSE OF THE DIRTBAGS™ IS TO RECEIVE ANY WATER PUMPED FROM EXCAVATIONS DURING CONSTRUCTION. A DIRTBAG™ SHALL BE INSTALLED AND PREPARED FOR OPERATION PRIOR TO ANY TRENCHING ON SITE. WHEN DIRTBAGS™ ARE OBSERVED TO BE AT 50% CAPACITY, THEY SHALL BE CLEANED OR REPLACED. STONE AND FILTER SAND UNDER THE DIRTBAG™ SHALL BE REMOVED AND REPLACED CONCURRENTLY WITH THE REPLACEMENT OF THE DIRTBAG™.
4. TEMPORARY STOCKPILES OF COMMON EXCAVATION WILL BE PROTECTED AS FOLLOWS:
   a) TEMPORARY STOCKPILES SHALL NOT BE LOCATED AT LEAST 50 FEET UPGRADIENT OF THE PERIMETER SILT BARRIER.
   b) INACTIVE STOCKPILES SHALL BE STABILIZED WITHIN 5 DAYS BY EITHER TEMPORARILY SEEDING THE STOCKPILE WITH A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH. IF NECESSARY, MESH SHALL BE INSTALLED TO PREVENT WIND FROM REMOVING THE MULCH.
5. ALL DENUDED AREAS EXCEPT GRAVEL AREAS SHALL RECEIVE MULCH, EROSION CONTROL MESH FABRIC, OR OTHER APPROVED TEMPORARY EROSION SEDIMENT MEASURE WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOIL OR BEFORE A PREDICTED RAIN EVENT OF >1/2" UNLESS PERMANENT MEASURES ARE INSTALLED.
6. ALL SOILS DISTURBED BETWEEN SEPTEMBER 15 AND APRIL 15 WILL BE COVERED WITH MULCH WITHIN 5 DAYS OF DISTURBANCE, PRIOR TO ANY PREDICTED STORM EVENT OF THE EQUIVALENT OF ½" OF RAINFALL IN A 24-HOUR PERIOD, OR PRIOR TO ANY WORK SHUTDOWN LASTING MORE THAN 35 HOURS (INCLUDING WEEKENDS AND HOLIDAYS). THE MULCH RATE SHALL BE DOUBLE THE NORMAL RATE.

   FOR WORK THAT IS CONDUCTED BETWEEN SEPTEMBER 15 AND APRIL 15 OF ANY CALENDAR YEAR, ALL DENUDED AREAS WILL BE COVERED WITH HAY MULCH, APPLIED AT TWICE THE NORMAL APPLICATION RATE, AND (IN AREAS OVER 10% GRADE) ANCHORED WITH A FABRIC NETTING. THE TIME PERIOD FOR APPLYING MULCH SHALL BE LIMITED TO 5 DAYS FOR ALL AREAS, OR IMMEDIATELY IN ADVANCE OF A PREDICTED RAINFALL EVENT.
7. STONE CHECK DAMS, SILT LOGS, OR HAY BALE BARRIERS WILL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS DURING CONSTRUCTION AND EARTHWORK OPERATIONS.
8. SILT FENCING WITH A MAXIMUM STAKE SPACING OF 6 FEET SHOULD BE USED, UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT OF MINIMUM 14 GAUGE AND WITH A MAXIMUM MESH SPACING OF 6 INCHES, IN WHICH CASE STAKES MAY BE SPACED A MAXIMUM OF 10 FEET APART. THE BOTTOM OF THE FENCE SHOULD BE PROPERLY ANCHORED A MINIMUM OF 6" PER THE PLAN DETAIL AND BACKFILLED. ANY SILT FENCE IDENTIFIED BY THE OWNER OR REVIEWING AGENCIES AS NOT BEING PROPERLY INSTALLED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPAIRED IN ACCORDANCE WITH THE INSTALLATION DETAILS.
9. STORM DRAIN CATCH BASIN INLET PROTECTION SHALL BE PROVIDED THROUGH THE USE OF STONE SEDIMENT BARRIERS OR A PREMANUFACTURED SILTSACK™. STONE SEDIMENT BARRIER INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE BARRIERS OR SILTSACKS™ SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRS MADE AS NECESSARY, INCLUDING THE REMOVAL OF SEDIMENT. SEDIMENT SHALL BE REMOVED AND THE BARRIER OR SILTSACK™ RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE BARRIER. SEDIMENT SHALL BE REMOVED FROM SILTSACKS™ AS NECESSARY. INLET PROTECTION SHALL BE REMOVED WHEN THE TRIBUTARY DRAINAGE AREA HAS BEEN STABILIZED.
10. ALL SLOPES STEEPER THAN 4:1 SHALL RECEIVE EROSION CONTROL MESH.
11. SLOPES STEEPER THAN 3:1 SHALL RECEIVE REINFORCED TURF.
12. CONDITION 3 SILT BARRIERS SHALL BE INSTALLED AS CONSTRUCTION PROGRESSES.
13. AREAS OF VISIBLE EROSION AND THE TEMPORARY SEDIMENT SUMPS SHALL BE STABILIZED WITH CRUSHED STONE. THE SIZE OF THE STONE SHALL BE DETERMINED BY THE CONTRACTOR'S DESIGNATED REPRESENTATIVE IN CONSULTATION WITH THE OWNER.
14. ALL CATCH BASINS, WHICH RECEIVE RUNOFF FROM CURRENT OR PAVED AREAS BEING CONSTRUCTED AS PART OF THIS PROJECT, SHALL HAVE A SORBENT BOOM INSTALLED PRIOR TO PLACING THE BASIN IN OPERATION INSTALLING BINDER PAVEMENT, OR OVERLAYS. THESE SORBENT BOOMS SHALL BE CHECKED WEEKLY FOR THE THREE WEEKS FOLLOWING PAVING AND REPLACED AS NECESSARY WITH THE BOOMS DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
15. ANY FLOW FROM THE SITE THAT IS CONCENTRATED MUST BE DIRECTED TO A SUMP WITH SAND FILTER AND UNDERDRAINED DISCHARGE.
16. CONCENTRATED RUNOFF SHALL BE DIVERTED AWAY FROM SLOPES OF OVER 10 PERCENT UNLESS THE SLOPE IS ARMORED WITH STONE.
17. UNDERGROUND UTILITIES MUST BE INSTALLED IN COMPLIANCE WITH THE FOLLOWING STANDARDS AND OTHER REQUIREMENTS OF THIS EROSION CONTROL PLAN:

- NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME;
- EXCAVATED MATERIALS SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES;
- DEWATERING OF THE TRENCH SHALL BE PUMPED THROUGH A DIRTBAG™ AND APPROPRIATE SEDIMENT CONTROL FACILITIES TO AVOID A TURBID DISCHARGE; AND
- STABILIZATION SHALL OCCUR AS SOON AS PRACTICABLE.

18. RICE STRAW WATTLES SHALL BE USED TO CONTROL LOCALIZED EROSION.
19. MAINTENANCE OF THE EROSION CONTROL, SEDIMENTATION FACILITIES, AND CONTROL OF FUGITIVE DUST MUST OCCUR UNTIL THE SITE IS STABILIZED WITH PERMANENT EROSION CONTROL MEASURES.

I. STANDARDS FOR STABILIZING SITES FOR THE WINTER

THE CONSTRUCTION OF THE PROJECT MAY REQUIRE WINTER CONSTRUCTION. THE PROJECT IS ANTICIPATED TO REQUIRE ABOUT 6 MONTHS TO CONSTRUCT. FOR PERMITTED WINTER CONSTRUCTION, THE EROSION CONTROL MEASURES ARE SUBSTANTIALLY MORE STRINGENT DUE TO THE COLD TEMPERATURES AND LACK OF WEATHER CONDITIONS WHICH AID IN DRYING THE SUBGRADE SOILS THROUGH EVAPORATION.

IF CONSTRUCTION ACTIVITIES INVOLVING EARTH DISTURBANCE CONTINUE PAST SEPTEMBER 15 OR BEGIN BEFORE APRIL 15, THE FOLLOWING MUST BE INCORPORATED WITH THE EROSION CONTROL PLAN AND IMPLEMENTATION:

1. ENLARGED ACCESS POINTS MUST BE STABILIZED TO PROVIDE FOR SNOW STOCKPILING.
2. LIMITS OF DISTURBANCE SHALL BE REDUCED TO THE EXTENT PRACTICABLE.
3. A SNOW MANAGEMENT PLAN INCLUDING ADEQUATE STORAGE AND CONTROL OF SNOWMELT, REQUIRING CLEARED SNOW TO BE STORED DOWNGRADIENT OF ALL AREAS OF DISTURBANCE SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL.
4. SNOW SHALL NOT BE STORED IN SEDIMENT BASINS OR TO PRECLUDE DRAINAGE STRUCTURES FROM OPERATING AS INTENDED.
5. A MINIMUM 25-FOOT BUFFER MAINTAINED FROM PERIMETER CONTROLS SUCH AS SILT FENCE SHALL BE MAINTAINED ON THE "WORK AREA SIDE" TO ALLOW FOR SNOW CLEARING AND MAINTENANCE.
6. DRAINAGE SYSTEMS INTENDED TO OPERATE DURING THE WINTER SHALL BE CATALOGUED, SHOWN ON A PLAN, AND INSPECTED AFTER EACH SNOW REMOVAL PERIOD TO MAKE SURE THE DRAINAGE STRUCTURES ARE OPEN AND FREE OF SNOW AND ICE DAMS.
7. TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
   - IF NO PRECIPITATION WITHIN 24 HOURS IS FORECAST AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
   - DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN UTILITY TRENCHES.
8. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS: THE CONTRACTOR SHALL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 15. THE CONTRACTOR SHALL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 1. IF THE CONTRACTOR FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 1, THEN THE CONTRACTOR SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.
   a. INSTALL A SOD LINING IN THE DITCH. THE CONTRACTOR SHALL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY SEPTEMBER 15. 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.
   ii. INSTALL A STONE LINING IN THE DITCH. THE CONTRACTOR SHALL LINE THE DITCH WITH STONE RIPRAP BY SEPTEMBER 15. THE CONTRACTOR SHALL 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 CONTRACTOR SHALL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO AS TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.
9. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES: THE CONTRACTOR SHALL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY SEPTEMBER 15. THE CONTRACTOR SHALL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% (106:1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 1, THEN THE CONTRACTOR SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.
   i. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MESH. BY SEPTEMBER 15, THE CONTRACTOR SHALL 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 SHALL 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 SLOPE BY SEPTEMBER 15, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM III OF THIS STANDARD OR WITH STONE RIP RAP AS DESCRIBED IN ITEM IV OF THIS STANDARD.
   ii. STABILIZE THE SLOPE WITH SOD. THE CONTRACTOR SHALL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY SEPTEMBER 15. 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 SLOPE. 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 SLOPE. INSTALLATION IS NOT NECESSARY FOR UNDERNEATH THE RIPRAP.
   iii. STABILIZE THE SLOPE WITH WOOD WASTE COMPOST. THE CONTRACTOR SHALL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY SEPTEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE CONTRACTOR SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE CONTRACTOR SHALL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
   iv. STABILIZE THE SLOPE WITH STONE RIP RAP. THE CONTRACTOR SHALL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY SEPTEMBER 15. THE CONTRACTOR SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.
10. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOIL: BY SEPTEMBER 1, THE CONTRACTOR SHALL 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 SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
   i. STABILIZE THE SOIL WITH TEMPORARY VEGETATION. BY SEPTEMBER 15, THE CONTRACTOR SHALL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1,000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE CONTRACTOR SHALL MONITOR THE 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 SEPTEMBER 15, THEN THE CONTRACTOR SHALL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM III OF THIS STANDARD.
   ii. STABILIZE THE SOIL WITH SOD. THE CONTRACTOR SHALL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY SEPTEMBER 15. PROPER INSTALLATION INCLUDES THE CONTRACTOR 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.
   iii. STABILIZE THE SOIL WITH MULCH. BY SEPTEMBER 15, THE CONTRACTOR SHALL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1,000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE CONTRACTOR SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE CONTRACTOR SHALL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.
   iv. STABILIZE ALL STOCKPILES WITH MULCH WITHIN 24 HOURS.

J. SPECIAL MEASURES FOR SUMMER CONSTRUCTION

THE SUMMER PERIOD IS GENERALLY OPTIMUM FOR CONSTRUCTION IN MAINE, BUT IT IS ALSO THE PERIOD WHEN INTENSE SHORT DURATION STORMS ARE MOST COMMON, MAKING DENUDED AREAS VERY SUSCEPTIBLE TO EROSION, WHEN DUST CONTROL NEEDS TO BE THE MOST STRINGENT, AND WHEN THE POTENTIAL TO ESTABLISH VEGETATION IS OFTEN RESTRICTED BY MOISTURE DEFICIT. DURING THESE PERIODS, THE CONTRACTOR MUST:

1. IMPLEMENT A PROGRAM TO APPLY DUST CONTROL MEASURES ON A DAILY BASIS EXCEPT THOSE DAYS WHERE THE PRECIPITATION EXCEEDS 0.25 INCH. THIS PROGRAM SHALL EXTEND TO AND INCLUDE ADJACENT STREETS USED BY CONSTRUCTION VEHICLES.
2. SPRAY ANY MULCHES WITH WATER AFTER ANCHORING TO DAMPEN THE SOIL AND ENCOURAGE EARLY GROWTH. SPRAYING MAY BE REQUIRED SEVERAL TIMES. TEMPORARY SEED MAY BE REQUIRED UNTIL THE LATE SUMMER SEEDING SEASON.
3. MULCH, COVER, AND MOISTEN STOCKPILES OF FINE-GRAINED MATERIALS, WHICH ARE SUSCEPTIBLE TO EROSION. IN THE SUMMER MONTHS, THE POTENTIAL FOR WIND EROSION IS OF CONCERN, AS WELL AS EROSION FROM THE INTENSE, SHORT-DURATION STORMS, WHICH ARE MORE PREVALENT IN THE SUMMER MONTHS.
4. TAKE ADDITIONAL STEPS NEEDED TO CONTROL FUGITIVE DUST EMISSIONS TO MINIMIZE REDUCTIONS IN VISIBILITY AND THE AIRBORNE DISBURSEMENT OF FINE-GRAINED SOILS. THIS IS PARTICULARLY IMPORTANT ALONG THE ADJACENT STREETS.

THESE MEASURES MAY ALSO BE REQUIRED IN THE SPRING AND FALL DURING THE DRIER PERIODS OF THESE SEASONS.

K. SEDIMENTATION SUMPS

THE SEDIMENT SUMPS SHALL BE SIZED IN ACCORDANCE WITH THE PLAN AND SPECIFICATIONS. THE BOTTOM OF THE SUMPS IS INTENDED TO BE USED FOR INFILTRATION.

DISCHARGE MUST BE THROUGH A SAND FILTER OVER AN UNDERDRAINED OUTLET TO AID IN THE CONTROL OF TURBIDITY LEVELS IN THE DISCHARGE. AN EMERGENCY BYPASS SHALL BE INCLUDED AND SHALL BE CONSTRUCTED OF 6" OF STONE OVERLAYING FILTER FABRIC AND DISCHARGE TO UNDISTURBED TURF.

L. PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION CONTROL PLAN:

1. THE DRAINAGE CONVEYANCE SYSTEMS HAVE BEEN DESIGNED TO INTERCEPT AND CONVEY THE 25-YEAR STORM. IN THE CASE OF OPEN CHANNELS OR SWALES, THIS INCLUDES THE DESIGN OF MEASURES TO RESIST SCOUR OF THE CHANNEL.
2. ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.), WILL BE LOAMED, LIMED, FERTILIZED, MULCHED, AND SEEDED. FABRIC NETTING, ANCHORED WITH STAPLES, SHALL BE PLACED OVER THE MULCH IN AREAS WHERE THE FINISH GRADE SLOPE IS GREATER THAN 10 PERCENT. NATIVE TOPSOIL SHALL BE STOCKPILED AND TEMPORARILY STABILIZED WITH SEED AND MULCH AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.
3. CATCH BASINS SHALL BE PROVIDED WITH SEDIMENT SUMPS FOR ALL OUTLET PIPES THAT ARE 12" IN DIAMETER OR GREATER.
4. PERMANENT SEEDING SHALL BE CONDUCTED ONLY IN APRIL THROUGH MAY AND IN LATE SUMMER UNTIL SEPTEMBER 15.
5. RIP RAP STABILIZATION OF SHORELINE.

M. TIMING AND SEQUENCE OF EROSION/SEDIMENTATION CONTROL MEASURES

THE SITE IS QUITE STABLE AND IS PRINCIPALLY A SEMI-VEGETATED GRAVE

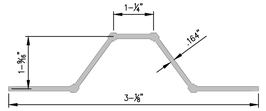
LENGTH: AS REQUIRED

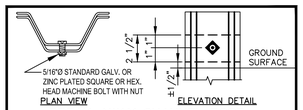
WEIGHT PER LINEAR FOOT: 2.50 LBS. MIN.

HOLES: ⅜" DIAMETER, 1" C-C FULL LENGTH

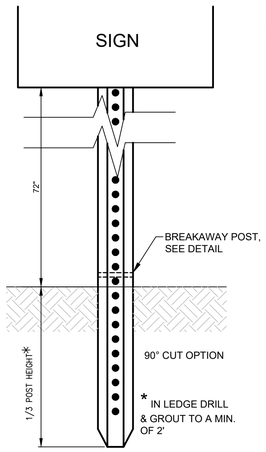
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASSTM A-576 (GRADE 1070 - 1080)

FINISH: SHALL BE PAINTED WITH TWO COATS OF AN APPROVED MEDIUM GREEN BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.





BREAK AWAY CHANNEL POST



(A) U-CHANNEL METAL SIGN POST
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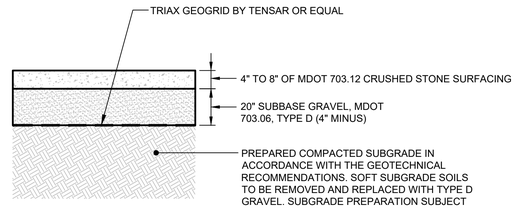
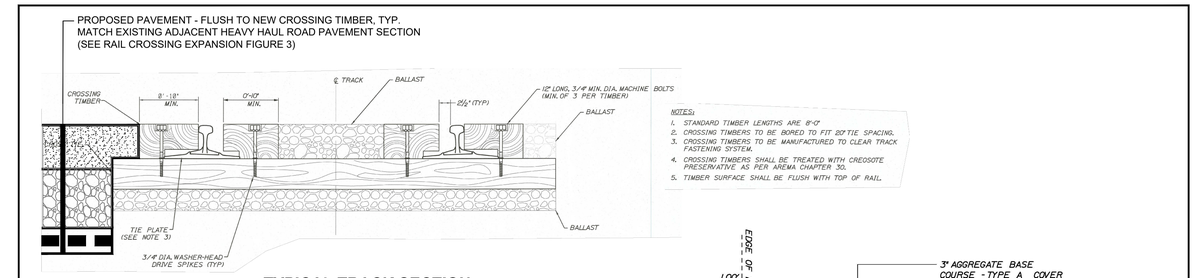


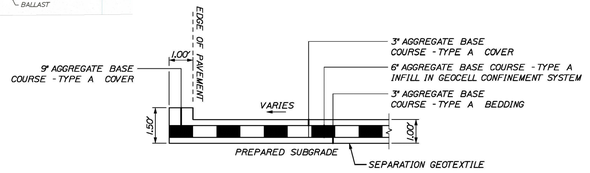
NOTES:

ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND GEOTECHNICAL RECOMMENDATIONS.

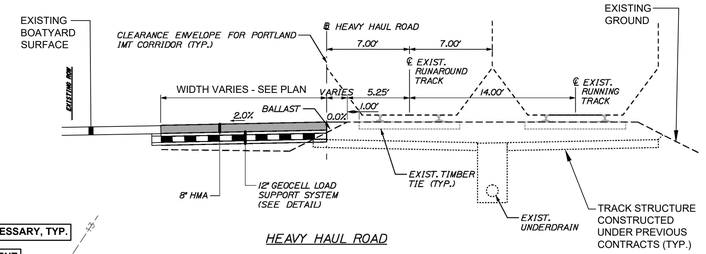
(D) BOAT YARD SURFACE SECTION
N.T.S.



TYPICAL TRACK SECTION
N.T.S.

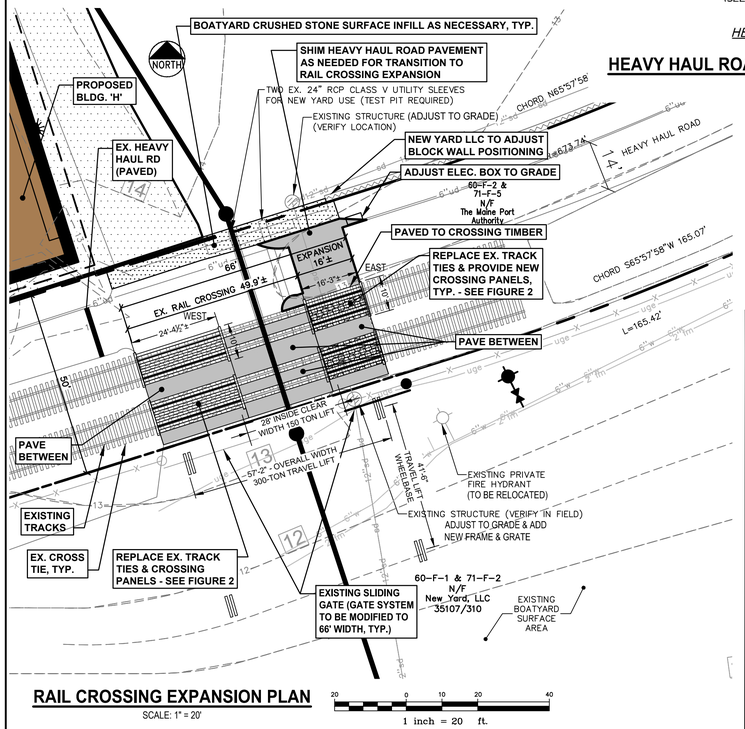


GEOCELL LOAD SUPPORT SYSTEM
REFER TO SPECIAL PROVISION 614
N.T.S.



HEAVY HAUL ROAD

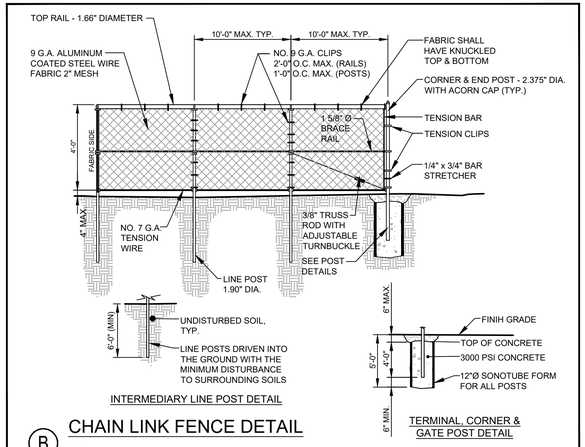
HEAVY HAUL ROAD GEOCELL LOAD SUPPORT SYSTEM DETAILS
N.T.S.



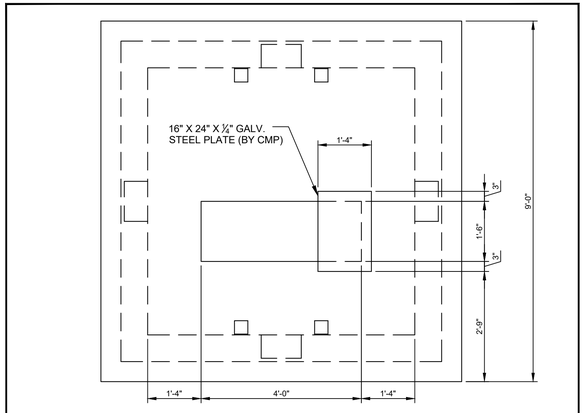
RAIL CROSSING EXPANSION PLAN
SCALE: 1" = 20'

20 0 10 20 40
1 inch = 20 ft.

(F) RAIL CROSSING EXPANSION PLAN & DETAILS
SCALE: AS NOTED



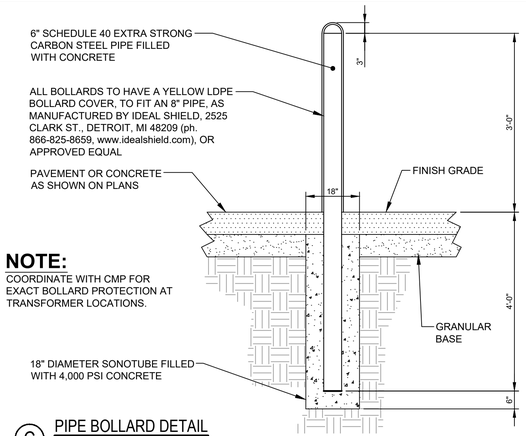
(B) CHAIN LINK FENCE DETAIL
N.T.S.



NOTES:

1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 4,000 PSI @ 28 DAYS WITH STEEL REINFORCEMENT.
2. AS PER CENTRAL MAINE POWER COMPANY SPECIFICATIONS, AS MANUFACTURED BY SUPERIOR CONCRETE OR EQUAL.
3. ONE 8" x 24" KNOCKOUT PROVIDED EACH WALL.
4. FOR 750 - 5000 KVA THREE PHASE TRANSFORMER.
5. FINISH GRADE SHALL BE GRADED TO ALLOW SURFACE WATER TO FLOW AWAY FROM THE PAD.

(E) 9'-0" TRANSFORMER PAD DETAIL
N.T.S.



NOTE:
COORDINATE WITH CMP FOR EXACT BOLLARD PROTECTION AT TRANSFORMER LOCATIONS.

(C) PIPE BOLLARD DETAIL
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE — STEPHEN R. BUSHEY — 09.11.24 — LICENSED PROFESSIONAL ENGINEER

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

Rev.	Date	Revision
5	2024.09.11	REVISED PER CITY STAFF REVIEW
4	2024.08.26	REVISED RR CROSSING DETAILS – ADDED ROOF HT PLAN
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1	2024.04.30	MAJOR SITE PLAN APPLICATION

Design: SRB	Draft: CDD
Checked: SRB	Scale: AS NOTED
File Name: 356105-H-DETAILS.dwg	Date: NOV. 2023
	Job No.: 3561.05

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An LJB Engineering Company
Gorrill Palmer, an LJB Engineering Company
GorrillPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

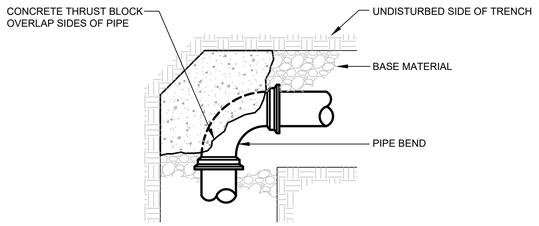
Drawing Name: SITE & MISCELLANEOUS DETAILS

Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine

Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

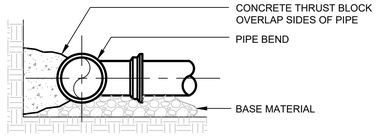
Drawing No. C-7.0

U:\3561.05_Canal Landing Building H\Z – CAD\DWG\356105-H-DETAILS.dwg 9/11/2024 3:22 PM



PLAN

NOTE:
KEEP CONCRETE CLEAR OF
PIPE JOINT, NUTS AND BOLTS



SECTION

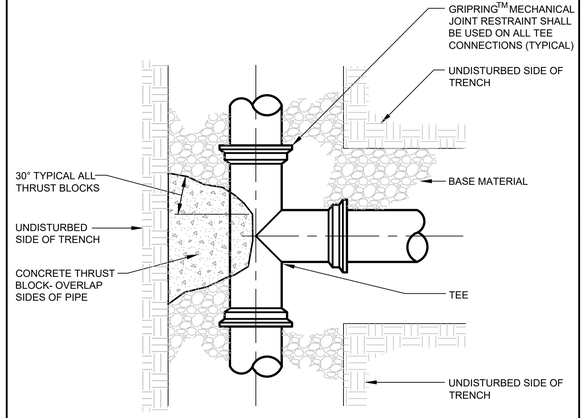
THRUST/RETAINER GLAND SCHEDULE		
¼ BEND	(90°)	USE POURED-IN-PLACE THRUST BLOCK WITH GRIPRING™ MECHANICAL JOINT RESTRAINT
⅛ BEND	(45°)	THRUST BLOCK W/ GRIPRING™
1/16 BEND	(22 ½°)	THRUST BLOCK W/ GRIPRING™
1/32 BEND	(11 ¼°)	THRUST BLOCK W/ GRIPRING™

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

NOTES:

1. THE PORTLAND WATER DISTRICT MAY HAVE INSPECTION FEES AND REQUIRE OBSERVATION OF ALL PIPING INSTALLATION BEFORE BURIAL. REFER TO SPECIFICATIONS.
2. REFER TO SPECIFICATIONS FOR TESTING AND CHLORINATION REQUIREMENTS.
3. ALL HYDRANTS AND VALVES TO BE EPOXY COATED, NUTS & BOLTS TO BE STAINLESS STEEL.
4. SERVICE RODS FOR DOMESTIC SERVICE OR AIR VALVES TO BE STAINLESS STEEL.

(A) TYPICAL THRUST BLOCK PLACEMENT ON BENDS DETAIL
N.T.S.



PLAN

NOTE:
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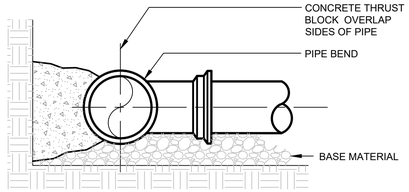
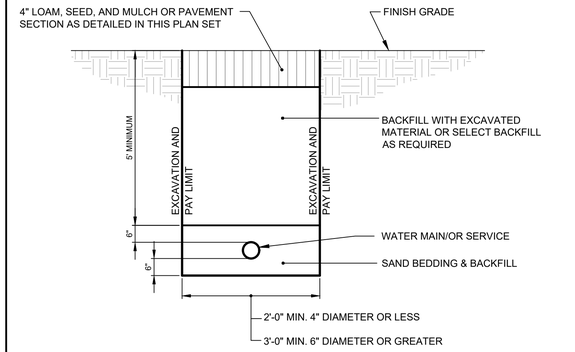


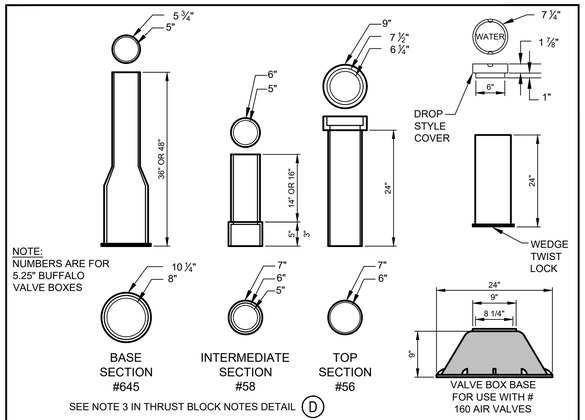
SECTION

(C) TYPICAL THRUST BLOCK PLACEMENT ON TEES DETAIL
N.T.S.



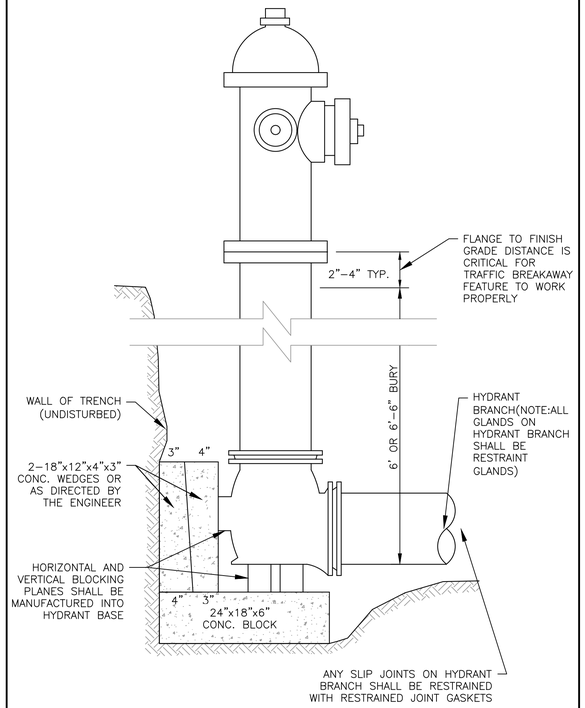
SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

(E) WATER SERVICE TRENCH SECTION
N.T.S.



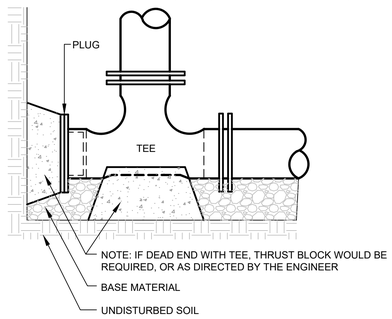
SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

(F) TYPICAL VALVE BOXES DETAIL
N.T.S.



(H) TYPICAL FIRE HYDRANT INSTALLATION DETAIL
N.T.S.

NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS



USE GRIPRINGS™ AT ALL RESTRAINED JOINTS

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL (D)

(B) STANDARD TEE BLOCKING DETAIL
N.T.S.

1. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.
2. ANY MODIFICATION TO THRUST BLOCK SIZING OR PIPE RESTRAINT REVISIONS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO IMPLEMENTATION IN THE FIELD.
3. ANY WORK RELATING TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS.
4. ALL RESTRAINED JOINTS MUST HAVE GRIPRING™.

BEARING SURFACE REQUIRED IN SQUARE FEET

PIPE SIZE	1/32 BEND	1/16 BEND	⅛ BEND	¼ BEND	TEES/CAPS
6" / 8"	5.0	5.0	5.0	6.5	5.0
12"	11.5	11.5	11.5	20.0	22.0

(D) THRUST BLOCK NOTES
N.T.S.

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STATE OF MAINE
STEPHEN R. BUSHEY
09.11.24
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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GorrillPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name: WATER SYSTEM DETAILS

Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine

Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-7.1

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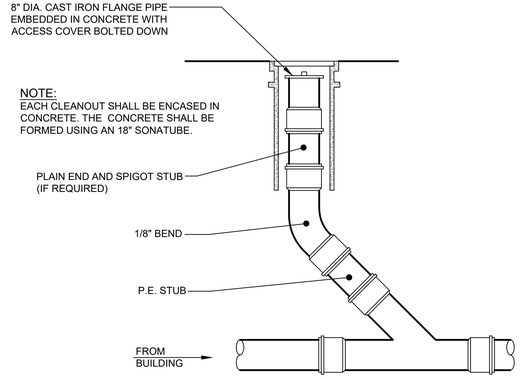
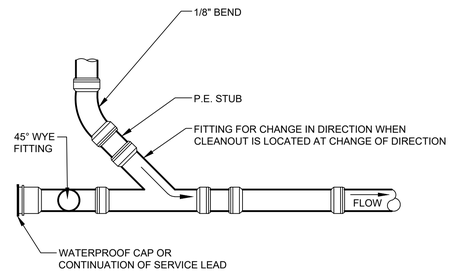
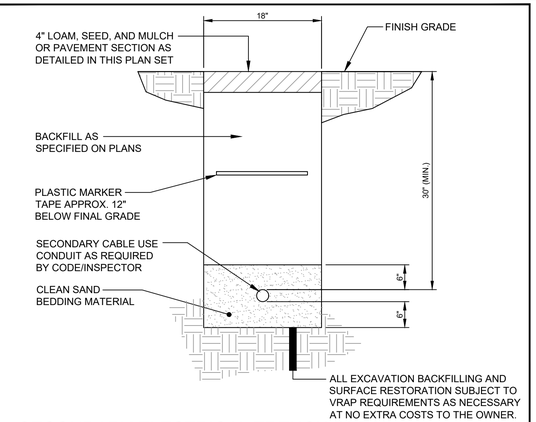


(A) PVC CLEANOUT DETAIL
N.T.S.



ELEVATION VIEW

(C) CLEANOUT DETAIL BELOW WYE FITTING OF CLEANOUT
N.T.S.

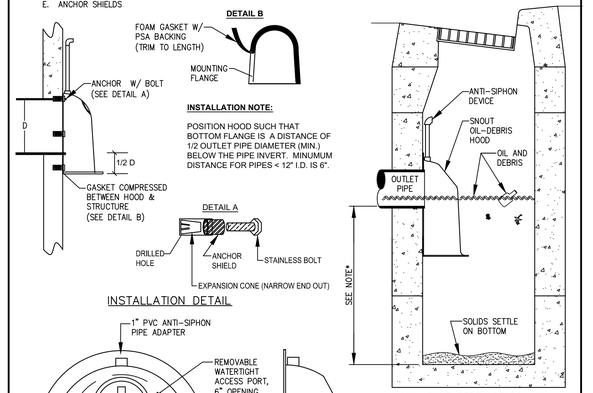


(F) SECONDARY ELECTRICAL TRENCH DETAIL
N.T.S.

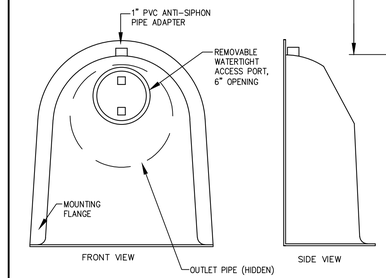
NOTES:
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY BEST MANAGEMENT PRODUCTS, INC. TOLL FREE: (800) 504-8008 OR (888) 354-7585 WEB SITE: www.bmpinc.com OR PRE-APPROVED EQUAL.
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, & AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE IN ACCORDANCE WITH THE FOLLOWING TABLE:

STRUCTURE OUTLET HOLE SIZE	SNOUT SIZE
11.9" O.D. OR LESS	12 F or R
12.0"-17.9" O.D.	18 F or R
18.0"-23.9" O.D.	24 F or R
24.0"-29.9" O.D.	30 F or R
30.0"-47.9" O.D.	48 F
48.0"-95.9" O.D.	96 F

5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT, WHICH INCLUDES:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS



INSTALLATION DETAIL



CONFIGURATION DETAIL

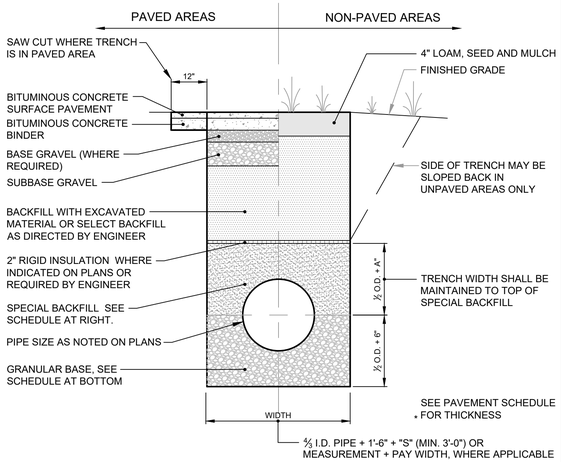
***NOTE-** SUMP DEPTH OF 36" MIN. FOR < OR= 12" DIAM. OUTLET. FOR OUTLETS >OR= 15", DEPTH = 2.5-3X DIAM.

TYPICAL INSTALLATION

SNOUTS INSTALLED ON STORM DRAIN PIPES GREATER THAN 18" DIAMETER ARE REQUIRED TO BE INSTALLED PRIOR TO INSTALLATION OF CATCH BASIN FLAT TOP.

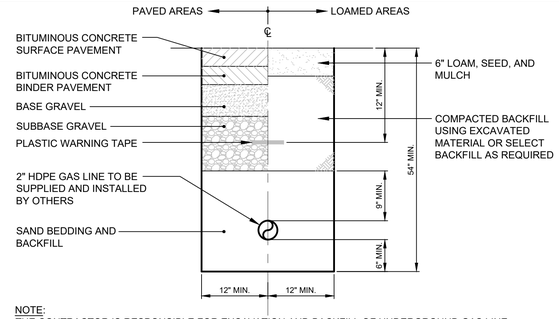
(I) SNOUT OIL-WATER-DEBRIS SEPARATOR DETAIL
N.T.S.

TRENCH SECTION BACKFILL SCHEDULE				
TYPE OF PIPE	GRANULAR BASE MATERIAL	SPECIAL BACKFILL	SPECIAL BACKFILL COVER "A" (IN)	SELECT BACKFILL
CONCRETE	GRANULAR AASHTO M145-49 A-3 OR BETTER	GRANULAR AASHTO M145-49 A-3 OR BETTER	12"	GRANULAR AASHTO M145-49 A-3 OR BETTER
PVC	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER
DUCTILE IRON	GRANULAR AASHTO M145-49 A-3 OR BETTER	GRANULAR AASHTO M145-49 A-3 OR BETTER	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER
UNDER-DRAINS	3/4" CRUSHED STONE	3/4" CRUSHED STONE	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER



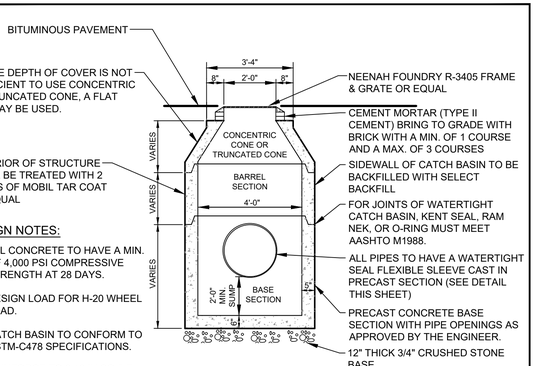
NOTES:
1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. WHERE APPLICABLE, SERVICES TO BE SIMILAR EXCEPT MINIMUM PAY WIDTH IS 2 1/2 FT.

(B) TYPICAL UTILITY PIPE TRENCH SECTION DETAIL
N.T.S.



NOTE:
THE CONTRACTOR IS RESPONSIBLE FOR EXCAVATION AND BACKFILL OF UNDERGROUND GAS LINE TRENCH. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION WITH GAS SUPPLIER FOR THE INSTALLATION OF THE GAS LINE. CONTRACTOR SHALL BE RESPONSIBLE FOR INITIAL REVIEW AND CONSTRUCTION COSTS FOR GAS LINE INSTALLATION; UPON FINAL DETERMINATION OF COSTS BY THE UTILITY COMPANY, CONTRACTOR SHALL BILL OWNER FOR ACTUAL COST. TRENCH REQUIREMENTS ARE SUBJECT TO VRAP AS DETERMINED BY UNITIL REPRESENTATIVE. CONTRACTOR SHALL COORDINATE WITH UNITIL/ENVIRONMENTAL CONSULTANTS FOR PLACEMENT OF SEPARATION LAYERS INCLUDING GEOTEXTILE FABRICS AND CLEAN BACKFILL.

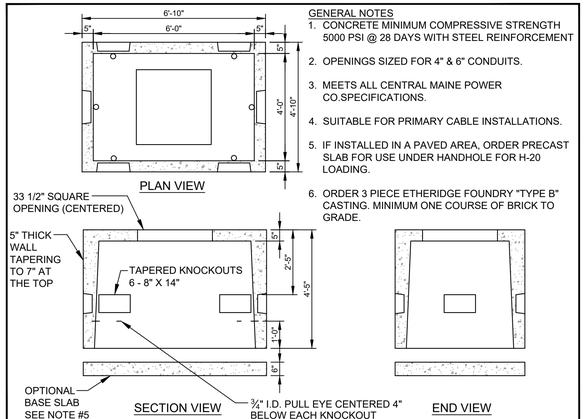
(D) UNDERGROUND GAS LINE TRENCH DETAIL
N.T.S.



DESIGN NOTES:
1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF..

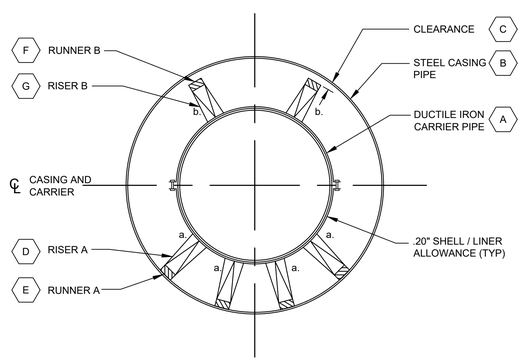
NOTE:
ALL CATCH BASIN OUTLET PIPES TO BE EQUIPPED WITH SNOUT OIL-WATER SEPARATOR (SEE DETAILS)

(G) 4'-0" PRECAST CATCH BASIN DETAIL
N.T.S.



GENERAL NOTES
1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 5000 PSI @ 28 DAYS WITH STEEL REINFORCEMENT
2. OPENINGS SIZED FOR 4" & 6" CONDUITS.
3. MEETS ALL CENTRAL MAINE POWER CO.SPECIFICATIONS.
4. SUITABLE FOR PRIMARY CABLE INSTALLATIONS.
5. IF INSTALLED IN A PAVED AREA, ORDER PRECAST SLAB FOR USE UNDER HANDHOLE FOR H-20 LOADING.
6. ORDER 3 PIECE ETHERIDGE FOUNDRY "TYPE B" CASTING. MINIMUM ONE COURSE OF BRICK TO GRADE.

(E) SPLICE BOX DETAIL
N.T.S.



PIPE SLED INSTALLATION SCHEDULE			
ITEM	DESCRIPTION	CARRIER PIPE SIZE	
		___"	___"
A	CARRIER PIPE OUTSIDE DIA.		
B	CASING PIPE OUTSIDE DIA.		
B	CASING PIPE INSIDE DIA		
C	CLEARANCE		
D	RISER A		
E	RUNNER A		
F	RUNNER B		
G	RISER A		

NOTE:
CONTRACTOR TO SUBMIT SHOP DRAWING ON PIPE SLEDS AND SPACING REQUIREMENTS

(H) CASING PIPE DETAIL
N.T.S.

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STATE OF MAINE — STEPHEN R. BUSHEY — 09.11.24 — LICENSED PROFESSIONAL ENGINEER

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West Commercial Street, Portland, Maine
Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-7.2

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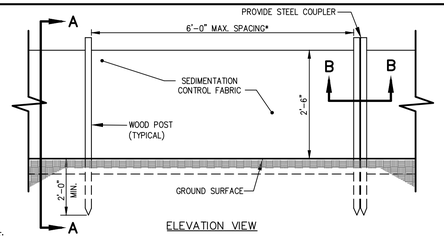
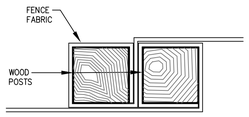
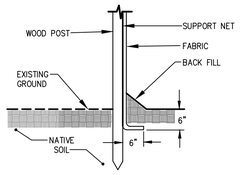


ELEVATION VIEW

*NOTE:
THE SILT FENCE SHOULD HAVE A MAXIMUM STAKING DISTANCE OF 6' UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT A MAXIMUM 14 GAUGE AND WITH A MINIMUM MESH SPACING OF 6".



SECTION B–B



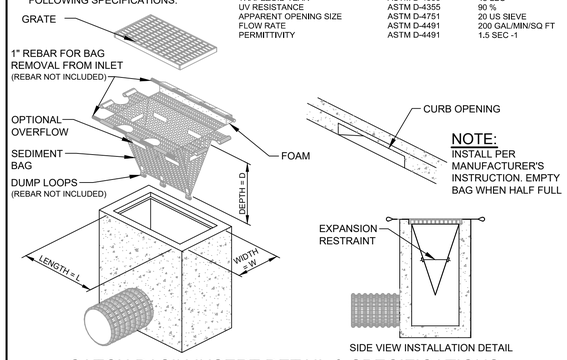
SECTION A–A

NOTE:
BOTTOM OF SILT FENCE MUST BE TOED INTO GROUND OR NO PAYMENT SHALL BE MADE.

(A) SILTATION FENCE DETAIL
N.T.S.

NOTE: THE CATCH BASIN INSERT WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

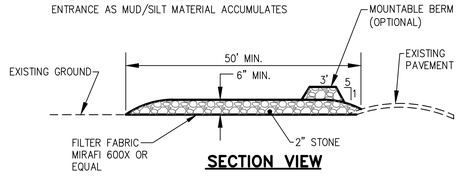


NOTE:
INSTALL PER MANUFACTURER'S INSTRUCTION. EMPTY BAG WHEN HALF FULL

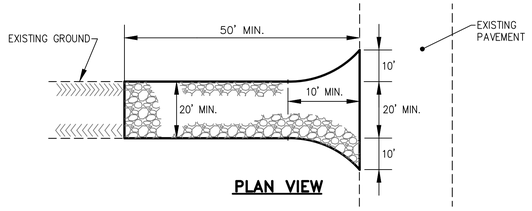
SIDE VIEW INSTALLATION DETAIL

(D) CATCH BASIN INSERT DETAIL & SPECIFICATIONS
N.T.S.

NOTE: CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES



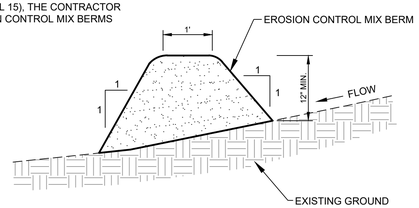
SECTION VIEW



PLAN VIEW

(B) STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

NOTE:
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:

THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).

(C) EROSION CONTROL MIX BERM DETAIL
N.T.S.

SPECIFICATIONS AND REQUIREMENTS FOR DEWATERING

THIS PROJECT WILL REQUIRE THE DISCHARGE OF CONSTRUCTION DEWATERING AND TURBID LADEN RUNOFF, FROM THE REMEDIAL CONSTRUCTION OF THE EXISTING STORMWATER BASIN, TO BE DIRECTED AND DISCHARGED THROUGH A DIRTBAG, WITHIN A DEWATERING SUMP. THIS DESCRIPTION ALSO CONTAINS APPENDED MATERIALS DESCRIBING THE DIRTBAGS REFERRED TO IN THIS NARRATIVE.

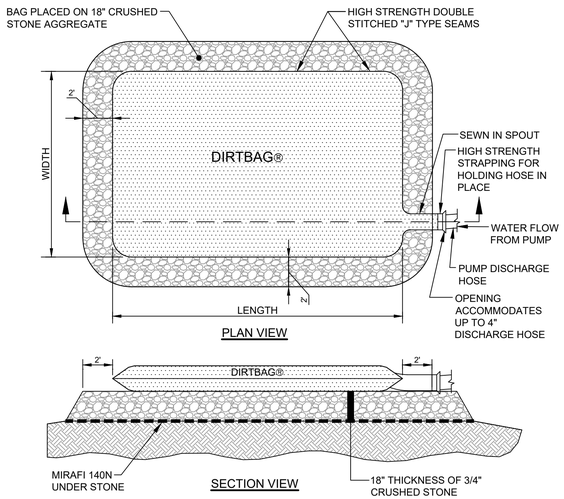
REQUIREMENTS FOR DIRTBAGS:

AT ALL TIMES THERE MUST BE AN UNUSED DIRTBAG AVAILABLE FOR EMERGENCY USE.

AT ALL TIMES (AFTER INITIAL SITE PREPARATION), THE CONTRACTOR SHALL HAVE ONE DIRTBAG ACTIVE OR READY FOR USE. THE DIRTBAGS SHALL BE FIELD LOCATED BY THE CONTRACTOR BUT ARE NOT TO BE INSTALLED WITHIN 100 FEET OF THE WETLANDS. THE DIRTBAG SHALL BE INSTALLED ON A PREPARED SUBGRADE. THIS SUBGRADE SHALL CONSIST OF THE INSTALLATION OF A LAYER OF MIRAFI 140N, AND 18 INCHES OF 3/4 INCH CRUSHED STONE. THE PLAN DIMENSION OF THE CRUSHED STONE PAD SHALL EXCEED THE PLAN AREA OF THE DIRTBAG BY AT LEAST TWO FEET IN ALL DIRECTIONS. THE DIRTBAG SHALL NOT BE INSTALLED ON AN UNDERLYING SLOPE OF GREATER THAN 15 PERCENT.

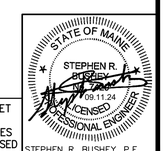
CONSTRUCTION DEWATERING OPERATIONS:

ALL CONSTRUCTION-DEWATERING OPERATIONS ARE THE RESPONSIBILITY OF THE SITE CONTRACTOR. IT SHALL BE THE SITE CONTRACTOR WHO IS RESPONSIBLE FOR SELECTING THE SITE FOR THE DIRTBAG, THE SELECTION OF THE USE OF THE DIRTBAG OR THE SEDIMENTATION BASIN FOR DIRECTING DEWATERING, EXCEPT THAT THE OWNER MAY DIRECT THE SITE CONTRACTOR TO ALTER THE SELECTED OPERATION IF TURBID DISCHARGE TO A WETLAND IS OBSERVED.



(E) DIRTBAG® DETAIL AND SPECIFICATIONS
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.



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

Rev.	Date	Revision
5	2024.09.11	REVISED PER CITY STAFF REVIEW
4	2024.08.26	REVISED RR CROSSING DETAILS – ADDED ROOF HT PLAN
3	2024.08.09	REVISED WATER SERVICES PER PWD COMMENTS
2	2024.07.18	ADDED RAIL CROSSING EXPANSION DETAILS
1	2024.04.30	MAJOR SITE PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2023
Checked: SRB	Scale: AS NOTED	Job No.: 3561.05
File Name: 356105-H-DETAILS.dwg		

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Drawing Name: EROSION AND SEDIMENT CONTROL DETAILS
Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine
Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-7.3

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A. INTRODUCTION

NEW YARD, LLC PROPOSES TO CONSTRUCT, OWN, AND OPERATE BUILDING 'H / I' AS A NEW BOAT MAINTENANCE AND REPAIR FACILITY WITHIN THE EXISTING CANAL LANDING FACILITY.

THE PROPOSED PHASE VII PROJECT INCLUDES BUILDING 'H' TO BE CONSTRUCTED ALONG THE WEST COMMERCIAL STREET FRONT. THE APPLICANT IS CURRENTLY SEEKING PHASE VII APPROVAL FOR THE CONSTRUCTION OF BUILDING 'H / I'.

THE PROJECT INCLUDES SITE DEVELOPMENT ACTIVITIES INVOLVING EARTHWORK, GRADING, BUILDING CONSTRUCTION, UTILITIES AND OVERALL SITE STABILIZATION.

THIS SECTION PRESENTS THE EROSION SEDIMENT CONTROL PLAN DESIGNED FOR THE PROJECT. THE EROSION CONTROL PLANS WILL BE CONTAINED IN THE CONTRACT DOCUMENTS FOR IMPLEMENTATION BY THE CONTRACTOR. SIMILARLY, THE APPLICANT'S OWN WORK FORCE WILL ALSO COMPLY WITH THESE REQUIREMENTS. FUGITIVE DUST EMISSIONS WILL BE CONTROLLED, THE REQUIREMENTS OF THIS EROSION CONTROL PLAN, AND ALL PERMIT REQUIREMENTS WILL BE FULFILLED. WINTER CONSTRUCTION WILL BE REQUIRED. SPECIFIC EROSION CONTROLS STIPULATED BY THE PLAN AND THIS REPORT ARE MINIMUM REQUIREMENTS.

B. EXISTING CONDITIONS

OWEN HASKELL, INC. HAS COMPLETED A TOPOGRAPHIC SURVEY OF THE PROPERTY. THE SITE IS RELATIVELY FLAT WITH THE HIGHEST POINTS ALONG THE WEST COMMERCIAL STREET FRONTAGE, SLOPING TO THE MIDDLE OF THE SITE. SITE ELEVATIONS ALONG WEST COMMERCIAL STREET TREND DOWN FROM WEST TO EAST FROM ELEVATION 23' (NGVD 1929) TO ELEVATION 15'. THE SITE'S LOW AREAS ARE NEAR ELEVATION 9'-12' WHILE MOST OF THE WATERFRONT TOP OF BANK IS NEAR ELEVATION 9'. THE HIGH ANNUAL TIDE LINE (HAT) FOR THE FORE RIVER IS ELEVATION 7.4' AND MEAN LOW WATER IS APPROXIMATELY ELEVATION -4.0'. OWEN HASKELL, INC. HAS ALSO COMPLETED BATHYMETRIC SURVEY DATA COLLECTION AND FOUND WATER DEPTHS WITHIN 50' OF THE LOW WATER LINE TO BE 10' TO 30'. THE FEDERAL CHANNEL IS ALSO REPRESENTED ON THE PROJECT'S DRAWINGS AND IT IS GENERALLY LOCATED 60' TO 120' OFF THE SHOREFRONT. NO ACTIVITIES ARE PROPOSED BEYOND THE FEDERAL CHANNEL LINE.

GENERALLY SPEAKING, THE SITE'S RUNOFF INFILTRATES INTO THE GROUND OR DRAINS DIRECTLY TO THE FORE RIVER VIA OVERLAND FLOW. THERE ARE NO DRAINAGE SYSTEMS ON SITE, ALTHOUGH THERE IS A CLOSED STORM DRAINAGE SYSTEM WITHIN WEST COMMERCIAL STREET.

ACCORDING TO VARIOUS INVESTIGATION DATA, DEPTH TO GROUNDWATER VARIES FROM 3 TO 7 FEET AND THIS LIKELY VARIES WITH TIDAL CONDITIONS IN THE FORE RIVER. GENERALLY SPEAKING, THE GROUNDWATER FLOWS FROM THE NORTHWEST TO THE SOUTHEAST ACROSS THE SITE.

C. PROPOSED PROJECT

THE APPLICANT PROPOSES TO REDEVELOP THE PROPERTY IN A MANNER CONSISTENT WITH THE WPDZ STANDARDS. THE DEVELOPMENT PROGRAM INCLUDES THE FOLLOWING COMPONENTS:

PHASE VI - WILL INCLUDE:

- SITE CLEARING, STABILIZATION AND GENERAL CLEAN UP.
- CONSTRUCTION OF A 45,000 SF BUILDING 'H' FOR BOAT DESIGN, TESTING AND MAINTENANCE OPERATIONS.
- INSTALLATION OF UTILITIES FOR BUILDING USE.
- SITE WORK FOR BOATYARD SURFACES AND UTILITIES.

D. OVERVIEW OF SOIL EROSION AND SEDIMENTATION CONCERNS

THE PRIMARY EMPHASIS OF THE EROSION AND SEDIMENTATION CONTROL PLAN TO BE IMPLEMENTED FOR THIS PROJECT IS AS FOLLOWS:

- **TEMPORARY MEASURES:** PLANNING THE PROJECT TO HAVE EROSION RESISTANT MEASURES IN PLACE BY IMPLEMENTING MEASURES INTENDED TO PREVENT EROSION FROM OCCURRING.
- **PHASING SEQUENCING:** THE PLAN INCLUDES MEASURES TO INTERCEPT AND CONVEY RUNOFF TO TEMPORARY SEDIMENT SUMPS AS THE CONSTRUCTION OF THE PROJECT OCCURS. THE USE OF SMALL TEMPORARY COLLECTION SUMPS WITH A CLEAN SAND FILTER ABOVE AN UNDERDRAINED DISCHARGE IS RECOMMENDED TO SUPPLEMENT THE PRINCIPAL SUMPS TO HELP REDUCE TURBIDITY.
- **USE OF TYPE 1 SETTLING:** INSTALLING SEDIMENT SUMPS AND SWALES EARLY IN THE CONSTRUCTION SEQUENCE TO PROVIDE SECONDARY RELIEF FOR EROSION CONTROL MEASURES WITHIN THE SITE UNTIL LATE IN THE PROJECT WHEN THE SEDIMENTATION AREAS NEED TO BE REMOVED FOR FINAL RESTORATION.
- **RESTABILIZATION:** STABILIZATION OF AREAS DENUDED TO UNDERLYING PARENT MATERIAL MUST OCCUR WITHIN STIPULATED TIME FRAME TO MINIMIZE THE PERIOD OF SOIL EXPOSURE AND STABILIZATION OF DRAINAGE PATHS TO AVOID RILL AND GULLY EROSION.
- **INTERIM ENTRAPMENT:** THE USE OF ON-SITE MEASURES TO CAPTURE SEDIMENT (HAY BALES/SILT FENCE, ETC.) BEFORE IT IS CONVEYED TO SEDIMENT SUMPS.
- **LONG TERM SITE PROTECTION:** THE IMPLEMENTATION OF LONG-TERM MEASURES FOR EROSION/SEDIMENT AND POLLUTANT TREATMENT THROUGH THE CONSTRUCTION OF PERMANENT BOATYARD SURFACES.
- **SPECIAL WINTER CONSTRUCTION MEASURES:** THESE WILL BE REQUIRED FOR WORK BETWEEN SEPTEMBER 15 AND APRIL 15.

E. DESCRIPTION AND LOCATION OF LIMITS OF ALL PROPOSED EARTH MOVEMENTS

THE CONSTRUCTION OF THE PROJECT WILL DISTURB ABOUT 1.5 ACRES OF LAND. THE LIMIT OF DISTURBANCE IS GENERALLY COINCIDENT WITH THE LIMIT OF GRADING.

THE EARTH MOVING WILL INCLUDE TRENCHING FOR UNDERGROUND UTILITIES, EARTHWORK TO RESHAPE THE SITE, EARTHWORK TO PREPARE AND SHAPE THE PREPARED BOATYARD SURFACE, AND EXCAVATION ATTENDANT WITH THE BUILDING AND EXCAVATION AND BORROW FOR THE PROJECT IMPROVEMENTS.

F. CRITICAL AREAS

CRITICAL RESOURCE AREAS INCLUDE THE FORE RIVER AND ASSOCIATED SHORELINE STABILIZATION. NO SPECIAL SPECIES HABITATS HAVE BEEN IDENTIFIED. IT IS NOTED THAT THE STORMWATER SYSTEM CONSISTING OF A INFILTRATION THROUGH THE PROPOSED PREPARED BOATYARD STONE SURFACE SHALL NOT BE ACTIVATED UNTIL THE TRIBUTARY AREAS HAVE BEEN STABILIZED.

G. EROSION/SEDIMENTATION CONTROL DEVICES

AS PART OF THE SITE DEVELOPMENT, THE CONTRACTOR WILL BE OBLIGATED TO IMPLEMENT THE FOLLOWING EROSION AND SEDIMENT CONTROL DEVICES. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED WITHIN THIS REPORT. FOR FURTHER REFERENCE ON THESE DEVICES, SEE THE *MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION EROSION AND SEDIMENT CONTROL BMPS MANUAL (MARCH, 2003).*

1. SILTATION BARRIER SHALL BE INSTALLED DOWN SLOPE OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS REVEGETATED. THE SILT BARRIER SHALL BE INSTALLED PER THE DETAIL PROVIDED IN THE PLAN SET AND INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THE CONTRACTOR SHALL MAKE REPAIRS IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE BARRIER LINE. IF SUCH EROSION IS OBSERVED, THE CONTRACTOR SHALL TAKE PROACTIVE ACTION TO IDENTIFY THE CAUSE OF THE EROSION AND TAKE ACTION TO AVOID ITS REOCCURRENCE. TYPICALLY, THIS REQUIRES THAT STABILIZATION MEASURES BE UNDERTAKEN. PROPER PLACEMENT OF STAKES AND KEYING THE BOTTOM OF THE SILT BARRIER FABRIC INTO THE GROUND IS CRITICAL TO THE BARRIER'S EFFECTIVENESS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE BARRIER, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM AND MEASURES TAKEN TO AVOID THE CONCENTRATION OF FLOWS NOT DIRECTED TO THE SILT BARRIER.

H. TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES

THE FOLLOWING ARE PLANNED AS TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION:

1. CRUSHED STONE-STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ANY CONSTRUCTION ACCESS POINTS FROM ADJACENT STREETS OR THE EXISTING PARKING LOT. THE LOCATIONS OF THE CONSTRUCTION ENTRANCES SHOWN ON THE DRAWINGS SHOULD BE CONSIDERED ILLUSTRATIVE AND WILL NEED TO BE ADJUSTED AS APPROPRIATE AND LOCATIVE AT ANY AREA WHERE THERE IS THE POTENTIAL FOR TRACKING OF MUD AND DEBRIS ONTO EXISTING ROADS OR STREETS. STONE STABILIZED CONSTRUCTION ENTRANCES WILL REQUIRE THE STONE TO BE REMOVED AND REPLACED, AS IT BECOMES COVERED OR FILLED WITH MUD AND MATERIAL TRACKED BY VEHICLES EXITING THE SITE.
2. CONDITION 1 AND 2 SILT BARRIER SHALL BE INSTALLED ALONG THE DOWNGRADIENT SIDE OF THE PROPOSED IMPROVEMENT AREAS. THE SILT BARRIER WILL REMAIN IN PLACE AND PROPERLY MAINTAINED UNTIL THE SITE IS ACCEPTABLY RE-VEGETATED. CONDITION 3 SILT BARRIER IS TO BE USED ALONG THE CONTOUR OF SIGNIFICANT FILL SLOPES AS ILLUSTRATED ON THE EROSION CONTROL PLAN SITE DRAWINGS. SILT BARRIER NEEDS TO BE CHECKED TO INSURE THE BOTTOM IS PROPERLY KEYED IN AND INSPECTED AFTER SIGNIFICANT RAINS. WOOD CHIPS OR EROSION CONTROL MIX IS OFTEN USED ON THE CONSTRUCTION SIDE OF THE SILT BARRIER TO PROVIDE AN EXTRA MARGIN OF SAFETY AND SECURITY FOR THE SILT BARRIER. THIS PRACTICE IS ENCOURAGED, PROVIDED THE CHIPS ARE REMOVED WHEN THE BARRIER IS REMOVED.
3. DIRTBAGS™ SHALL BE USED IN ACCORDANCE WITH THE DETAILS IN THE PLAN SET. THE PURPOSE OF THE DIRTBAGS™ IS TO RECEIVE ANY WATER PUMPED FROM EXCAVATIONS DURING CONSTRUCTION. A DIRTBAG™ SHALL BE INSTALLED AND PREPARED FOR OPERATION PRIOR TO ANY TRENCHING ON SITE. WHEN DIRTBAGS™ ARE OBSERVED TO BE AT 50% CAPACITY, THEY SHALL BE CLEANED OR REPLACED. STONE AND FILTER SAND UNDER THE DIRTBAG™ SHALL BE REMOVED AND REPLACED CONCURRENTLY WITH THE REPLACEMENT OF THE DIRTBAG™.
4. TEMPORARY STOCKPILES OF COMMON EXCAVATION WILL BE PROTECTED AS FOLLOWS:
   a) TEMPORARY STOCKPILES SHALL NOT BE LOCATED AT LEAST 50 FEET UPGRADIENT OF THE PERIMETER SILT BARRIER.
   b) INACTIVE STOCKPILES SHALL BE STABILIZED WITHIN 5 DAYS BY EITHER TEMPORARILY SEEDING THE STOCKPILE WITH A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH. IF NECESSARY, MESH SHALL BE INSTALLED TO PREVENT WIND FROM REMOVING THE MULCH.
5. ALL DENUDED AREAS EXCEPT GRAVEL AREAS SHALL RECEIVE MULCH, EROSION CONTROL MESH FABRIC, OR OTHER APPROVED TEMPORARY EROSION SEDIMENT MEASURE WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOIL OR BEFORE A PREDICTED RAIN EVENT OF >1/2" UNLESS PERMANENT MEASURES ARE INSTALLED.
6. ALL SOILS DISTURBED BETWEEN SEPTEMBER 15 AND APRIL 15 WILL BE COVERED WITH MULCH WITHIN 5 DAYS OF DISTURBANCE, PRIOR TO ANY PREDICTED STORM EVENT OF THE EQUIVALENT OF ½" OF RAINFALL IN A 24-HOUR PERIOD, OR PRIOR TO ANY WORK SHUTDOWN LASTING MORE THAN 35 HOURS (INCLUDING WEEKENDS AND HOLIDAYS). THE MULCH RATE SHALL BE DOUBLE THE NORMAL RATE.

   FOR WORK THAT IS CONDUCTED BETWEEN SEPTEMBER 15 AND APRIL 15 OF ANY CALENDAR YEAR, ALL DENUDED AREAS WILL BE COVERED WITH HAY MULCH, APPLIED AT TWICE THE NORMAL APPLICATION RATE, AND (IN AREAS OVER 10% GRADE) ANCHORED WITH A FABRIC NETTING. THE TIME PERIOD FOR APPLYING MULCH SHALL BE LIMITED TO 5 DAYS FOR ALL AREAS, OR IMMEDIATELY IN ADVANCE OF A PREDICTED RAINFALL EVENT.
7. STONE CHECK DAMS, SILT LOGS, OR HAY BALE BARRIERS WILL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS DURING CONSTRUCTION AND EARTHWORK OPERATIONS.
8. SILT FENCING WITH A MAXIMUM STAKE SPACING OF 6 FEET SHOULD BE USED, UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT OF MINIMUM 14 GAUGE AND WITH A MAXIMUM MESH SPACING OF 6 INCHES, IN WHICH CASE STAKES MAY BE SPACED A MAXIMUM OF 10 FEET APART. THE BOTTOM OF THE FENCE SHOULD BE PROPERLY ANCHORED A MINIMUM OF 6" PER THE PLAN DETAIL AND BACKFILLED. ANY SILT FENCE IDENTIFIED BY THE OWNER OR REVIEWING AGENCIES AS NOT BEING PROPERLY INSTALLED DURING CONSTRUCTION SHALL BE IMMEDIATELY REPAIRED IN ACCORDANCE WITH THE INSTALLATION DETAILS.
9. STORM DRAIN CATCH BASIN INLET PROTECTION SHALL BE PROVIDED THROUGH THE USE OF STONE SEDIMENT BARRIERS OR A PREMANUFACTURED SILTSACK™. STONE SEDIMENT BARRIER INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE BARRIERS OR SILTSACKS™ SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRS MADE AS NECESSARY, INCLUDING THE REMOVAL OF SEDIMENT. SEDIMENT SHALL BE REMOVED AND THE BARRIER OR SILTSACK™ RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE BARRIER. SEDIMENT SHALL BE REMOVED FROM SILTSACKS™ AS NECESSARY. INLET PROTECTION SHALL BE REMOVED WHEN THE TRIBUTARY DRAINAGE AREA HAS BEEN STABILIZED.
10. ALL SLOPES STEEPER THAN 4:1 SHALL RECEIVE EROSION CONTROL MESH.
11. SLOPES STEEPER THAN 3:1 SHALL RECEIVE REINFORCED TURF.
12. CONDITION 3 SILT BARRIERS SHALL BE INSTALLED AS CONSTRUCTION PROGRESSES.
13. AREAS OF VISIBLE EROSION AND THE TEMPORARY SEDIMENT SUMPS SHALL BE STABILIZED WITH CRUSHED STONE. THE SIZE OF THE STONE SHALL BE DETERMINED BY THE CONTRACTOR'S DESIGNATED REPRESENTATIVE IN CONSULTATION WITH THE OWNER.
14. ALL CATCH BASINS, WHICH RECEIVE RUNOFF FROM CURRENT OR PAVED AREAS BEING CONSTRUCTED AS PART OF THIS PROJECT, SHALL HAVE A SORBENT BOOM INSTALLED PRIOR TO PLACING THE BASIN IN OPERATION INSTALLING BINDER PAVEMENT, OR OVERLAYS. THESE SORBENT BOOMS SHALL BE CHECKED WEEKLY FOR THE THREE WEEKS FOLLOWING PAVING AND REPLACED AS NECESSARY WITH THE BOOMS DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
15. ANY FLOW FROM THE SITE THAT IS CONCENTRATED MUST BE DIRECTED TO A SUMP WITH SAND FILTER AND UNDERDRAINED DISCHARGE.
16. CONCENTRATED RUNOFF SHALL BE DIVERTED AWAY FROM SLOPES OF OVER 10 PERCENT UNLESS THE SLOPE IS ARMORED WITH STONE.
17. UNDERGROUND UTILITIES MUST BE INSTALLED IN COMPLIANCE WITH THE FOLLOWING STANDARDS AND OTHER REQUIREMENTS OF THIS EROSION CONTROL PLAN:

- NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME;
- EXCAVATED MATERIALS SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES;
- DEWATERING OF THE TRENCH SHALL BE PUMPED THROUGH A DIRTBAG™ AND APPROPRIATE SEDIMENT CONTROL FACILITIES TO AVOID A TURBID DISCHARGE; AND
- STABILIZATION SHALL OCCUR AS SOON AS PRACTICABLE.

18. RICE STRAW WATTLES SHALL BE USED TO CONTROL LOCALIZED EROSION.
19. MAINTENANCE OF THE EROSION CONTROL, SEDIMENTATION FACILITIES, AND CONTROL OF FUGITIVE DUST MUST OCCUR UNTIL THE SITE IS STABILIZED WITH PERMANENT EROSION CONTROL MEASURES.

I. STANDARDS FOR STABILIZING SITES FOR THE WINTER

THE CONSTRUCTION OF THE PROJECT MAY REQUIRE WINTER CONSTRUCTION. THE PROJECT IS ANTICIPATED TO REQUIRE ABOUT 6 MONTHS TO CONSTRUCT. FOR PERMITTED WINTER CONSTRUCTION, THE EROSION CONTROL MEASURES ARE SUBSTANTIALLY MORE STRINGENT DUE TO THE COLD TEMPERATURES AND LACK OF WEATHER CONDITIONS WHICH AID IN DRYING THE SUBGRADE SOILS THROUGH EVAPORATION.

IF CONSTRUCTION ACTIVITIES INVOLVING EARTH DISTURBANCE CONTINUE PAST SEPTEMBER 15 OR BEGIN BEFORE APRIL 15, THE FOLLOWING MUST BE INCORPORATED WITH THE EROSION CONTROL PLAN AND IMPLEMENTATION:

1. ENLARGED ACCESS POINTS MUST BE STABILIZED TO PROVIDE FOR SNOW STOCKPILING.
2. LIMITS OF DISTURBANCE SHALL BE REDUCED TO THE EXTENT PRACTICABLE.
3. A SNOW MANAGEMENT PLAN INCLUDING ADEQUATE STORAGE AND CONTROL OF SNOWMELT, REQUIRING CLEARED SNOW TO BE STORED DOWNGRADIENT OF ALL AREAS OF DISTURBANCE SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL.
4. SNOW SHALL NOT BE STORED IN SEDIMENT BASINS OR TO PRECLUDE DRAINAGE STRUCTURES FROM OPERATING AS INTENDED.
5. A MINIMUM 25-FOOT BUFFER MAINTAINED FROM PERIMETER CONTROLS SUCH AS SILT FENCE SHALL BE MAINTAINED ON THE "WORK AREA SIDE" TO ALLOW FOR SNOW CLEARING AND MAINTENANCE.
6. DRAINAGE SYSTEMS INTENDED TO OPERATE DURING THE WINTER SHALL BE CATALOGUED, SHOWN ON A PLAN, AND INSPECTED AFTER EACH SNOW REMOVAL PERIOD TO MAKE SURE THE DRAINAGE STRUCTURES ARE OPEN AND FREE OF SNOW AND ICE DAMS.
7. TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
   - IF NO PRECIPITATION WITHIN 24 HOURS IS FORECAST AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
   - DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN UTILITY TRENCHES.
8. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS: THE CONTRACTOR SHALL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 15. THE CONTRACTOR SHALL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 1. IF THE CONTRACTOR FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 1, THEN THE CONTRACTOR SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.
   a. INSTALL A SOD LINING IN THE DITCH. THE CONTRACTOR SHALL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY SEPTEMBER 15. 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.
   ii. INSTALL A STONE LINING IN THE DITCH. THE CONTRACTOR SHALL LINE THE DITCH WITH STONE RIPRAP BY SEPTEMBER 15. THE CONTRACTOR SHALL 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 CONTRACTOR SHALL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO AS TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.
9. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES: THE CONTRACTOR SHALL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY SEPTEMBER 15. THE CONTRACTOR SHALL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% (106:1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 1, THEN THE CONTRACTOR SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.
   i. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MESH. BY SEPTEMBER 15, THE CONTRACTOR SHALL 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 SHALL 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 SLOPE BY SEPTEMBER 15, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM III OF THIS STANDARD OR WITH STONE RIP RAP AS DESCRIBED IN ITEM IV OF THIS STANDARD.
   ii. STABILIZE THE SLOPE WITH SOD. THE CONTRACTOR SHALL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY SEPTEMBER 15. 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 33% (3H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
   iii. STABILIZE THE SLOPE WITH WOOD WASTE COMPOST. THE CONTRACTOR SHALL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY SEPTEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE CONTRACTOR SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE CONTRACTOR SHALL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
   iv. STABILIZE THE SLOPE WITH STONE RIP RAP. THE CONTRACTOR SHALL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY SEPTEMBER 15. THE CONTRACTOR SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.
10. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOIL: BY SEPTEMBER 1, THE CONTRACTOR SHALL 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 SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
   i. STABILIZE THE SOIL WITH TEMPORARY VEGETATION. BY SEPTEMBER 15, THE CONTRACTOR SHALL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1,000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE CONTRACTOR SHALL MONITOR THE 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 SEPTEMBER 15, THEN THE CONTRACTOR SHALL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM III OF THIS STANDARD.
   ii. STABILIZE THE SOIL WITH SOD. THE CONTRACTOR SHALL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY SEPTEMBER 15. PROPER INSTALLATION INCLUDES THE CONTRACTOR 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.
   iii. STABILIZE THE SOIL WITH MULCH. BY SEPTEMBER 15, THE CONTRACTOR SHALL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1,000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE CONTRACTOR SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE CONTRACTOR SHALL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

   iv. STABILIZE ALL STOCKPILES WITH MULCH WITHIN 24 HOURS.

J. SPECIAL MEASURES FOR SUMMER CONSTRUCTION

THE SUMMER PERIOD IS GENERALLY OPTIMUM FOR CONSTRUCTION IN MAINE, BUT IT IS ALSO THE PERIOD WHEN INTENSE SHORT DURATION STORMS ARE MOST COMMON, MAKING DENUDED AREAS VERY SUSCEPTIBLE TO EROSION, WHEN DUST CONTROL NEEDS TO BE THE MOST STRINGENT, AND WHEN THE POTENTIAL TO ESTABLISH VEGETATION IS OFTEN RESTRICTED BY MOISTURE DEFICIT. DURING THESE PERIODS, THE CONTRACTOR MUST:

1. IMPLEMENT A PROGRAM TO APPLY DUST CONTROL MEASURES ON A DAILY BASIS EXCEPT THOSE DAYS WHERE THE PRECIPITATION EXCEEDS 0.25 INCH. THIS PROGRAM SHALL EXTEND TO AND INCLUDE ADJACENT STREETS USED BY CONSTRUCTION VEHICLES.
2. SPRAY ANY MULCHES WITH WATER AFTER ANCHORING TO DAMPEN THE SOIL AND ENCOURAGE EARLY GROWTH. SPRAYING MAY BE REQUIRED SEVERAL TIMES. TEMPORARY SEED MAY BE REQUIRED UNTIL THE LATE SUMMER SEEDING SEASON.
3. MULCH, COVER, AND MOISTEN STOCKPILES OF FINE-GRAINED MATERIALS, WHICH ARE SUSCEPTIBLE TO EROSION. IN THE SUMMER MONTHS, THE POTENTIAL FOR WIND EROSION IS OF CONCERN, AS WELL AS EROSION FROM THE INTENSE, SHORT-DURATION STORMS, WHICH ARE MORE PREVALENT IN THE SUMMER MONTHS.
4. TAKE ADDITIONAL STEPS NEEDED TO CONTROL FUGITIVE DUST EMISSIONS TO MINIMIZE REDUCTIONS IN VISIBILITY AND THE AIRBORNE DISBURSEMENT OF FINE-GRAINED SOILS. THIS IS PARTICULARLY IMPORTANT ALONG THE ADJACENT STREETS.

THESE MEASURES MAY ALSO BE REQUIRED IN THE SPRING AND FALL DURING THE DRIER PERIODS OF THESE SEASONS.

K. SEDIMENTATION SUMPS

THE SEDIMENT SUMPS SHALL BE SIZED IN ACCORDANCE WITH THE PLAN AND SPECIFICATIONS. THE BOTTOM OF THE SUMPS IS INTENDED TO BE USED FOR INFILTRATION.

DISCHARGE MUST BE THROUGH A SAND FILTER OVER AN UNDERDRAINED OUTLET TO AID IN THE CONTROL OF TURBIDITY LEVELS IN THE DISCHARGE. AN EMERGENCY BYPASS SHALL BE INCLUDED AND SHALL BE CONSTRUCTED OF 6" OF STONE OVERLAYING FILTER FABRIC AND DISCHARGE TO UNDISTURBED TURF.

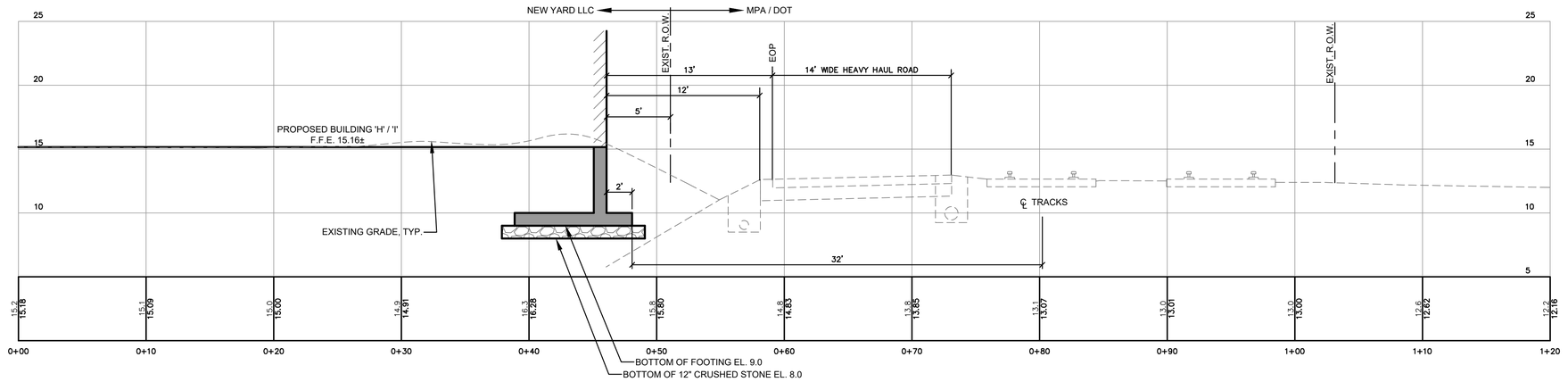
L. PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION CONTROL PLAN:

1. THE DRAINAGE CONVEYANCE SYSTEMS HAVE BEEN DESIGNED TO INTERCEPT AND CONVEY THE 25-YEAR STORM. IN THE CASE OF OPEN CHANNELS OR SWALES, THIS INCLUDES THE DESIGN OF MEASURES TO RESIST SCOUR OF THE CHANNEL.
2. ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.), WILL BE LOAMED, LIMED, FERTILIZED, MULCHED, AND SEEDED. FABRIC NETTING, ANCHORED WITH STAPLES, SHALL BE PLACED OVER THE MULCH IN AREAS WHERE THE FINISH GRADE SLOPE IS GREATER THAN 10 PERCENT. NATIVE TOPSOIL SHALL BE STOCKPILED AND TEMPORARILY STABILIZED WITH SEED AND MULCH AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.
3. CATCH BASINS SHALL BE PROVIDED WITH SEDIMENT SUMPS FOR ALL OUTLET PIPES THAT ARE 12" IN DIAMETER OR GREATER.
4. PERMANENT SEEDING SHALL BE CONDUCTED ONLY IN APRIL THROUGH MAY AND IN LATE SUMMER UNTIL SEPTEMBER 15.
5. RIP RAP STABILIZATION OF SHORELINE.

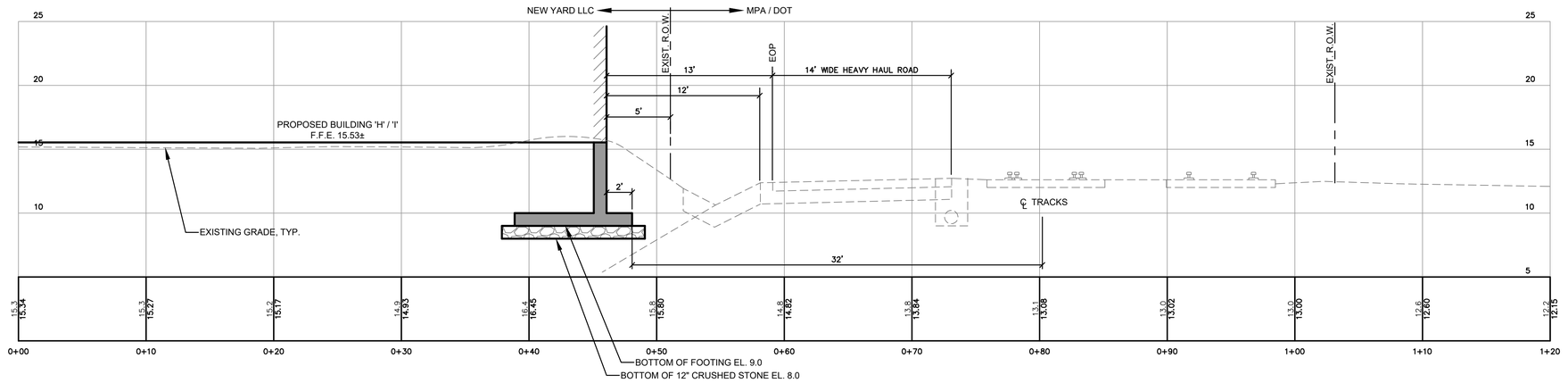
M. TIMING AND SEQUENCE OF EROSION/SEDIMENTATION CONTROL MEASURES

THE SITE IS QUITE STABLE AND IS PRINCIPALLY A SEMI-VEGETATED GRAVEL SURFACE. THESE CONDITIONS WILL REDUCE THE EXTENT OF EROSION CONTROLS NEEDED COMPARED TO PROJECTS WITH FINE-GRAINED SOILS.



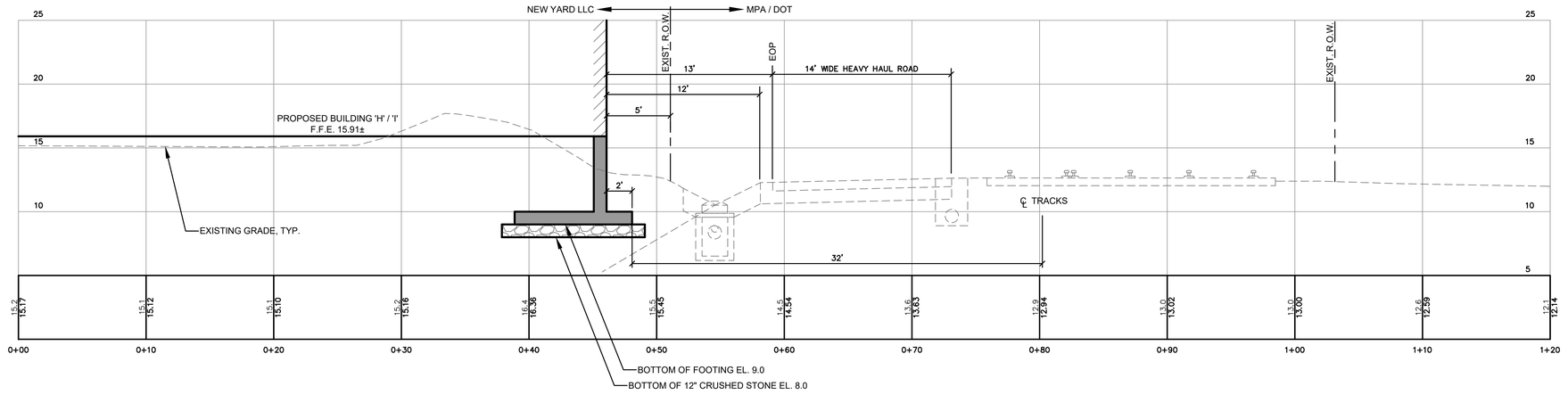
SECTION C-C (MDOT STA. 27+00.00)

SCALE: 1" = 5'



SECTION B-B (MDOT STA. 26+50.00)

SCALE: 1" = 5'



SECTION A-A (MDOT STA. 26+00.00)

SCALE: 1" = 5'

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STATE OF MAINE
STEPHEN R. BUSHEY
09.11.24
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
5	2024.09.11	REVISED PER CITY STAFF REVIEW
4	2024.08.26	REVISED RR CROSSING DETAILS – ADDED ROOF HT PLAN
3	2024.08.09	REVISED WATER SERVICES PER PWD COMMENTS
2	2024.07.18	ADDED RAIL CROSSING EXPANSION DETAILS
1	2024.04.30	MAJOR SITE PLAN APPLICATION

Design: SRB	Draft: CDD	Date: NOV. 2023
Checked: SRB	Scale: AS NOTED	Job No.: 3561.05
File Name: 356105-H-GRADING EROSION.dwg		

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GORRILL PALMER
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Gorrill Palmer, an LJB Engineering Company
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300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name: SITE CROSS SECTIONS

Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine

Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-8.0

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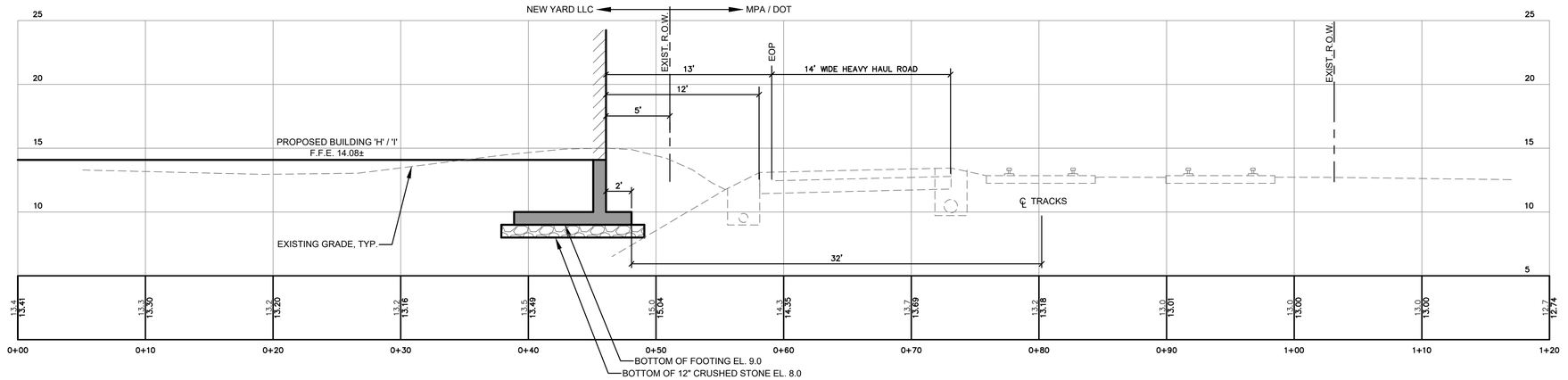

SECTION F-F (MDOT STA. 28+50.00)

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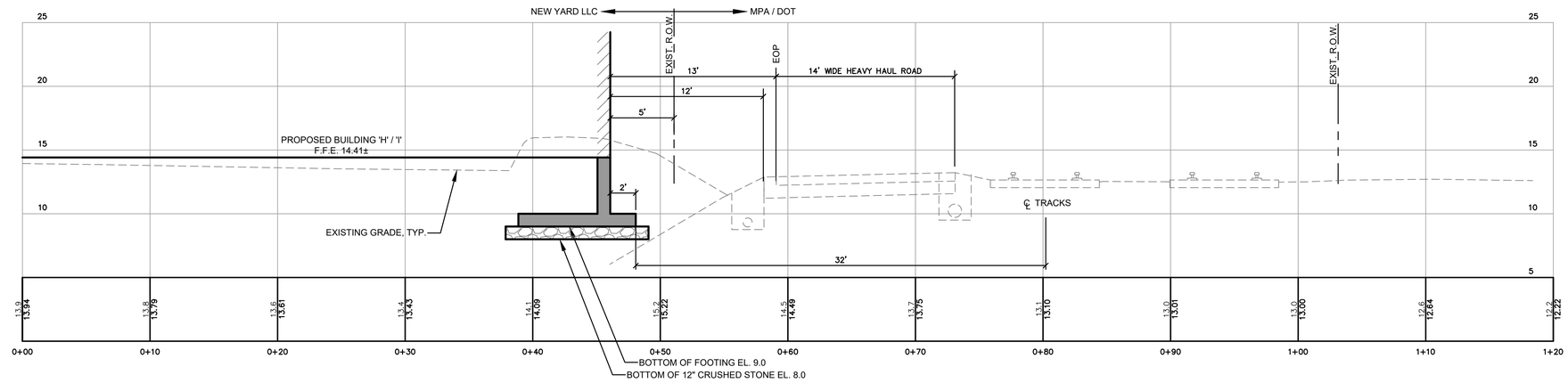

SECTION E-E (MDOT STA. 28+00.00)

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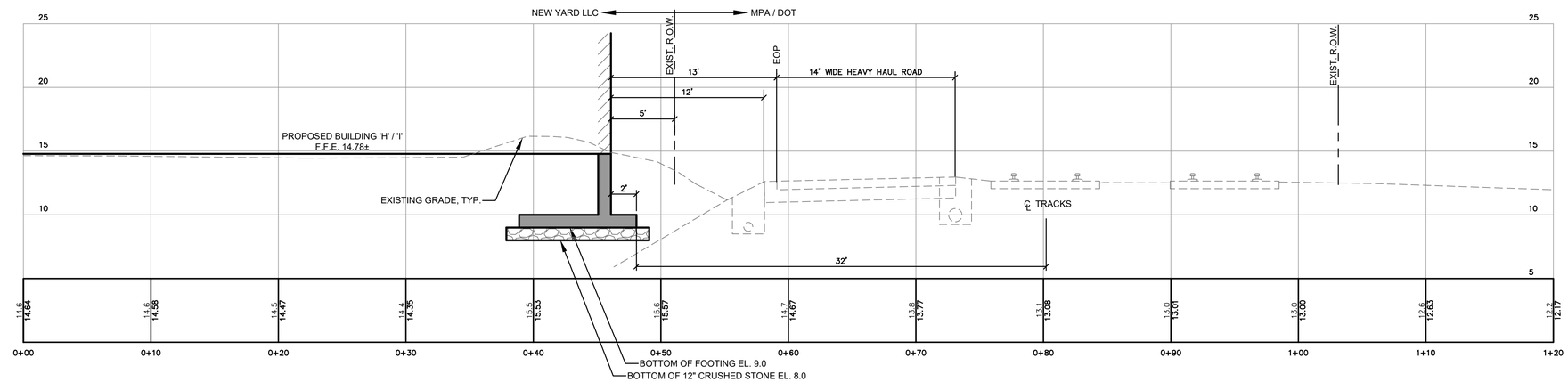

SECTION D-D (MDOT STA. 27+50.00)

SCALE: 1" = 5'

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
09.11.24
LICENSED PROFESSIONAL ENGINEER

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

Rev.	Date	Revision

Rev.	Date	Revision
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Design: SRB	Draft: CDD	Date: NOV. 2023
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GORRILL PALMER
An LJB Engineering Company

Gorrill Palmer, an LJB Engineering Company
GorrillPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name: SITE CROSS SECTIONS

Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine

Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-8.1

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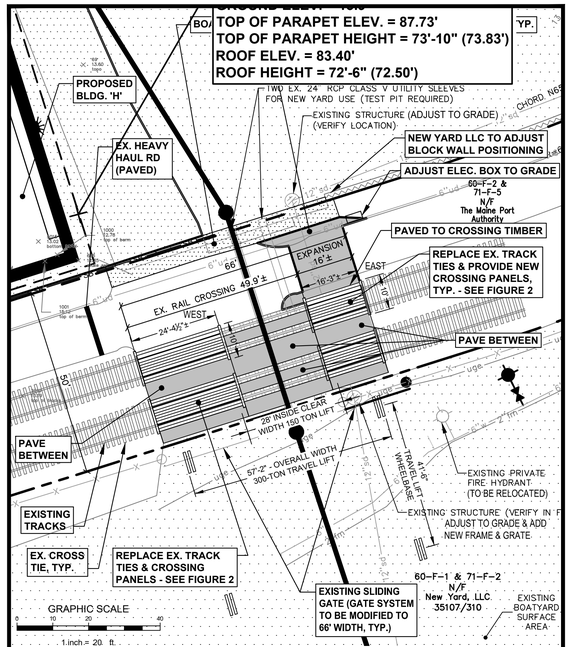
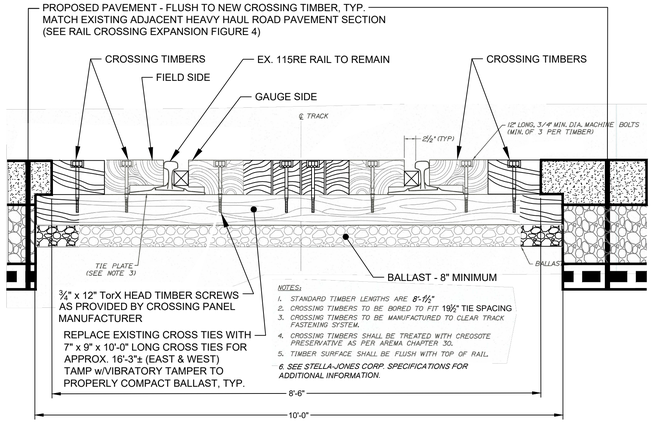


RAIL CROSSING EXPANSION PLAN VIEW

SCALE: 1" = 20'

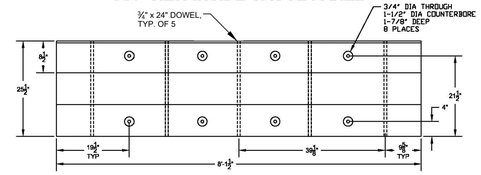


TYPICAL TRACK SECTION

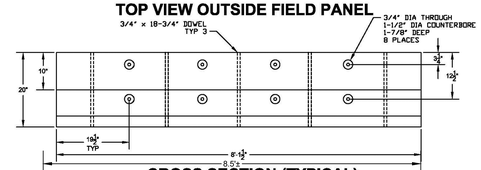
N.T.S.

SJC SOLID TIMBER PANEL CROSSING

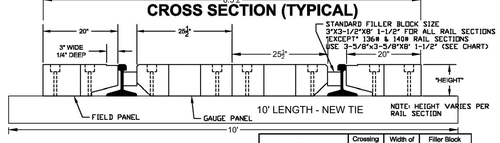
TOP VIEW INSIDE GAUGE PANEL



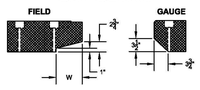
TOP VIEW OUTSIDE FIELD PANEL



CROSS SECTION (TYPICAL)



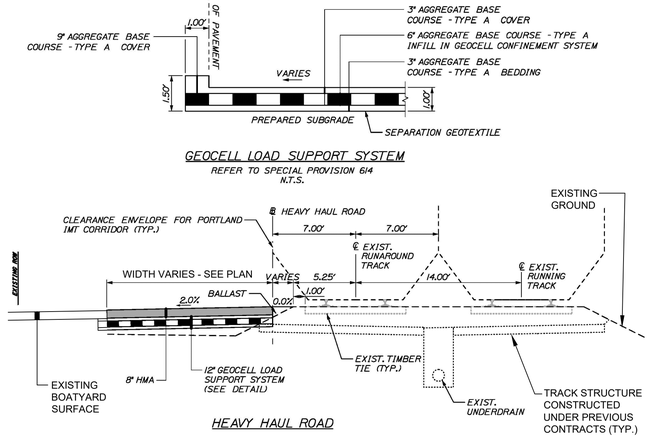
DAP DETAIL



Rail Section	Crossing Height	Width of Dap "W"	Filler Block Cross Section
140-136	8-5/16"	7"	3-5/8" x 3-5/8"
133-132-131-130RE-127-119	8"	8-1/2"	3" x 3-1/2"
112-115RE	7-3/8"	8-1/2"	3" x 3-1/2"
107-105-100RA	6-1/2"	8-1/2"	3" x 3-1/2"

SOLID TIMBER PANEL DETAILS

N.T.S.



HEAVY HAUL ROAD GEOCELL LOAD SUPPORT SYSTEM DETAILS

N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE — STEPHEN R. BUSHEY — 09.11.24 — LICENSED PROFESSIONAL ENGINEER

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

Rev.	Date	Revision

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Design: SRB	Draft: CDD	Date: NOV. 2023
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South Portland, ME 04106

Drawing Name: RAIL CROSSING EXPANSION PLAN & DETAILS

Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine

Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-9.0

U:\3561.05_Canal Landing Building H\Z - CAD\DWG\356105-H-GRADING EROSION.dwg 9/11/2024 2:07 PM

PLAN REFERENCES

1. "BOUNDARY AND TOPOGRAPHIC SURVEY WEST COMMERCIAL STREET PORTLAND, CUMBERLAND COUNTY, MAINE" MADE FOR HNTB AND THE MAINE DEPARTMENT OF TRANSPORTATION BY OWEN HASKELL, INC. DATED APRIL 4, 2014.
2. PLAN TITLED "STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP" "LAND ACQUISITIONS" BY OWEN HASKELL INC. DATED APRIL 4, 2014.
3. PLAN SET TITLED "STATE OF MAINE DEPARTMENT ON TRANSPORTATION" CITY OF PORTLAND, CUMBERLAND COUNTY, PORTLAND INTERNATIONAL MARINE TERMINAL - EXISTING LAYDOWN AND CONNECTING CORRIDOR CONNECTION WIN: 022809.20
4. PORTLAND HARBOR, PORTLAND, ME AFTER DREDGE SURVEY - 35 FOOT CHANNEL AND TURNING BASINS BY THE U.S. ARMY CORPS OF ENGINEERS. SHEETS V-101 THROUGH V-104, DATED APRIL 16, 2014.

STRUCTURES WITHIN PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH PORTLAND CITY CODE, SECTION 14-450.8 FLOOD PLAIN MANAGEMENT.

NORTH

UTILITY STREET OPENING MAY BE SUBJECT TO CITY OF PORTLAND STREET MORATORIUM RESTORATION REQUIREMENTS. WEST COMMERCIAL STREET IS SCHEDULED TO BE REPAVED DURING THE SUMMER 2025. CONTRACTOR TO CONDUCT STREET OPENING OPERATIONS ACCORDINGLY.

PROPOSED RISER POLE w/3 POLE MOUNT TRANSFORMERS

ASSORTED SHRUB PLANTINGS, TYP. OF 30

NEW YARD CENTRAL DRIVEWAY

APPROX. LIMIT OF PERIMETER FOOTING, TYP.

4' HIGH CHAIN LINK FENCE, 6" OFF RIGHT-OF-WAY LINE, TYP.

3' TO 6' ± WIDE LANDSCAPE STRIP, TYP.

VEHICULAR ACCESS FOR NEW YARD LLC

ENTRANCE CANOPY

EXTEND FORCE MAIN TO BUILDING C / D SEWER, TYP.

MAN DOOR, TYP. OF 7

SANITARY LIFT STATION (BY CONTRACTOR)

16" x 1.5" TAPPING SADDLE DOMESTIC WATER SERVICE, TYPE K COPPER

16" x 6" TAPPING SLEEVE & 6" GATE VALVE (FIRE SERVICE)

1.5" CURB STOP IN THE R.O.W. AT 6' OFF THE GAS MAIN - CURB STOP SHALL BE IN A VALVE BOX TOP SECTION

CONDUCT TEST PITS PRIOR TO SCHEDULING WATER SERVICE WORK, TYP.

4" SAN
L = 4'
S = 0.0208 ft / ft

OWS 1

MAX. HT. = 50'

MAX. HT. = 72'-6"

BUILDING 'I'
21,000 SF

TOTAL BUILDING
45,000 SF

BUILDING 'H'
24,000 SF
(SEE PLANS BY ARCHETYPE, P.A.)
(NO ROOF TOP EQUIPMENT)

1.5" DOMESTIC WATER ENTRY

6" WATER FIRE SERVICE ENTRY

FLOOR DRAIN PLUMBING EXIT TO OIL-WATER SEPARATOR, TYP.

EMPLOYEE RESTROOMS

FDC

RIVER BIRCH CLUMP, TYP. OF 12

APPROXIMATE LIMITS OF PROPOSED BOATYARD SURFACE, TYP.

AREA OF ENCROACHMENT INTO MAX. HT. SETBACK AS ALLOWED BY CERTIFICATE OF VARIANCE, CCRD BK. 40362 PG. 151 = 1,564 SF

HEAVY HAUL ROAD (PAVED)

OUTSIDE EDGE OF FOOTING, TYP. LIMITS OF EXCAVATION TO REMAIN ON NEW YARD LLC PROPERTY

PAVE BETWEEN

EXISTING TRACKS

EX. CROSS TIE, TYP.

REPLACE EX. TRACK TIES & CROSSING PANELS - SEE FIGURE 2

EXISTING SLIDING GATE (GATE SYSTEM TO BE MODIFIED TO 66' WIDTH, TYP.)

EXISTING SLIDING GATE

EXISTING BOATYARD SURFACE AREA

PROPOSED BOATYARD SURFACE, TYP.

60-F-1 & 71-F-2
N/F
New Yard, LLC
35107/310

BOATYARD CRUSHED STONE SURFACE INFILL AS NECESSARY, TYP.

PROPOSED BLDG. 'H'

EX. HEAVY HAUL RD (PAVED)

SHIM HEAVY HAUL ROAD PAVEMENT AS NEEDED FOR TRANSITION TO RAIL CROSSING EXPANSION

TWO EX. 24" RCP CLASS V UTILITY SLEEVES FOR NEW YARD USE (TEST PIT REQUIRED)

EXISTING STRUCTURE (ADJUST TO GRADE) (VERIFY LOCATION)

NEW YARD LLC TO ADJUST BLOCK WALL POSITIONING

ADJUST ELEC. BOX TO GRADE

60-F-2 & 71-F-5
N/F
The Maine Port Authority

PAVED TO CROSSING TIMBER

REPLACE EX. TRACK TIES & PROVIDE NEW CROSSING PANELS, TYP. - SEE FIGURE 2

EXPANSION 16'±

EAST

WEST

EX. RAIL CROSSING 49.9'±

PAVE BETWEEN

RELOCATE PRIVATE HYDRANT

EXISTING PRIVATE (RELOCATE) FIRE HYDRANT

EXISTING STRUCTURE (VERIFY IN FIELD) ADJUST TO GRADE & ADD NEW FRAME & GRATE

57'-2" - OVERALL WIDTH

TRAVELIFT 144" WHEELBASE

CHORD N65°57'58"E 153.24'

CHORD S65°57'58"W 146.07'

L=153.24'

L=673.74'

L=165.42'

14' HEAVY HAUL ROAD

EX. PAVED MPA HEAVY HAUL ROAD

(LIMITS OF BALLAST & RAIL TIES NOT SHOWN FOR CLARITY)

S72°29'45"W

519.07'

B-106

EX. CB

VARIANCE GRANTED (SEE TABLE 10-B RECORDS) CCRD BOOK 40362, PAGE 151

WEST COMMERCIAL STREET
(width varies - speed limit 40)

VA CLINIC PROPOSED PARKING

PROPOSED MANHOLE (BY OTHERS)

CONCRETE COLLAR CONNECTION (3' LENGTH x 4' WIDTH x 6" MIN. THICKNESS)

CMP MH

PROPOSED SHRUB BY OTHERS

DMH 11

SD 1

DMH 1

SMH
RIM 18.27
48" INV. IN 5.32
48" INV. OUT 5.32

CB 20

4' DIA. CB OFFSET CONE
RIM 14.84
TWIN 10" INV. OUT 11.60

4' DIA. DMH
RIM 15.02
18" INV. OUT 10.56

5' DIA. MH w/DOUBLE GRATE
RIM 14.85
18" INV. OUT 10.85

CAPPED SD & FILLED w/ FLOWABLE FILL

CAPPED ABANDONED GAS MAIN

24" I.P. (ABANDONED)

10" H.P. (ACTIVE)

UTILITY POLE #7½ EL. 19.11

SD 15

30" SD

18" SD

15" SD

50' MIN.

115KV uge

OHE/TC

UGE/TC

2"FM

4"SYL

4"BYL

4"SWL

300' (MAX. LENGTH ALLOWED IN WPDZ)

22' OHD

50' OHD

30' OHD

60' OHD

70'

80'

150'

100'

22'

20'

16'

18'

21'

9'

6'

3.5' SEPARATION

1.7% ± 69.3'

SEE CERTIFICATE OF VARIANCE APPROVED C.C.R.D. BK 40362, PG 151

SPACE AND BULK INFORMATION

ZONE: WATERFRONT PORT DEVELOPMENT ZONE (WPDZ)

PERMITTED USES: MARINE REPAIR SERVICES / BOAT REPAIR YARD / VESSEL CONSTRUCTION

TABLE 10-B: WPDZ DIMENSIONAL REQUIREMENTS	REQUIRED / ALLOWED		PROVIDED
	Permitted Use Dimensional Standards	Conditional Use Dimensional Standards	
Setbacks (min.)	N/A	N/A	17.77 ACRES
Lot size (min.)	N/A	5 acres, limited to 1 building greater than the maximum applicable height allowed under the permitted use dimensional standards.	
Setback from pier line, wharf, or bulkhead (including any attached aprons)(min.)[1]	5 ft.	5 ft.	> 5 FT
Lot coverage (max.)	50% east of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.	50% east of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.	3.54 ACRES/ 17.77 ACRES = 20%
	100% west of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.	100% west of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive.	
Building height (inclusive of roof forms and rooftop appurtenances)(max.)[2]	55 ft. east of a line projected due south from the centerline intersections of West Commercial Street and the easterly most Cassidy Point Drive.	60 ft. west of the Casco Bay Bridge[3], except as follows: 75 ft. in the area east of a line projected due south from the centerline intersections of W. Commercial Street and the easterly most Cassidy Point Drive and west of Casco Bay Bridge, on lots 5 contiguous acres or larger.[4] 90 ft. for bulk storage[5] facilities west of the projection of the westerly most Cassidy Point Drive segment.	72' - 6"[*]
	60 ft. west of a line projected due south from the centerline intersections of West Commercial Street and the easterly most Cassidy Point Drive.		
	In no case may any permitted heights exceed 90ft within 100ft of W. Commercial Street and all area of the WPDZ east of the Casco Bay Bridge.[3]	In no case may any conditionally permitted heights exceed 90ft within 100ft of W. Commercial Street and all area of the WPDZ east of the Casco Bay Bridge.[3]	
Building length (max.)[6]	450 ft.	450 ft.	300 FT
	300 ft. within 100 ft. of W. Commercial Street and all area of the WPDZ east of the Casco Bay Bridge.	300 ft. for buildings or portions of buildings exceeding the maximum applicable height allowed under the permitted use dimensional standards.	

[1] The setback area may be used for activities related to the principal uses in the structure, but shall not be used for off-street parking.
[2] Buildings and/or structures shall be limited to an absolute height measured from average grade with no portion of the structure roof system or roof top appurtenances exceeding the limits set forth under Table 10-B with the exception of moveable elements or connection devices as listed under Subsection 10-4.7
[3] Bulk storage dedicated to materials delivered and shipping from ocean vessels to a distribution center for transportation.
[4] Building height limitations east of the Casco Bay Bridge are intended to protect views of the harbor from public open space.
[5] As measured by a line parallel with the southern edge of the West Commercial Street right-of-way.
[6] Only those conditional uses so designated in Note 1 of the Waterfront Port Development Zone Use Table 10-A may be located in buildings taller than 60 ft.

[*] SEE CERTIFICATE OF VARIANCE APPROVED C.C.R.D. BK 40362, PG 151

1 inch = 20 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
11.06.24
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E. LIC. #7429

Rev.	Date	Revision

Rev.	Date	Revision
7	2024.11.06	REVISED & RESUBMITTED
6	2024.10.15	UPDATED BUILDING PER ARCHITECT
5	2024.09.11	REVISED PER CITY STAFF REVIEW
4	2024.08.26	REVISED RR CROSSING DETAILS – ADDED ROOF HT PLAN
3	2024.08.09	REVISED WATER SERVICES PER PWD COMMENTS
2	2024.07.18	ADDED RAIL CROSSING EXPANSION DETAILS
1	2024.04.30	MAJOR SITE PLAN APPLICATION

Design: SRB | Draft: CDD | Date: NOV. 2023
Checked: SRB | Scale: AS NOTED | Job No.: 3561.05
File Name: 356105-H-SITE.dwg

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GORRILL PALMER
An LJB Engineering Company
Gorrill Palmer, an LJB Engineering Company
GorrillPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name: BUILDINGS H & I SITE LAYOUT & UTILITY PLAN
Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine
Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-3.0

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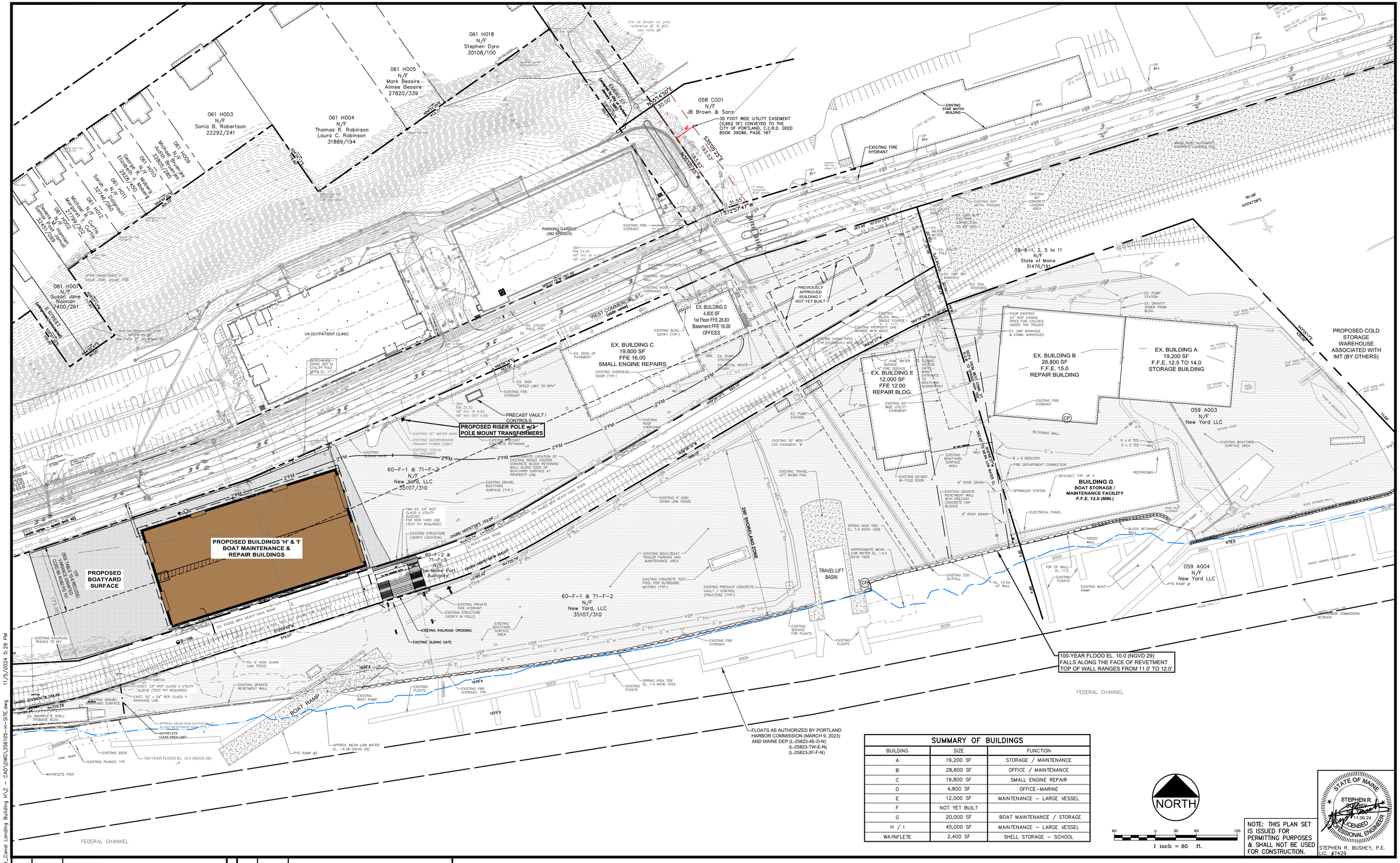

SUMMARY OF BUILDINGS		
BUILDING	SIZE	FUNCTION
A	19,200 SF	STORAGE / MAINTENANCE
B	28,800 SF	OFFICE / MAINTENANCE
C	19,800 SF	SMALL ENGINE REPAIR
D	4,800 SF	OFFICE-MARINE
E	12,000 SF	MAINTENANCE - LARGE VESSEL
F	NOT YET BUILT	
G	20,000 SF	BOAT MAINTENANCE / STORAGE
H / I	45,000 SF	MAINTENANCE - LARGE VESSEL
WAYNFLETE	2,400 SF	SHELL STORAGE - SCHOOL

NORTH

60 0 30 60 120

1 inch = 60 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
11.06.24
LICENSED PROFESSIONAL ENGINEER
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Design: SRB	Draft: CDD	Date: NOV. 2023	
Checked: SRB	Scale: AS NOTED	Job No.: 3561.05	
File Name: 356105-H-SITE.dwg			

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GORRILL PALMER
An LJB Engineering Company
Gorrill Palmer, an LJB Engineering Company
GorrillPalmer.com
(207) 772-2515
300 Southborough Drive - Suite 200
South Portland, ME 04106

Drawing Name: OVERALL DEVELOPMENT PLAN

Project: CANAL LANDING PHASE VII - BUILDINGS H & I
West Commercial Street, Portland, Maine

Client: NEW YARD LLC
100 West Commercial Street, Portland, Maine 04102

Drawing No. C-5.0

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COST ESTIMATE FORM PORTLAND SUBDIVISION/SITE DEVELOPMENT
Cost Estimate of Improvements to be covered by Performance Guarantee

Name of Project: Bldg H new yard llc
Address/Location: 100 west commercial street
Application ID #: PL-003033-2024
Developer: New Yard llc
Form of Performance Guarantee: Letter of Credit (with Financial Institution)
Type of Development: Level III Site Plan

To submit a Cost Estimate, please breakdown the costs associated with the project in both Public and Private tables below. Once the Cost Estimate is approved and Performance Guarantee posted, this form can be resubmitted up to three times a year for reduction requests, as needed, by indicating items fully completed.

TO BE FILLED OUT BY THE APPLICANT:

Item	PUBLIC			Unit Type	PRIVATE			Unit Type	Combined Item Total	COMPLETED DURING CONSTRUCTION PHASE: Performance Guarantee Reductions (enter amount of each line item, once fully complete)		
1. STREET/SIDEWALK	**Quantity**	**Unit Cost**	**Subtotal**	***Description***	**Quantity**	**Unit Cost**	**Subtotal**	***Description***		**1st**	**2nd**	**3rd**
Road/Parking Areas	0.0		$0.00		1.0	$35,000.00	$35,000.00		$35,000.00			
Curbing	0.0		$0.00		0.0		$0.00		$0.00			
Sidewalks	0.0		$0.00		0.0		$0.00		$0.00			
Esplanades	0.0		$0.00		0.0		$0.00		$0.00			
Monuments	0.0		$0.00		0.0		$0.00		$0.00			
Street Lighting	0.0		$0.00		0.0		$0.00		$0.00			
Street Opening Repairs	1.0	$5,000.00	$5,000.00		0.0		$0.00		$5,000.00			
Other	0.0		$0.00		0.0		$0.00		$0.00			
	PUBLIC				**PRIVATE**				**Combined**			
2. EARTH WORK	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Item Total**	**1st**	**2nd**	**3rd**
Cut	0.0		$0.00		1,000.0	$15.00	$15,000.00	cy	$15,000.00			
Fill	0.0		$0.00		500.0	$30.00	$15,000.00	cy	$15,000.00			
	PUBLIC				**PRIVATE**				**Combined**			
3. SANITARY SEWER	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Item Total**	**1st**	**2nd**	**3rd**
Manholes	0.0		$0.00		0.0		$0.00		$0.00			
Piping	0.0		$0.00		1,500.0	$20.00	$30,000.00	lf	$30,000.00			
Connections	0.0		$0.00		1.0	$2,000.00	$2,000.00	each	$2,000.00			
Main Line Piping	0.0		$0.00		0.0		$0.00		$0.00			
House Sewer Service Piping	0.0		$0.00		0.0		$0.00		$0.00			
Pump Stations	0.0		$0.00		1.0	$4,500.00	$4,500.00	each	$4,500.00			
Other	0.0		$0.00		0.0		$0.00		$0.00			
	PUBLIC				**PRIVATE**				**Combined**			
	Quantity	**Unit Cost**	**Subtotal**	*Description*	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Item Total**	**1st**	**2nd**	**3rd**
4. WATER MAINS	1.0	$25,000.00	$25,000.00		1.0	$5,000.00	$5,000.00		$30,000.00			
	PUBLIC				**PRIVATE**				**Combined**			
5. STORM DRAINAGE	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Item Total**	**1st**	**2nd**	**3rd**
Manholes	0.0		$0.00		0.0		$0.00		$0.00			
Catchbasins	0.0		$0.00		2.0	$4,500.00	$9,000.00		$9,000.00			
Piping	0.0		$0.00		600.0	$25.00	$15,000.00		$15,000.00			
Detention Basin	0.0		$0.00		0.0		$0.00		$0.00			
Stormwater Quality Units	0.0		$0.00		0.0		$0.00		$0.00			
Other	0.0		$0.00		0.0		$0.00		$0.00			
	PUBLIC				**PRIVATE**				**Combined**			
6. SITE LIGHTING	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Item Total**	**1st**	**2nd**	**3rd**
	0.0		$0.00		0.0		$0.00		$0.00			

TO BE FILLED OUT BY THE APPLICANT:										COMPLETED DURING CONSTRUCTION PHASE:		
	PUBLIC			Unit Type	PRIVATE			Unit Type	Combined	Performance Guarantee Reductions *(enter amount of each line item, once fully complete)*		
7. EROSION CONTROL	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Item Total**	**1st**	**2nd**	**3rd**
Silt Fence	0.0		$0.00		500.0	$5.00	$2,500.00		$2,500.00			
Check Dams	0.0		$0.00		0.0		$0.00		$0.00			
Pipe Inlet/Outlet Protection	0.0		$0.00		0.0		$0.00		$0.00			
Level Lip Spreader	0.0		$0.00		0.0		$0.00		$0.00			
Slope Stabilization	0.0		$0.00		0.0		$0.00		$0.00			
Geotextile	0.0		$0.00		0.0		$0.00		$0.00			
Hay Bale Barriers	0.0		$0.00		25.0	$50.00	$1,250.00		$1,250.00			
Catch Basin Inlet Protection	2.0	$250.00	$500.00		0.0		$0.00		$500.00			
	PUBLIC				PRIVATE				Combined			
8. RECREATION AND OPEN SPACE AMENITIES	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Item Total**	**1st**	**2nd**	**3rd**
	0.0		$0.00		0.0		$0.00		$0.00			
	PUBLIC				PRIVATE				Combined			
9. LANDSCAPING	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Item Total**	**1st**	**2nd**	**3rd**
			$0.00		1.0	$30,000.00	$30,000.00		$30,000.00			
(Attach breakdown of the quantities of plant material and unit costs)												
	PUBLIC				PRIVATE				Combined			
10. MISCELLANEOUS	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Quantity**	**Unit Cost**	**Subtotal**	*Description*	**Item Total**	**1st**	**2nd**	**3rd**
			$0.00				$0.00		$0.00			

TOTAL: **$30,500.00** **$164,250.00**

GRAND TOTAL: **$194,750.00**

(once approved, the grand total becomes the amount needed for the Performance

☐ **Convert to Defect Guarantee**
(Check and submit once all work is complete)

☐ **Release Defect Guarantee**
(Check and submit approx. one month prior to one-year defect guarantee expiration date)

INSPECTION FEE (to be filled out by the City)

PUBLIC	**PUBLIC**		**PRIVATE**		**INSPECTION FEE TOTAL**
A: 2.0% of totals:	**$610.00**	+	**$3,285.00**	=	
or		+			
B. Alternative Assessment:					**$3,895.00**

(Once approved, the inspection fee total becomes the amount needed for the inspection fee. The minimum inspection fee is $300.00)

PERFORMANCE GUARANTEE REDUCTION HISTORY

	Amount to Release	**Comments**
1st Reduction	$0.00	
2nd Reduction	$0.00	
3rd Reduction	$0.00	
Convert to Defect Guarantee (10% of	$0.00	
Release Defect Guarantee	**$0.00**	

Balance After Reduction: **$194,750.00**