

CITY OF PORTLAND, MAINE

PLANNING BOARD



Sean Dundon, Chair
Brandon Mazer, Vice Chair
Bob Dunfey
David Eaton
David Silk
Austin Smith
Maggie Stanley

AGENDA PORTLAND PLANNING BOARD MEETING

The Portland Planning Board will hold a meeting on Tuesday, March 26, 2019, Room 209, 2nd Floor, City Hall, 389 Congress Street. **Public comments will be taken for each item on the agenda during the estimated allotted time and written comments should be submitted to planningboard@portlandmaine.gov.**

PUBLIC HEARING - 6:00 P.M. (NOTE CHANGE IN TIME)

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON MARCH 12, 2019

Workshop: Mazer, Dunfey, Eaton, Silk, Stanley and Smith present. Dundon absent. Smith recused from the second workshop item.

Public Hearing: Mazer, Dunfey, Eaton, Silk and Stanley present. Dundon and Smith absent.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON MARCH 12, 2019

- i. Proposed Hotel Project Inclusionary Zoning Regulations, Housing and Community Development Division, City of Portland, Applicant. Stanley moved and Dunfey seconded a motion to approve the regulations to implement Section 14-488.1 of the Land Use Ordinance related to hotel inclusionary zoning. Vote: 5-0. Dundon and Smith absent.

5. NEW BUSINESS

- i. Technical Manual Update of Street Lighting and Site Lighting Standards, Planning Division, City of Portland, Applicant. (estimated time 6:00 - 6:45 p.m.) The Planning Board will hold a public hearing on the proposed comprehensive update of the Municipal Street Lighting Standards (Chapter 10) and Site Lighting Standards (Chapter 12) of Portland's Technical Manual. The amendments include, but are not limited to, updating the municipal standards to incorporate LED street lighting, revise special street lighting districts and fixtures, and revise the on-site lighting standards regarding lumens and illumination levels.

6. EVENING WORKSHOP (IMMEDIATELY FOLLOWING THE PUBLIC HEARING)

- i. Level III Site Plan and Subdivision; 10 Hammond Street; Hammond House, LLC., Applicant. (estimated time 6:45 - 7:30 p.m.) The Planning Board will hold a workshop on a proposal for a 3-story building with sixteen (16) residential unit and parking for sixteen (16) vehicles. This workshop will focus specifically on the building's design in response to Planning Board and staff public feedback from the February 26th workshop. The site is located in the R-6 zone and is subject to review under Portland's subdivision, site plan and inclusionary zoning ordinances.
- ii. Level II Site Plan and Conditional Use; 121 Cassidy Point Drive; 534 Danforth, LLC., Applicant. (estimated time 7:30 p.m.) The Planning Board will hold an evening workshop on a proposal for demolition of an existing two-story wood-framed structure and construction of a new, four-story, 17,736 sf building, along with associated site improvements including site landscaping, reconfiguration of driveways and sidewalks and striping of twelve (12) off-street parking spaces. Tenants would include a variety of crafters and tradespeople as well as Sail Maine. The site is located in the WPDZ zone and is subject to review under Portland's site plan and conditional use standards.

Planning and Urban Development Department

Planning Division



To: Sean Dundon, Chair and the Portland Planning Board

Subject: Amendments to the *City of Portland Technical Manual Section 10 - Municipal Street Lighting Standards* and *Section 12 - Site Lighting Standards*

Written by: Caitlin Cameron, Urban Designer; Shukria Wiar, Planner

Date: Friday, March 22, 2019

I. Introduction

The City is undergoing revisions to the *City of Portland Technical Manual Section 10 - Municipal Lighting Standards* and *Section 12 - Site Lighting Standards* with the following goals:

- Update the specifications and fixture selection to meet the new LED standards being implemented city-wide
- Provide guidance for the city-wide LED conversion project
- Revise the boundaries for special lighting districts to reflect recent master and comprehensive plans, changes in the built environment, and to correspond to the real-world conditions of the character of the streetscape and neighborhoods
- Consolidate and reduce the number of fixtures installed around the city to alleviate maintenance time and costs as well as bring consistency to the streetscape
- Provide cost-effective, durable options and substitutions
- Reflect best practices around light pollution and dark sky goals

Public notice of the proposed amendments was printed in the Portland Press Herald on March 18th and 19th, 2019.

Given the comprehensive nature of the revisions, the entire sections have been included both in clean and redlined versions for reference.

II. Background

- A. These sections of the Technical Manual have not been updated for almost ten years. There are multiple aspects of these sections that are out of date including references to CMP, the kinds of fixtures being specified, the present initiative to convert to LED fixtures, the locations where fixtures have been implemented. In addition, staff feel the legibility of the manual could be improved to be more user-friendly and clear, especially for selecting the correct fixture in the right location. Some pertinent information was missing including cabinet and installation specifications, specifications for lit bollards, and the addition or subtraction of fixtures newly implemented or that are no longer made. The revisions reflect the following objectives and actions:

- 1) Update the manual to reflect new policy, best practices, and on-the-ground conditions
- 2) Provide more cohesive streetscapes and reduce visual clutter
- 3) Reduce costs to City (purchase, installation, maintenance)
- 4) Provide guidance and fixture selections that are easy to implement for all users, including City departments (clear information, cost-effective, durable options and substitutions)
- 5) Make the manual more user-friendly and efficient

B. Process

In order to meet the aforementioned goals, City staff and consultants listed below met over the course of a year and half on an as-needed basis to discuss the revisions. Many decisions had to be discussed and made about format, special lighting areas and the extent of their boundaries, fixture types and selection, including the new LED cobraheads and Town & Country fixtures as well as the decorative fixtures, and installation details. All participants were involved in the decision-making in order to ensure that the decisions were technically sound, that the document would be user-friendly, but also that Public Works would be able to feasibly implement what is called for, and that the new LED conversion project could incorporate these desired outcomes. The consultants provided valuable research and technical advice. Planning staff, with the technical support of the consultants, drafted the text and figure revisions. The proposed package as presented to the Planning Board was also reviewed with the City Manager to ensure that all goals are being met by these documents.

Additional review included the Historic Preservation Board to review the designated historic landscapes where decorative fixtures should be used (Deering Oaks, Eastern Promenade, Western Promenade, Baxter Boulevard, and Lincoln Park) and to revise the pedestrian and street fixture selection – these will be standard specifications across all historic landscapes and selected to reduce costs. The Historic Preservation Board voted to recommend these revisions and are included as recommended in this version for approval.

C. Participants

Planning: Caitlin Cameron, Shukria Wiar, Deb Andrews, Bruce Hyman, Jeff Levine, Barbara Barhydt

Sustainability Office: Troy Moon, James Hebert (Colby Company Engineering)

Department of Public Works: Kevin Thomas, Jennifer Ladd, Chris Branch

TENConnected: Jim Schriver, Pat Bresnahan

Historic Preservation Board

City Manager

D. Implementation

The proposed changes will revise the *Technical Manual* standards to reflect the best practices using the LED lighting technology and provide guidance for fixture selection and location for future replacement or new installation of lights within the public right-of-way by private development and public projects. In 2019, the City plans to implement the LED replacement/retrofit for Town & Country, Deering Oaks, and existing decorative fixtures.

Prior to becoming effective 30 days from adoption, staff will prepare the documents to be published (page numbers, date adopted, outstanding specification numbers, etc.).

III. Summary of Technical Manual Amendments

A. Section 10 – Municipal Street Lighting Standards

Section 10 of the Technical Manual contains the standards for street lighting fixtures within the public right-of-way. The section includes standards and installation details for standard and decorative street lighting fixtures. This information appears in text and tables and as figures showing decorative lighting area locations maps and fixture specifications. Staff reviewed the content of the manual - existing decorative fixture locations, specifications – as well as the format and legibility. A few things to note:

- Where fixtures are widely implemented, staff chose to keep the existing light fixtures but updated for LED, color, etc. – Downtown District, Old Port, Trails
- Where fixtures are not widely implemented, staff removed or revised the fixture to meet cost, LED, and maintenance needs – Historic landscapes, Bayside Trail, Bayside and Eastern Waterfront
- DPW staff provided valuable insight regarding cost and maintenance with existing fixtures
- Simplification and Standardization were accomplished by removing custom colors, size variation, etc. Most fixtures would be black in color, black poles
- Special lighting areas boundaries were re-examined and in some cases expanded, in others, reduced.
- To provide clear guidance and consistency, more content around Installation instructions were added.
- References to CMP were removed/revised to reflect the recent City purchase of all street lighting as part of the LED conversion project.

Summary of Revisions (Attachments A – D)

Reductions

- Streets removed from decorative lighting districts (Franklin Street, Commercial Street, Danforth Street, parts of Forest and Cumberland Avenue, and east end of Congress Street)
- Custom colors/color variation removed from the fixture catalogue (except downtown)
- Bayside Trail fixture removed from the manual
- Eastern Waterfront decorative fixture area reduced
- References to master plans and external documents

Additions

- East Bayside commercial streets added to the decorative fixture area (Washington Ave, Anderson Street, Fox Street, Marginal Way)
- Old Port district expanded to Center Street and Commercial Street
- Off-peninsula decorative fixture spec (as implemented in Exit 6 project)
- Lincoln Park added to the historic landscapes requiring decorative path lighting (per Parks)

- Standard lighted bollard spec (per DPW)
- Cabinet spec (per DPW)

Substitutions

- Bayside/Eastern Waterfront fixture for a less expensive manufacturer
- Historic Landscape Street fixture for a less expensive manufacturer
- Historic Landscape Ped fixture for an available, LED fixture

Updates

- Standards for Town & Country, Cobrahead fixtures
- All fixtures updated to LED specs
- All fixtures updated to black/standard color (except downtown fixture)
- Standards for installation, placement
- References to CMP removed
- Decorative Lighting Area map
- Formatting

B. Section 12 – Site Lighting Standards

Chapter 12 of the Technical Manual contains the site lighting standards for exterior lighting on private property. Exterior lighting is important for public safety, visibility and identification of destinations. The challenge is to determine what is adequate lighting - i.e., lighting that is the least intensity necessary to accomplish the light's purpose. Adequate lighting recognizes that different land uses have different lighting design needs. Good lighting practices can provide adequate light for safety and utility without excessive glare or light pollution. Careful attention to when, where, and how much night-time lighting is needed results in better lighting practices, darker skies and reduced energy use and costs. Below is a summary of revisions to the site lighting standards (Attachments E and F) that incorporate the update best management practices to achieve these objectives:

- Added a Purpose Statement
- Updated the manual to be more user-friendly and efficient through formatting, tables, and clarifying some of the existing standards
- The inclusion of new LED standards and related specifications (i.e. 3000K Correlated Color Temperature (CCT))
- Introduction of new standards pertaining to the following:
 - Pedestrian Walkways (standards for bollards and other walkway lights)
 - Measurement of light source through lumens rather than wattage
 - A standard for continued maintenance
 - Clarification on building façade lighting
- Clarify the General Exceptions
- Streamlined the submission of a lighting plan

IV. Recommendation

On January 1, 2019 and February 20, 2019, the Historic Preservation Board reviewed and recommended the staff proposals as presented in this packet for the Historic Landscapes to

include special lighting, the selection for the street and pedestrian-scale fixtures to apply to all those designated historic landscapes.

Staff recommend the Planning Board adopt the Technical Manual amendments to become effective thirty (30) days after adoption.

V. Motions for the Board to Consider

On the basis of the material provided in this report, a review of the applicable policies, and other information, the Planning Board finds:

1. The proposed revisions to the *City of Portland Technical Manual, Section 10 Municipal Street Lighting Standards* [**are or are not**] consistent with Section 14-498 Technical and Design Standards and other applicable provisions of the land use code and [**approves, approves with conditions, or does not approve**] adoption of the proposed technical standards.
2. The proposed revisions to the *City of Portland Technical Manual Section 12 Site Lighting Standards* [**are or are not**] consistent with Section 14-498 Technical and Design Standards and other applicable provisions of the land use code and [**approves, approves with conditions, or does not approve**] adoption of the proposed technical standards.

Attachments

- A. *Section 10 Municipal Street Lighting Standards* – revised table of contents (redline)
- B. *Section 10 Municipal Street Lighting Standards* – revised text (clean)
- C. *Section 10 Municipal Street Lighting Standards* – revised text (redline)
- D. *Section 10 Municipal Street Lighting Standards* – revised figures
- E. *Section 12 Site Lighting Standards* – revised text (clean)
- F. *Section 12 Site Lighting Standards* – revised text (redline)

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10. MUNICIPAL STREET LIGHTING STANDARDS

10.1. APPLICABILITY:

Street lighting on city streets and public rights-of-way not subject to decorative street lighting shall follow the General Standards under 10.2 of this section.

In addition to the General Standards for lighting applicable throughout the city, the City of Portland has established special street lighting standards for decorative lighting in the following areas and according to the tables and figures in this section:

- Downtown (includes portions of Cumberland Avenue)
- Old Port
- Peninsula - Eastern Waterfront and Bayside
- Waterfront - Commercial/Thames Street
- Off-Peninsula/Forest Avenue
- Historic Landscape Districts (including Baxter Boulevard, the Eastern and Western Promenades, Lincoln Park, and Deering Oaks Park)
- Trails and pathways (including Eastern Promenade Trail, Fore River Trail, and Bayside Trail).

Decorative street lighting specifications include but are not limited to fixture type, pole and base type, pole height to top of fixture, pole spacing, and color. Please refer to Section 10.4 Standards for Decorative Lighting and Figure X-4 for the map of Portland's decorative lighting locations.

Developments subject to Level II and Level III site plan review that are on an existing or proposed street that is not currently illuminated with street lighting meeting City standards shall install the requisite type and number of street lights along all frontages.

Where lighting is being installed in the public way as part of a private development, developers are responsible for purchasing and installing all street lighting, including light poles, brackets, slip fitters, bases and all electrical wiring and conduit. The new street lighting shall be connected to an existing metered service, unless otherwise directed by the City. Once installed and operational, and upon acceptance by the City, street lighting located in the City right of way

shall become the property of the City of Portland.

10.2. GENERAL STANDARDS:

Location: For areas not designated with decorative lighting, street lighting may be placed on only one side of the street within the furnishing zone. However, when deemed necessary for traffic safety, the Reviewing Authority may require some street lights to be placed the opposite side of a street.

Specification: For areas not designated with decorative lighting, the City of Portland has adopted the following typical street light pole and fixture standards:

- Residential (Local/Minor) Street – [see *Figure X-1*]
 - a) The standard pole height is a minimum 14', not to exceed 15' and shall be black aluminum. Poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole. Street light pole base design, mounting bolt pattern, bolt spacing, and bolt size shall be approved by the Department of Public Works.
 - b) Light levels and pole spacing shall be according to the table in section 10.2.1
 - c) Streetlights shall be full cutoff, using LEDs at a 3000 Kelvin color temperature, and shall seek to match uniformity, lumen output, and color of existing streetlights along the roadway, where applicable.
- Commercial/Industrial (Arterial/Collector) Road – [see *Figures X-2A to X-2G*]
 - a) The standard pole height shall be either 20' or 30' according to the table in section 10.2.1 and shall be a grey or silver aluminum.
 - b) Poles selection and finish:
 - Within .5 mi. of shoreline shall use Beacon RSA-B-SHO-S AA-10 Cobra [Figure X-2F]
 - More than .5 mi. away from shoreline shall use Hubbell RTA Upsweep Style [Figure X-2G]
 - c) Poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole.
 - d) Light levels and pole spacing shall be according to the tables in 10.2.1.

- e) Streetlights shall be full cutoff, using cost-effective and innovative technologies and shall seek to match uniformity, lumen output, and color of existing streetlights along the roadway, where applicable.

10.2.1. Lighting Design – Standard street lighting design shall conform to the following table:

STREET CLASSIFICATION	COMMERCIAL/INDUSTRIAL		RESIDENTIAL	
	Min. Avg. Foot Candles	Maximum Pole Spacing	Min. Avg. Foot Candles	Maximum Pole Spacing
Arterial	2.0	160' (30' pole)	1.0	130' (30' pole)
Collector	1.2	130' (30' pole)	0.6	60' (14' pole)
Local/Minor	0.9	130' (30' pole)	0.4	120' (14' pole)

STANDARD COBRAHEAD				
Fixture – Figures X-2A through X-2G				
Location	Fixture Type	Fixture Height	Spacing + Layout	Color
One-lane Roadways: Without parking with low traffic	COBRAHEAD A	20'	One side: 65' – 70' Alt. sides: 125' – 135'	Grey (Manufacturer's Specification)
One-lane Roadways: With on-street parking with low traffic	COBRAHEAD A	30'	One side: 70' – 80' Alt. sides: 120' – 130'	
Two-lane Roadways: With on-street parking with medium traffic	COBRAHEAD B	20'	One side: 75' – 80' Alt. sides: 145' – 155'	
Two-lane Roadways: With on-street parking with low traffic	COBRAHEAD B	30'	One side: 80' – 90' Alt. sides: 175' – 185'	
Two-lane Roadways: With on-street parking with medium traffic	COBRAHEAD C	20'	One side: 90' – 100' Alt. sides: 180' – 190'	
Two-lane Roadways: With on-street parking with medium traffic	COBRAHEAD C	30'	One side: 100' – 110' Alt. sides: 200' – 210'	
Two or more lane Roadways: With on-street with high/medium traffic	COBRAHEAD D	20'	One side: 95' – 105' Alt. sides: 195' – 210'	
Two or more lane Roadways: With on-street parking with high traffic	COBRAHEAD D	30'	One side: 115' – 125' Alt. sides: 245' – 255'	
	COBRAHEAD E	20'	One side: 100' – 110' Alt. sides: 200' – 215'	
	COBRAHEAD E	30'	One side: 115' – 130' Alt. sides: 240' – 255'	

10.2.2 New Metered Services for Light Fixtures

- New light fixtures shall:
 - a) Not to be tied to the existing power utility leased lighting system.
 - b) Be provided with a NEMA 7-pin receptacle for future connection to the City of Portland lighting control system.
 - c) Be specified with a color temperature of 3000K.
- The developer is to provide a new metered electrical service in an APX outdoor rated enclosure (see section 10.3.1 for unit specification), preventing any new fixtures from being directly connected to the power utility.
- The developer will be required to:
 - a) Provide an astronomical timeclock inside the electrical enclosure (see section 10.3.1 for unit specification) to control light fixtures or
 - b) Provide a standard photocell for each fixture, to be used until lighting control module is installed.

10.3. ACCESSORIES & BOLLARDS:

10.3.1. Cabinets - The city standard cabinet specifications are as follows:

CABINET				
Location	Fixture Type	Fixture Height	Layout	Color
Public Right-of-way	ABX Enclosures, Inc. • Cabinet # 1-850-000062 • Pedestal Base #1-060000190	Per Manufacturer's Specification	Mounted on the back side of sidewalk with door facing street, meter facing building street wall. If site constraints require box to be mounted within sidewalk furnishing zone, then door should face building/private property and meter should be mounted opposite side of travel direction.	Grey/Silver or Clear Coat (Manufacturer's Specification)

- Cabinet base can be stand-alone type other than above, provided it is not in a sidewalk or on the edge of a plowed pathway, street, or parking lot. Circuits may also be wired into existing traffic signal boxes or other light circuit boxes. This will be determined on a case-by-case basis.

- Additional specifications for multiuse box with external power for festivals and special events (not required – determined by Department of Public Works):
 - Square D power panel QO816L100DF/S or QO112L125G with cover QO16US
 - Circuits required:
 - 1= 125/250V 50 Amp NEMA 14-50 Receptacle
 - 1= 125/250V 30 Amp NEMA 14-30 Receptacle
 - 2= 125V 20A Standard Receptacle

10.3.2 Wiring & Electrical

- 2" inch conduit (minimum) underground in light pole bases and cabinet base.
- Each light fused individually at base Fuse holder type is a (Buchanan 65 kit Cat # 65U)
- Regular outlet on each pole just below the fixture to be fused at the bottom of the pole base with the same fuse kit as listed above.
- Single photo cell control for all lights shall be in the cabinet, rated for the circuit. This may require an all-purpose contactor.
- Wire size and circuit size shall be calculated by the design engineer and inspected by the city inspector to make sure it is correct. This would be done on a case by case basis because not all circuits, lights and systems are the same.

10.3.3 Bollards

This section includes standards for typical lighted bollards. Non-lighted bollards appear in *Section 1. Transportation Systems and Street Design Standards*.

Location: Bollards may be used in areas such as underpasses and similar conditions where height is restricted for pedestrian lighting. Spacing and number to be determined by Department of Public Works. Locations must be approved by Department of Public Works and the Planning Authority. The City may approve additional bollard types for streetscape or special projects such as parks or as use for security bollards; any additional bollard selection must be of equivalent structural strength as approved bollards.

Specification:

- Bollards shall be mounted on reinforced concrete bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole.
- The City of Portland has adopted the following typical lighted bollard standards:

LIGHTED BOLLARD				
<i>Fixture – Figure X-3</i>				
Location <i>(including but not limited to)</i>	Fixture Type	Fixture Height	Spacing + Layout	Color
Underpasses: Park Avenue, St. James Street, St. John Street, Forest Avenue, Preble Street, Franklin Street, Commercial Street, Harborview Park, Tukey’s Bridge, Veranda Street	Holophane Freeport Series	45”	To be determined by Department of Public Works	Black (Manufacturer’s Specification)
Waterfront Piers				

10.4. STANDARDS FOR DECORATIVE LIGHTING:

Locations, Specifications, and Colors:

- Figure X-4 identifies the decorative street light locations. The following tables and Figures X-5 through X-12 illustrate the requirements for **fixture type, height, layout, and color for each decorative light fixture**, according to street.
- All light poles shall be mounted on reinforced concrete pole bases with at least 2” but no more than 4” reveal above grade, with 4 bolts per pole.

DECORATIVE LIGHT – Downtown

Map - Figures X-5A, X-5D

Fixtures – Figures X-5B, X-5C, X-5E, X-5F

The Technical Manual supersedes the previously adopted City of Portland Downtown Sidewalk and Street Lighting Plan (1994); that plan may be used for reference or clarification of the standards in this manual.

Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Oak Street, Casco Street, Brown Street, Chestnut Street, Shepley Street Center Street: Congress to Free St Cross Street: Free to Spring St Monument Square and Monument Way: Pedestrian ways	PEDESTRIAN 1 – Single or Double Arm [Figure X-5B]	12' 6"	One side: 60' – 80' Alt. sides: 100' – 175' Single-arm fixture placed in furnishing zone with luminaire oriented over sidewalk. Double-arm fixture placed with bracket arms parallel to sidewalk. If sidewalk space is limited, Planning Authority may approve lights within private property or attached to building.	Dark Green – Tiger Drylac RAL 6012
	PEDESTRIAN 2 [Figure X-5C]	24' 0"	One side: 90' – 100' Alt. sides: 175' – 225' Double-arm fixture placed with bracket arms parallel to sidewalk.	Dark Green – Tiger Drylac RAL 6012
Congress Street Other locations on a case-by-case basis	STREET – Single or Double Arm [Figure X-5E]	30' 0"	One side: 90' – 100' Alt. sides: 175' – 225' Double-arm fixture used in median conditions with luminaire overhanging street.	Dark Green – Tiger Drylac RAL 6012
Congress Street: St. John to Franklin St	STREET/PED COMBO [Figure X-5F]	30' 0"	One side: 90' – 100' Alt. sides: 175' – 225'	Dark Green – Tiger Drylac RAL 6012
Cumberland Avenue: High to Franklin St				
Spring Street: High to Temple/Union St				
Free Street: Between High St and Temple St				
Forest Avenue: Congress to Cumberland Ave				
Center Street: Free to Spring St				
Temple Street: Congress to Spring/Middle St				
Myrtle, Chestnut, Elm and Preble Streets: Congress to Cumberland Ave	STREET/PED COMBO [Figure X-5F]	30' 0"	One side: 90' – 100'	Dark Green – Tiger Drylac RAL 6012
Federal Street: Congress to Temple St				

DECORATIVE LIGHT – Old Port				
<i>Map - Figure X-6A</i> <i>Fixture – Figure X-6B</i>				
Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Exchange Street: Congress to Fore St	STREET [Figure X-6B]	14’ 3”	One side: 60’- 80’	Black (Manufacturer’s Specification)
Fore Street: Center to Franklin Ave				
Streets between Spring/Middle to Commercial Street: Center Street, Cotton Street, Cross Street, Union Street, Dana Street, Patton Court, Moulton Street, Market Street, Silver Street, Pearl Street, Custom House Street, Portland Square, Milk Street, Wharf Street, Gold Street				
Federal Street W, Middle Street, Newbury Street W: Temple/Union to Franklin St				
Church Street				
Parks: Tommy’s, Post Office Park				

DECORATIVE LIGHT – Peninsula				
<i>Map - Figures X-7A, X-7C</i> <i>Fixtures – Figures X-7B, X-7D, X-7E</i>				
Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Wilmot Street, Chapel Street, Stone Street, and Cedar Street Alder St, Hanover St, Parris St, Brattle St, Mechanic St Mountfort St, Hancock St, Hampshire St, Newbury St E, Federal St E Preble Street and Elm Street: Cumberland Ave to Marginal Way Pearl St, Chestnut St, Myrtle St: Cumberland Ave to Marginal Way Oxford Street W, Lancaster Street, Kennebec Street, Somerset Street Portland Street Anderson St: Everett to Plowman St Fox Street Washington Ave: Congress to I-295 India Street Middle Street: Franklin to Hancock St Fore Street: Franklin to Waterville St	MEDIUM STREET (Figure X-7B)	19' 3"	One side: 80' – 100' Use Type 2 IES distribution. Fixture placed in furnishing zone overhang towards the street; where fixture conflicts with overhead utilities, may be placed on back of sidewalk with light overhanging sidewalk. Where street lighting is provided by existing cobrahead fixtures, decorative fixtures are not needed on that side of street. If a project includes placing utilities underground, street/pedestrian lighting provided by decorative fixtures.	Black (Manufacturer's Specification)
Marginal Way Forest Avenue: Cumberland Ave to Park/Portland St	LARGE STREET (Figure X-7D)	24' 3"	One side: 90' – 110' Alt. sides: 175' – 225'	Black (Manufacturer's Specification)
* No streets shall use PEDESTRIAN scale light unless site conditions such as sidewalk width or overhead utilities prevent installation of MEDIUM STREET fixture (Figure X-7D)	PEDESTRIAN (Figure X-7E)	14' 6"	One side: 60' – 80' Alt. sides: 100' – 175' Fixture shall be oriented to overhang sidewalk. Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.	Black (Manufacturer's Specification)

DECORATIVE LIGHT – Trails, Waterfront

Map - Figure X-8A

Fixture – Figure X-8B

Trails - This fixture appropriate for any city trail installation. Standard lighted bollard may also be used in appropriate circumstances.

Bayside Trail - This fixture should only be used on the Bayside Trail if replacing six or more of the existing fixtures.

Waterfront – Commercial/Thames Street, this fixture is suitable to supplement standard cobrahead lighting.

Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Fore River Trail: Casco Bay Bridge to US-1; Harborview Park trail path	TRAIL – Single Arm	20' 8"	One side: 90' – 125' Alt. sides: 175' – 225'	Black (Manufacturer's Specification)
Commercial Street: Fore River Parkway to India St	TRAIL – Single Arm	20' 8"	Supplemental pedestrian lighting as-needed. One side: 90' – 125' Alt. sides: 175' – 225'	Black (Manufacturer's Specification)
Thames Street: India St to Eastern Promenade Trail	TRAIL – Single Arm	20' 8"	One side: 90' – 125' Alt. sides: 175' – 225'	Black (Manufacturer's Specification)
Eastern Promenade Trail	TRAIL – Single or Double Arm	20' 8"	One side: 90' – 125' Alt. sides: 175' – 225' Single arm fixture oriented to overhang trail; Double arm fixture for medians or similar.	Black (Manufacturer's Specification)

DECORATIVE LIGHT – Off-Peninsula

Map - Figure X-9A

Fixture – Figure X-9B

In addition to the specific locations indicated below, this fixture is suitable for off-peninsula, commercial corridors to supplement standard cobrahead lighting.

Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Forest Avenue: Marginal Way to Woodlawn Ave	PEDESTRIAN – Single or Double Arm	18' 4"	One side: 90'-125' Alt. sides: 175' - 225' Placement on back of sidewalk with single arm fixture oriented to overhang sidewalk; Where site constraints require placement in furnishing zone, use double arm fixture parallel to sidewalk.	Graphite (Manufacturer's Specification)

DECORATIVE LIGHT – Historic Landscape Street				
Map - Figure X-10A Fixture – Figure X-10B Fixture placement should comply with adopted master plans.				
Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Eastern Promenade (park side of street only): North St to Vesper St	STREET – with shield	21' 0"	One side: 90' – 100' Alt sides: 175' – 225'	Black (Manufacturer's Specification)
Western Promenade (park side of street only): Bramhall to Vaughan St				
Baxter Boulevard (both sides of street): Forest Ave to Bates St				
Deering Oaks Park (Abutting Streets, park side only): Deering Ave, Park Ave, Forest Ave	STREET – without shield	21' 0"	One side: 90' – 100' Park side of street only	Black (Manufacturer's Specification)
Deering Oaks Park (within park): High Street, State Street	STREET – without shield	21' 0"	One side: 90' – 100' Alt. sides: 175' – 225'	Black (Manufacturer's Specification)

DECORATIVE LIGHT – Historic Landscape Pedestrian				
Map - Figure X-11A Fixture - Figures X-11B Fixture placement should comply with adopted master plans.				
Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Eastern Promenade: Pedestrian paths	Pedestrian	14' 0"	One side: 60' – 80'	Black (Manufacturer's Specification)
Western Promenade: Pedestrian paths	Pedestrian	14' 0"	One side: 60' – 80'	Black (Manufacturer's Specification)
Deering Oaks Park (Interior): Pedestrian paths, High and State streets	Pedestrian	14' 0"	Use existing light locations or refer to the Deering Oaks Master Plan (2003) for revised locations	Black (Manufacturer's Specification)

DECORATIVE LIGHT – Deering Oaks Bridge				
Fixture –Figure X-12 Fixture placement should comply with adopted master plans.				
Location	Fixture Type	Fixture Height	Spacing + Layout	Color
Deering Oaks Park (Bridge)	Bridge Light	6' 0" (match existing)	Match existing	Match existing

10.5. City of Portland versus Construction Contractor Responsibilities:

For projects where the construction contractor is required by the City to provide new street lighting, the new street lighting shall be connected to an existing metered service, unless otherwise directed by the City (see Section 10.2.2 for new metered services for lighting). The responsibilities of the construction contractor are as follows:

Construction Contractor Responsibilities:

- a. The construction contractor shall furnish and install as part of the construction scope: Street lighting luminaires, street lighting poles, bracket arms, pole accessories, and decorative base enclosures all as stipulated by the City according to the City standards for the given project location.
 - b. Concrete foundation bases for new street lighting poles. Poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole. The installation of the foundation bases shall be coordinated with sidewalk details and requirements as stipulated by the City of Portland Department of Public Works.
 - c. Underground conduit and wire between street lighting pole foundation bases. In addition, underground conduit and wire shall be provided to an electrical service panelboard and meter, as well as to an existing point of service connection.
 - d. Wiring to be installed within each street lighting pole and shall be extended at the pole top (or bracket arm), with connection to the street lighting luminaire(s).
2. Upon completion of the erection of the project street lighting, including the installation of all lighting poles and conduit/wire, the construction contractor shall notify the City that the system is ready for operation. THE LUMINAIRES SHALL BE ENERGIZED PRIOR TO THE CONSTRUCTION CONTRACTOR'S REQUEST FOR A CITY CERTIFICATE OF OCCUPANCY.
 3. It shall be the construction contractor's responsibility to pay all costs associated with the provision of required street lighting including costs associated with street lighting luminaires, street lighting poles, brackets, bases, conduit, and wire, panelboards and metering equipment.

City of Portland Responsibilities:

1. To approve the proposed point of connection for electrical service for new municipal street lighting where a new metered service is provided.
2. Connection of the construction contractor's secondary service conductors at an existing service point, where a new service is provided.
3. To review and approve the location of the street light fixtures within the public right-of-way.

10.6. Reserved.

10.7. Submission Requirements:

A lighting plan shall be provided which shall show the quantity and location of all existing and proposed street lights. This shall be incorporated into the site plan or presented on an individual lighting plan. Descriptive information including engineering detail drawings depicting the entire proposed fixture, including luminaire, bracket arm, slip fitter and lighting, along with the proposed color shall be included on the individual lighting plan.

10. MUNICIPAL STREET LIGHTING STANDARDS

10.1. APPLICABILITY:

Street lighting on city streets and public rights-of-way not subject to decorative street lighting shall follow the General Standards under 10.2 of this section.

In addition to the General Standards for lighting applicable throughout the City, the City of Portland has established special street lighting standards for decorative lighting districts in the following areas and according to the tables and figures in this section:

- ~~West Bayside~~
- Downtown (includes portions of Cumberland Avenue)
- Old Port
- Peninsula - Eastern Waterfront and Bayside
- Waterfront - Commercial/Thames Street
- Off-Peninsula/Forest Avenue
- Historic Landscape Districts (including Baxter Boulevard, the Eastern and Western Promenades, Lincoln Park, and Deering Oaks Park)
- Trails and pathways, ~~(including Eastern Promenade Trail, Fore River Trail, and Bayside Trail).~~

~~Each lighting district is subject to individual Decorative~~ street lighting specifications including but are not limited to fixture type, pole and base type, pole height to top of fixture, pole spacing, and color. Please refer to Section 10.4 Standards for Decorative Lighting and Figures X-14 for the map of boundaries of Portland's ~~decorative street lighting locations~~ districts.

Developments subject to Level II and Level III site plan review that are on an existing or proposed street that is not currently illuminated with street lighting meeting City standards shall install the requisite type and number of street lights along all frontages.

Where lighting is being installed in the public way as part of a private development, developers are responsible for purchasing and installing all street lighting, including light poles, brackets, slip fitters, bases and all electrical wiring and conduit. The new street lighting shall be connected to an existing metered

service, unless otherwise directed by the City. Once installed and operational, and upon acceptance by the City, street lighting located in the City right of way shall become the property of the City of Portland.

For areas of the City outside the special street lighting districts, the general standards under 10.2 of this section shall apply.

10.2. GENERAL STANDARDS:

Location: For areas not ~~located-designated~~ within a ~~special street decorative lighting-district~~, street lighting may be placed on only one side of the street within the furnishing zone. However, when deemed necessary for traffic safety, the Reviewing Authority may require some street lights to be placed the opposite side of a ~~curving street section so as to place light poles along the inside of the curve street.~~

Specification: For areas not designated with decorative lighting, ~~the~~ City of Portland has adopted the following basic-typical street light pole and fixture standards:

- Residential (Local/Minor) Street – ~~On residential streets, t~~ [see Figure X-1]

- a) The standard light pole height is a minimum 14', not to exceed 15' – 4" and shall be black aluminum ~~Town and Country pole.~~

- b) Poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole. Street light pole base design, mounting bolt pattern, bolt spacing, and bolt size shall be approved by the Department of Public ServicesWorks.

- c) Light levels and pole spacing shall be according to the table in section 10.2.1

- a)d) Streetlights shall be full cutoff, using LEDs at a 3000 Kelvin color temperature, cost-effective and innovative technologies and shall seek to match uniformity, lumen output, and color of existing streetlights along the roadway, where applicable.

- Commercial/Industrial (Arterial/Collector??) Road – ~~On all new commercial/industrial roads, t~~ [see Figures X-2A to X-2G]

- a) The standard pole height shall be either 20' or 30' according to the table in section 10.2.1 and shall be a grey or silver ~~black~~ aluminum.

- b) Pole selection and finish:

- Within .5 mi. of shoreline shall use Beacon RSA-B-SHO-S AA-10 Cobra [Figure X-2F]

- More than .5 mi. away from shoreline shall use Hubbell FTA Upsweep Style [Figure X-2G]

c) Poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole.

d) Light levels and pole spacing shall be according to the tables in 10.2.1.

e) Streetlights shall be full cutoff, using cost-effective and innovative technologies and shall seek to match uniformity, lumen output, and color of existing streetlights along the roadway, where applicable.

10.2.1. Minimum Lighting Design – Standard street lighting design ~~proposed outside of the City of Portland Special Lighting Districts (see Section 10.3 below)~~ shall conform to the following table:

STREET CLASSIFICATION	COMMERCIAL/ INDUSTRIAL		RESIDENTIAL	
	Min. Avg. Foot Candles	Maximum Pole Spacing	Min. Avg. Foot Candles	Maximum Pole Spacing
Arterial	2.0	160' (30' pole)	1.0	130' (30' pole)
Collector	1.2	130' (30' pole)	0.6	60' (14' pole)
Local/Minor	0.9	130' (30' pole)	0.4	120' (14' pole)

STANDARD COBRAHEAD

Fixture – Figures X-2A through X-2G

<u>Location</u>	<u>Fixture Type</u>	<u>Fixture Height</u>	<u>Spacing + Layout</u>	<u>Color</u>
<u>One-lane Roadways: Without parking with low traffic</u>	<u>COBRAHEAD A</u>	<u>20'</u>	<u>One side: 65' – 70'</u> <u>Alt. sides: 125' – 135'</u>	<u>Grey</u> <u>(Manufacturer's Specification)</u>
<u>One-lane Roadways: With on-street parking with low traffic</u>	<u>COBRAHEAD A</u>	<u>30'</u>	<u>One side: 70' – 80'</u> <u>Alt. sides: 120' – 130'</u>	
<u>Two-lane Roadways: With on-street parking with medium traffic</u>	<u>COBRAHEAD B</u>	<u>20'</u>	<u>One side: 75' – 80'</u> <u>Alt. sides: 145' – 155'</u>	
<u>Two-lane Roadways: With on-street parking with low traffic</u>	<u>COBRAHEAD B</u>	<u>30'</u>	<u>One side: 80' – 90'</u> <u>Alt. sides: 175' – 185'</u>	
<u>Two-lane Roadways: With on-street</u>	<u>COBRAHEAD C</u>	<u>20'</u>	<u>One side: 90' – 100'</u>	

<u>parking with medium traffic</u>			<u>Alt. sides: 180' – 190'</u>
Two-lane Roadways: <u>With on-street parking with medium traffic</u>	<u>COBRAHEAD C</u>	<u>30'</u>	<u>One side: 100' – 110'</u> <u>Alt. sides: 200' – 210'</u>
Two or more lane Roadways: <u>With on-street with high/medium traffic</u>	<u>COBRAHEAD D</u>	<u>20'</u>	<u>One side: 95' – 105'</u> <u>Alt. sides: 195' – 210'</u>
Two or more lane Roadways: <u>With on-street parking with high traffic</u>	<u>COBRAHEAD D</u>	<u>30'</u>	<u>One side: 115' – 125'</u> <u>Alt. sides: 245' – 255'</u>
	<u>COBRAHEAD E</u>	<u>20'</u>	<u>One side: 100' – 110'</u> <u>Alt. sides: 200' – 215'</u>
	<u>COBRAHEAD E</u>	<u>30'</u>	<u>One side: 115' – 130'</u> <u>Alt. sides: 240' – 255'</u>

~~Developments subject to Level III site plan review that are on an existing or proposed street that is not currently illuminated with street lighting meeting city standards shall install the requisite number of street lights along all frontages. Developers are responsible for purchasing and installing all street lighting, including light poles, brackets, slip fitters, bases and all electrical wiring and conduit. The new street lighting shall be connected to either a new *Central Maine Power Company (CMP)* metered secondary service, or an existing metered service, unless otherwise directed by the City. Where a leased service is necessary, luminaires will be leased from CMP under the existing municipal street lighting rate and lease agreement held between the City and the *Central Maine Power Company (CMP)*. Once installed and operational, and upon acceptance by the City, street lighting located in the City right of way shall become the property of the City of Portland.~~

10.2.2 New Metered Services for Light Fixtures

- New light fixtures shall:
 - a) Not to be tied to the existing power utility leased lighting system.
 - b) Be provided with a NEMA 7-pin receptacle for future connection to the City of Portland lighting control system.
 - c) Be specified with a color temperature of 3000K.
- The developer is to provide a new metered electrical service in an APX outdoor rated enclosure (see section 10.3.1 for unit specification), preventing any new fixtures from being directly connected to the power utility.
- The developer will be required to:
 - a) Provide an astronomical timeclock inside the electrical enclosure (see section 10.3.1 for unit specification) to control light fixtures or
 - b) Provide a standard photocell for each fixture, to be used until lighting control module is installed.

10.3. ACCESSORIES & BOLLARDS: Reserved.

10.2.2.10.3.1. Cabinets - The city standard cabinet specifications are the as following two pieces:

<u>CABINET</u>				
<u>Location</u>	<u>Fixture Type</u>	<u>Fixture Height</u>	<u>Layout</u>	<u>Color</u>
<u>Public Right-of-way</u>	<u>ABX Enclosures, Inc.</u> <u>Cabinet # 1-850-000062</u> <u>Pedestal Base #1-060000190</u>	<u>Per Manufacturer's Specification</u>	<u>Mounted on the back side of sidewalk with door facing street, meter facing building street wall.</u> <u>If site constraints require box to be mounted within sidewalk furnishing zone, then door should face building/private property and meter should be mounted opposite side of travel direction.</u>	<u>Grey/Silver or Clear Coat (Manufacturer's Specification)</u>

- Cabinet base can be stand-alone type other than above, provided it is's not in a sidewalk or on the edge of a plowed pathway, street, or parking lot. Circuits may also be wired into existing traffic signal boxes or other light circuit boxes. This will be determined on a case-by-case basis.
- Additional specifications for multiuse box with external power for festivals and special events (not required – determined by Department of Public Works):
 - Square D power panel QO816L100DF/S or QO112L125G with cover QO16US
 - Circuits required:
 - 1= 125/250V 50 Amp NEMA 14-50 Receptacle
 - 1= 125/250V 30 Amp NEMA 14-30 Receptacle
 - 2= 125V 20A Standard Receptacle

10.3.2 Wiring & Electrical

- 2" inch conduit (minimum) underground in light pole bases and cabinet base.
- Each light fused individually at base Fuse holder type is a (Buchanan 65 kit Cat # 65U)
- Regular outlet on each pole just below the fixture to be fused at the bottom of the pole base with the same fuse kit as listed above.
- Single pPhoto cell control for all lights shall be in the cabinet, rated for the circuit. This may require an all-purpose contactor.
- Wire size and circuit size shall be calculated by the design engineer and inspected by the city inspector to make sure it i's correct. This would be done

on a case by case basis because not all circuits, lights and systems are the same.

10.3.3 Bollards

This section includes standards for typical lighted bollards. Non-lighted bollards appear in Section 1. Transportation Systems and Street Design Standards.

Location: Bollards may be used in areas such as underpasses and similar conditions where height is restricted for pedestrian lighting. Spacing and number to be determined by Department of Public Works. Locations must be approved by Department of Public Works and the Planning Authority. The City may approve additional bollard types for streetscape or special projects such as parks or as use for security bollards; any additional bollard selection must be of equivalent structural strength as approved bollards.

Specification: The City of Portland has adopted the following typical lighted bollard standards:

<u>LIGHTED BOLLARD</u>				
<u>Fixture – Figure X-3</u>				
<u>Location (including but not limited to)</u>	<u>Fixture Type</u>	<u>Fixture Height</u>	<u>Spacing + Layout</u>	<u>Color</u>
<u>Underpasses: Park Avenue, St. James Street, St. John Street, Forest Avenue, Preble Street, Franklin Street, Commercial Street, Harborview Park, Tukey's Bridge, Veranda Street</u>	<u>Holophane Freeport Series</u>	<u>45"</u>	<u>To be determined by Department of Public Works</u>	<u>Black (Manufacturer's Specification)</u>
<u>Waterfront Piers</u>				

10.3.10.4. STANDARDS FOR ~~DECORATIVE~~SPECIAL LIGHTING-DISTRICTS:

Locations, Specifications, and Colors:

- Figure X-41 identifies the ~~established decorative special~~ Street Light locations ~~Districts city wide~~. The following tables and Figures X-52 through X-127 illustrate the requirements for fixture type, height, layout, and color for each ~~district~~decorative light fixture, according to street name.
- All light poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole.

|

DOWNTOWN LIGHTING DISTRICT DECORATIVE LIGHT – Downtown

Map - Figures X-5A, X-5D

Fixtures – Figures X-5B, X-5C, X-5E, X-5F

The Technical Manual supersedes the previously adopted City of Portland Downtown Sidewalk and Street Lighting Plan (1994); that plan may be used for reference or clarification of the standards in this manual. ~~The boundary of the Downtown Lighting District is depicted in Figure X-3A. For projects in the Downtown Lighting District, except on Franklin Arterial, please refer to the City of Portland Downtown Sidewalk and Street Lighting Plan.~~

Any fixtures identified in ~~The City of Portland Downtown Sidewalk and Street Lighting Plan~~ for **Exchange Street are superseded by the City of Portland Old Port Lighting Plan. For street lighting requirements along Exchange Street, please refer to the standards for the Old Port Lighting District of this section.*

	Location	Fixture Type	Fixture Height (top of fixture)	Spacing + Layout	Color
	Franklin Arterial: Between Cumberland and Commercial Street	Eastern Waterfront District Large Scale Lighting Pole (see Figure X-5B)	24 ft 3 inch	90-100 ft on center (one side only) 175-225 on center (staggered pattern on both sides of street)	Black (Manufacturer's Specification)
	<u>Oak Street, Casco Street, Brown Street, Chestnut Street, Shepley Street, Center Street: Congress to Free St</u> <u>Cross Street: Free to Spring St</u> <u>Monument Square and Monument Way: Pedestrian ways</u>	PEDESTRIAN 1 – Single or Double Arm [Figure X-5B]	12' 6"	One side: 60' – 80' Alt. sides: 100' – 175' Single-arm fixture placed in furnishing zone with luminaire oriented over sidewalk. Double-arm fixture placed with bracket arms parallel to sidewalk. If sidewalk space is limited, Planning Authority may approve lights within private property or attached to building.	Dark Green – Tiger Drylac RAL 6012
		PEDESTRIAN 2 [Figure X-5C]	24' 0"	One side: 90' – 100' Alt. sides: 175' – 225' Double-arm fixture placed with bracket arms parallel to sidewalk.	Dark Green – Tiger Drylac RAL 6012
	<u>Congress Street</u> <u>Other locations on a case-by-case basis</u>	STREET – Single or Double Arm [Figure X-5E]	30' 0"	One side: 90' – 100' Alt. sides: 175' – 225' Double-arm fixture to be used in median conditions with luminaire overhanging street.	Dark Green – Tiger Drylac RAL 6012
	<u>Congress Street: Between St. John Street to and Franklin State Street</u> <u>Cumberland Avenue: High to Franklin St</u>	STREET/PED COMBO [Figure X-5F] Four styles of street	30' 0" Please refer to the City of	One side: 90' – 100' Alt. sides: 175' – 225'	Dark Green – Tiger Drylac RAL 6012

<u>Spring Street: High to Temple/Union St</u>	light are specified for the Downtown Lighting District. These lights vary in terms of height and amount and placement of luminaires (see Figures X-3B through X-3H).	<u>Portland Downtown Sidewalk and Street Lighting Plan</u>, available for review at the Planning Division, for detailed information concerning lighting pole placement and type.		
Congress Street: Between State Street and High Street				
Congress Street: Between High Street and Myrtle Street				
Congress Street: Between Myrtle Street and Franklin Arterial				
Congress Street: Between Franklin Arterial and Eastern Promenade				
Myrtle, Chestnut, Elm and Preble Streets: Between Congress Street and Cumberland Avenue				
Union Street: Between Spring Street and Pleasant Street				
Federal Street: Between Monument Square and Exchange Street				
Brown, Casco, Oak, Shepley and High Streets: Between Cumberland Avenue and Congress Street				
<u>Free Street: Between High St and Temple St</u>				
Forest Avenue, Pearl Street and State Street: Between Congress Street to and Cumberland Avenue				
Center Street, High Street, Temple Street, Oak Street and Cross Street: Between Free Congress Street to and Spring St. Arterial				
<u>Temple Street: Congress to Spring/Middle St</u>				
Free Street: Between High Street and Temple Street				
Spring Street Arterial: Between Exchange Street and Oak Street				
Brown Street: Between Congress Street and Free Street				
<u>Myrtle, Chestnut, Elm and Preble Streets: Congress to Cumberland Ave</u>	<u>STREET/PED COMBO</u> <u>[Figure X-5F]</u>	<u>30' 0"</u>	<u>One side: 90' – 100'</u>	<u>Dark Green – Tiger Drylac RAL 6012</u>
<u>Federal Street: Congress to Temple St</u>				

<u>OLD PORT LIGHTING DISTRICT</u> <u>DECORATIVE LIGHT – Old Port</u>				
<u>Map - Figure X-6A</u> <u>Fixture – Figure X-6B</u>				
<i>The boundary of the Old Port Lighting District is depicted in Figure X-4A. For projects on Exchange Street and portions of Fore Street described below, please Refer to the <u>City of Portland Old Port Lighting Plan</u>, available for review at the Planning Division.</i>				
Location	Fixture Type	Fixture Height (top of fixture)	Spacing + Layout	Color
Exchange Street: Between Congress to and Middle Fore Streets	Old Port District Street Lighting Pole	14 ft 3 inch 14' ft 3" inch	Please refer to the <u>City of Portland Old Port</u>	Black (Manufacturer's

Exchange Street: Between Middle Street and Fore Street	(see Figure X-4B) STREET (Figure X-6B) Old Port District Street Lighting Pole (see Figure X-4B)		Lighting Plan, available through the Planning Division, for detailed specifications concerning light pole placement. One side: 60'-80' ft on center (staggered pattern on both sides)	Specification) Black (Manufacturer's Specification)
Fore Street: Between Center Exchange Street to and Franklin Arterial				
Streets between Spring/Middle to Commercial Street: Center Street, Cotton Street, Cross Street, Union Street, Dana Street, Patton Court, Moulton Street, Market Street, Silver Street, Pearl Street, Custom House Street, Portland Square, Milk Street, Wharf Street, Gold Street				
Federal Street W, Middle Street, Newbury Street W: Between Exchange Temple/Union Street to and Franklin St Arterial				
Federal Street W: Between Exchange Street and Franklin Arterial				
Market Street: Between Congress Street and Fore Street				
Newbury Street W: Between Market Street and Franklin Arterial				
Pearl Street: Between Congress Street and Commercial Street				
Church Street				
Milk Street: Between Exchange Street and Pearl Street				
Parks: Tommy's, Post Office Park				

WEST BAYSIDE LIGHTING DISTRICT DECORATIVE LIGHT – Peninsula

Map - Figures X-7A, X-7C

Fixtures – Figures X-7B, X-7D, X-7E The boundary of the West Bayside Lighting District is depicted in Attachment X-2A.

*For street lighting requirements on either side of **Cumberland Avenue** between Forest Avenue and Franklin Arterial, please refer to the standards and specifications for the Downtown Lighting District.

Location	Fixture Type	Fixture Height (top of fixture)	Spacing + Layout	Color
Wilmot Street, Chapel Street, Stone Street, and Cedar Street	MEDIUM STREET (Figure X-7B) Bayside District Medium Scale Light (see Figure X-2C) Bayside District Medium Scale Residential Light (see Figure X-2D) Bayside Small Scale Residential Light (see Figure X-2E)	19'-ft 3"-inch 19 ft 3-inch 12 ft 9-inch	One side: 80' – 100' ft on center (one side only)	Black (Manufacturer's Specification) Silver Metallic Natural Aluminum— Tiger Drylac Old Navy Silver Y003J Dark Gray— Tiger Drylac RAL 7016 Dark Gray— Tiger Drylac RAL 7016
Alder Street, Hanover St, Parris St, Brattle St, Mechanic St			150 – 200 feet on center (staggered pattern on both sides of street)	
Hanover Street: above Somerset Street			Fixtures needed on one side of street only. Use Type 2 IES distribution.	
Parris Street, Brattle Street, Mechanic Street			Fixture placed in furnishing zone overhang towards the street; where fixture is in conflict with overhead utilities, may be placed on back of sidewalk with light overhanging sidewalk.	
Chestnut Street: Lancaster Street to Marginal Way			Where street lighting is provided by existing cobrahead fixtures, decorative fixtures are not needed on that side of street. If a project includes placing utilities	
Somerset Street				
Preble Street and Elm Street: Cumberland Avenue to Marginal Way				
Pearl Street: Lancaster St. to Marginal Way				
Kennebec Street				
Hanover Street: Somerset Street to Marginal Way				
Portland Street				
Chestnut Street: Cumberland Avenue to Lancaster Street				
Pearl Street: Cumberland Avenue to Lancaster Street				
Oxford Street				
Lancaster Street				

	<u>Mountfort St, Hancock St, Hampshire St, Newbury St E, Federal St E</u>			<u>underground, street/pedestrian lighting shall be provided by decorative fixtures.</u> <u>80—100 ft on-center (one side only)</u> <u>150—200 ft on-center (staggered pattern on both sides of street)</u> <u>60—80 ft on-center (one side only)</u> <u>100-175 ft on-center (staggered pattern on both sides of street)</u>	
	<u>Preble Street and Elm Street:</u> <u>Cumberland Avenue to Marginal Way</u>	<u>MEDIUM STREET (Figure X-7B)</u>	<u>19' 3"</u>	<u>One side: 80' – 100'</u> <u>Alt. sides: 150' – 200'</u> <u>Fixture placed in furnishing zone overhang towards the street; where fixture is in conflict with overhead utilities, may be placed on back of sidewalk with light overhanging sidewalk.</u> <u>Fixtures placed on both sides of the street.</u> <u>Where street lighting is provided by existing cobrahead fixtures, decorative fixtures are not needed on that side of street. If a project includes placing utilities underground, street/pedestrian lighting shall be provided by decorative fixtures.</u>	<u>Black (Manufacturer's Specification)</u>
	<u>Pearl St, Chestnut St, Myrtle St:</u> <u>Cumberland Ave to Marginal Way</u>				
	<u>Oxford Street W, Lancaster Street, Kennebec Street, Somerset Street</u>				
	<u>Portland Street</u>				
	<u>Anderson Street:</u> Everett to Plowman St				
	<u>Fox Street</u>				
	<u>Washington Avenue:</u> Congress to I-295				
	<u>India Street</u>				
	<u>Middle Street:</u> Franklin to Hancock St				
	<u>Fore Street:</u> Franklin to Waterville St				
	<u>Marginal Way</u>	<u>LARGE STREET (Figure X-7D) Bayside District Large Scale Light (see Figure X-2B)</u>	<u>24' 3" inch</u>	<u>One side: 90' – 110' ft on center (one side only)</u> <u>Alt. sides: 175' – 225' ft on-center (staggered pattern on both sides of street)</u>	<u>Black (Manufacturer's Specification)</u> <u>Silver Metallic</u> <u>Natural Aluminum—</u> <u>Tiger Drylac Old Navy Silver</u> <u>¥003J</u>
	<u>Franklin Arterial:</u> Cumberland Ave. to Marginal Way				
	<u>Forest Avenue:</u> Cumberland Avenue to Marginal Way				

	<u>* No streets shall use PEDESTRIAN scale light unless site conditions such as sidewalk width or overhead utilities prevent installation of MEDIUM STREET fixture (Figure X-7D)</u>	<u>PEDESTRIAN (Figure X-7E)</u>	<u>14' 6"</u>	<u>One side: 60' – 80'</u> <u>Alt. sides: 100' – 175'</u> <u>Fixture oriented to overhang sidewalk.</u> <u>Fixture placed in furnishing zone unless space is limited.</u> <u>Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.</u>	<u>Black (Manufacturer's Specification)</u>
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EASTERN WATERFRONT LIGHTING DISTRICT					
<i>The boundaries of the Eastern Waterfront Lighting District are depicted in Figure X-5A.</i>					
	Location	Fixture Type	Fixture Height (top of fixture)	Layout	Color
	Fore Street: Between Franklin Arterial and Eastern Promenade Middle Street: Between Franklin Arterial and Hancock Street India Street Hancock Street: Between Newbury Street and Thames Street Newbury Street: Between India Street and Mountfort Street Bradbury Court	Eastern Waterfront District Medium-Scale Lighting Pole (see Figure X-5C.)	19 ft 3 inch	80—100 ft on center (one side only) 150—225 ft on center (staggered pattern on both sides of street)	Black (Manufacturer's spec)
	Newbury Street: Between Franklin Arterial and India Street Hampshire St Mountfort Street Hancock Street: Between Newbury Street and Federal Street Federal Street: Between Franklin Arterial and Mountfort Street	Eastern Waterfront District Small-Scale Lighting Pole (see Figure X-5D)	12 ft 9 inch	60—80 ft on center (one side only) 100—175 ft on center (staggered pattern on both sides of street)	Black (Manufacturer's spec)
	Thames Street	Commercial Street District Lighting Pole—W Commercial Street (see Figure X-6B)	18 ft 4 inch	90—125 ft on center (one side only) 174—225 ft on center (staggered pattern on both sides of street)	Dark Green—Tiger Drylac RAL 6028

~~COMMERCIAL STREET LIGHTING DISTRICT~~ DECORATIVE LIGHT – Trails, Waterfront

Map - Figure X-8A

Fixture – Figure X-8B ~~The boundary of the Commercial Street Lighting District is depicted in Figure X-6A.~~

~~Trails - This fixture appropriate for any city trail installation. Standard lighted bollard may also be used in appropriate circumstances.~~

~~Bayside Trail - This fixture should only be used on the Bayside Trail if replacing six or more of the existing fixtures.~~

~~Waterfront – Commercial/Thames Street, this fixture is suitable to supplement standard cobrahead lighting.~~

Location	Fixture Type	Fixture Height (top of fixture)	Spacing + Layout	Color
Commercial Street: From Thames Street to Casco Bay Bridge	TRAIL – Single Arm Eastern Waterfront District Large Scale Lighting Pole Large (see Figure X-5B) Commercial Street District Lighting Pole W Commercial Street (see Figure X-6B)	24 ft 3 inch 20' 8" 18 ft 4 inch	90-100 ft on center (one side only)	Black (Manufacturer's Specification) Black (Manufacturer's Specification) Dark Green – Tiger Drylac RAL 6028
West Commercial Street: From Casco Bay Bridge to Fore River Parkway			175-225 on center (staggered pattern on both sides of street)	
Fore River Parkway: Between Valley Street and Frederic Street			One side: 90' – 125' ft on center (one side only)	
Fore River Trail: Casco Bay Bridge to US-1; Harborview Park trail path			Alt. sides: 175' 4 – 225' ft on center (staggered pattern on both sides of street)	
Commercial Street: Fore River Parkway to India St	TRAIL – Single Arm	20' 8"	Supplemental pedestrian lighting as-needed. On side: 90' – 125' Alt. sides: 175' – 225'	Black (Manufacturer's Specification)
Thames Street: India Street to Eastern Promenade Trail	TRAIL – Single Arm	20' 8"	One side: 90' – 125' Alt. sides: 175' – 225'	Black (Manufacturer's Specification)
Eastern Promenade Trail	TRAIL – Single or Double Arm	20' 8"	One side: 90' – 125' Alt. sides: 175' – 225' Single arm fixture oriented to overhang trail; Double arm fixture for medians or similar.	Black (Manufacturer's Specification)

DECORATIVE LIGHT – Off-Peninsula

Map - Figure X-9A

Fixture – Figure X-9B

~~In addition to the specific locations indicated below, this fixture is also suitable for off-peninsula, commercial corridors to supplement standard cobrahead lighting.~~

Location	Fixture Type	Fixture Height (top of fixture)	Spacing + Layout	Color
Forest Avenue: Marginal Way to Woodlawn Avenue	PEDESTRIAN – Single or Double Arm	18' 4"	One side: 90'-125' 00 ft on center (one side only) Alt. sides:	Graphite (Manufacturer's Specification)

				175' - 225' on center (staggered pattern on both sides of street) <u>Placement on back of sidewalk with single arm fixture oriented to overhang sidewalk; Where site constraints require placement in furnishing zone, use double arm fixture parallel to sidewalk.</u>	
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HISTORIC LANDSCAPE DISTRICTS AND TRAILS DECORATIVE LIGHT – Historic Landscape Street

Map - Figure X-10A

Fixture –Figure X-10B

Fixture placement should comply with adopted master plans. The boundaries of the Historic and Trail Lighting Districts are depicted in Figure X-7A.

	Location	Fixture Type	Fixture Height (top of fixture)	<u>Spacing + Layout</u>	Color
	Eastern Promenade (<u>park side of street only</u>): Between North Street to and ForeVesper Street	Eastern Waterfront District Medium Scale Lighting (<i>see Figure X-5C</i>) Baxter Boulevard Lighting Pole (<i>see Figure X-7D</i>)	21' 0" 19 ft 3 inch 21 ft	80—100 feet on center (one side only)	Black (Manufacturer's Specification) Black (Manufacturer's Specification)
	Western Promenade (<u>park side of street only</u>): Between Danforth Street and Bramhall Street to Vaughan St			150—200 feet on center (staggered pattern on both sides of street) <u>One side: 90' – 100' feet on center (one side only)</u>	
	Baxter Boulevard (<u>both sides of street</u>): Between Forest Avenue to and Bates Street			<u>Alt. sides: 175' – 225' feet on center (staggered pattern both sides)</u>	
	Eastern Promenade Trail	Commercial Street District Lighting Pole—W Commercial Street (<i>see Figure X-6B</i>)	18 ft 4 inch	90—125 ft on center (one side only)	Dark Green— Tiger Drylac RAL 6028
	Fore River Parkway: Between Valley Street and Frederic Street			174—225 ft on center (staggered pattern on both sides of street)	
	Deering Oaks Park (Interior) (<u>Abutting Streets, park side only</u>): <u>Deering Ave, Park Ave, Forest Ave</u>	Deering Oaks Park Pedestrian Light (<i>see Figure X-7B</i>)	21' 0" 11 ft 10 inch	<u>One side: 90' – 100' Park side of street only</u> <u>Please refer to the Deering Oaks Master Plan (2003), available through the Planning Division and on the City of Portland website, for specifications concerning exact placement of street lighting poles.</u>	Black (Manufacturer's Specification)
		Deering Oaks Park Bridge Light (<i>see Figure X-7C</i>)	4 ft 8 inch		
	Deering Oaks Park (<u>within park</u>): <u>High Street, State Street</u>	<u>STREET – without shield</u>	<u>21' 0"</u>	<u>One side: 90' – 100'</u> <u>Alt. sides: 175' – 225'</u>	<u>Black</u> <u>(Manufacturer's Specification)</u>

	Park Avenue: abutting Deering Oaks Park	Deering Oaks Park, Park Avenue Street Light (see Figure X-7E)	21 ft	n/a	Black (Manufacturer's Specification)
	Bayside Trail	Bayside Trail Pedestrian Trail Light	16 ft	n/a	Blue—Tiger Drylac RAL 5003

HISTORIC LANDSCAPE DISTRICTS AND TRAILS <u>DECORATIVE LIGHT – Historic Landscape Pedestrian</u>				
<u>Map - Figure X-11A</u> Fixture - X-11B The boundaries of the Historic and Trail Lighting Districts are depicted in Figure X-7A. Fixture placement should comply with adopted master plans.				
Location	Fixture Type	Fixture Height (top of fixture)	Spacing + Layout	Color
<u>Eastern Promenade: Pedestrian paths</u>	<u>Pedestrian</u>	<u>14' 0"</u>	<u>One side: 60' – 80'</u>	<u>Black (Manufacturer's Specification)</u>
<u>Western Promenade: Pedestrian paths</u>	<u>Pedestrian</u>	<u>14' 0"</u>	<u>One side: 60' – 80'</u>	<u>Black (Manufacturer's Specification)</u>
<u>Deering Oaks Park (Interior): Pedestrian paths, High and State streets</u>	<u>Pedestrian</u>	<u>14' 0"</u>	<u>Use existing light locations or refer to the Deering Oaks Master Plan (2003) for revised locations</u>	<u>Black (Manufacturer's Specification)</u>

HISTORIC LANDSCAPE DISTRICTS AND TRAILS <u>DECORATIVE LIGHT – Deering Oaks Bridge</u>				
Fixture – Figure X-12 <u>The boundaries of the Historic and Trail Lighting Districts are depicted in Figure X-7A.</u> Fixture placement should comply with adopted master plans.				
Location	Fixture Type	Fixture Height (top of fixture)	Spacing + Layout	Color
<u>Deering Oaks Park (Bridge)</u>	<u>Bridge Light</u>	<u>6' 0" (match existing)</u>	<u>Match existing</u>	<u>Match existing</u>

HISTORIC LANDSCAPE DISTRICTS AND TRAILS				
The boundaries of the Historic and Trail Lighting Districts are depicted in Figure X-7A.				
Location	Fixture Type	Fixture Height (top of fixture)	Layout	Color

10.4.10.5. Central Maine Power City of Portland versus Construction Contractor Responsibilities:

For projects where the construction contractor is required by the City to provide new street lighting, the new street lighting shall be connected to ~~either a new Central Maine Power Company (CMP) metered secondary service, or~~ an existing metered service, unless otherwise directed by the City (see Section 10.2.2 for new metered services for lighting). The responsibilities of the construction contractor ~~and of CMP~~ are as follows:

Construction Contractor Responsibilities:

- ~~1. Where a new CMP metered secondary service is provided, the construction contractor shall contact the project representative with CMP to review the proposed new service meter configuration, location and connection to existing CMP service lines. The construction contractor shall furnish and install as part of the construction scope:~~
 - a. ~~The construction contractor shall furnish and install as part of the construction scope S~~street lighting luminaires, street lighting poles, bracket arms, pole accessories, and decorative base enclosures all as stipulated by the City according to the City ~~Street Lighting S~~Standards for the given project location.
 - b. ~~The construction contractor shall furnish and install as part of the construction scope C~~concrete foundation bases for new street lighting poles. Poles shall be mounted on reinforced concrete pole bases with at least 2" but no more than 4" reveal above grade, with 4 bolts per pole. The installation of the foundation bases shall be coordinated with sidewalk details and requirements as stipulated by the City of Portland Department of Public ~~Services~~Works.
 - c. ~~The construction contractor shall furnish and install as part of the construction scope U~~underground conduit and wire between street lighting pole foundation bases. In addition, underground conduit and wire shall be provided to an electrical service panelboard and ~~CMP~~ meter, as well as to an existing point of ~~CMP~~ service connection.
 - d. ~~The construction contractor shall furnish and install as part of the construction scope W~~wiring to be installed within each street lighting pole and shall be extended at the pole top (or bracket arm), with connection to the street lighting luminaire(s).
2. Upon completion of the erection of the project street lighting, including the installation of all lighting poles and conduit/wire, the construction contractor shall notify the City that the system is ready for operation. ~~Where a new metered service has been provided, the City will execute a contract agreement with CMP to energize the system.~~ THE LUMINAIRES SHALL BE ENERGIZED PRIOR TO THE CONSTRUCTION CONTRACTOR'S REQUEST FOR A CITY CERTIFICATE OF OCCUPANCY.
3. It shall be the construction contractor's responsibility to pay all costs associated with the provision of required street lighting including costs associated with street lighting luminaires, street lighting poles, brackets, bases, conduit, and wire, panelboards and metering equipment. ~~This includes~~

~~all requirements stipulated by CMP for connection to existing CMP electrical power source(s).~~

~~Central Maine Power Company (CMP)~~City of Portland Responsibilities:

1. To approve the proposed point of connection for electrical service for new municipal street lighting where a new metered service is provided.
- ~~2. To prepare a secondary metered service agreement where a new service is provided, for execution between CMP and the City, for street lighting service.~~
2. Connection of the construction contractor's secondary service conductors at an existing ~~CMP~~ service point, where a new service is provided.
3. To review and approve the location of the street light fixtures within the public right-of-way.

~~10.5.10.6.~~ 10.6. Reserved.

~~10.6.10.7.~~ 10.7. Submission Requirements:

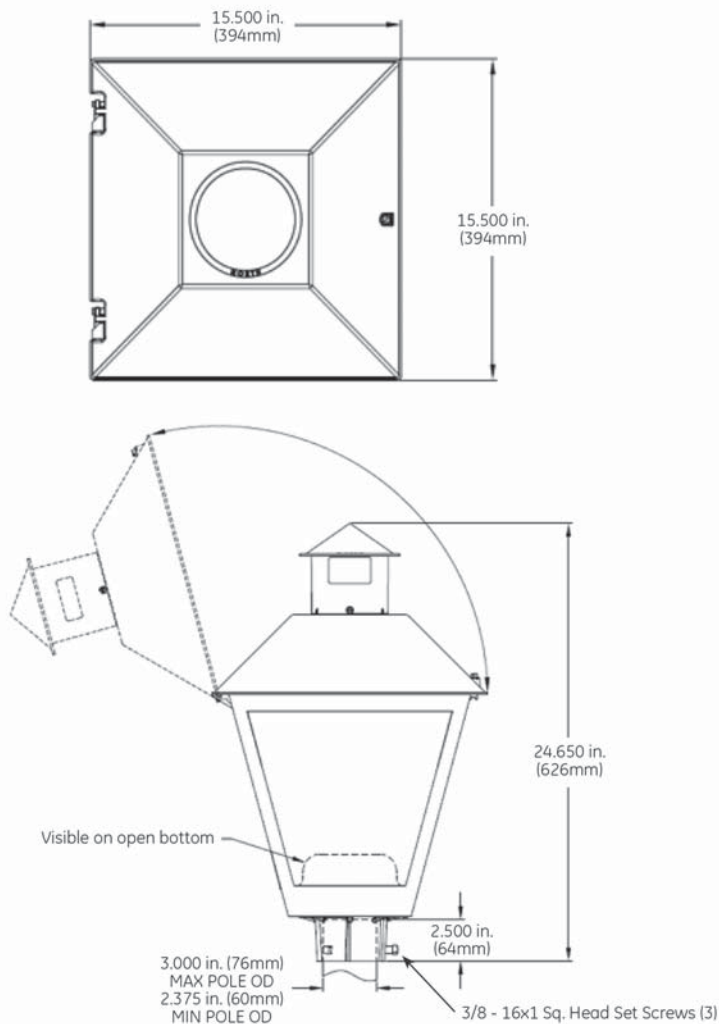
A lighting plan shall be provided which shall show the quantity and location of all existing and proposed street lights. This shall be incorporated into the site plan or presented on an individual lighting plan. Descriptive information including engineering detail drawings depicting the entire proposed fixture, including luminaire, bracket arm, slip fitter and lighting, along with the proposed color shall be included on the individual lighting plan.



PORTLAND | me

Street & Sidewalk Lighting STANDARD - RESIDENTIAL

Town & Country Post Top (EPTT)



LUMINAIRE

GE Evolve LED Post Top Town & Country (EPTT)
Model: EPTT-01-0-06-D-A-30-A-P-BLCKR-R

Die-case aluminum housing with acrylic refractor in white opal.

Pole-mounted, secondary surge protection
Voltage (120 through 277 V)
Asymmetric HO, 56 watt
LED 3000K color temperature

LIGHTING POLE

Aluminum, smooth tapered pole with 5/32" thickness (.156").

EPA rating from 4.6 to 6.9 (using 110mph wind speed ratings from AAHTO).

Maximum weight capacity = 75-100 lbs.

Base bolt pattern: 10" diagonal.

DIMENSIONS

Pole Height = 14' max.

Pole Diameter = 6" base tapered to 3"

FINISH

Black (standard)

APPLICATION

Standard sidewalk lighting for residential streets not specified for decorative lighting.

Spacing: According to Section 10.2.1

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property near sidewalk may be accommodated where space is a constraint.

Date:
March, 2019

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Figure:

X-1

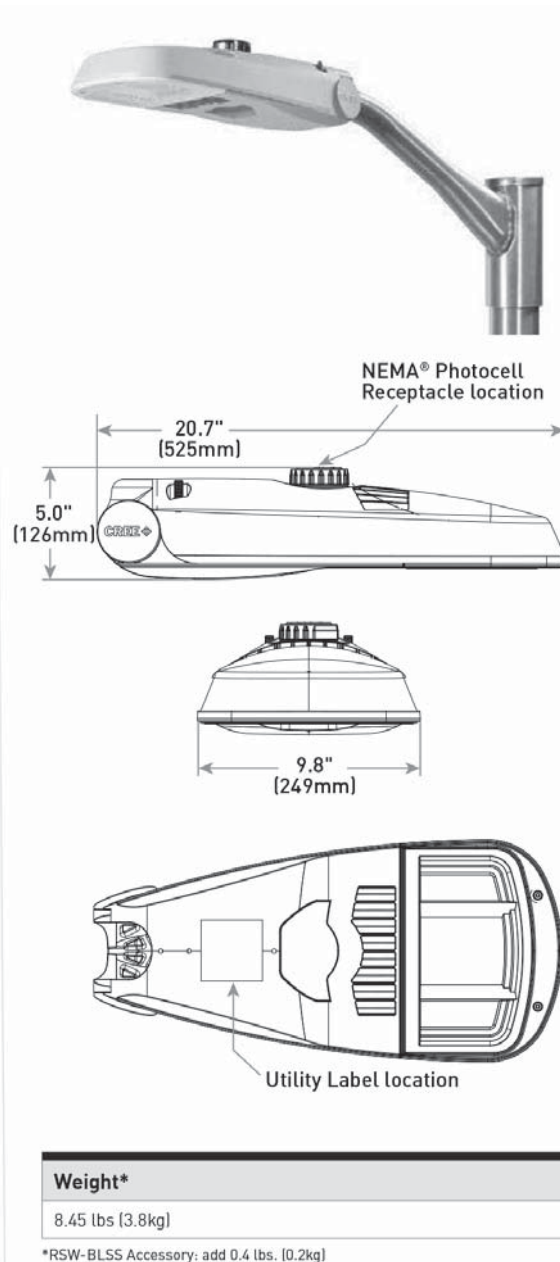
Revised Date:

RESIDENTIAL



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Street & Sidewalk Lighting STANDARD - COBRAHEAD A



LUMINAIRE

Cree RSW series LED streetlight
Model: RSW-A-HT-3ME-3L-30K7-UL-GY-N-X3

Small, horizontal tenon
Optics Type III Medium, 3,300 lumens
Universal voltage (120-227v)
7-pin photocell receptacle
LED 3000K color temperature

LIGHTING POLE

Mount to existing pole or according to Section 10.2.1

DIMENSIONS

Pole Height = 20' or 30'

FINISH

Grey: GY (standard)

APPLICATION

Standard street lighting for streets not specified for decorative lighting.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date:
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Figure:

X-2A

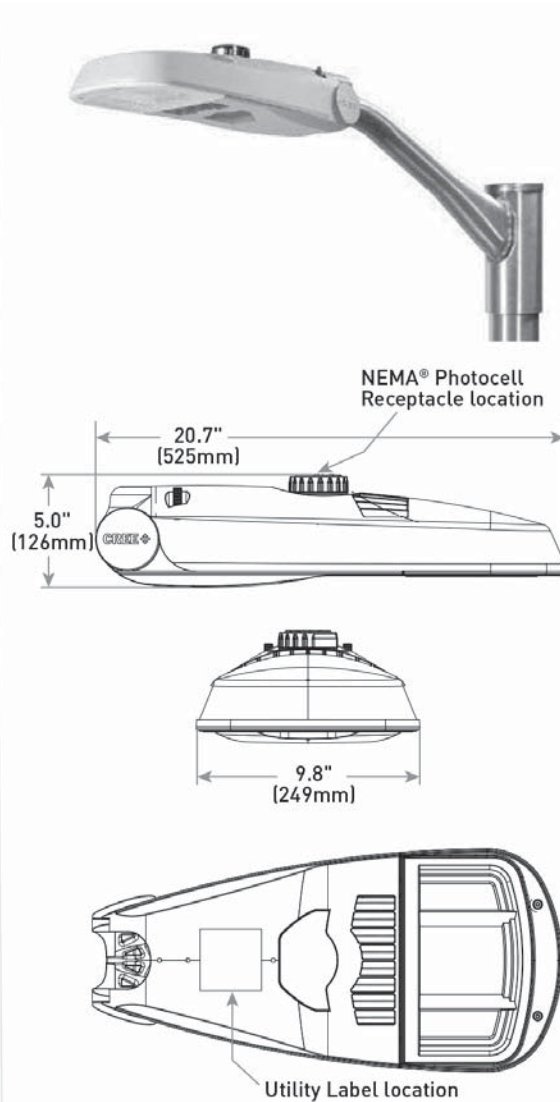
Revised Date:

COBRAHEAD A



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Street & Sidewalk Lighting STANDARD - COBRAHEAD B



Weight*

8.45 lbs (3.8kg)

*RSW-BLSS Accessory: add 0.4 lbs. (0.2kg)

LUMINAIRE

Cree RSW series LED streetlight
Model: RSW-A-HT-3ME-5L-30K7-UL-GY-N-X1

Small, horizontal tenon
Optics Type III Medium, 5,000 lumens
Universal voltage (120-277v)
7-pin photocell receptacle
LED 3000K color temperature

LIGHTING POLE

Mount to existing pole or according to Section 10.2.1

DIMENSIONS

Pole Height = 20' or 30'

FINISH

Grey: GY (standard)

APPLICATION

Standard street lighting for streets not specified for decorative lighting.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

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March, 2019

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Figure:

X-2B

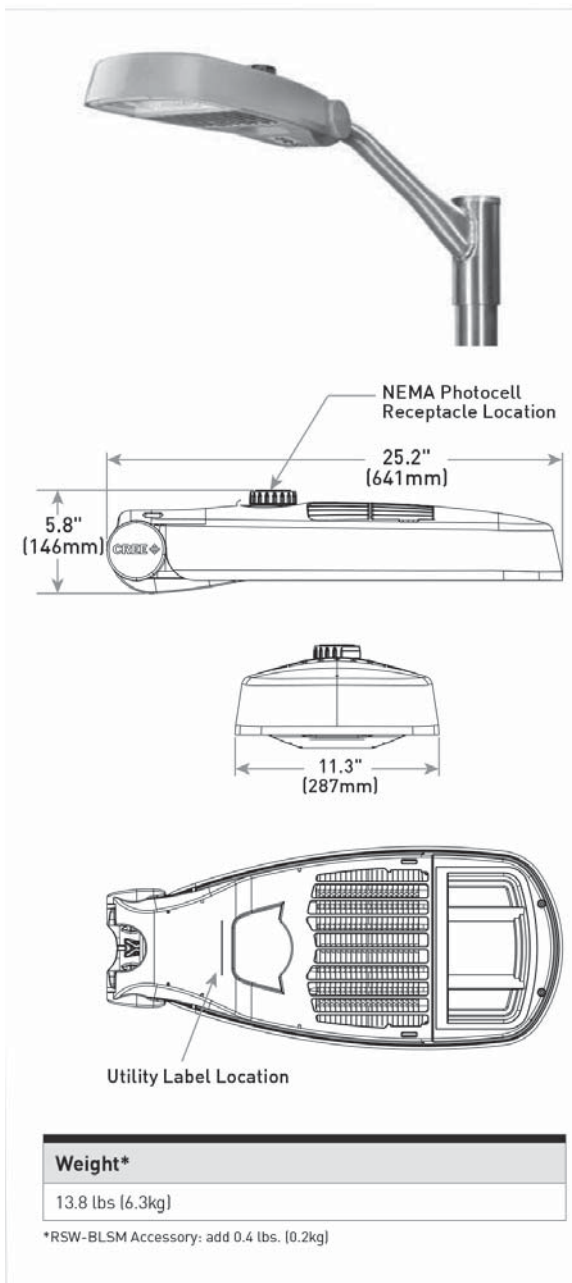
Revised Date:

COBRAHEAD B



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Street & Sidewalk Lighting STANDARD - COBRAHEAD C



LUMINAIRE

Cree RSW series LED streetlight
Model: RSWM-A-HT-3ME-9L-30K7-UL-GY-N-X1

Medium, horizontal tenon
Optics Type III Medium, 9,325 lumens
Universal voltage (120-227v)
7-pin photocell receptacle
LED 3000K color temperature

LIGHTING POLE

Mount to existing pole or according to Section 10.2.1

DIMENSIONS

Pole Height = 20' or 30'

FINISH

Grey: GY (standard)

APPLICATION

Standard street lighting for streets not specified for decorative lighting.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

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Figure:

X-2C

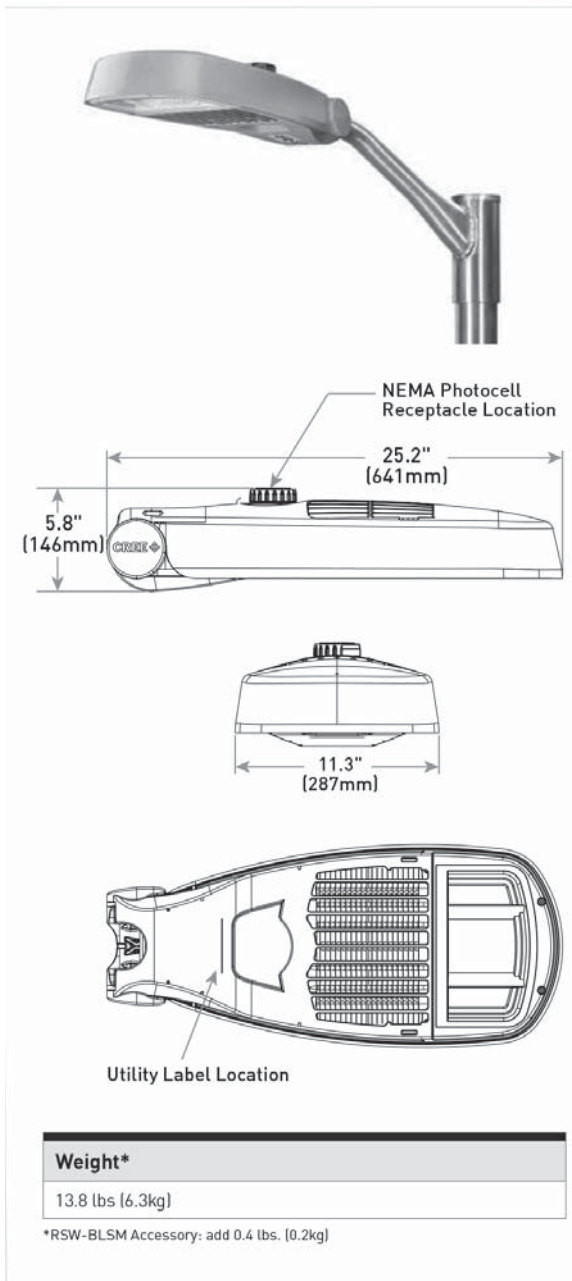
Revised Date:

COBRAHEAD C



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Street & Sidewalk Lighting STANDARD - COBRAHEAD D



LUMINAIRE

Cree RSW series LED streetlight
Model: RSWM-A-HT-3ME-9L-30K7-UL-GY-N-X6

Medium, horizontal tenon
Optics Type III Medium, 9,325 lumens
Universal voltage (120-227v)
7-pin photocell receptacle
LED 3000K color temperature

LAMP

Vertical mounted, LED 3000K color temperature

LIGHTING POLE

Mount to existing pole or according to Section 10.2.1

DIMENSIONS

Pole Height = 20' or 30'

FINISH

Grey: GY (standard)

APPLICATION

Standard street lighting for streets not specified for decorative lighting.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

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Figure:

X-2D

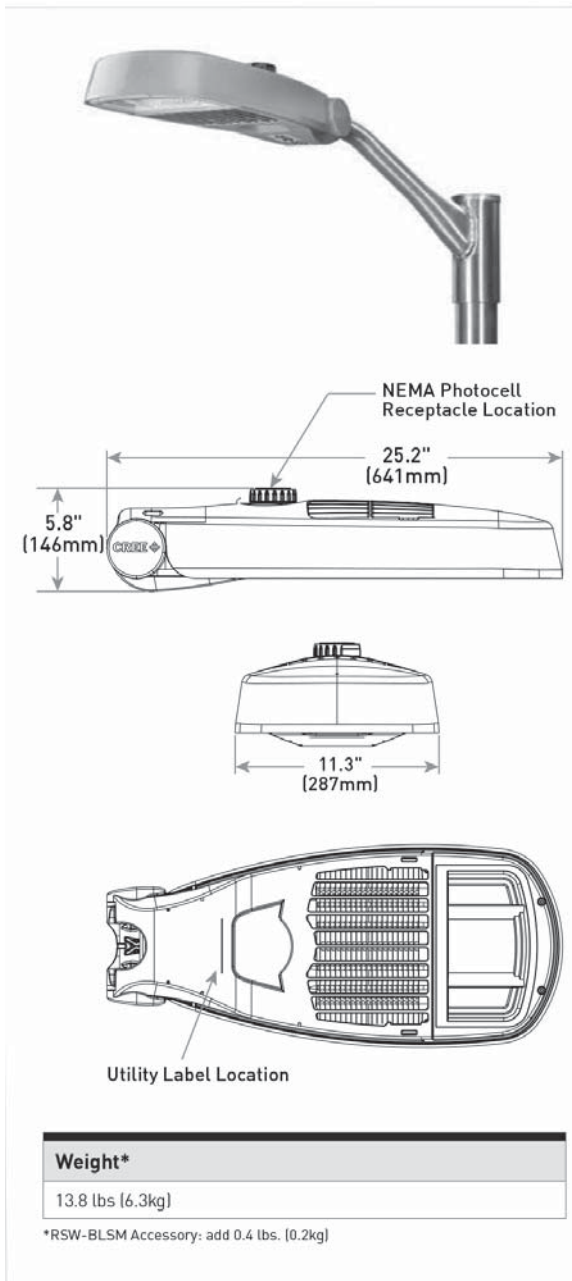
Revised Date:

COBRAHEAD D



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Street & Sidewalk Lighting STANDARD - COBRAHEAD E



LUMINAIRE

Cree RSW series LED streetlight
Model: RSWM-A-HT-3ME-9L-30K7-UL-GY-N

Medium horizontal tenon
Optics Type III Medium, 9,325 lumens
Universal voltage (120-227v)
7-pin photocell receptacle
LED 3000K color temperature

LIGHTING POLE

Mount to existing pole or according to Section 10.2.1

DIMENSIONS

Pole Height = 20' or 30'

FINISH

Grey: GY (standard)

APPLICATION

Standard street lighting for streets not specified for decorative lighting.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

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Figure:

X-2E

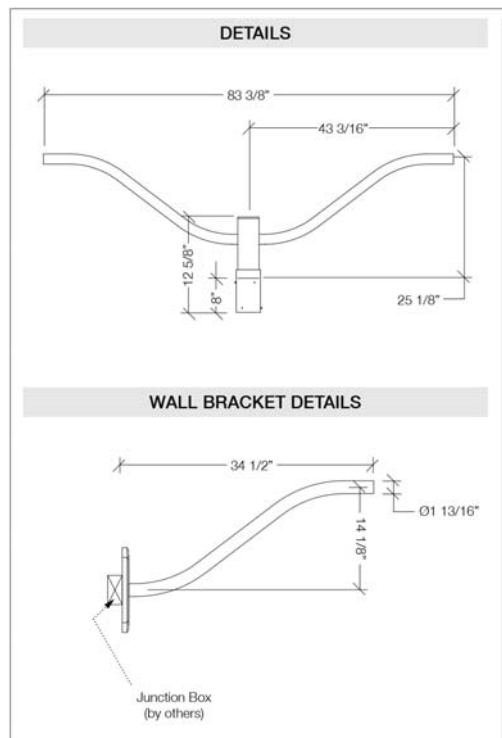
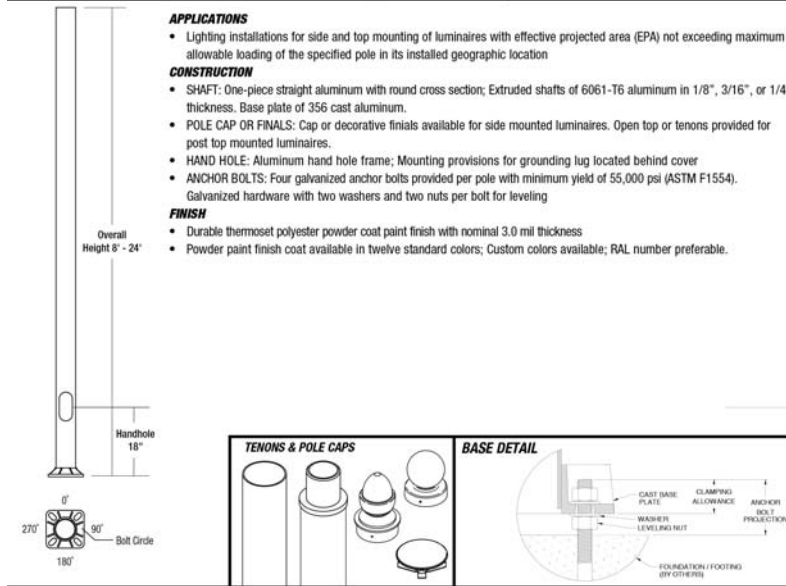
Revised Date:

COBRAHEAD E



PORTLAND | me

Street & Sidewalk Lighting STANDARD - COBRAHEAD POLE



LIGHTING POLE (see Section 10.2)

Pole: Beacon RSA-B-SHO-S Series

Model:

RS-B-SHO-S-16-40-A/B/C-CAP-2L-B3-DBT-VM2

Aluminum, smooth tapered pole of 6061-T6 aluminum.

Arm: Beacon AA-10 Cobra

Model: AA-10-S-5-B-P-GYS

Smooth profile on arms with copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

Performance standards for locations near shoreline (AAMA 2604, ASTM D522, resists surface impacts of up to 160 inch-pounds).

Base bolt pattern: Four galvanized anchor bolts per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling.

DIMENSIONS

Pole Height = 20' or 30' (according to Section 10.2.1)

FINISH

Grey: GYS Grey Smooth (standard)

Thermoset polyester powder coat paint finish with nominal 3.0 mil thickness.

Corrosion-resistant polyester powder-coat electrostatically applied meeting AAMA 2604 performance specification.

APPLICATION

Standard street lighting for streets not specified for decorative lighting.

To be used within .5 mi. of shoreline and where existing poles are not available for mounting cobrahead fixture.

Spacing: According to Section 10.2.1

Follow established pattern and orientation - typically single arm overhanging towards street.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date:
March, 2019

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Figure:

X-2F

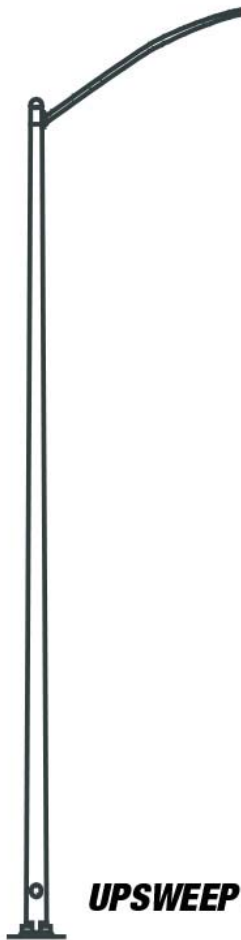
Revised Date:

COBRAHEAD POLE - WATERFRONT



PORTLAND | me

Street & Sidewalk Lighting STANDARD - COBRAHEAD POLE



UPSWEET STYLE

LIGHTING POLE (see Section 10.2)

Hubbell FTA Series - Upsweep Style
Model: RTA

Standard aluminum, smooth tapered pole.

DIMENSIONS

Pole Height = 20' or 30' (according to Section 10.2.1)

FINISH

Grey (standard)

APPLICATION

Standard street lighting for streets not specified for decorative lighting.

To be used further than .5 mi. from shoreline and where existing poles are not available for mounting cobrahead fixture.

Spacing: According to Section 10.2.1

Follow established pattern and orientation - typically single arm overhanging towards street.

Fixture placed in furnishing zone unless space is limited. Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date:
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**CITY OF PORTLAND, MAINE
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**MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10**

Figure:

X-2G

Revised Date:

COBRAHEAD POLE - NON-WATERFRONT

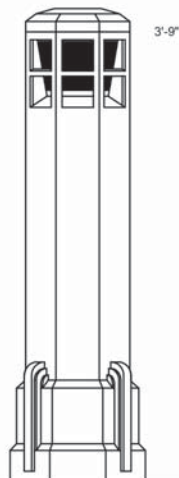


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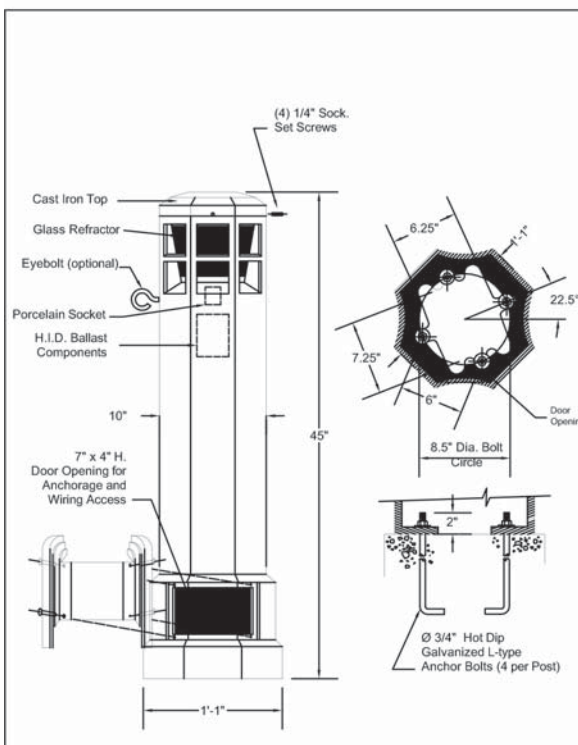
Street & Sidewalk Lighting BOLLARD

Freeport Series

Cast Iron Lighted Bollard



BOL/FP45/13/L-CI



LUMINAIRE

Holophane Freeport Series Cast Iron Lighted Bollard
Model: BOL-FP45-13-LC/BK-M70-II

Bollard shall be cast iron construction with a classic octagonal design.

The bollard shall be provided with an optical assembly including a glass refractor, and an octagonal top. Borosilicate glass refractor with IES Type II distribution.

Bollard shall be made from a one-piece casting; the top shall be attached to the bollard with four tamper resistant set screws.

LAMP

Light source shall be 70 watt Metal Halide or LED substitute where available (3000K).

DIMENSIONS

Height = 3'-9" or manufacturer's specification

Base Diameter = 13" octaflute base

Top Diameter = 10" octagonal top

MATERIALS

ASTM-A48 Class 30 cast iron

Refractor: Borosilicate glass with IES Type II dist.

Hardware: Exposed hardware shall be tamper resistant stainless steel. Anchor bolts to be completely hot dip galvanized.

FINISH

Black: CI/BL = Cast Iron/Black (standard)

APPLICATION

Sidewalk lighting where height is limited - underpasses, parks, piers

Can be used as a security bollard.

Spacing: To be determined by Department of Public Works per specific project

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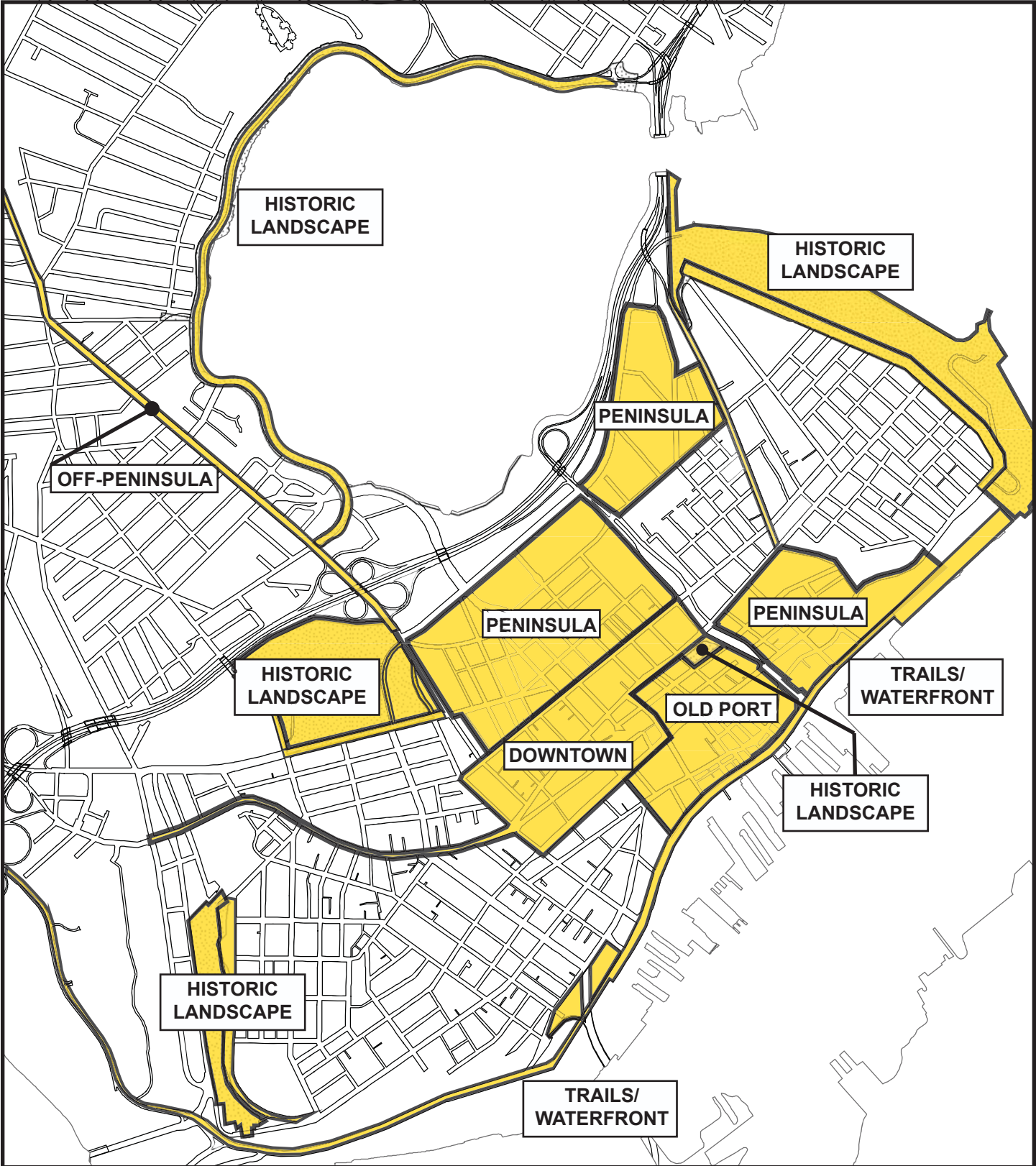
**MUNICIPAL STREET
LIGHTING STANDARDS**
SECTION 10

Figure:

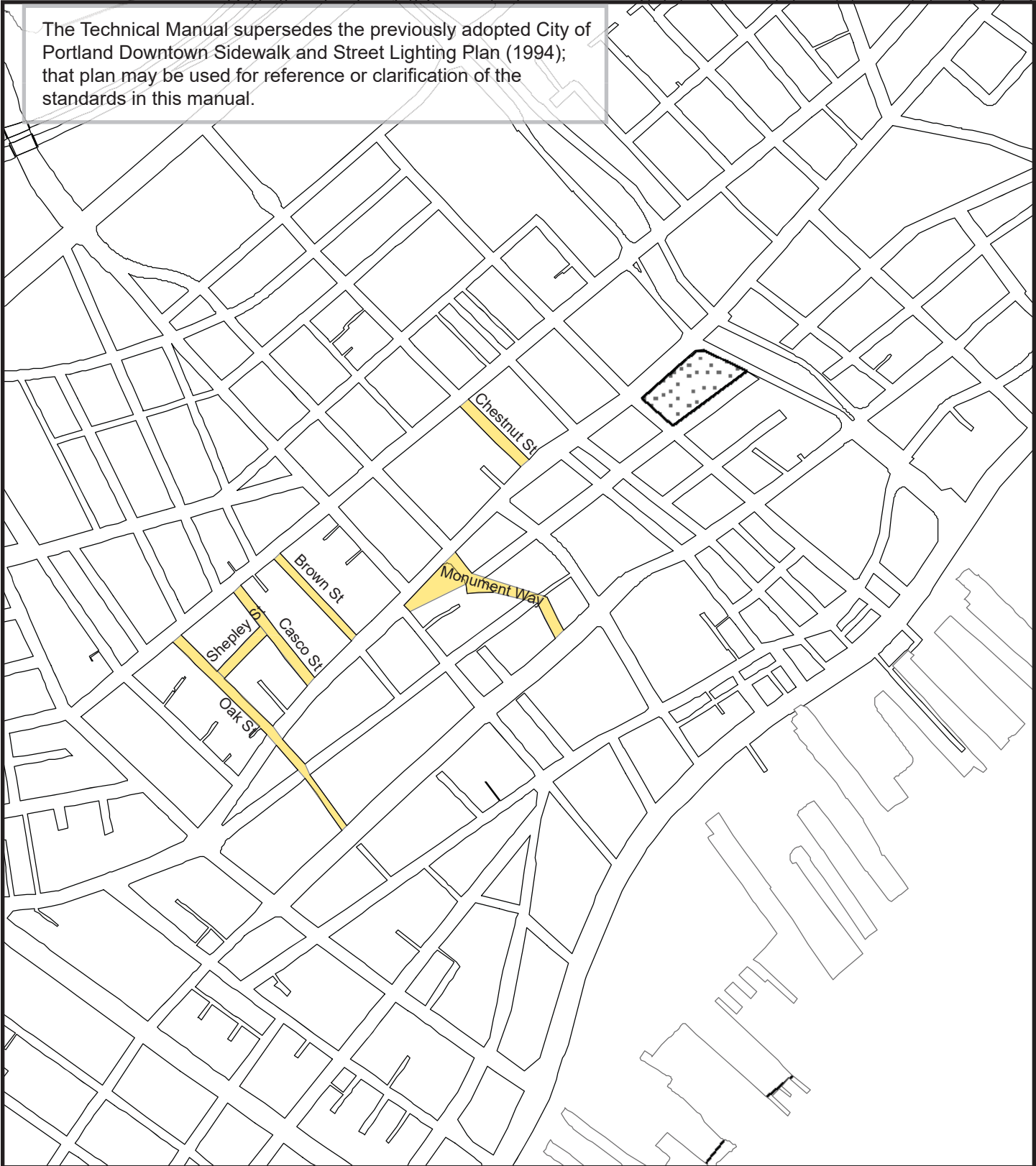
X-3

Revised Date:

LIGHTED BOLLARD



Date: March, 2019	CITY OF PORTLAND, MAINE TECHNICAL MANUAL	MUNICIPAL STREET LIGHTING STANDARDS SECTION 10	Figure: X-4
Revised Date:	MAP: DECORATIVE LIGHTING AREAS		

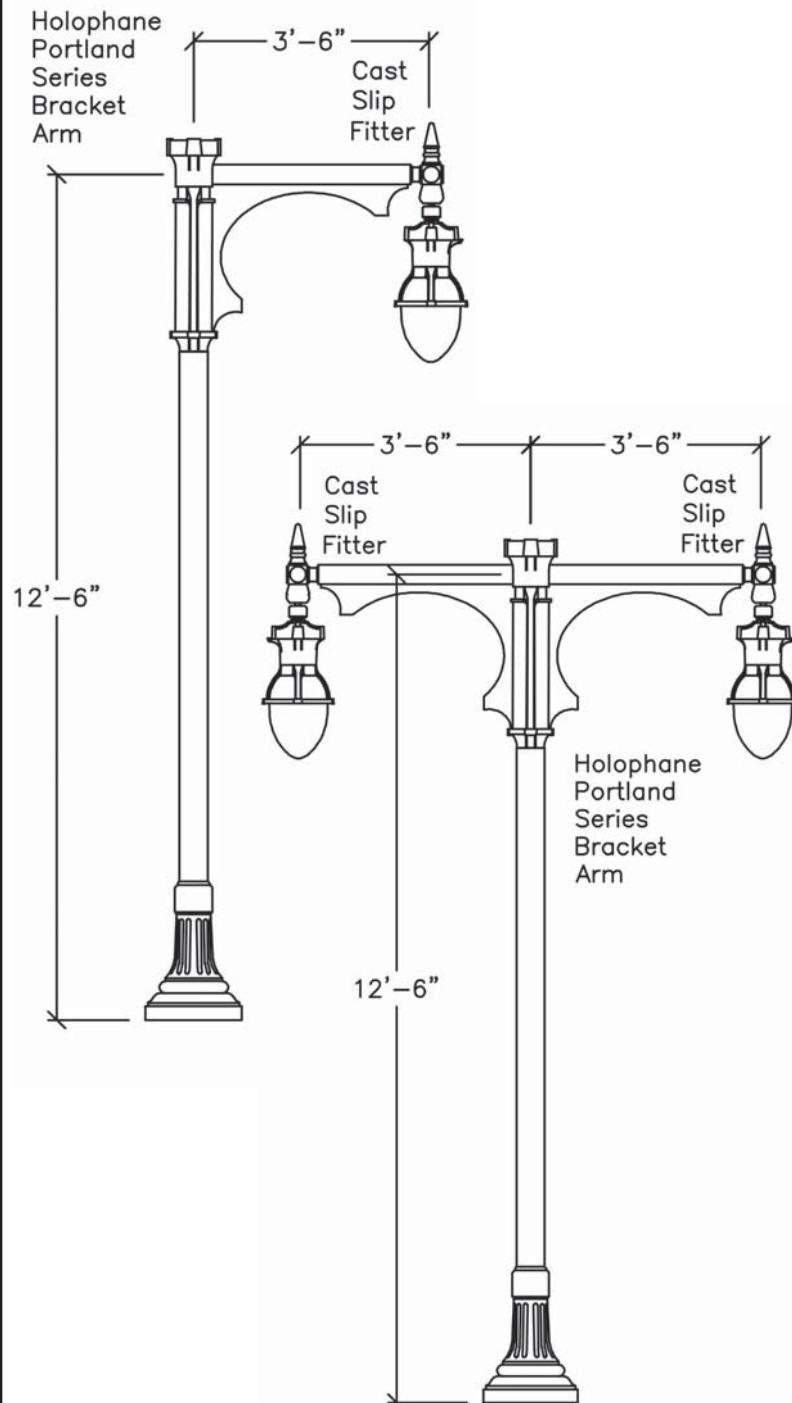


Date: March, 2019	CITY OF PORTLAND, MAINE TECHNICAL MANUAL	MUNICIPAL STREET LIGHTING STANDARDS SECTION 10	Figure: X-5A
Revised Date:	MAP: Decorative Light - DOWNTOWN PEDESTRIAN		



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE LIGHT - DOWNTOWN



LUMINAIRE

Holophane Esplanade LED II

Model:

ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC

Cast aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. Luminaire shall include an integral ballast with modular wiring connectors and multi-voltage taps. Provide an internal receptacle type photocell control. LED 3000K color temperature

BRACKET ARM

Holophane Portland Series (custom)

Model PD42CA-RAL6012

Portland Series steel crossarm with a post-top fitting for a 3-1/2" by 8" tenon.

SLIP FITTER

Holophane

Model :WLLF200SCA-RAL6012

2-3/8" O.D. with swivel cast fitter.

LIGHTING POLE AND BASE

Holophane North Yorkshire Cast Steel

Model NY-S-13-FTB-??-ABG-RAL6012

Cast steel pole, smooth 5" diameter shaft with integrated base rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

DIMENSIONS

Overall Height = 12' 6"

Bracket Arm Length = 3' 6"

Base Diameter = 17"

FINISH

Dark Green: RAL-6012 (custom)

APPLICATION

Sidewalk lighting or pedestrian lighting areas

Spacing:

One side: 60' - 80' on center

Alternating sides: 100' - 175' on center

Single-arm fixture placed in furnishing zone with luminaire oriented over sidewalk. Double-arm fixture placed with bracket arms parallel to sidewalk. If sidewalk space is limited, Planning Authority may approve lights within private property or attached to building.

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MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10

Figure:

X-5B

Revised Date:

DOWNTOWN PED 1



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE LIGHT - DOWNTOWN

LUMINAIRE

Holophane Esplanade LED II

Model:

ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC

Cast aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. Luminaire shall include an integral ballast with modular wiring connectors and multi-voltage taps. Provide an internal receptacle type photocell control. LED 3000K color temperature.

BRACKET ARM

Holophane Portland Series steel dual crossarm (custom)

Model: PD69-CA-RAL6012

SLIP FITTER

Holophane

Model: WLLF200S-CA-RAL6012

2-3/8" O.D. with swivel cast fitter

LIGHTING POLE

Holophane

Model: PM-18-CSB-CA-RAL6012

Tapered steel pole smooth shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

DECORATIVE BASE

Holophane

Model: PM18CSB-CA-RAL6012

Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

DIMENSIONS

Overall Height = 24' 0"

Bracket Arm Length = 2' 10 1/2"

Base Diameter = 18"

FINISH

Dark Green: RAL-6012 (custom)

APPLICATION

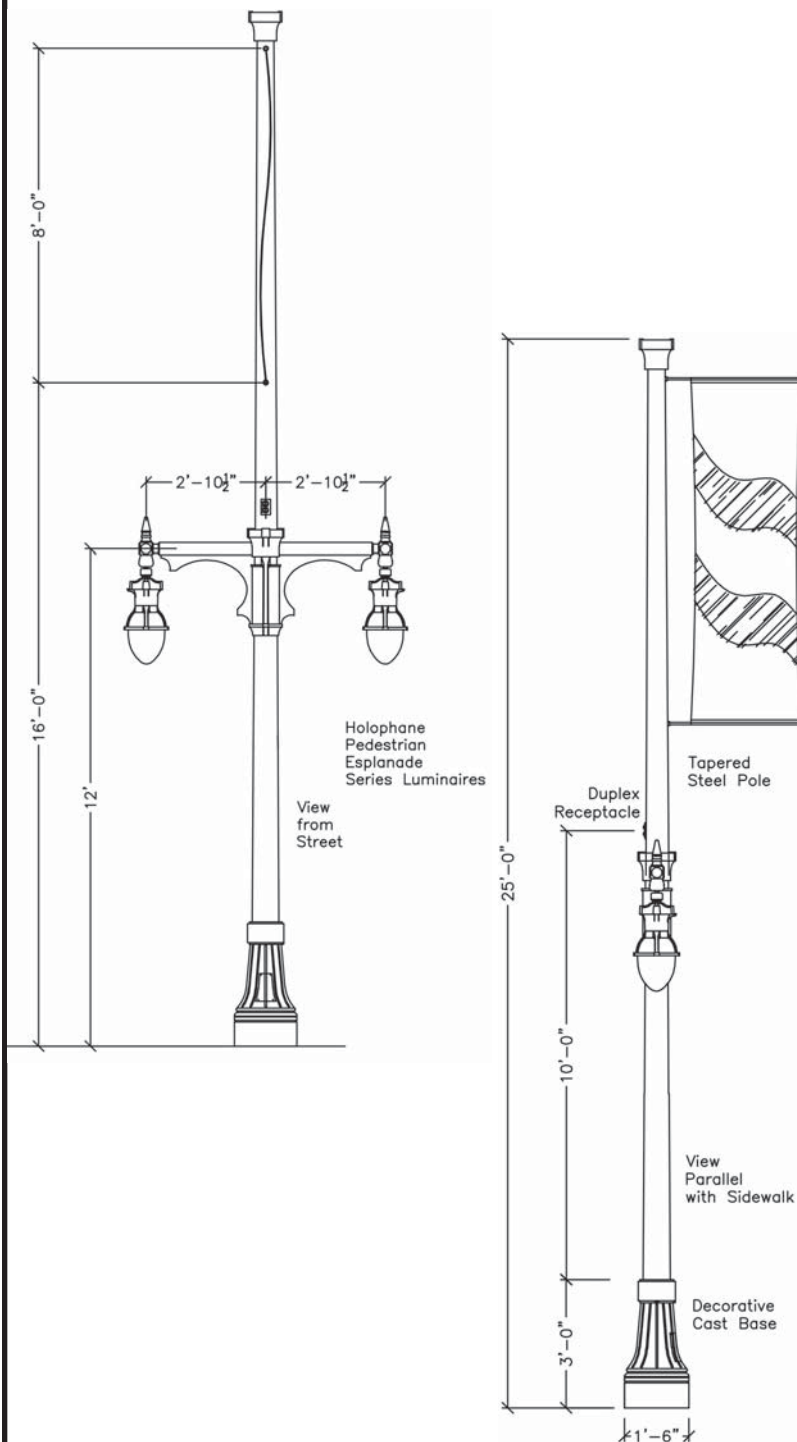
Sidewalk lighting or pedestrian lighting areas

Suggested layout:

One side: 90' - 100' on center

Alternating sides: 175' -225' on center

Double-arm fixture placed with bracket arms parallel to sidewalk. If sidewalk space is limited, Planning Authority may approve lights within private property or attached to building.



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**MUNICIPAL STREET
LIGHTING STANDARDS**
SECTION 10

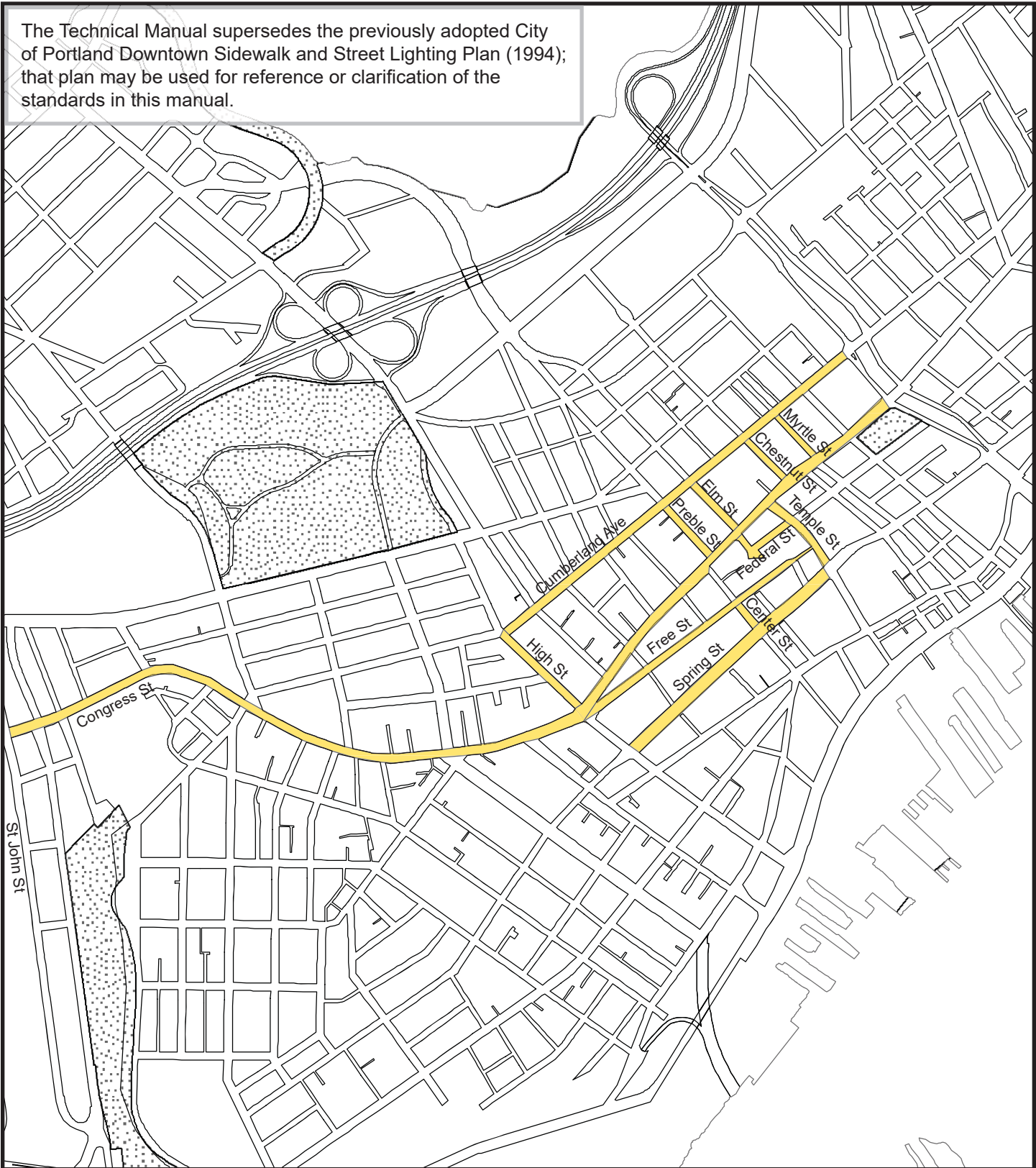
Figure:

X-5C

Revised Date:

DOWNTOWN PED 2

The Technical Manual supersedes the previously adopted City of Portland Downtown Sidewalk and Street Lighting Plan (1994); that plan may be used for reference or clarification of the standards in this manual.

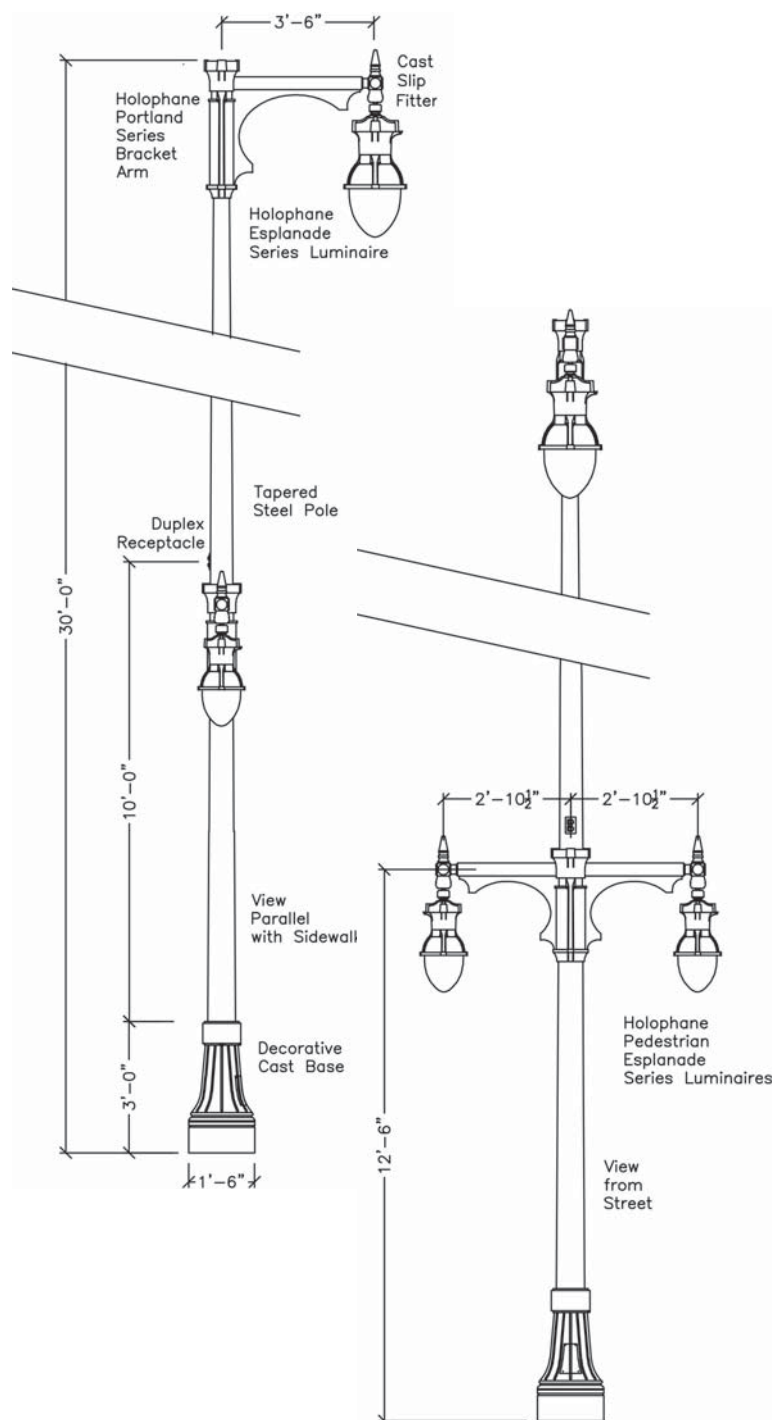


Date: March, 2019	CITY OF PORTLAND, MAINE TECHNICAL MANUAL	MUNICIPAL STREET LIGHTING STANDARDS SECTION 10	Figure: X-5D
Revised Date:	MAP: Decorative Light - DOWNTOWN STREET		



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE LIGHT - DOWNTOWN



LUMINAIRE

Holophane Esplanade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC

Cast aluminum housing with stainless steel hardware. Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. Luminaire shall include an integral ballast with modular wiring connectors and multi-voltage taps. Provide an internal receptacle type photocell control. LED 3000K color temperature

BRACKET ARM

Holophane Portland Series steel (custom)
Top Bracket Arm: Steel crossarm with a post-top fitting for a 3 1/2" by 8" tenon
Model: PD42-CA-RAL6012
Lower Bracket Arm: Steel dual crossarm
Model: PD69-CA-RAL6012

SLIP FITTER

Holophane
Model: WLLF200S-CA-RAL6012
2-3/8" O.D. with swivel cast fitter.

LIGHTING POLE

Holophane
Model: PM-18-CSB-CA-RAL6012

Tapered steel pole smooth shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

DECORATIVE BASE

Holophane
Model: PM18CSB-CA-RAL6012
Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

DIMENSIONS

Overall Height = 30' 0"
Bracket Arm Length = 2' 10 1/2"
Base Diameter = 18"

FINISH

Dark Green: RAL-6012 (custom)

APPLICATION

Street/pedestrian lighting combination.
Spacing:
One side: 90' - 100' on center
Alternating sides: 175' - 225' on center

Double-arm bracket arms parallel to sidewalk.

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**CITY OF PORTLAND, MAINE
TECHNICAL MANUAL**

**MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10**

Figure:

X-5F

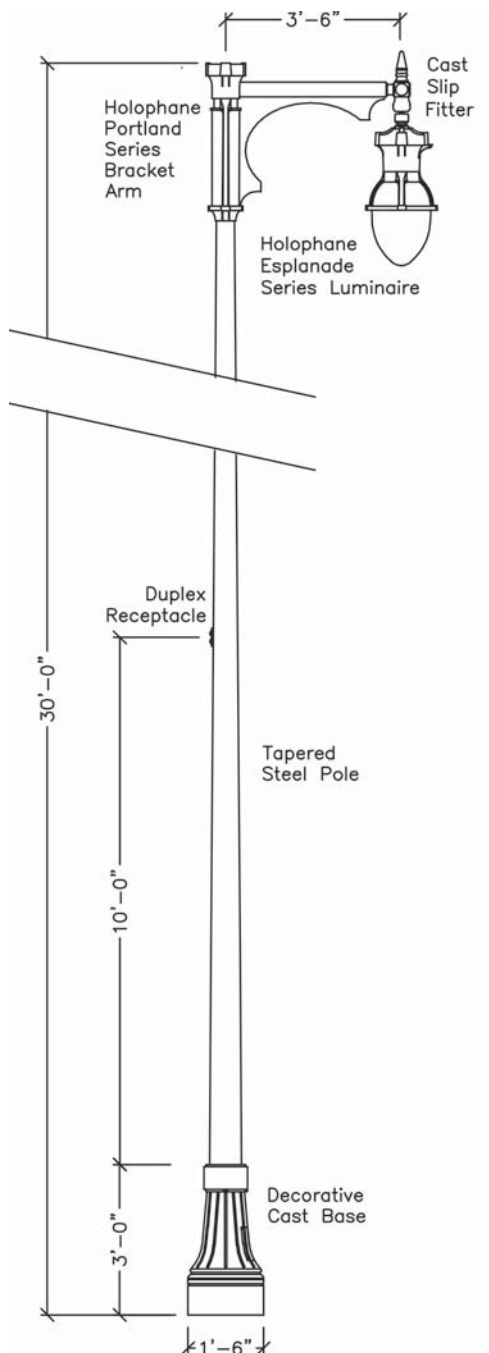
Revised Date:

DOWNTOWN COMBO



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE LIGHT - DOWNTOWN



LUMINAIRE

Holophane Esplanade LED II

Model:

ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC

Cast aluminum housing with stainless steel hardware.

Dropped refractor shall be thermal resistant borosilicate glass. Internal reflector and prismatic diffuser shall provide an IES Type IV distribution pattern. Luminaire shall include an integral ballast with modular wiring connectors and multi-voltage taps. Provide an internal receptacle type photocell control. LED 3000K color temperature.

BRACKET ARM

Holophane Portland Series steel crossarm (custom)

Model: PD42-CA-RAL6012

Steel crossarm with a post-top fitting for a 3 1/2" by 8" tenon

SLIP FITTER

Holophane

Model: WLLF200S-CA-RAL6012

2-3/8" O.D. with swivel cast fitter.

LIGHTING POLE

Holophane

Model: PM-18-CSB-CA-RAL6012

Tapered steel pole smooth shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

DECORATIVE BASE

Holophane

Model: PM18CSB-CA-RAL6012

Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

DIMENSIONS

Overall Height = 24' 0"

Bracket Arm Length = 2' 10 1/2"

Base Diameter = 18"

FINISH

Dark Green: RAL-6012 (custom)

APPLICATION

Street lighting

Spacing:

One side: 90' - 100' on center

Alternating sides: 175' - 225' on center

Single-arm fixture placed in furnishing zone with luminaire oriented over sidewalk. Double-arm fixture placed with bracket arms parallel to sidewalk or in medians. If sidewalk space is limited, Planning Authority may approve lights within private property or attached to building.

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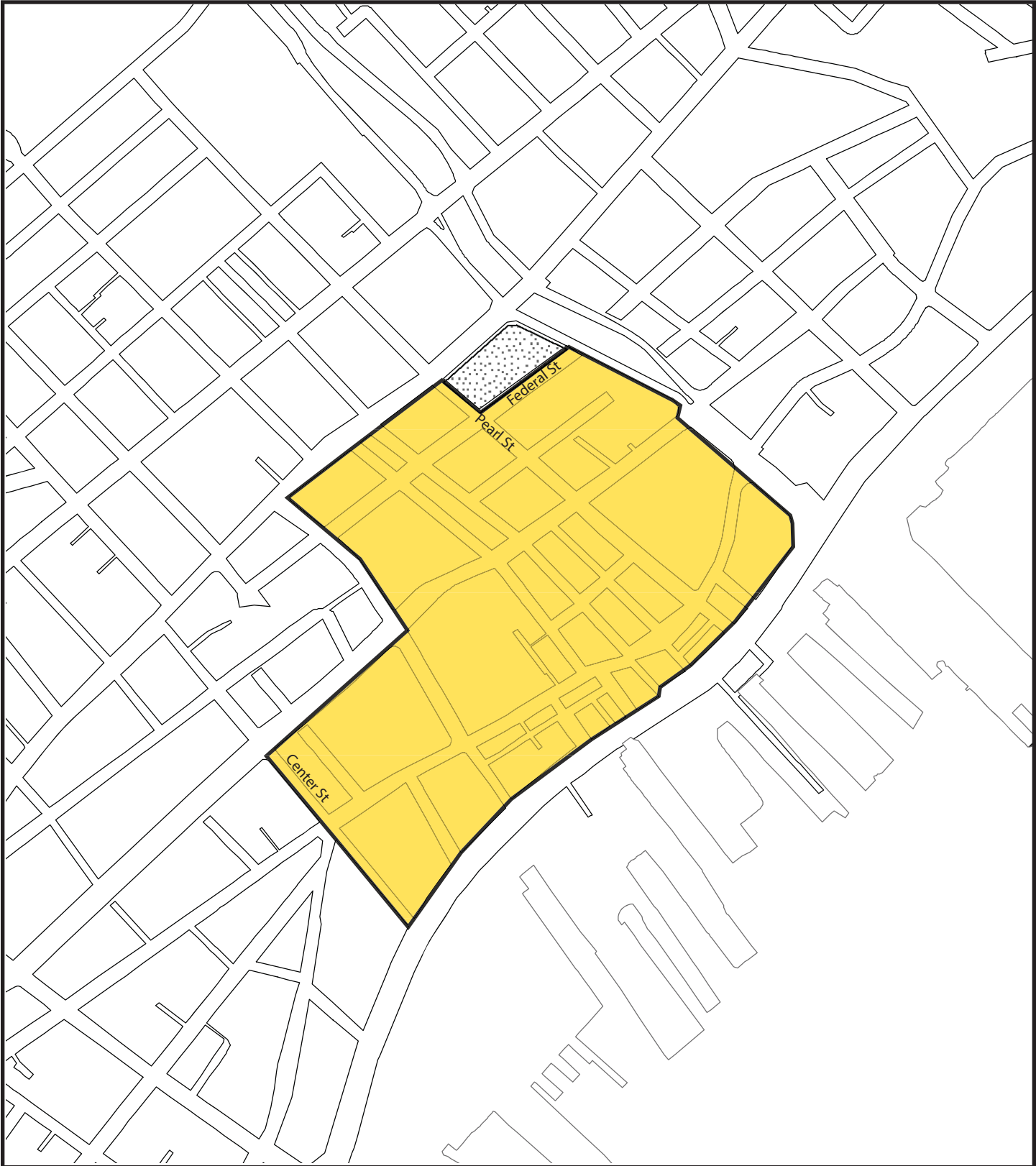
**MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10**

Figure:

X-5E

Revised Date:

DOWNTOWN STREET

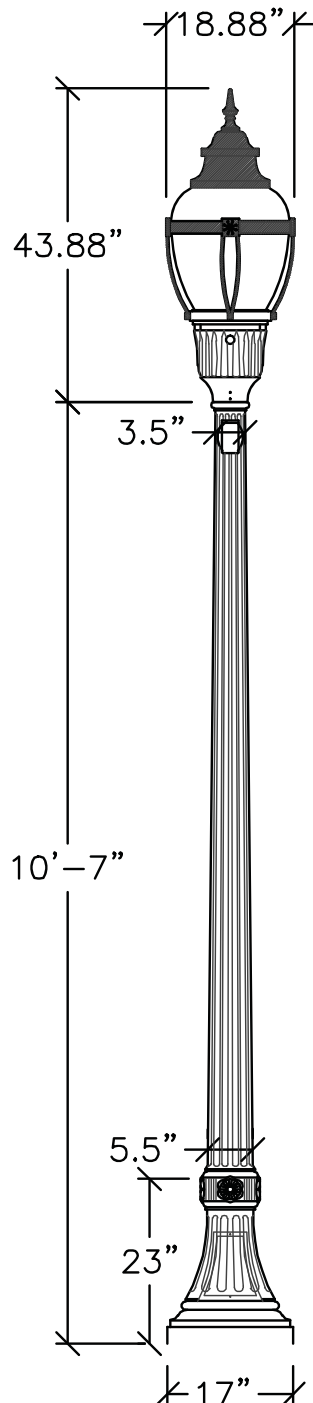


Date: March, 2019	CITY OF PORTLAND, MAINE TECHNICAL MANUAL	MUNICIPAL STREET LIGHTING STANDARDS SECTION 10	Figure: X-6A
Revised Date:	MAP: Decorative Light - OLD PORT		



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE LIGHT - OLD PORT



LUMINAIRE

Holophane Washington Postlite II LED - Acrylic

Model: WAUE2-P20-30K-AS-BK-3-BK-6-P7-S

Cast aluminium housing with stainless steel hardware.

Thermal resistant acorn borosilicate glass refractor with IES Type asymmetric Type IV distribution.

Luminaire shall include decorative ribs, solid band, and spike finial, with internal twist-lock receptacle type photocell control. LED 3000K

LAMP

IES Type asymmetric Type IV distribution
LED 3000K color temperature

LIGHTING POLE

Holophane North Yorkshire - Aluminum pole and base

Model ZNY11C/17CABKHFG-SBKH

Tapered, fluted cast aluminum pole shaft rated for a 90mph wind load with a 1.3 gust factor.

Provide four hot-dipped galvanized steel L-type anchor bolts. Provide GFI rated duplex receptacle outlet.

Lighting pole shall be hot dipped galvanized prior powder coat paint.

DIMENSIONS

Overall Height = 14' 3"

Pole Height = 10' 7"

Taper = 5.5" to 3.5"

Base Diameter = 17"

FINISH

Black (standard)

APPLICATION

Street/Sidewalk lighting for two-way streets with parking on both sides.

Spacing: 60' - 80' on center (staggered pattern both sides of street)

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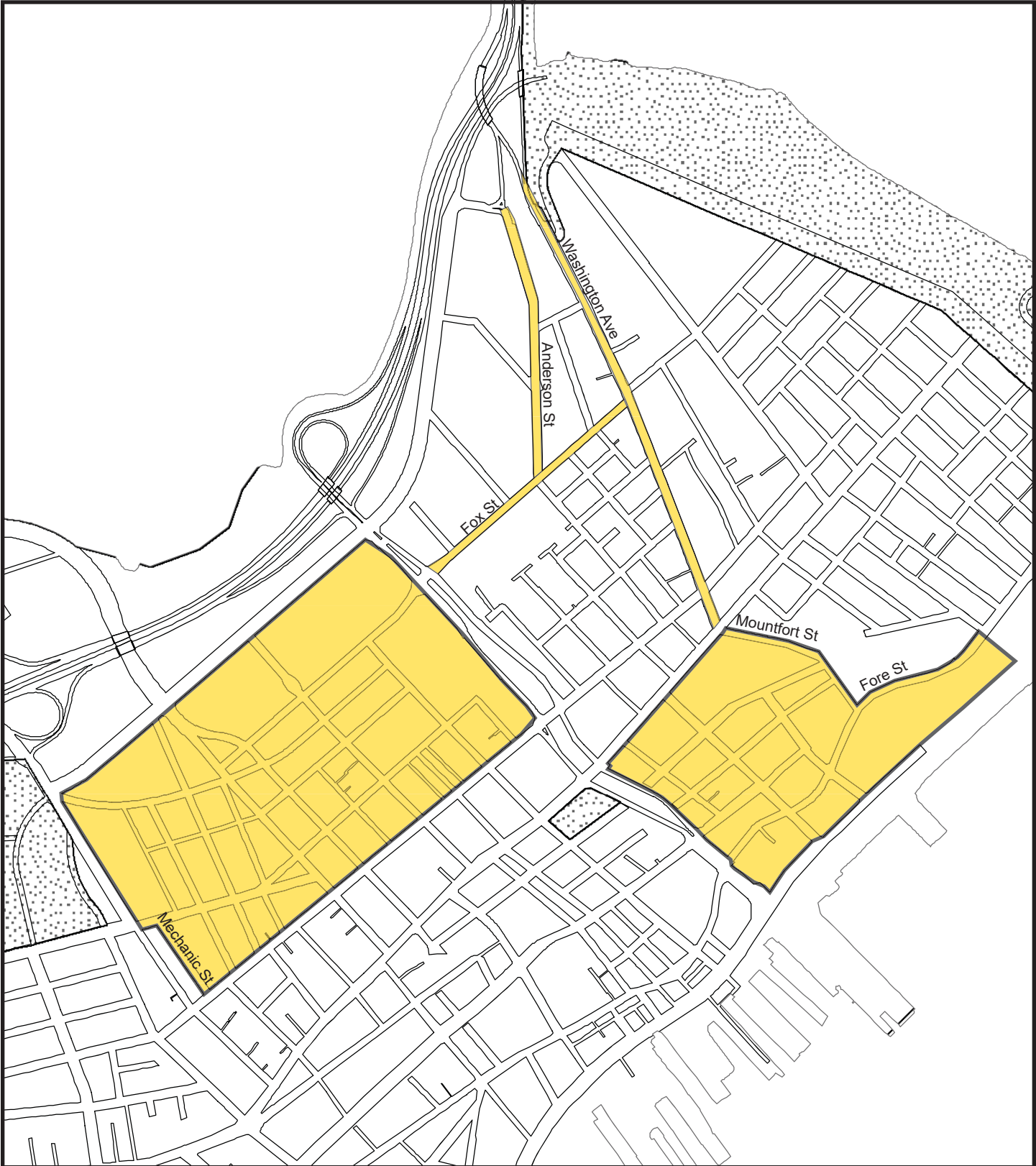
MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10

Figure:

X-6B

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OLD PORT

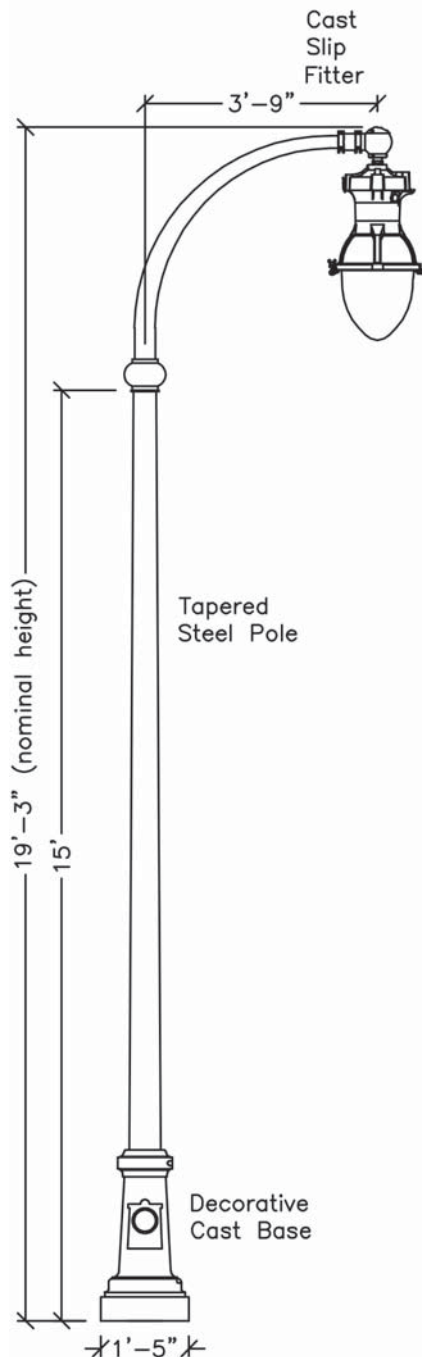


Date: March, 2019	CITY OF PORTLAND, MAINE TECHNICAL MANUAL	MUNICIPAL STREET LIGHTING STANDARDS SECTION 10	Figure: X-7 A
Revised Date:	MAP: Decorative Light - PENINSULA MEDIUM STREET		



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE LIGHT - PENINSULA



LUMINAIRE

Holophane Esplanade LED II
Model: ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC
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.

BRACKET ARM

Holophane OUC Roadway Arm
Model: OUC 6063-T6
Spring City Columbia Arm
Model: AARCLA-1S-51-53-TN2.38/7.00-CU
Aluminum crossarm with a post-top fitting for a 3 1/2" by 8" tenon. Single Arm 45" Oriented 180 degrees.

SLIP FITTER

Holophane Boston Harbor Series
Model: BHLF-200-SCA/AS
2 3/8" O.D. with swivel cast fitter.

LIGHTING POLE

Holophane
Model: ???-CA-RAL6012
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 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powdercoat paint.

DECORATIVE BASE

Holophane Cambridge Series
Model: ??
Spring City Cambridge Series
Model: DWBCMB-17-CU
Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

DIMENSIONS

Overall Height = 19' 3"
Pole Height = 15' 0"
Base Diameter = 17" to 18"

FINISH

Black (standard)

APPLICATION

Street/sidewalk lighting. Decorative fixture not needed on same side of street as existing cobrahead fixtures.
Spacing: 80' - 100' on center
Place in furnishing zone overhang towards street; where fixture conflicts with overhead utilities, may be placed on back of sidewalk.

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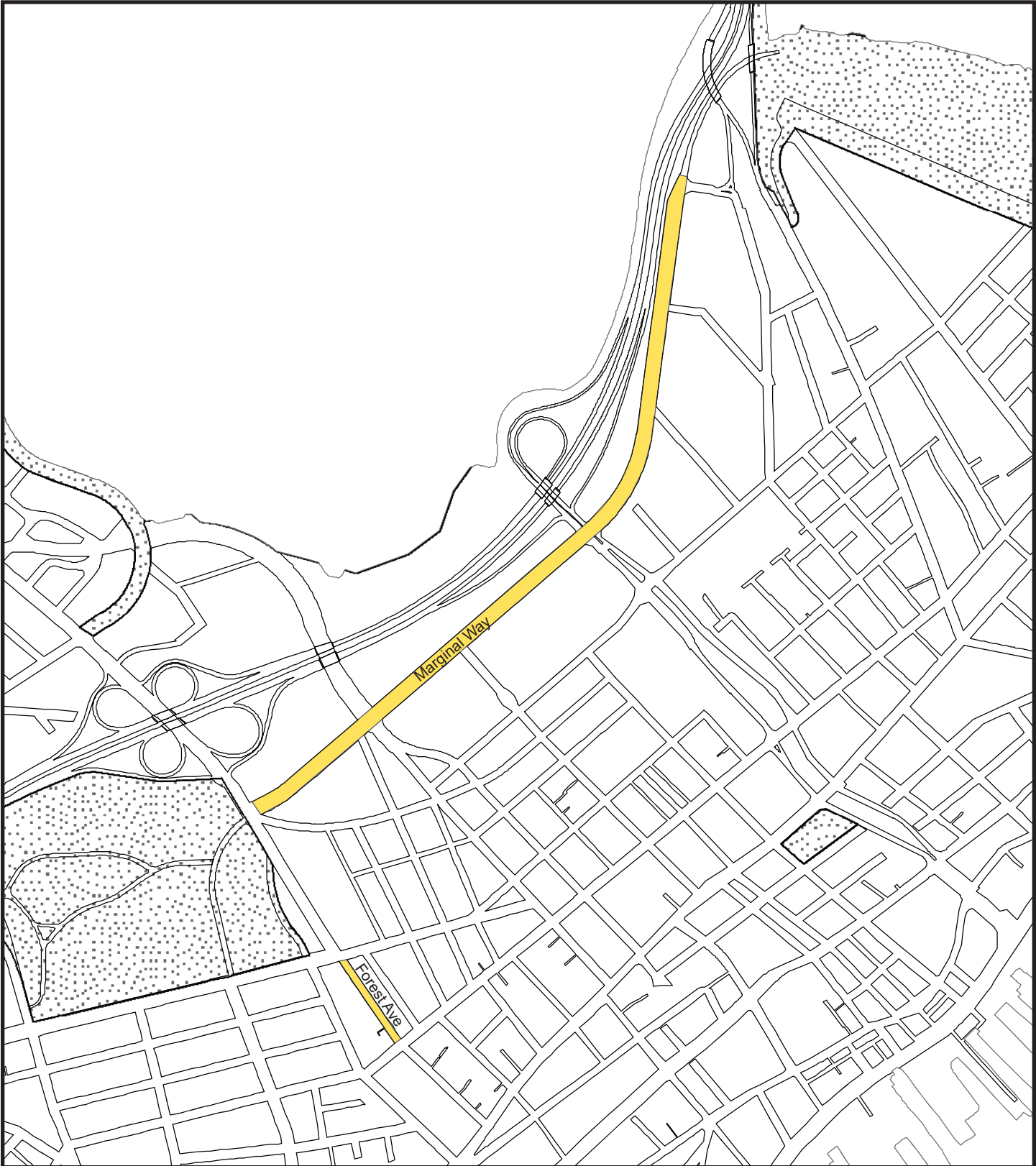
MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10

Figure:

X-7B

Revised Date:

PENINSULA MEDIUM STREET

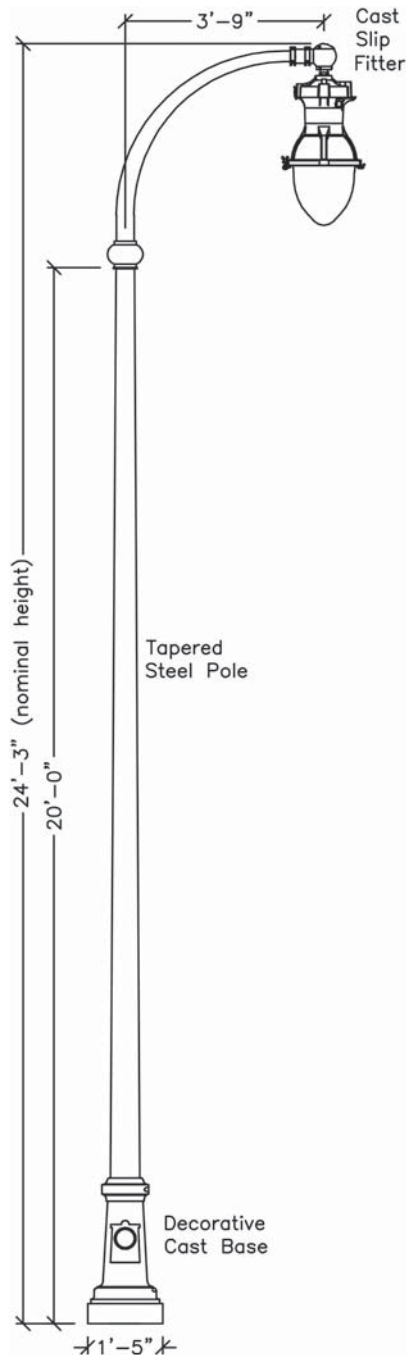


Date: March, 2019	CITY OF PORTLAND, MAINE TECHNICAL MANUAL	MUNICIPAL STREET LIGHTING STANDARDS SECTION 10	Figure: X-7C
Revised Date:	MAP: Decorative Light - PENINSULA LARGE STREET		



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE LIGHT - PENINSULA



LUMINAIRE

Holophane Esplanade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC
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.

BRACKET ARM

Holophane OUC Roadway Arm
Model: OUC 6063-T6
Spring City Columbia Arm
Model: AARCLA-1S-51-53-TN2.38/7.00-CU
Aluminum crossarm with a post-top fitting for a 3 1/2" by 8" tenon. Single Arm 45" Oriented 180 degrees.

SLIP FITTER

Holophane Boston Harbor Series
Model: BHLF-200-SCA/AS
2 3/8" O.D. with swivel cast fitter.

LIGHTING POLE

Holophane
Model: ???-CA-RAL6012
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 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powdercoat paint.

DECORATIVE BASE

Holophane Cambridge Series
Decorative clamshell cast aluminum base. Hardware shall be stainless steel.

DIMENSIONS

Overall Height = 24' 3"
Pole Height = 20' 0"
Bracket Arm = 3' 9"
Base Diameter = 18"

FINISH

Black (standard)

APPLICATION

Street/sidewalk lighting.
Spacing:
One side: 90' - 110' on center
Alt. sides: 175' - 225' on center
Place in furnishing zone overhang towards street; where fixture conflicts with overhead utilities, may be placed on back of sidewalk.

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LIGHTING STANDARDS
SECTION 10

Figure:

X-7D

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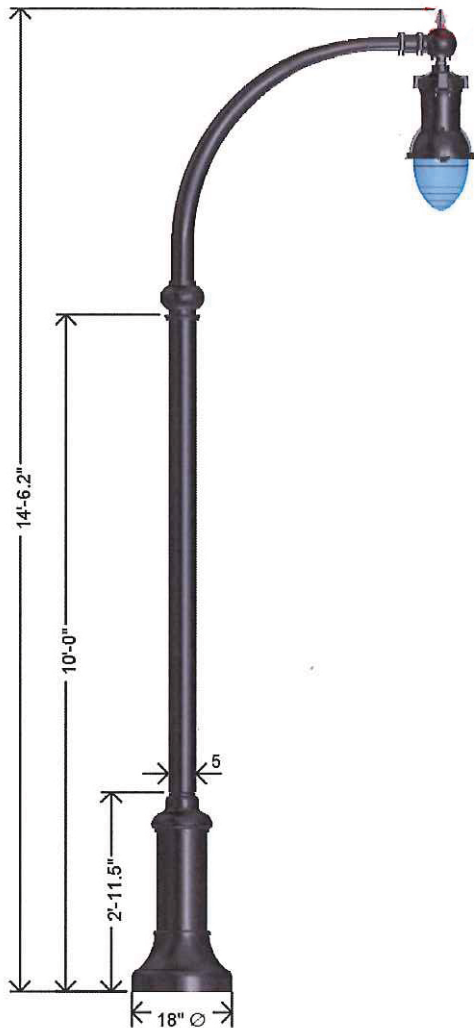
PENINSULA LARGE STREET



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE LIGHT - PENINSULA

*Waiver required: This fixture to be implemented in special circumstances only.
See 10.4 STANDARDS FOR DECORATIVE LIGHTING.



Anchorage/Orientation Plan

LUMINAIRE

Holophane Esplanade LED II
Model: ESPL-038-3K-AS-S-BK-BHDF13-200-BK

Pendant mount, quick lock stem mount
Auto-sensing 50/60 hz (120-225v), 38 watts
LED 3000K color temperature.

BRACKET ARM

Holophane OUC Roadway Arm
Model: OUC 45/1-CA-BK

Aluminum crossarm with a post-top fitting for a 3 1/2" by 8" tenon.
Single Arm 45" Oriented 180 degrees.

SLIP FITTER

Holophane Boston Harbor Decorative Arm Fitter
Model: WLLF200S-CA-RAL6012

2 3/8" O.D. with swivel cast fitter.

LIGHTING POLE AND BASE

Holophane Rockford Harbor Aluminum Pole
Model: RHA-10-S5J-18-P15-ABG-BK

Pole is aluminum, smooth 5" diameter, .25 wall
Assembly meets wind load of 90 mph.

DIMENSIONS

Overall Height = 14' 6"
Pole Height = 10' 0"
Pole Diameter = 5"
Base Diameter = 18"
Arm = 45"

FINISH

Black (standard)

APPLICATION

Sidewalk lighting only when MEDIUM STREET fixture cannot be accommodated.

Spacing:
One side: 60' - 80' on center
Alternating sides: 100' - 175' on center

Fixture shall be oriented to overhang sidewalk.

Place in furnishing zone unless space is limited.
Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

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**MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10**

Figure:

X-7E

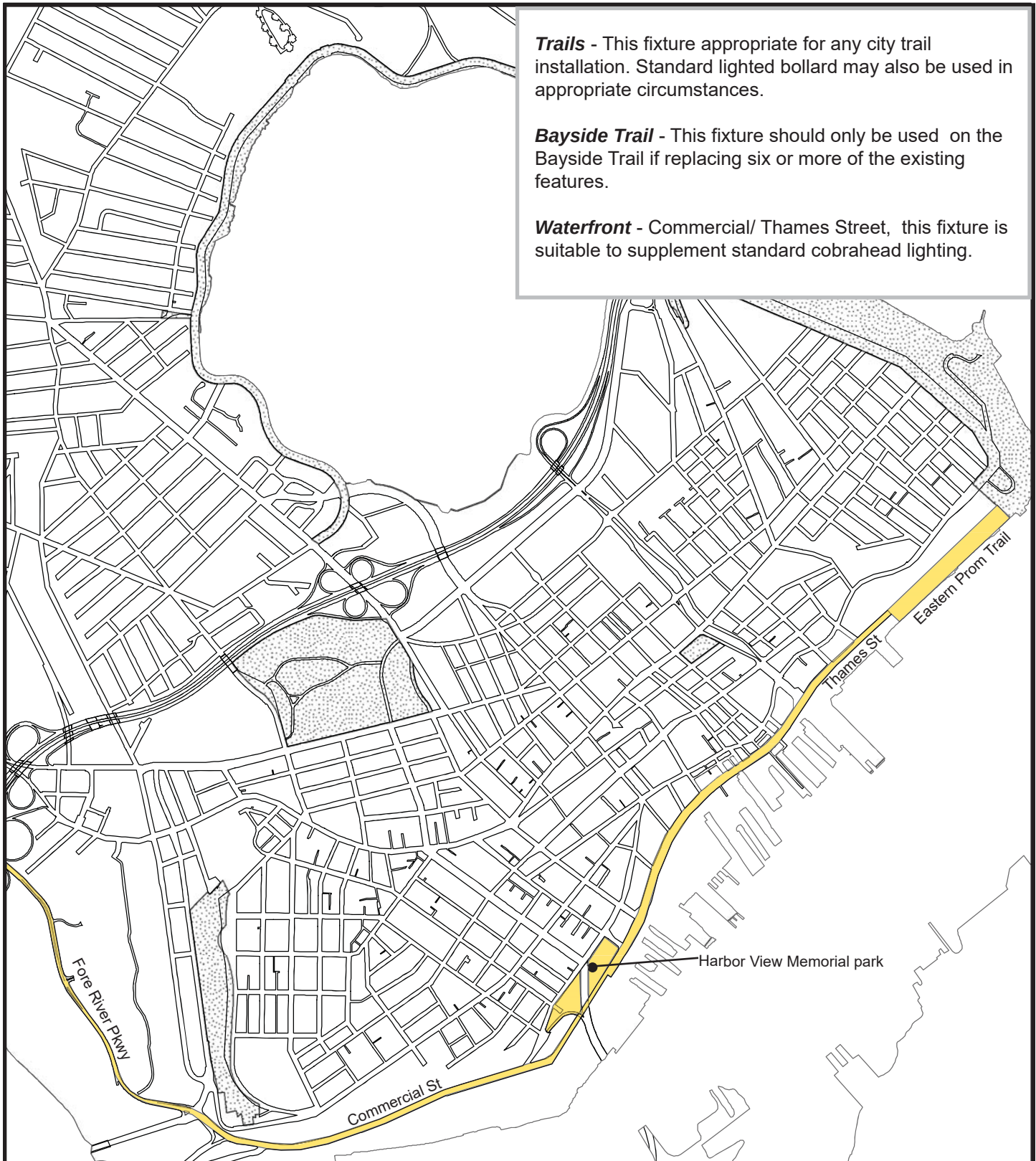
Revised Date:

**PENINSULA PED
*waiver required**

Trails - This fixture appropriate for any city trail installation. Standard lighted bollard may also be used in appropriate circumstances.

Bayside Trail - This fixture should only be used on the Bayside Trail if replacing six or more of the existing features.

Waterfront - Commercial/ Thames Street, this fixture is suitable to supplement standard cobrahead lighting.

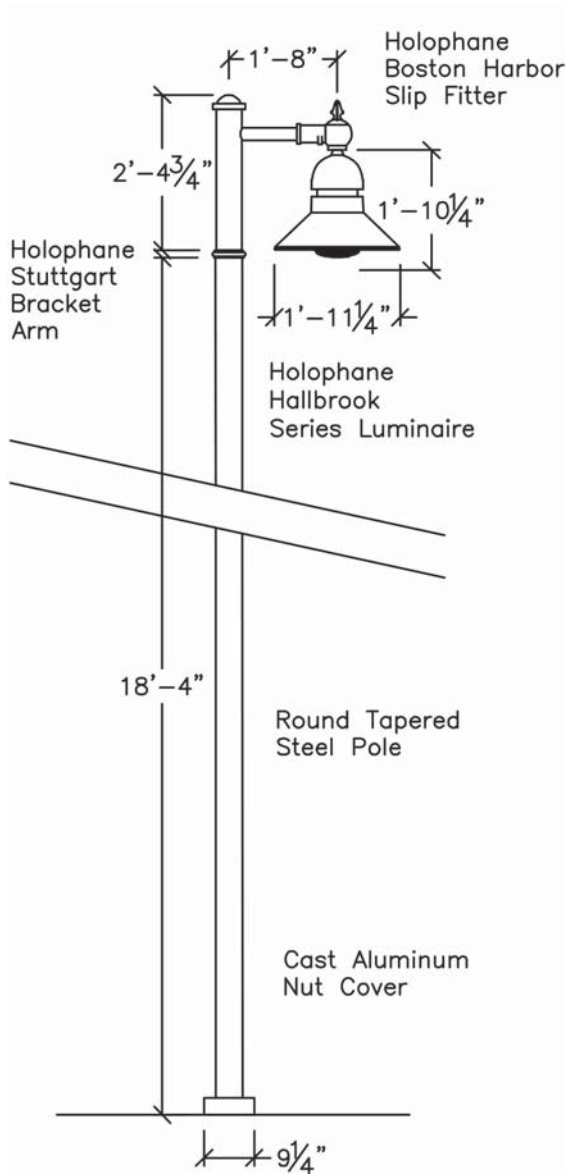


Date: March, 2019	CITY OF PORTLAND, MAINE TECHNICAL MANUAL	MUNICIPAL STREET LIGHTING STANDARDS SECTION 10	Figure: X-8A
Revised Date:	MAP: Decorative Light - TRAILS/ WATERFRONT		



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE LIGHT - TRAIL/WATERFRONT



LUMINAIRE

Holophane GlasWerks LED Hallbrook Series
Model: GSLB-

Pendant mount
Thermal resistant prismatic glass lens held in a formed aluminum door frame.
LED 3000K color temperature

BRACKET ARM

Holophane Valmont
Model: 1-HT-9-0-H-30-X-30" Long 31-7-RB-405

Steel crossarm with a post-top fitting for a 2-3/8" by 6" tenon.

SLIP FITTER

Holophane Boston Harbor Slip Fitter
Model BHLF/200-SCA/BK

2-3/8" O.D. with swivel cast fitter.

LIGHTING POLE

Holophane Valmont
Model: 1804-30505T4-BK

Tapered steel pole shaft rated for a 90 mph wind load with a 1.3 gust factor.

Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dipped galvanized prior to powder coat paint.

DIMENSIONS

Overall Height = 18' 4"
Bracket Arm = 1' 8"

FINISH

Black (standard) - polyester powder coat

APPLICATION

Trails: Appropriate for any city trail installation.
Waterfront (Commercial/Thames St): Supplemental pedestrian lighting to standard cobrahead lighting.

Spacing:
One side: 90' - 125' on center
Alternating sides: 175' - 225' ft on center

Follow established pattern. Single arm oriented over trail or street; Double-arm used in medians or similar.

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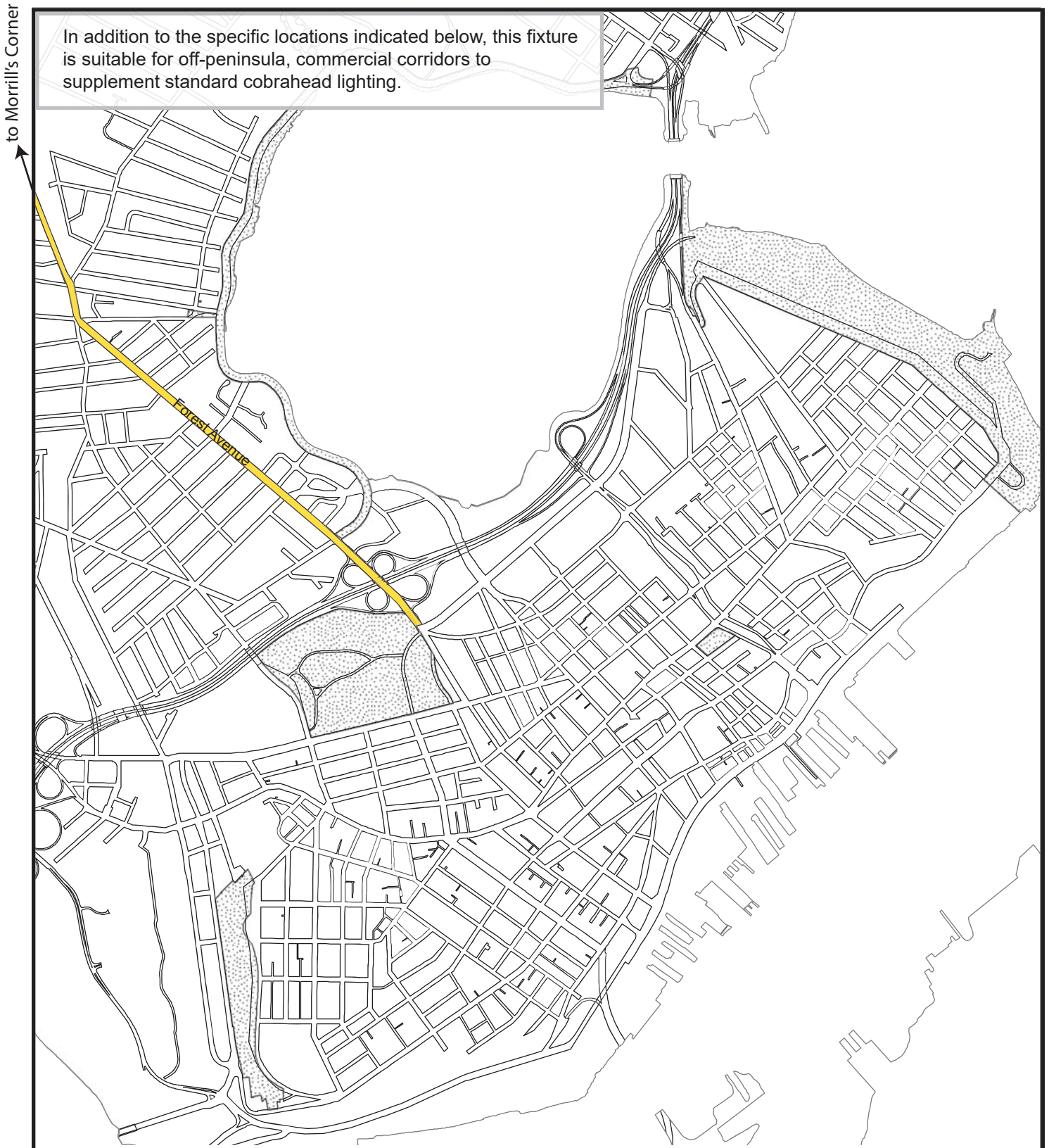
MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10

Figure:

X-8B

Revised Date:

**TRAILS / WATERFRONT
(COMMERCIAL/THAMES STREET)**

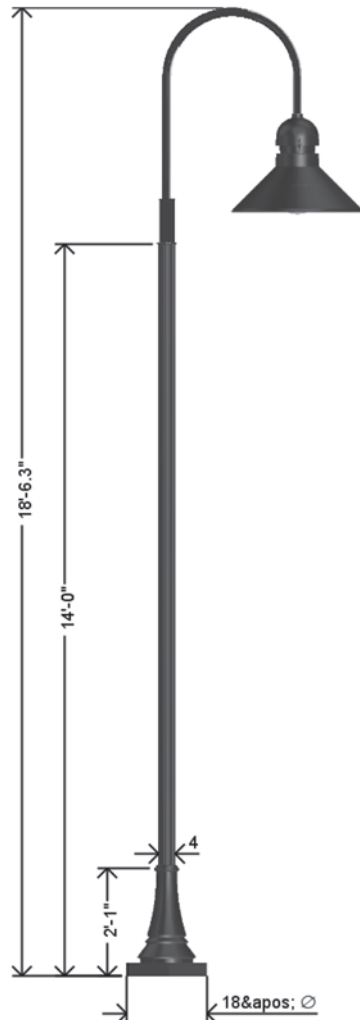


Date: March, 2019	CITY OF PORTLAND, MAINE TECHNICAL MANUAL	MUNICIPAL STREET LIGHTING STANDARDS SECTION 10	Figure: X-9A
Revised Date:	MAP: Decorative Light - OFF-PENINSULA		

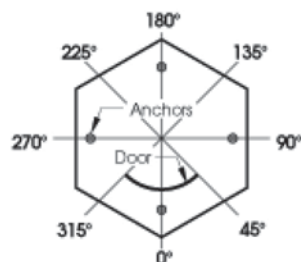


PORTLAND | me

Street & Sidewalk Lighting DECORATIVE LIGHT - OFF-PENINSULA



Anchorage/Orientation Plan



Hand Hole is at 0 deg.

LUMINAIRE

Holophane Hallbrook Ext GalsWerks LED Bowl Glass
Model: GELB-050-3K-AS-H-3

Pendant mouting (1.5 NPT). Dropped refractor shall be thermal resistant borosilicate glass held in a formed aluminum door frame. Asymmetric bowl glass.
Auto-sensing voltage (120-277)
50 watt, LED 3000K color temperature

BRACKET ARM

Holophane Bishops Crook Arm
Model : 1-BC-90R-15F-XX (for single arm 90 degree)

Tenon mounted, using a 1 1/2" NPT fitting for luminaire mounting. Arm shall be 1 1/2" sch. 80 aluminum pipe (6061-T6 alloy). Mounting hub for the arm shall be 3" sch. 40 x 10" long aluminum pipe (6061-T6 alloy). All hardware shall be stainless steel. The arm shall be heat-treated to a T6 condition after fabrication.

LIGHTING POLE + BASE

Holophane Princeton Aluminum Pole, Smooth Base
Model: PSA-14-F4J-18-P09-ABG-GH

One-piece construction, aluminum pole (heavy wall cast aluminum ASTM 356), smooth shaft 4" dia. rated for a 90mph wind load with a 1.3 gust factor with integral 18" hexagonal smooth base. All hardware shall be tamper resistant stainless steel. Provide four hot-dipped galvanized steel L-type anchor bolts. Lighting pole shall be hot dip galvanized prior to powder coat paint.

DIMENSIONS

Overall Height = 18' 6"
Pole Height = 14' 0"
Pole Diameter = 4"
Base Diameter = 18"

FINISH

Graphite (Standard) - powder coat paint finish

APPLICATION

Sidewalk lighting to supplement standard lighting off-peninsula.

Spacing:
One side: 60' - 80' on center
Alternating sides: 100' - 175' on center

Fixture orientation should be consistent with established pattern. In some cases, a double-arm bracket parallel to the street may be appropriate.
Fixture placed in furnishing zone unless space is limited.
Placement on back of sidewalk or private property overhanging sidewalk may be accommodated where space is a constraint.

Date:
March, 2019

**CITY OF PORTLAND, MAINE
TECHNICAL MANUAL**

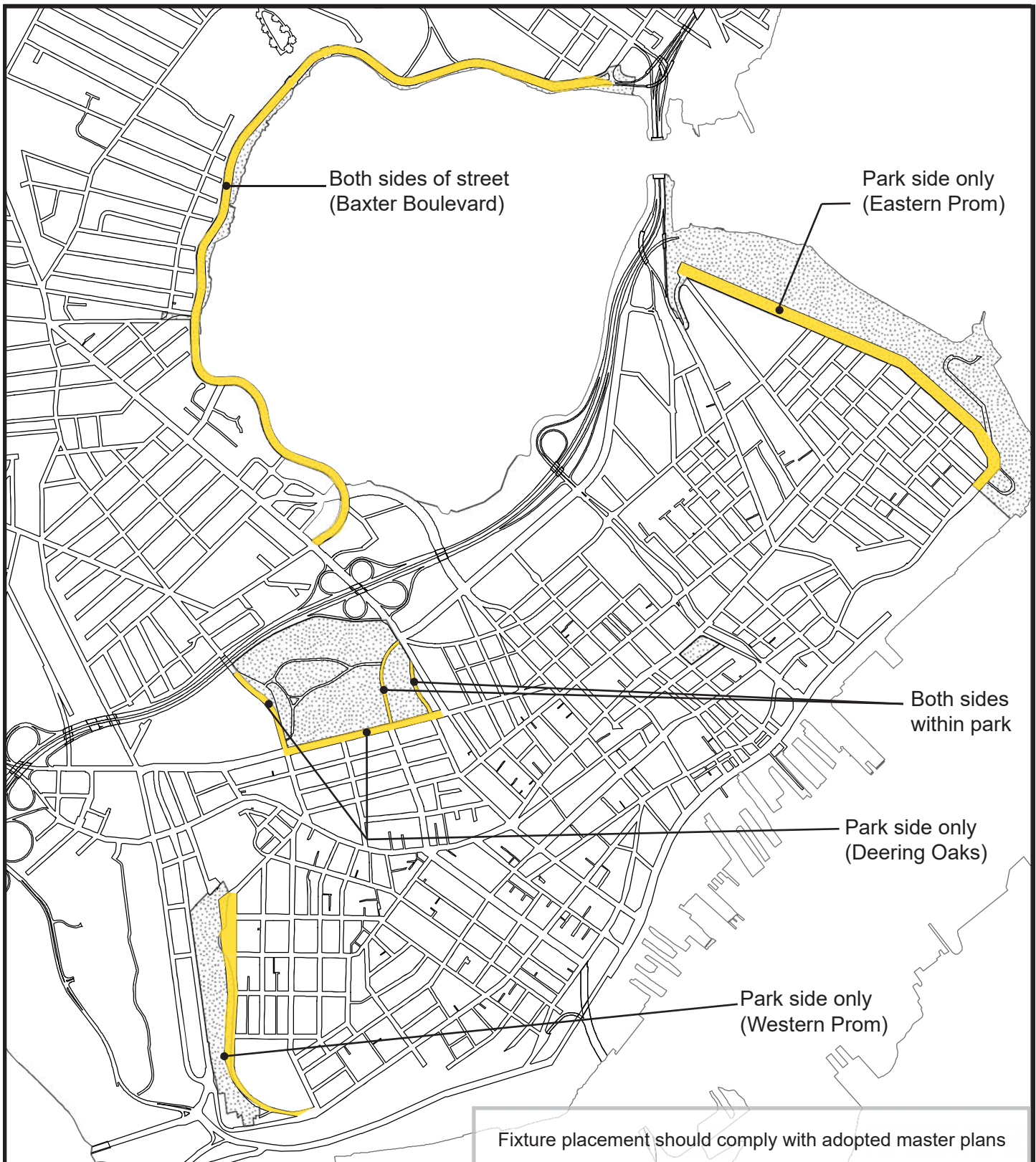
**MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10**

Figure:

X-9B

Revised Date:

OFF-PENINSULA PED

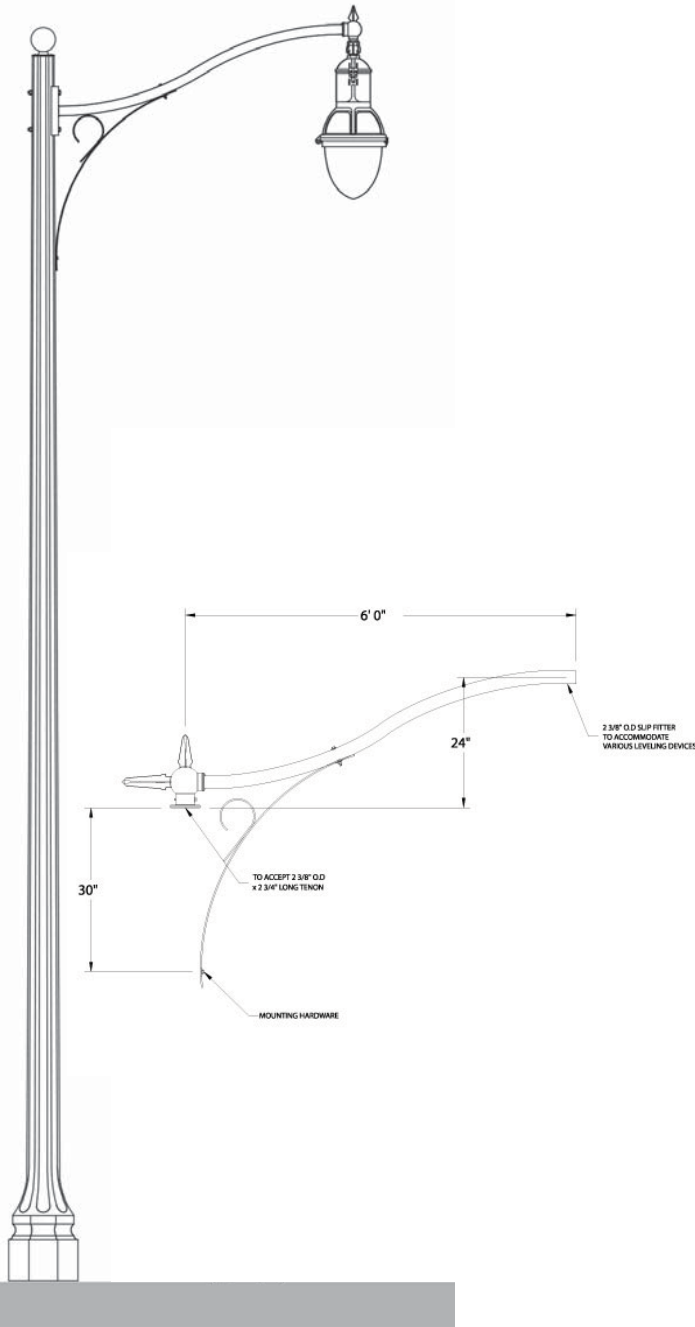


Date: March, 2019	CITY OF PORTLAND, MAINE TECHNICAL MANUAL	MUNICIPAL STREET LIGHTING STANDARDS SECTION 10	Figure: X-10A
Revised Date:	MAP: Decorative Light - HISTORIC LANDSCAPE STREET		



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE - HISTORIC STREET



LUMINAIRE

Holophane Espalade LED II
Model:
ESL2-P20S-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC
Spring City Columbia Series
Model: LMCLU-LE080/EVX/X2-30-CR3-GR14-LACLB-FED-CU

With Shield: Deering Oaks Park
Without Shield: All other locations

LED Auto-sensing 39 watt
Voltage (120 - 277 V)
IES Type V Distribution
LED 3000K color temperature

BRACKET ARM

King Luminaire/StressCrete: Scroll Arm with Decorative Scroll
Model: KA30-T

Single arm with finials and decorative scroll.
Slip fitter 2 3/8" O.D. to accommodate various leveling devices. At pole, to accept 2 3/8" O.D. x 2 3/4" Long tenon.

LIGHTING POLE

King Luminaire/StressCrete: The Talisman - Concrete
Model: KTH20

The American Series - The Talisman, 8-fluted concrete
Footing details, tenon size, options per specific project

DIMENSIONS

Overall Height = 21' 0"
Pole Height = 20' 0"
Pole Base Flare = 18"
Bracket Arm Length = 6' 0"

FINISH

Luminaire: Black (standard)
Pole: Eclipse Black, acrylic coating (standard)

APPLICATION

Decorative street lighting for historic landscapes.

Spacing:
One side: 90' - 100' on center
Alt. sides: 175' - 225' on center

Fixture locations must comply with adopted Historic Master Plans.

Date:
March, 2019

**CITY OF PORTLAND, MAINE
TECHNICAL MANUAL**

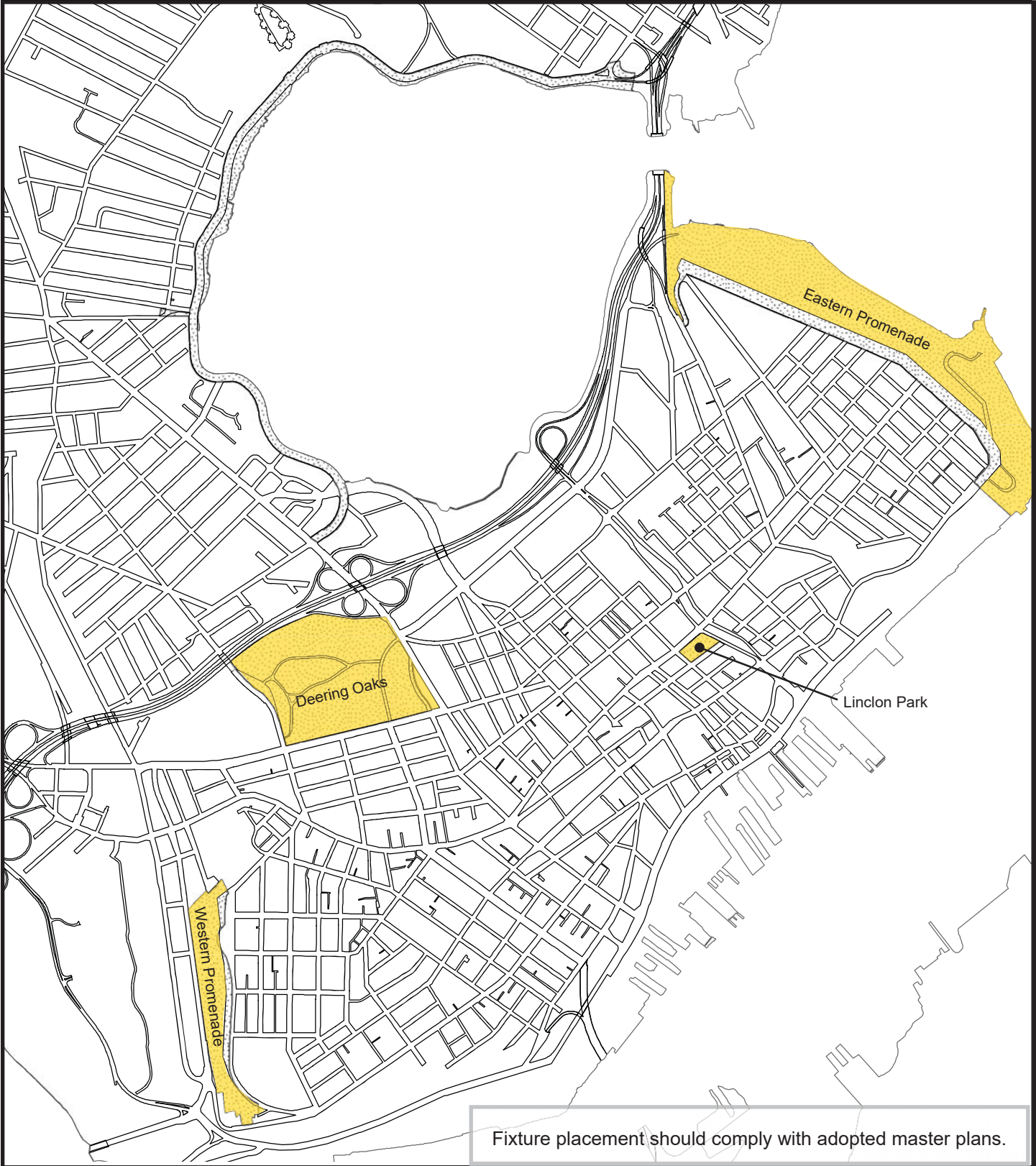
**MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10**

Figure:

X-10B

Revised Date:

HISTORIC LANDSCAPE STREET

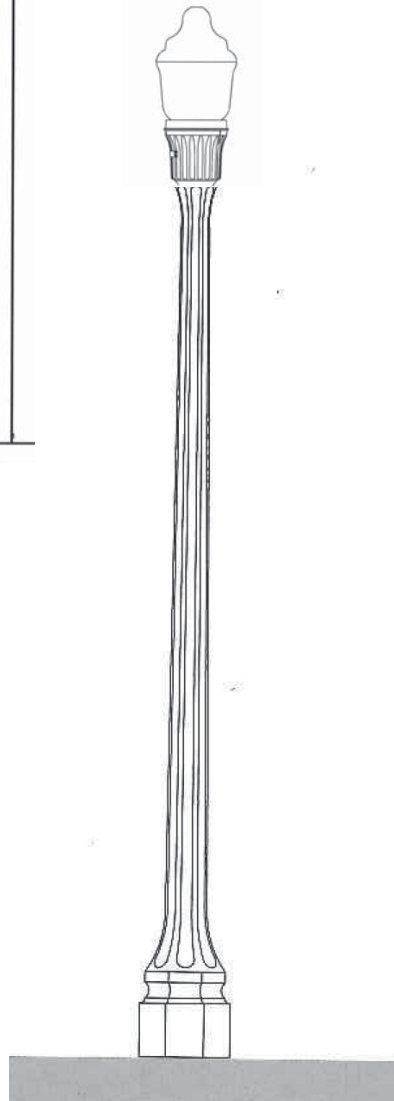
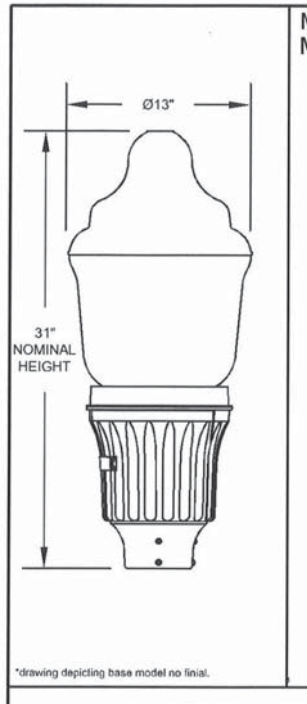


Date: March, 2019	CITY OF PORTLAND, MAINE TECHNICAL MANUAL	MUNICIPAL STREET LIGHTING STANDARDS SECTION 10	Figure: X-11A
Revised Date:	MAP: Decorative Light - HISTORIC LANDSCAPE PEDESTRIAN		



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE - HISTORIC LANDSCAPE PED



LUMINAIRE

Holophane GranVille II LED
Model: GVD2-P20-30K-AS-M-BK-5-N-N-U

Prismatic Style: Glass Classic
Housing Size: Utility
No Trim or finial, Modern Housing
Slip fitter accommodates 3" dia. tenon

LED Auto-sensing 39 watt
Voltage (120 - 277 V)
IES Type V Distribution
LED 3000K color temperature

LIGHTING POLE

King Luminaire/StressCrete: The Talisman - Concrete
Model: KT-12-E-11-DB-??-A

The American Series - The Talisman, 8-fluted concrete
Talisman Non-Flared Top 12'
Footing details, tenon size, options per specific project

DIMENSIONS

Overall Height = 14' 6"
Pole Height = 12' 0"

FINISH

Luminaire: Black (standard)
Pole: Eclipse Black, acrylic coating (standard)

APPLICATION

Decorative pedestrian lighting for historic landscapes.

Spacing: 60' - 80' on center

In some instances, the fixture will replace existing fixtures.

Fixture locations must comply with adopted Historic Master Plans.

Date:
March, 2019

CITY OF PORTLAND, MAINE
TECHNICAL MANUAL

MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10

Figure:

X-11B

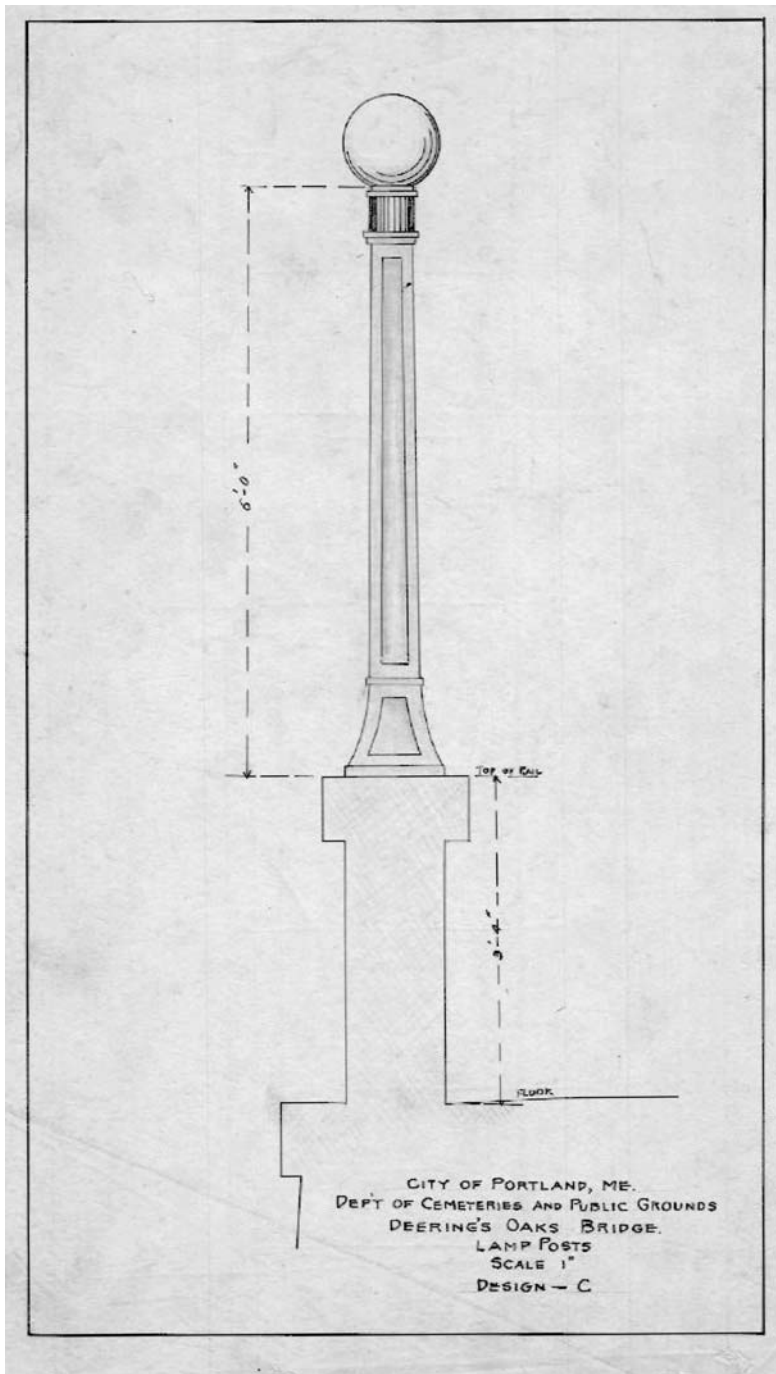
Revised Date:

HISTORIC LANDSCAPE PED



PORTLAND | me

Street & Sidewalk Lighting DECORATIVE - HISTORIC LANDSCAPE



LUMINAIRE

Match existing and according to historic resources.

LAMP

LED 3000K color temperature

LIGHTING POLE

Match existing and according to historic resources.

DIMENSIONS

Match existing and as shown in image.

FINISH

Black: Match existing and according to historic resources.

APPLICATION

Match existing location and installation.

Date:
March, 2019

**CITY OF PORTLAND, MAINE
TECHNICAL MANUAL**

**MUNICIPAL STREET
LIGHTING STANDARDS
SECTION 10**

Figure:

X-12

Revised Date:
Month Year

DEERING OAKS BRIDGE

12. SITE LIGHTING STANDARDS

12.1. PURPOSE

The requirements set forth in this chapter are intended to promote and protect public health, safety and general welfare, and encourage the preservation of the natural nighttime outdoor environment. Specifically, the intent of this chapter is to limit light trespass, glare and light pollution to safeguard adequate safety, night vision, and comfort of the neighboring properties.

12.21. APPLICABILITY

The following types of development proposals are required to submit a lighting management plan for review and approval:

- All developments subject to site lighting standards of Section 14-526 of the Land Use Code.
- Other projects where the Reviewing Authority determines that special conditions warrant a lighting management plan.

12.32. GENERAL STANDARDS

Outdoor lighting standards listed below apply to all new developments.

~~12.2.1. Unless otherwise specified below, exterior lighting shall conform to the recommendations put forth in Lighting for Exterior Environments RP-33-99, or its successor, published by the Illuminating Engineering Society of North America (IESNA). Proposed uses that demonstrate a need to exceed the specific site lighting limits shown below for safe and reasonable exercise of the proposed use must provide a professionally produced lighting plan which adheres to the current Illuminating Engineering Society of North America (IESNA) recommendations for the proposed use.~~

1. ~~12.2.2.~~ Uniformity: As measured in foot candles at grade, maximum to minimum illumination levels shall not exceed a ratio of twenty (20) to one (1.)

2. ~~12.2.3.~~ Illumination Levels: 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)

Average illuminance levels for exterior areas specified below, measured in foot candles (fc) at ground level unless noted, shall not exceed the following levels:

<u>Uses</u>	<u>Average</u> <u>(Foot candle)</u>	<u>Uniformity Ratio</u> <u>(average-to-</u>	<u>Maximum</u> <u>(Foot candle)</u>
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<u>minimum)</u>			
<u>Automated Teller Machine (ATM) Surrounding Area (10 ft perimeter)</u>	<u>10.0</u>	<u>3:1</u>	<u>20.0</u>
<u>Drive-through Canopy</u>	<u>10.0</u>	<u>3:1</u>	<u>20.0</u>
<u>Minor Gasoline Service Stations:</u>			
• <u>Approaches and Drives</u>	<u>1.5</u>	<u>3:1</u>	<u>3.0</u>
• <u>Service Areas</u>	<u>2.0</u>	<u>3:1</u>	<u>4.0</u>
• <u>Pump Island Areas</u>	<u>10.0</u>	<u>3:1</u>	<u>20.0</u>
<u>Major Gasoline Service Stations:</u>			
• <u>Approaches and Drives</u>	<u>2.0</u>	<u>3:1</u>	<u>6.0</u>
• <u>Service Areas</u>	<u>3.0</u>	<u>3:1</u>	<u>6.0</u>
• <u>Pump Island Areas</u>	<u>10.0</u>	<u>3:1</u>	<u>20.0</u>
<u>Parking Lots:</u>			
• <u>Surface</u>	<u>0.5</u>	<u>3:1</u>	<u>4.0</u>
• <u>Structure</u>	<u>0.8</u>	<u>3:1</u>	<u>2.0</u>

3. Lumens: No fixture shall exceed 20,000 lumens ($\pm 3\%$).

12.2.4. Wattage: No fixture shall exceed 250 watts, except in industrial areas.

<u>Types of Lighting</u>	<u>Maximum Lumens Allowed</u>
<u>Path lighting</u>	<u>1,500 lumens</u>
<u>Building Entrance</u>	<u>3,500 lumens</u>
<u>Residential/ Commercial Pole at 20'</u>	<u>15,000 Lumens</u>
<u>Industrial Pole at 30'</u>	<u>20,000 lumens</u>
<u>Automated Teller Machine (ATM)</u>	<u>4,000 lumens</u>
<u>Drive-Through Canopy</u>	<u>6,000 lumens</u>
<u>Minor Vehicle Service Station</u>	
• <u>Approaches and Drives</u>	<u>4,000 lumens</u>
• <u>Service Areas</u>	<u>6,000 lumens</u>
• <u>Pump Island Areas</u>	<u>8,000 lumens per fuel pump</u>
<u>Major Vehicle Service Station</u>	
• <u>Approaches and Drives</u>	<u>6,000 lumens</u>
• <u>Service Areas</u>	<u>8,000 lumens</u>
• <u>Pump Island Areas</u>	<u>10,000 lumens per fuel pump</u>

4. 12.2.5. Light Trespass: The maximum illumination level at a property line shall not exceed 0.1-foot candle, as measured at grade, except where abutting industrial, or other non-sensitive uses. When a commercial or industrial use abuts a public right-of-way, or another commercial or industrial use, lighting must be designed so that the illumination at the property boundary line does not exceed 1.0 foot-candles. All residential uses and natural resource protection areas are to be considered sensitive to light trespass. In certain instances where a proposed development is adjacent to a sensitive use, house-side shielding may be necessary to comply with this standard.

All residential uses and natural resource protection areas are to be considered sensitive to light

trespass. In certain instances where a proposed development is adjacent to a sensitive use, house-side shielding (see 12.3.5.1) may be necessary to comply with this standard.

5. ~~12.2.6.~~ Luminaire Types: All fixtures must be LED and shall not exceed 3000K Correlated Color Temperature (CCT). Screw in light fixtures must have LED lamps specified to be maximum of 3000K CCT.

6. Full Cut-off Fixtures and Shielding Required: All outdoor lighting fixtures, including pole mounted and wall mounted luminaires, shall be constructed Fulla "cut-off" or with full shielding, type where lenses, refractors or lamp sources do not extend below the surface of the fixture housing and no direct light shall be directed at or above the horizontal plane.

Where the light source from an outdoor light fixture is visible beyond the property line, shielding shall be required to reduce glare so that the light source is not visible from within any residential dwelling unit.

Light fixtures mounted under a canopy shall be recessed so that the lens cover is recessed into, or flush with, the underside (ceiling) of the canopy.

— Sites which are part of an historic district or require specific decorative lighting fixtures as means to achieve

compatibility within an existing architectural context may propose non-cutoff fixtures providing that they have built in reflectors to mitigate uplighting and that photometrics fall within IESNA guidelines. Low pressure sodium bulbs are prohibited.

7. ~~12.2.7.~~ Pedestrian Walkway Lighting: Pedestrian walkway light fixtures can be a combination of freestanding pole, bollard, in-place step or building mounted fixtures. For building mounted fixtures, the proposed fixture type will be in scale with the building elevation on which it is to be installed and meet the fixture height provisions of 12.3.8. Pedestrian lighting (bollards) shall meet the technical manual standards for full cut-off or an exception may be considered under 12.2.11.

8. Fixture Height: Fixtures shall be mounted at the lowest height necessary to meet city standards and the height is measured from grade to the bottom of the lighting fixture. with no fixture height to exceed twenty (20) feet above grade, except in sites proposed for large industrial and/or commercial uses, where the fixture height shall not exceed thirty (30) feet above grade. For the purposes of this standard only, a large industrial and/or commercial use is defined to have greater than fifty thousand (50,000) gross square feet of building space.

<u>Type of Lighting</u>	<u>Maximum Fixture Height</u>
<u>Residential (Pedestrian) Uses</u>	<u>20 feet</u>
<u>Commercial/ Office Uses</u>	<u>20 feet</u>
<u>Large Industrial Uses (50,000 sf or more- gross floor area)</u>	<u>30 feet</u>
<u>Building Mounted/ Entrances</u>	<u>below the roof eave and not</u>

	<u>to exceed 20 feet, whichever is lower</u>
Bollard Fixtures	<u>42 inches (3.5 feet)</u>

~~1-9. 12.2.8.~~ Lighting Curfew: For surface and structured parking, non-residential uses, lighting in vehicle parking areas containing twenty (20) or more parking spaces shall be reduced to 50% of permitted levels from one hour after the business closing to one hour before business opening. If lighting levels are already below 50% of permitted levels, no curfew adjustment is required. Motion sensor activated lighting shall be permitted during closed hours to activate additional lighting above the 50% permitted, for the purposes of public safety.

~~2-10.~~ Continued Maintenance: Lighting installations must be maintained in good repair to meet the provision of this ordinance on an on-going basis.

11. General Exceptions: Proposed uses that demonstrate a need to exceed the specific site lighting limits shown below for safe and reasonable exercise of the proposed use must provide a professionally produced lighting plan which adheres to the current Illuminating Engineering Society of North America (IESNA) recommendations for the proposed use. The Planning Authority may grant exceptions to the lighting standards with the finding that the light impacts do not create a public nuisance for abutting residential property. Unless otherwise specified below, exterior lighting shall conform to the recommendations put forth in Lighting for Exterior Environments RP-33-14, or its successor, published by the Illuminating Engineering Society of North America (IESNA). Lighting fixtures other than full cut-off fixtures may be allowed only if acceptable luminaires shall include internal and/or external glare control louvers and installed so as to minimize uplight and offsite light trespass.

12. Historic District, Architectural and Pedestrian Walkway Exception: Sites which are located within a historic district or require specific decorative lighting fixtures as means to achieve compatibility within an existing architectural context or to replicate an original fixture must meet the following standards:

- a. Lighting fixtures other than full cut-off fixtures may be allowed only if acceptable luminaires shall include internal and/or external glare control louvers and installed so as to minimize uplight and offsite light trespass.
- b. Low pressure sodium and metal halide lamps are prohibited.

~~12.43.~~ Reserved.

12.4. ARCHITECTURAL AND SPECIALTY LIGHTING AND UPLIGHTING:

1. ~~12.4.1.~~ Lighting shall be designed to minimize lighting of night sky and shall accentuate individual architectural or aesthetic elements, not the entire structure.

~~12.4.2. The light shall only be directed onto the building façade and not spillover-~~

~~beyond the plane of the building.~~

2. ~~12.4.3.~~ Lighting shall be directed downward unless the development is located in an area of the city where uplighting is permitted as described in section 14-526 (a) of the City Code. ~~Lighting shall be mounted as close to the architectural feature being lit as possible and shall be fully shielded from view off site. Where permitted, upward aimed lighting (uplighting) shall not exceed 4,000 mean lumens per accent feature, shall be placed as close as possible to the base of the building or feature that is being illuminated, shall be fully shielded from view off-site, and shall use a narrow cone of light for the purpose of confining the light to the object.~~
3. Building façade lighting. The exterior of a building may be lighted provided the following standards are met:
 - a. The lighting is done to accentuate architectural or aesthetic elements of the building, generally not the entire building façade.
 - b. The light must only be directed onto the building façade and not spillover beyond the plane of the building.
 - c. Upward aimed lighting must not exceed 4,000 mean lumens per accent feature, must be fully shielded, and mounted as flush to the wall as possible.
 - d. Lighting exceeding 4,000 mean lumens per accent feature must be aimed downward, fully shielded, and mounted as flush to the wall as possible.
 - e. Strip Lighting: Strip lighting along building structures as articulation may be approved as specialty architectural lighting, provided that it does not create nuisance. The lighting shall not be for the purposes of branding or signage.
4. Flag poles, statues and similar monuments. A flag pole bearing a state flag, a flag of the United States or a flag of a foreign nation may be illuminated, provided the following standards are met:
 - a. The luminaires must be fully shielded.
 - b. Upward aiming luminaires must be placed as close to the base as possible.
 - c. The luminaires must not collectively exceed 20,000 mean lumens. Public statues, memorials or other similar monuments may also be lighted upon approval by the Historic Preservation authority, provided the above standards are met.

~~12.4.4. Uplighting: Where permitted, upward aimed lighting (uplighting) shall not exceed 4,000 mean lumens per accent feature, shall be placed as close as possible to the base of the building or feature that is being illuminated and shall be fully shielded from view off site.~~

~~12.5. ILLUMINANCE STANDARDS FOR SPECIFIED EXTERIOR AREAS:~~

~~Average illuminance levels for exterior areas specified below shall not exceed the following levels:~~

Automated Teller Machine (ATM)- Surrounding Area (10 ft)	10.0 fc average
	3:1 average to minimum uniformity ratio
	20.0 fc maximum
Drive-through Canopy	10.0 fc average
	3:1 average to minimum uniformity ratio
	20.0 fc maximum

~~12.6. — AUTO SERVICE STATION ILLUMINANCE STANDARDS:~~

~~Illuminance levels for major and minor auto service stations, as defined in City Code 14.47 shall not exceed the following levels:~~

~~Minor Gasoline Service Stations and Major Gasoline Service Stations abutting residential zones, illuminance levels shall not exceed the following:~~

~~Minor Gasoline Service Stations:~~

Approaches and Drives	1.5 fc average
	3:1 average to minimum uniformity ratio
	3.0 fc maximum
Service Areas	2.0 fc average
	3:1 average to minimum uniformity ratio
	4.0 fc maximum
Pump Island Areas	10.0 fc average
	3:1 average to minimum uniformity ratio
	20.0 fc maximum

~~Major Gasoline Service Stations, illuminance levels shall not exceed the following:~~

~~Major Gasoline Service Stations:~~

Approaches and Drives	2.0 fc average
	3:1 average to minimum uniformity ratio
	6.0 fc maximum
Service Areas	3.0 fc average
	3:1 average to minimum uniformity ratio
	6.0 fc maximum
Pump Island Areas	10.0 fc average
	3:1 average to minimum uniformity ratio
	20.0 fc maximum

~~12.7. Reserved.~~**12.6. SUBMISSION REQUIREMENTS, PHOTOMETRIC PLANS:**

1. The Lighting Plan shall be depicted on a site plan, indicating the location of each current and proposed outdoor lighting fixture with projected hours of use. This plan will need to be stamped and certified by a licensed professional, such as an architect or engineer. The lighting plan must include a KEY to the proposed lighting that provides the following information:
 - a. Type and number of luminaire equipment (fixtures), including the "cut off characteristics", indicating manufacturer and model number(s).
 - b. Lamp source type (bulb type, i.e. LED), lumen output, and wattage.
 - c. Mounting height with distance noted to the nearest property line for each luminaire.
 - d. Types of timing devices used to control the hours set for illumination, as well as the proposed hours when each fixture will be operated.
 - e. Lighting manufacturer-supplied specifications ("cut sheets") that include photographs of the fixtures, indicating the certified "cut off characteristics" of the fixture.
2. A photometric plan shall be provided at 20 scale or larger which shall show the extent of the areas designed and intended for lighting, and within those specific areas show a photometric grid of maximum 10' point spacing, and within those areas provide foot candle calculations of maximum, average, minimum, maximum to minimum ratio, and average to minimum ratio. On the same or additional plan, a photometric plot shall extend to all lot lines and as necessary to reach illumination levels of 0 (zero) foot candles. Additionally, the applicant shall provide descriptive information, including manufacturers catalog excerpts, for all proposed light fixtures, lamps, and poles.

12. SITE LIGHTING STANDARDS

12.1. PURPOSE

The requirements set forth in this chapter are intended to promote and protect public health, safety and general welfare, and encourage the preservation of the natural nighttime outdoor environment. Specifically, the intent of this chapter is to limit light trespass, glare and light pollution to safeguard adequate safety, night vision, and comfort of the neighboring properties.

12.2. APPLICABILITY

The following types of development proposals are required to submit a lighting management plan for review and approval:

- All developments subject to site lighting standards of Section 14-526 of the Land Use Code.
- Other projects where the Reviewing Authority determines that special conditions warrant a lighting management plan.

12.3. GENERAL STANDARDS

Outdoor lighting standards listed below apply to all new developments.

1. Uniformity: As measured in foot candles at grade, maximum to minimum illumination levels shall not exceed a ratio of twenty (20) to one (1.)
2. Illumination Levels: 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)

Average illuminance levels for exterior areas specified below, measured in foot candles (fc) at ground level unless noted, shall not exceed the following levels:

Uses	Average (Foot candle)	Uniformity Ratio (average-to-minimum)	Maximum (Foot candle)
Automated Teller Machine (ATM) Surrounding Area (10 ft perimeter)	10.0	3:1	20.0
Drive-through Canopy	10.0	3:1	20.0
Minor Gasoline Service Stations:			
• Approaches and Drives	1.5	3:1	3.0
• Service Areas	2.0	3:1	4.0

• Pump Island Areas	10.0	3:1	20.0
Major Gasoline Service Stations:			
• Approaches and Drives	2.0	3:1	6.0
• Service Areas	3.0	3:1	6.0
• Pump Island Areas	10.0	3:1	20.0
Parking Lots:			
• Surface	0.5	3:1	4.0
• Structure	0.8	3:1	2.0

3. Lumens: No fixture shall exceed 20,000 lumens ($\pm 3\%$).

Types of Lighting	Maximum Lumens Allowed
Path lighting	1,500 lumens
Building Entrance	3,500 lumens
Residential/ Commercial Pole at 20'	15,000 Lumens
Industrial Pole at 30'	20,000 lumens
Automated Teller Machine (ATM)	4,000 lumens
Drive-Through Canopy	6,000 lumens
Minor Vehicle Service Station	
• Approaches and Drives	4,000 lumens
• Service Areas	6,000 lumens
• Pump Island Areas	8,000 lumens per fuel pump
Major Vehicle Service Station	
• Approaches and Drives	6,000 lumens
• Service Areas	8,000 lumens
• Pump Island Areas	10,000 lumens per fuel pump

4. Light Trespass: The maximum illumination level at a property line shall not exceed 0.1-foot candle, as measured at grade, except where abutting industrial, or other non-sensitive uses. When a commercial or industrial use abuts a public right-of-way, or another commercial or industrial use, lighting must be designed so that the illumination at the property boundary line does not exceed 1.0 foot-candles.

All residential uses and natural resource protection areas are to be considered sensitive to light trespass. In certain instances where a proposed development is adjacent to a sensitive use, house-side shielding (see 12.3.5.1) may be necessary to comply with this standard.

5. Luminaire Types: All fixtures must be LED and shall not exceed 3000K Correlated Color Temperature (CCT). Screw in light fixtures must have LED lamps specified to be maximum of 3000K CCT.
6. Full Cut-off Fixtures and Shielding Required: All outdoor lighting fixtures, including pole mounted and wall mounted luminaires, shall be constructed Full "cut-off" or with full shielding, type where lenses, refractors or lamp sources do not extend

below the surface of the fixture housing and no direct light shall be directed at or above the horizontal plane.

Where the light source from an outdoor light fixture is visible beyond the property line, shielding shall be required to reduce glare so that the light source is not visible from within any residential dwelling unit.

Light fixtures mounted under a canopy shall be recessed so that the lens cover is recessed into, or flush with, the underside (ceiling) of the canopy.

7. Pedestrian Walkway Lighting: Pedestrian walkway light fixtures can be a combination of freestanding pole, bollard, in-place step or building mounted fixtures. For building mounted fixtures, the proposed fixture type will be in scale with the building elevation on which it is to be installed and meet the fixture height provisions of 12.3.8. Pedestrian lighting (bollards) shall meet the technical manual standards for full cut-off or an exception may be considered under 12.2.11.
8. Fixture Height: Fixtures shall be mounted at the lowest height necessary to meet city standards and the height is measured from grade to the bottom of the lighting fixture.

Type of Lighting	Maximum Fixture Height
Residential (Pedestrian) Uses	20 feet
Commercial/ Office Uses	20 feet
Large Industrial Uses (50,000 sf or more- gross floor area)	30 feet
Building Mounted/ Entrances	below the roof eave and not to exceed 20 feet, whichever is lower
Bollard Fixtures	42 inches (3.5 feet)

9. Lighting Curfew: For surface and structured parking, lighting in vehicle parking areas containing twenty (20) or more parking spaces shall be reduced to 50% of permitted levels from one hour after the business closing to one hour before business opening. If lighting levels are already below 50% of permitted levels, no curfew adjustment is required. Motion sensor activated lighting shall be permitted during closed hours to activate additional lighting above the 50% permitted, for the purposes of public safety.
10. Continued Maintenance: Lighting installations must be maintained in good repair to meet the provision of this ordinance on an on-going basis.
11. General Exceptions: Proposed uses that demonstrate a need to exceed the specific site lighting limits shown below for safe and reasonable exercise of the proposed use must provide a professionally produced lighting plan which adheres to the current Illuminating Engineering Society of North America (IESNA) recommendations for the proposed use. The Planning Authority may grant

exceptions to the lighting standards with the finding that the light impacts do not create a public nuisance for abutting residential property. Unless otherwise specified below, exterior lighting shall conform to the recommendations put forth in Lighting for Exterior Environments RP-33-14, or its successor, published by the Illuminating Engineering Society of North America (IESNA). Lighting fixtures other than full cut-off fixtures may be allowed only if acceptable luminaires shall include internal and/or external glare control louvers and installed so as to minimize uplight and offsite light trespass.

12. Historic District, Architectural and Pedestrian Walkway Exception: Sites which are located within a historic district or require specific decorative lighting fixtures as means to achieve compatibility within an existing architectural context or to replicate an original fixture must meet the following standards:
 - a. Lighting fixtures other than full cut-off fixtures may be allowed only if acceptable luminaires shall include internal and/or external glare control louvers and installed so as to minimize uplight and offsite light trespass.
 - b. Low pressure sodium and metal halide lamps are prohibited.

12.4. Reserved.

12.4. ARCHITECTURAL AND SPECIALTY LIGHTING AND UPLIGHTING:

1. Lighting shall be designed to minimize lighting of night sky and shall accentuate individual architectural or aesthetic elements, not the entire structure.
2. Lighting shall be directed downward unless the development is located in an area of the city where uplighting is permitted as described in section 14-526 (a) of the City Code. Where permitted, upward aimed lighting (uplighting) shall not exceed 4,000 mean lumens per accent feature, shall be placed as close as possible to the base of the building or feature that is being illuminated, shall be fully shielded from view off-site, and shall use a narrow cone of light for the purpose of confining the light to the object.
3. Building façade lighting. The exterior of a building may be lighted provided the following standards are met:
 - a. The lighting is done to accentuate architectural or aesthetic elements of the building, generally not the entire building façade.
 - b. The light must only be directed onto the building façade and not spillover beyond the plane of the building.
 - c. Upward aimed lighting must not exceed 4,000 mean lumens per accent feature, must be fully shielded, and mounted as flush to the wall as possible.
 - d. Lighting exceeding 4,000 mean lumens per accent feature must be aimed downward, fully shielded, and mounted as flush to the wall as possible.
 - e. Strip Lighting: Strip lighting along building structures as articulation may be approved as specialty architectural lighting, provided that it does not create nuisance. The lighting shall not be for the purposes of branding or signage.
4. Flag poles, statues and similar monuments. A flag pole bearing a state flag, a flag of

the United States or a flag of a foreign nation may be illuminated, provided the following standards are met:

- a. The luminaires must be fully shielded.
- b. Upward aiming luminaires must be placed as close to the base as possible.
- c. The luminaires must not collectively exceed 20,000 mean lumens. Public statues, memorials or other similar monuments may also be lighted upon approval by the Historic Preservation authority, provided the above standards are met.

12.6. SUBMISSION REQUIREMENTS, PHOTOMETRIC PLANS:

1. The Lighting Plan shall be depicted on a site plan, indicating the location of each current and proposed outdoor lighting fixture with projected hours of use. This plan will need to be stamped and certified by a licensed professional, such as an architect or engineer. The lighting plan must include a KEY to the proposed lighting that provides the following information:
 - a. Type and number of luminaire equipment (fixtures), including the "cut off characteristics", indicating manufacturer and model number(s).
 - b. Lamp source type (bulb type, i.e. LED), lumen output, and wattage.
 - c. Mounting height with distance noted to the nearest property line for each luminaire.
 - d. Types of timing devices used to control the hours set for illumination, as well as the proposed hours when each fixture will be operated.
 - e. Lighting manufacturer-supplied specifications ("cut sheets") that include photographs of the fixtures, indicating the certified "cut off characteristics" of the fixture.
2. A photometric plan shall be provided at 20 scale or larger which shall show the extent of the areas designed and intended for lighting, and within those specific areas show a photometric grid of maximum 10' point spacing, and within those areas provide foot candle calculations of maximum, average, minimum, maximum to minimum ratio, and average to minimum ratio. On the same or additional plan, a photometric plot shall extend to all lot lines and as necessary to reach illumination levels of 0 (zero) foot candles. Additionally, the applicant shall provide descriptive information, including manufacturers catalog excerpts, for all proposed light fixtures, lamps, and poles.

street lights comment for 3/26 meeting

joan h grant <joanhammergrant@yahoo.com>

Mar 25, 2019 11:19 AM

Posted in group: **Planning Board**

I would like to request a review of sidewalk lighting on the peninsula. Many sidewalks are dark and dangerous because of the lack of adequate lighting...dangerous from possible bad people, but also from possible falls due to inability to see ice patches, loose bricks etc at night. Even main main streets are poorly lit. And example is High Street from Congress to Cumberland where there are zero lights on one side of the street and few on the other. Cumberland Ave from High to Preble is avoided by most people at night because of the lack of lighting....completely dark in some areas.

At the District 2 meeting I asked about getting sidewalk lighting...Mr Jennings said there is no funding. I love Portland, pay taxes and want to see it a safer place to live and walk.

I can't come to the meeting 3/28 because of another commitment.

Joan Grant

442 Cumberland Ave. #4

Street light request for 3-26-19 PB meeting

Peter Gordon <gordonpd@live.com>

Mar 25, 2019 11:01 PM

Posted in group: **Planning Board**

Dear Planning Board,

In reference to your March 26th hearing on Street Lighting Standards, I would like to raise a problem we've been having with a street light lately. While I certainly don't expect you to deal with our situation individually, I think this does raise an important issue to consider in overall street light guidelines.

In a nutshell, the problem is an overly-bright street light that's mounted high enough that it shines directly into our unit. The light in question is on the SW corner of the intersection of Fore and India Streets (kitty corner across from the Nine Stones Spa). We live on the 3rd-floor corner unit above the spa, and the light shines laterally right into our living room. It's much brighter than other street lights in the neighborhood, and the glare into our living room is very bothersome whether the window shade is open or closed. (See the attached photos.)

I think the planning board should take a street light's lateral effects into consideration, along with its overall brightness. Lights should shine downward but not laterally, especially when there are residents nearby.

Feel free to contact me if you'd like more information or want to take a field trip over here to check it out. Thank you for considering this in your future plans.

---Peter Gordon

Peter D. Gordon

Author "Six Years and Counting"

Email: gordonpd@live.com

Office/Home: 207-808-8679

185 Fore St. #301

Portland, ME, 04101, USA







Memorandum

Planning and Urban Development Department

Planning Division

To: Sean Dundon, Chair and Members of the Portland Planning Board
From: Matthew Grooms, Planner
Date: March 22, 2019
Re: Sixteen-Unit Condominium, 10 Hammond Street, Hammond House, LLC
Project #: PL-000418-2018 CBL: 012-C-004
Meeting: March 26, 2019

I. INTRODUCTION

Hammond House, LLC has submitted a Level III Site Plan, Subdivision and Conditional Use application for a new sixteen-unit residential condominium on a 15,433 square foot parcel located at 10 Hammond Street in the East Bayside Neighborhood. This neighborhood consists largely of one- and two-family homes, with fewer multi-family properties and is located within the R-6 Residential Zone, outside of the Munjoy Hill Neighborhood Conservation Overlay zone. The proposed development involves demolition of two single-family structures and construction of a new three-story building with subsurface structured parking.

An initial Planning Board Workshop was held on February 26, 2019, where the applicant and staff provided the Board with an overview of the project and key concerns, particularly the scale and massing of the building as it relates to nearby properties, viability of the stormwater infrastructure being proposed, adequacy of vegetative buffering and the need for a crosswalk across Fox Street in the vicinity of this project. At that meeting, the Planning Board requested that this project return for a second workshop.



Figure 1: Approximate boundaries of project site.

This workshop will focus exclusively on design of the building and integration of the development within the surrounding neighborhood. The following memo is abbreviated to reflect the scope of this review. Please refer to the memo provided at the February 26th meeting for more information on the project ().

This workshop will focus exclusively on design of the building and integration of the development within the surrounding neighborhood. The following memo is abbreviated to reflect the scope of this review. Please refer to the memo provided at the February 26th meeting for more information on the project ().

A total of 157 notices were sent to property owners within 500 feet of the site and a legal ad ran in the March 16th and 18th 2019 editions of the Portland Press Herald.

Applicant: Kevin O'Rourke, Hammond House, LLC

Consultants: Will Savage, P.E., Acorn Engineering; Sam Level, Acorn Engineering; Ryan Senatore, Ryan Senatore Architecture; Richard Eaton, R.W. Eaton Associates.

II. PROJECT DATA

Existing Zoning	R-6 Residential
Existing Use	Single-Family (2 units)
Proposed Use	16 Residential Units
- Bedroom Mix	3 three-bedroom units, 7 two-bedroom units, 6 one-bedroom units
Parcel Size	15,433 SF

	<i>Existing</i>	<i>Proposed</i>	<i>Net Change</i>
Building Footprint	2,260 SF	8,276 SF	6,016 SF
Building Floor Area	4,000 SF	32,242 SF	28,242 SF
Impervious Surface Area	4,009 SF	11,565 SF	7,556 SF
Parking Spaces	4	16	12
Bicycle Parking Spaces	0	6	6
Estimated Cost of Project	Unknown		

III. EXISTING CONDITIONS

The proposed development site occupies two single-family properties, totaling just over one-third of an acre, located at the northwest corner of the Hammond Street and Fox Street intersection. The existing one and a half story single-family structures date to the latter half of the 19th Century (1850 and 1880 respectively) and are not protected under local or state historic preservation designations.

At present, approximately one-quarter of the site is impervious surface, with significant vegetation being located along the property boundaries and towards the rear of the site away from Hammond Street. The property generally slopes down from east to west with an average grade of 12%. The project area presently drains the entirety of its runoff on to the abutting property to the west (117 Anderson Street – the Portland Housing Authority’s Maintenance Facility), which likely contributes to the ponding and icing of the Facility’s parking lot that has been observed.



Figure 2: Existing conditions of site at Hammond Street frontage.

In looking at the broader context, Hammond Street and surrounding areas of East Bayside feature a higher proportion of single-family structures as compared with other areas of Portland’s peninsula, with a generally smaller scale of development. Existing structures are typically between one and two stories, though there are several three-story buildings within a block radius of the development site. Hammond street features regularly spaced street trees, a nine (9) foot concrete sidewalk, and overhead utility poles with cobra head light fixtures along the east side of Hammond Street.

IV. PROPOSED DEVELOPMENT

The development is proposed as a new three-story, sixteen-unit residential condominium, composed of a mixture of one-, two- and three-bedroom units with subsurface structured parking for thirteen (13) vehicles, including one handicap space, and two (2) exterior parking spaces. The building is just under forty (40) feet tall and eighty (80) feet wide with a depth of approximately one-hundred (100) feet. The development emphasizes pedestrian access and activity at street level, with front entrance and unit patios fronting Hammond Street. Vehicular access is deemphasized by shifting the garage entrance towards the rear of the site, that is accessible via an eighteen (18) foot driveway located along the northerly property boundary. The use of a driveway is consistent with other developments along Hammond Street. The project also features closure of two (2) existing curb cuts, for a net reduction of one (1).

As mentioned in the existing conditions section, the development site is approximately 25% developed, with significant open space and vegetation. While much of that existing area is to be developed, and vegetation is to be removed, existing vegetation located within the building setback areas will be preserved where possible, and will be significantly augmented through additional plantings. A mixture of native ornamental grasses, perennials, shrubs and trees are proposed along the building’s exterior, at the rear of the site and along the driveway edge for additional buffering, and along the property frontage. Based upon the width of the property’s frontage, two street trees are being provided to partially satisfy the city’s street tree requirement. A retaining wall and six (6) foot cedar fence is proposed along the northerly property boundary to provide additional noise and visual buffering between the neighboring property.

Utilities to the site are provided via existing infrastructure located beneath Hammond Street, with new connections consisting of a four (4) inch water service, six (6) inch fire service and six (6) inch sanitary sewer connection. Electrical service is provided underground from an existing CMP pole located at the northwest corner of Fox and Hammond Street. Site lighting is provided by six (6) full cutoff wall pack fixtures, with a maximum light trespass of 0.1 foot-candles onto adjacent properties. Lighting is provided at the main entrance, along the pedestrian accessway to the garage and along the driveway.

In regards to stormwater management, the proposed development significantly increases the amount of on-site impervious surface and is therefore required to meet Maine DEP Chapter 500 stormwater standards for stormwater quality and quantity control. The development proposes water quality treatment for no less than 95% of the new impervious area and 80% of the developed area, which shall be met through the use of an underdrained subsurface sand filter (USSF) and StormTech Isolator Row. According to the applicant, the proposed system will exceed both city and state requirements for stormwater quality treatment. The system is also designed to contain runoff for up to a 25-year storm event and promote infiltration, which satisfies the flooding standard. The post development condition would significantly reduce the amount of runoff impacting down gradient property owners.

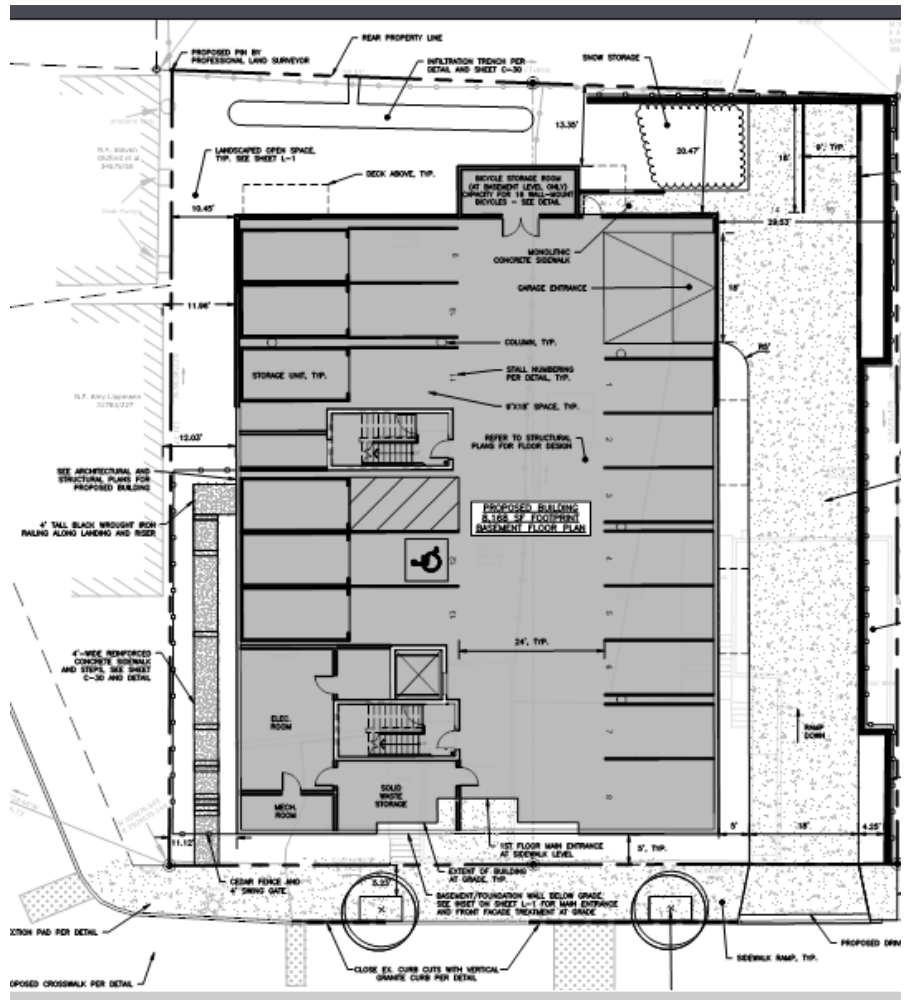


Figure 3: Proposed site plan.

V. Public Comment and Neighborhood Meeting

As of the writing of this report, eight (8) written comments have been received by the Planning Division. The concerns raised by abutters were primarily focused on building design, particularly the height and massing of the proposed building as it compares with the largely one- and two- story buildings found elsewhere along Hammond Street and in the vicinity. Other concerns raised included the affordability of new units, the limited consideration of the impacts of climate change, the appropriate balance between off-street and on-street parking and a closer look at city allowances for rooftop appurtenances.

City staff also met with Cynthia Cochran, Vice President of the East Bayside Neighborhood Organization, to discuss the project in more detail and answer questions compiled by neighbors. At this meeting, Ms. Cochran raised concerns that the scale and form of the building were incompatible with nearby properties and that the project did not meet design standards as listed under alternative design review for projects in the R-6 zone. She also raised concerns regarding impacts to the on-street parking supply, vehicle speeding along Fox Street, the lack of a crosswalk across Fox Street in the vicinity of this project, and impacts to vehicle and pedestrian sight lines resulting from illegally parked vehicles along Fox Street. One additional point raised was the lack of integration of projects of this scale into the surrounding neighborhood, as projects with four (4) or more units tend to be more inwardly focused.

In response to these concerns, the staff would note that design review comments for both the first and second iteration of the building's design have focused on the massing and scale of the building, particularly as it related to the façade visible from Fox Street, proposed rooftop features, and pedestrian scale features along Hammond Street and

at the building entrance. The design review process requires that development relate in terms of scale and massing to nearby development, but does not require that a new development replicate existing development. Given that this scale of development is permitted by right in the R-6 zone, the staff are instead suggesting that the design of the building continue to be revised so as to be more complementary of and integrated within its context. Please see the design review memo for more information (Attachment 1).

Regarding other concerns, the staff are requesting that the applicant construct a crosswalk across Fox Street, and have confirmed that the development is providing off-street parking as required by the city's off-street parking standards.

The applicant held a neighborhood meeting on January 15, 2019 attended by twenty-five (25) members of the public. At this meeting, members of the public asked questions regarding process, project parameters, the likelihood of blasting, status of the condominium documents, construction management. Those in attendance also raised concerns regarding the scale of the proposed building and felt that it would overwhelm nearby properties. Responses to these questions and concerns can be found in the attached neighborhood meeting minutes (Attachment Y)

VI. PLANNING BOARD WORKSHOP (FEBRUARY 26, 2019)

The Planning Board held a workshop to discuss the proposed development at 10 Hammond Street on February 26, 2019. At that meeting, the Board strongly encouraged the applicant to revisit site design as well as building scale and massing and stressed that the development felt too large in relation to surrounding properties. Board members identified roof-top appurtenances as needing to be evaluated for visual impact and offered suggestions for the overall project design to respond to the concerns raised about massing and context, including:

- Break the building into two separate buildings
- Reduce the amount of on-site parking to cut down on size and site impacts
- Use vegetation to more significantly screen the development
- Revise the design of bays along Hammond Street to further break up the building

The Board also observed that the building felt institutional, due in part to the sculpture, concept signage and entrance design. Aside from design related comments, the Board also asked that the applicant evaluate the viability of their stormwater system given the steep slope at the rear of the property, with the concern being that the infiltration unit may destabilize the slope. Additional erosion control may be warranted to counter that concern. Other requests included the provision of condominium documents and a reconsideration of landscape choices.

Public Comment:

Nine members of the public spoke at the workshop, who reflected many of the sentiments shared by the Board. They commented that:

- Neighboring buildings, particularly those on Hammond Street, do not include roof decks
- Lot coverage, and therefore lack of vegetation, was not in context with the neighborhood.
- Proposed building is too large, particularly along Fox Street, which is immediately adjacent to very small single-family structures
- Development feels too institutional and is not well enough integrated into the streetscape
- Condominium documents are needed to determine whether or not the residential units will be utilized as short-term rentals (i.e. AirBnB).

VII. UPDATED ZONING ANALYSIS

The proposed project is a three-story residential condominium with sixteen (16) units and sixteen (16) off-street parking spaces. The property is located within the R-6 Residential zone, outside of the Munjoy Hill Neighborhood Conservation Overlay District.

The proposed use, a multi-family residential development, is a permitted use within the R-6 and the project as proposed is fully compliant with all dimensional requirements as shown in the table below.

	Required	Proposed
Lot Size	2,000 SF	15,433 SF
Area Per Dwelling Unit	725 SF	965 SF
Minimum Street Frontage	20' FT	120' FT
Front Yard Minimum	0 (Abutter Average)	5.12' FT
Front Yard Maximum	N/A	5.12' FT

Rear Yard	10' FT	13.35' FT
Side Yard	5' FT	29.5' FT (Right), 10.5' FT (Left)
Maximum Lot Coverage	60%	56% (Deck area included)
Maximum Height	45' FT	39.82' FT
Open Space	20%	25%
Maximum Impervious Surface	80%	75%
Off-Street Parking	13 (1 space/unit, first 3 not required)	15 (1 space/unit)

The proposed height of the building is compliant with the standards of the R-6 zone. At the previous workshop, staff highlighted the quantity and dimension of rooftop appurtenances, which extended the height of the building to approximately fifty (50) feet above average grade.

Based upon the elevation change within the vicinity of this site, it is anticipated that there will be long views of the building from multiple vantage points. Staff are requesting that views of the building be provided from higher elevations such as along Washington Avenue, to determine whether further screening may be required of roof-mounted mechanical equipment.

VIII. UPDATE ON BUILDING DESIGN

In response to feedback from the Planning Board and staff, the applicant's design team have significantly redesigned the building to enhance compatibility with smaller scale development in the vicinity. Caitlin Cameron, Urban Designer and Matthew Grooms, Planner, met with the architect and developer on March 11th to discuss proposed changes, and found them to be significantly responsive to Board and public feedback, while maintaining the scope of the project. Below is a list of changes that have been incorporated in order to relate the building to its neighborhood.



Figure 4: Revised front elevation, note that mechanical equipment is roof-mounted.

- Roof top decks and stairwells, which added significantly to the massing of the proposed structure, have been removed, reducing effective height of the building by approximately ten (10) feet.
- Main entrance has been recessed in order to scale the front façade.
- The main stair and elevator have been moved deeper into the building and away from the front façade, which eliminates the elevator override that previously was a prominent feature of the front façade, and adds additional living space along the street.
- Sculpture has been removed and replaced with ground-level planters to better identify separation of private and public space.
- A quasi front porch, added through canopy and columns, is now proposed, further contextualizing the building with other multi-family properties in the vicinity.
- Façade materials have been simplified and made more uniform. The color of materials has also been lightened and strategically chosen to downplay the scale of the building.
- Bays have been added to the front façade to scale the building's width and pay tribute to triple decker typology.
- A more traditional cornice detail is now provided that is more contextual.
- Recessed decks are now being provided at the mid-point of side facades, which serve to break up the scale of the building.
- Cornice has been brought down one story and material color has changed at 3rd floor on Fox Street façade to scale building.



Figure 5: Revised Fox Street elevation



Figure 6: Fox Street view of Hammond Street. Note material and cornice changes, and recess of balconies, intended to reduce massing impacts.

IX. DESIGN REVIEW

A design review (Attachment 1) according to the City of Portland Design Manual Standards was performed for the revised proposal for new construction of a multi-family dwelling at 10 Hammond Street. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Matthew Grooms, Planner. The project was reviewed against the R-6 Small Infill Development Design Principles & Standards (Appendix 7 of the Design Manual) as well as the Two-Family, Special Needs Independent Living Units, Multiple-Family, Lodging Houses, Bed and Breakfasts, and Emergency Shelters (Section I of the Design Manual).

Design Review Criteria:

The project was reviewed with the Alternative Design Review which has the following criteria:

- Proposed design is consistent with all of the Principle Statements.
- The majority of the Standards within each Principle are met.
- The guiding principle for new construction under the alternative design review is to be compatible with the surrounding buildings in a two-block radius in terms of size, scale, materials, and siting, as well as the general character of the neighborhood, thus Standards A-1 through A-3 shall be met.
- The design plan is prepared by an architect registered in the State of Maine.

Findings of the Design Review:

The proposed design passes all of the criteria of the R6 Alternate Design Review – please refer to comments below:

- Staff find that the applicant has adequately responded to the comments and concerns from the Planning Board and public comment.
- The revisions include:
 - Simplification of the roof form to a compatible, simple flat roof with overhanging eaves (removal of stair towers and roof decks)
 - Massing and material variation and articulation elements introduced on street-facing facades to create scale and mass more similar to the traditional built patterns.
 - Massing, material, and articulation variation introduced on the Fox Street-facing elevation to mitigate the scale impacts and relate to the composition patterns found in the context.
 - Revise the entrance and building interface with the street to evoke the porches and front yard planters typically found in the R-6 residential context.

X. LANDSCAPE DISCUSSION

During preliminary review, staff raised concerns that the proposed landscaping scheme, while ornamentally effective, did not sufficiently buffer the site from surrounding uses. Particularly, the size of plantings along the Fox Street property boundary and along the rear property line, were too small to provide significant screening, and there have also been concerns that the proposed retaining wall and cedar fence along the driveway may disrupt vehicle sight distances. In response to those concerns, a revised landscape plan was drafted, which has been reviewed by the City Arborist, Jeff Tarling, who offers the following comments (Attachment 2):

- The revised landscape plan is improved and meets the suggested topics from earlier plan review comments.

Regarding the NEENAH Tree Grate. The typical street tree & sidewalk requirement is to maintain ADA sidewalk width between the back of the sidewalk and the tree pit or planter. It looks like the one spec is from the NEENAH 'Boulevard Collection' # R-8811 which is 48" x 72" vs the NEENAH 'Avenue Collection' R-8810 which is 36" x 60".

The tree grate would not be required if the proper ADA sidewalk width can be created. We are open to further discussion on that topic. Location of the tree pit is dependent on the location of the underground utilities as trees should maintain adequate distance from underground electric, water, gas & sewer services.

Overall the proposed landscape plan is acceptable with the condition that the sidewalk & street-tree details are refined to meet ADA standards acceptable to Public Works Engineering and the Planning Authority.

XI. NEXT STEPS

1. Address staff comments
2. Address additional comments of the Planning Board

3. Prepare final plan submission, including subdivision and site plan submittal requirements as included in 14-496(i) and (b) and 14-527(e) and (f) for review by the Planning Authority and Planning Board
4. Hold final Planning Board Hearing

XI. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Design Review Comments - Updated
2. Landscape Review Comments
3. Public Comment
 - a. Jason Wentworth (1.3.19)
 - b. Jonathan Garland (1.4.19)
 - c. Jessica Lockhart (1.5.19)
 - d. Carolyn Treat (2.26.19)
 - e. Catharine Clay (2.26.19)
 - f. Donna Gartland (2.26.19)
 - g. Joanna Shaw (2.27.19)
 - h. Jonathan Gartland (2.27.19)

APPLICANT'S SUBMITTALS

- A. Cover Letter
- B. Application Form
- C. Architectural Design Narrative (Revised)
- D. Neighborhood Meeting Minutes
- E. Comment Response Letter

PLANS

- Plan 1. Cover Sheet
- Plan 2. Existing Conditions Plan
- Plan 3. Site Plan
- Plan 4. Landscape Plan
- Plan 5. Garage Floor Plan
- Plan 6. First Floor Plan
- Plan 7. Second Floor Plan
- Plan 8. Third Floor Plan
- Plan 9. Roof Plan
- Plan 10. Front Elevation
- Plan 11. Rear Elevations
- Plan 12. South Elevation
- Plan 13. North Elevation
- Plan 14. Contextual Rendering from Hammond
- Plan 15. Contextual Rendering from Winthrop
- Plan 16. Contextual Rendering from 30 Fox Street
- Plan 17. Contextual Rendering from Downhill Fox Street

Planning and Urban Development Department

Planning Division



Subject: R-6 Small Infill/Multi-family Design Review – 10 Hammond Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Tuesday, March 19, 2019

A design review according to the *City of Portland Design Manual* Standards was performed for the revised proposal for new construction of a multi-family dwelling at 10 Hammond Street. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Matt Grooms, Planner. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual) as well as the *Two-family, Special Needs Independent Living Units, Multiple-family, Lodging Houses, Bed and Breakfasts, and Emergency Shelters* (Section I of the Design Manual).

Design Review Criteria:

The project was reviewed with the Alternative Design Review which has the following criteria:

- A. Proposed design is consistent with all of the Principle Statements
- B. The majority of the Standards within each Principle are met
- C. The guiding principle for new construction under the alternative design review is to be compatible with the surrounding buildings in a two-block radius in terms of size, scale, materials, and siting, as well as the general character of the established neighborhood, thus Standards A-1 through A-3 shall be met.
- D. The design plan is prepared by an architect registered in the State of Maine.

Findings of the Design Review:

The proposed design passes all of the criteria of the R6 Alternate Design Review – please refer to comments below:

- Staff find the applicant has adequately responded to the comments and concerns from the Planning Board and public comment.
- The revisions include
 - Simplification of the roof form to a compatible, simple flat roof with overhanging eaves (removal of stair towers and roof decks)
 - Massing and material variation and articulation elements introduced on street-facing facades to create scale and mass more similar to the traditional built patterns
 - Massing, material, and articulation variation introduced on the Fox Street-facing elevation to mitigate the scale impacts and relate to the composition patterns found in the context
 - Revise the entrance and building interface with the street to evoke the porches and front yard planters typically found in the R-6 residential context.

Design Review Comments (*red text denotes principles or standards that are not met; bold text denotes updated comment*):

Appendix 7: R-6 Infill Development

Principle A Overall Context – Met – see below.

- *A-1 Scale and Form:* The context is predominantly single and two-family buildings with simple forms, one and a half to two and half stories in height, vertical proportions, and masonry bases with clapboard siding. Larger multi-family buildings typically are 3 stories, use balconies or bay windows, flat roofs, and vertical proportions. In those rare instances where a larger scale, wider building has been built, the scale is mitigated by keeping setbacks as a buffer and through massing variation with elements such as bay windows and porches, and scaling elements such as canopies, material variation, and balconies. Some scale mitigation has been achieved by varying the massing at the front, maintaining a three-story flat roof, and varying materials – **in the revised proposal, significant and effective massing variation was introduced to better relate this larger building with the context.** The design creates façade compositions reminiscent of triple-deckers at the corners of the building to create a relatable scale and form. **Staff now find the design relates enough to the scale and form of the surrounding residential buildings. Staff suggested mass and scaling elements be incorporated and that the roof form be simplified in order to meet the standard – these were adopted.**
- *A-2 Composition of Principal Facades:* The façade composition takes the approach of using material placement, **massing variation, and articulation elements** to relate to a triple-decker composition. The strategies emphasize vertical proportions and provides local symmetry and windows. The façade composition is largely impacted by placement of circulation at the front façade and the overall width of the building, which at 80', is much wider than the surround buildings with which it shares the streetscape. Predominantly, traditional façade compositions include vertical proportions and narrower buildings. **The Fox and Hammond Street facades include relationships and elements that relate to the patterns found in the context.**
- *A-3 Relationship to the Street:* The street wall is maintained and building placement in relationship to the street is consistent with the neighboring properties. The building sits close to the street with a slight front yard setback buffer consistent with residential architecture in this neighborhood. The established pattern on this street varies – some buildings are directly at the sidewalk while others allow a small front yard setback to accommodate stoops, bays, and landscaping for privacy. Given the scale of this proposed building, a setback creates a respectful relationship and is in keeping with the patterns in the context. The building pattern also varies – there is not a clear, established rhythm of building/drive. This project incorporates a side driveway which does respect the building placement patterns of the streetscape/neighborhood. **At a detailed level, the building interface with the street is now compatible with the predominant character-defining architectural features of the neighborhood – raised planters, entrance porch with canopy, recessed entry. The project differs from historic homes in that the entrance is at the sidewalk grade – this is the result of Fair Housing and ADA requirements. The ground level residential units, though not as raised as most traditional homes, maintains a privacy through setbacks, planted buffers.**

Principle B Massing – Met – The building is larger in scale than what is found in the context in both height and width of the building. **The project revisions increased the amount of massing variation to elicit references to the proportions, forms, and massing found in traditional multi-**

family buildings and to mitigate the scale impact of this larger building adjacent to small, single family buildings. Staff find, though the project is larger in scale than the adjacent buildings, that the massing now creates a building that reflects and reinforces the traditional building character of the neighborhood.

- *B-1 Massing:* The proposed mass is wider on the street and longer in length on Fox Street than the typical building context. **Given the scale and massing of this new project is taller and wider than the residential context, the proposed massing variation breaks down the perceived scale.** In this case, the balconies, three-story flat roof, and material placement/articulation define portions of the building into smaller, vertical proportions that are harmonious with the massing of the existing buildings. **Where previously the building relied on surface-level elements to integrate the larger scaled building, now there are physical pushes and pulls to the massing – the effect is masses and forms that relate to the scale and proportions of the context.**
- *B-2 Roof Forms:* The proposed flat roof form is in keeping with the traditional multi-family building types found in the context. Simple forms define the context – **the roof was simplified to meet this standard and is referential of the simple, flat roofs found on the multi-family buildings nearby. This form is emphasized with a strong, overhanging cornice line.**
- *B-3 Main Roofs and Subsidiary Roofs:* There is a clear main roof form.
- *B-4 Roof Pitch:* The roof is flat.
- *B-5 Façade Articulation:* The project employs a covered entry, bay window.
- *B-6 Garages:* The garage is attached and buried with a side entry and living space above.

Principle C Orientation to the Street – Met – There are some living spaces at the ground level separated from the sidewalk with a front setback and balconies – these provide a positive and contextual level of activity towards the street while appropriately raised above and setback from the sidewalk for privacy. **The project entrance was revised to provide a transition appropriate to the small-scale residential street (recessed entry, porch canopy, front setback.**

- *C-1 Entrances:* The main entry directly faces the street and is emphasized by **a recessed entry, special materials, canopy, and side lights.**
- *C-2 Visual Privacy:* Visual privacy is adequately addressed; all living spaces are elevated **or set back from the street with a planter/balcony buffer.**
- *C-3 Transition Spaces:* The transition from the sidewalk to the building entrance **was revised to provide a more residential-style transition from sidewalk to entry with a recessed entry, “porch” with canopy.** The front setback with ground level plantings and artwork and the direct vestibule provide a transition – **the more commercial aspects of the sidewalk interface and entrance were removed to provide a more residential character. The ground floor living spaces have a buffer from the street with plantings, balconies.**

Principle D Proportion and Scale – Met – The proportion and massing of the front façade was revised to be referential of the vertical proportions of triple-deckers – this is addressed by creating a façade composition through materials and articulation that relates to the proportions found in the context. Some individual building elements are human-scaled. **Staff previously expressed that more could be done to introduce substantial scaling elements beyond applied material and trim elements – this was accomplished with changes to the front façade massing and planes, the relationship of the roof line and balconies, and the recess of the central circulation space.**

- *D-1 Windows:* The majority of windows are rectangular and have a vertical proportion, though different size and proportion from what is found in the context. The entrance and balconies have additional window types appropriate for the uses behind.
- *D-2 Fenestration:* The project appears to meet the 12% fenestration requirement and appropriately scaled to the massing of the building. Window variation follows programmatic needs inside. The side elevations include an appropriate level of fenestration given the scale and proportions of the facades.
- *D-3 Porches:* The balconies meet the size and integration requirement.

Principle E Balance – Met – The building façade composition creates a sense of balance with good use of overall and local symmetry and articulation of façade materials.

- *E-1 Window and Door Height:* The majority of window and door head heights align along a common horizontal datum.
- *E-2 Window and Door Alignment:* The majority of windows shall stack so that centerlines of windows are in vertical alignment.
- *E-3 Symmetricality:* Primary window compositions are arranged symmetrically around discernable vertical axes.

Principle F Articulation – Met – Articulation is provided through material texture, strong, overhanging cornice lines, changes in façade planes, and emphasized entry.

- *F-1 Articulation:* The design uses balconies, bays, a strong roof line, and the texture of the material to provide surface articulation and visual interest.
- *F-2 Window Types:* **More than two window types are used** – there is design justification for some of the variation (circulation, inactive uses). Windows are rectangular with vertical proportion but **type differs from the double-hung windows found in the surrounding residential context.**
- *F-3 Visual Cohesion:* The visual cohesion of the Hammond Street façade is good. The massing variation and material placement are harmonious with the intent to relate the building to the smaller scale residential context.
- *F-4 Delineation between Floors:* The balconies provide the most apparent floor delineation. The entry canopy also makes this distinction.
- *F-5 Porches, etc.:* **The entrance was revised to be similar to a porch – the recessed entry and extended canopy are incorporated into the design.** The balconies meet this standard – integrated into the overall massing and façade composition.
- *F-6 Main Entries:* **The character of the entrance was revised to reference residential characteristics – recessed entry, extended canopy/porch roof, special materials, side lights.** The main entry is emphasized with prominent placement facing the street.
- *F-7 Articulation Elements:* The rake of the roof meets the 6" requirement; no trim; offsets in the principal façade are at least 12", cornice line is pronounced.

Principle G Materials – Met – The material choices of clapboard and panel with brick foundation are contextual and fine-grained. Material placement is used to mitigate the scale of the building. **The material variation on the side facades was revised; material variation now used to accentuate massing variation and help mitigate scale impacts of the building.**

- *G-1 Materials:* The residential context is predominantly clapboards with occasional shingle or brick. The clapboard is a fine-grain materials in keeping with the context. Brick at the ground floor is logical and grounds the building.

- *G-2 Material and Façade Design:* The materials are appropriately placed according to their nature. The use of clapboard relates the building to the context. The natural wood material emphasizes the entrance. The material placement on Hammond Street helps break down the façade composition and delineate the circulation and entrance from the living spaces. **Material placement follows the rationale of the massing and façade composition.**
- *G-3 Chimneys:* Not applicable.
- *G-4 Window Types:* More than two window types are used on the front façade – the variation in most cases follows program (balcony doors, entrance windows). Detailing is consistent throughout.
- *G-5 Patios and Plazas:* n/a

(i) Two-family, Special Needs Independent Living Units, Multiple-Family, Lodging Houses, Bed and Breakfasts, and Emergency Shelters (red text denotes standards that are not met; bold text denotes updated comments):

Standard 1 – Met – The project design includes certain strategies of material placement, massing variation, and articulation to create proportions and scale that relate to the context of single and two-family homes. Simple roof forms are predominant throughout the East End context – a flat roof is appropriate here for a multi-family building made up of mostly one and a half and two and half story buildings with simple roof forms. Given the scale and massing of this new project is taller and wider than the residential context, **revisions include additional design elements to meet the standards around compatibility especially around scale, simplicity of materials, form, and articulation.**

Standard 2 – Met – The building sits close to the street with a slight front yard setback buffer consistent with residential architecture in this neighborhood. The established pattern on this street varies – some buildings are directly at the sidewalk while others allow a small front yard setback to accommodate stoops, bays, and landscaping for privacy. Given the scale of this proposed building, a setback creates a respectful relationship and is in keeping with the patterns in the context. The building pattern also varies – there is not a clear, established rhythm of building/drive. This project incorporates a side driveway which does respect the building placement patterns of the streetscape/neighborhood. **The entrance and building interface with the street was revised to become more residential in character. The artwork, branding were removed in favor of more subtle, residential characteristics such as an extended canopy similar to a porch structure, recessed entry, side lights.** This building does differ from the established context in the width of the building itself – this building is much wider than the residential buildings in the context. **The revisions incorporate scaling and articulation elements to relate to its residential context and the predominant character surrounding.**

Standard 3 – Met – The project provides balcony space for each dwelling unit.

Standard 4 – Met – The project has a high level of fenestration and the provision of balconies also contributes to residents' access to light and air. Storage is provided within each unit.

Standard 5 – Met – The parking is structured and screened from view. The garage door is side-facing accessed from a side yard driveway.

Standard 6 – Not Applicable

10 Hammond Landscape Plan

Jeff Tarling <jst@portlandmaine.gov>

Fri, Mar 22, 2019 at 12:05 PM

To: Matthew Grooms <mgrooms@portlandmaine.gov>

Cc: Mike Tremblay <mtremblay@portlandmaine.gov>

Hi Matt -

The revised landscape plan is improved and meets the suggested topics from the earlier plan review comments.

We did have a question about the sidewalk street-tree opening and use of the NEENAH Tree Grate shown. The typical street tree & sidewalk requirement is to maintain an ADA sidewalk width between the back of sidewalk and the tree pit or planter. It looks like the one spec is from the NEENAH 'Boulevard Collection' # R-8811 which is 48" x 72" vs the NEENAH 'Avenue Collection' R-8810 which is 36" x 60" (see examples below).

The tree grate would not be required if the proper ADA sidewalk width can be created, we would be open for further discussion on that option. Location of the tree pit is dependent on the location of the underground utilities, trees should maintain adequate distance from underground electric, water, gas & sewer services.

Overall the proposed, revised landscape plan is acceptable with the condition that the sidewalk & street-tree details are refined to meet ADA standards acceptable to Public Works Engineering and the Planning Authority. I copied Mike T to see if he and PW had suggestions or comments.

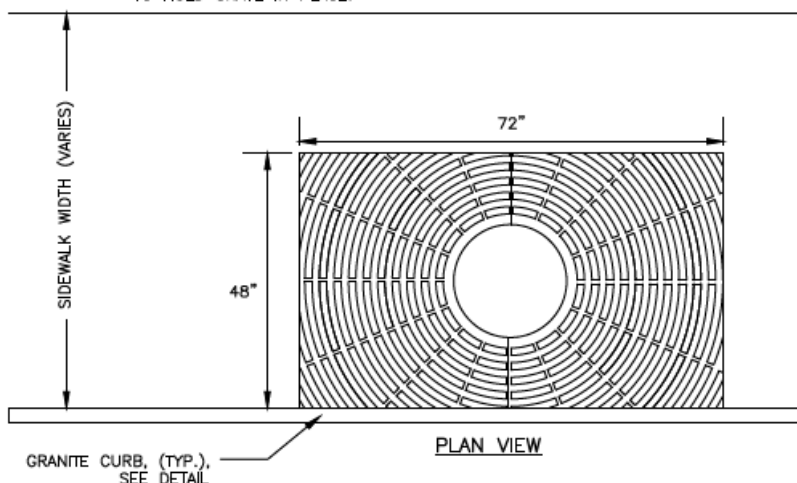
Thanks,

Jeff

This is from the Hammond Street project Landscape Spec sheet:

NOTES:

1. 16" EXPANDABLE TREE OPENING; .25" SLOT OPENINGS.
2. SIDEWALK MATERIAL PER PLAN.
3. WHEN INSTALLED IN A BRICK SIDEWALK, GRATE REQUIRES A FRAME TO BE INSTALLED TO HOLD GRATE IN PLACE.



EXPANDABLE TREE GRATE
NEENAH MODEL R-8810
NOT TO SCALE

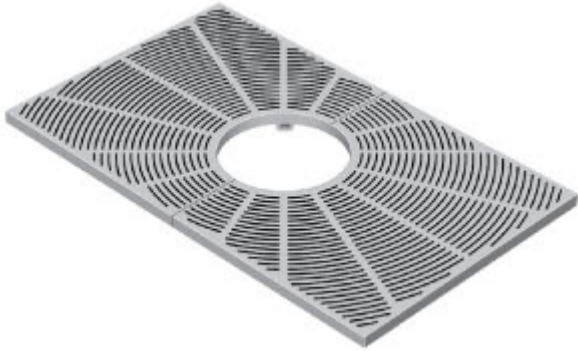
This is from the NEENAH Catalog:

Neenah Foundry | Avenue Collection <p></p>

R-8810

Avenue Collection Tree Grate

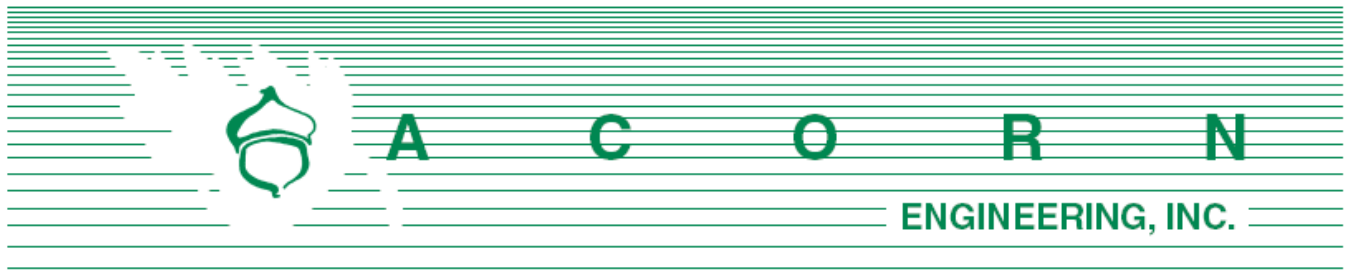
36" x 60"



Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities Department
Forestry & Horticulture
212 Canco Road
Portland, ME. 04103
(207) 808-5446
jst@portlandmaine.gov

On Fri, Mar 22, 2019 at 11:09 AM Matthew Grooms <mgrooms@portlandmaine.gov> wrote:

[Quoted text hidden]



Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

November 26, 2018

Subject: Level III Final Site Plan/Subdivision Application
Redevelopment of 4-12 Hammond Street

To Whom It May Concern:

On behalf of The Preserve at South Ridge, LLC, we are pleased to submit the accompanying package of submission materials related to the proposed redevelopment along 4-12 Hammond Street. The project proposes to construct a 3-story, 16-unit residential building with subsurface parking. The design has incorporated a side driveway which takes advantage of the existing slope to the rear, effectively “hiding” the parking and allowing the garage door to be absent from the front façade. The project site is located within the City’s R-6 Zoning District in the East Bayside Neighborhood and complies with the permitted uses within the zone. This submission package is intended to meet the City’s Submission Requirements as outlined in the Level III Site Plan Application procedures.

Based upon the 10% workforce unit requirement, the project currently anticipates either building one unit on site and paying the fee-in-lieu for the remaining 0.6 requirement or building two units on site.

We are pleased to submit this application which will increase the housing stock, implement stormwater best management practices to the site, and improve the streetscape by rebuilding the sidewalk, incorporating sculptures created by local artists, planting street trees, and closing a curb cut adjacent to the intersection at Fox Street.

If you have any questions regarding these materials or the completeness of the application materials, please contact us within the next five (5) days.

Sincerely,

William H. Savage, P.E.
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: Level III Final Site Plan Application & Checklist
- Section C: Right, Title, Interest
- Section D: Zoning Assessment
- Section E: Easements
- 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: Fire Department 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: Stormwater Maintenance Agreement

Drawings:

- Civil Site Plan Set, Dated 11/26/18
- Architectural Plan Set, Dated 11/21/18





LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Submit each Tab as one PDF file and bookmark the items as noted below

Please confirm by electronically checking the boxes to the left

Tab 1 – General Application Documents

Checklist	Items to be Provided
Yes ☒ NA ☐ Plan ☐	PROJECT DESCRIPTION Cover Letter with detailed project description
Yes ☒ NA ☐ Plan ☐	COMPLETED CHECKLIST – LEVEL II APPLICATION
Yes ☒ NA ☐ Plan ☐	RIGHT, TITLE AND INTEREST Deeds, leases, or purchase and sales agreements
Yes ☐ NA ☒ Plan ☐	EVIDENCE OF STATE OR FEDERAL APPROVALS , if applicable Permits or letters of non-jurisdiction, if applicable
Yes ☒ NA ☐ Plan ☐	ZONING ASSESSMENT Table listing required and proposed uses and dimensional standards <u>Zoning Assessment Table</u>
Yes ☐ NA ☒ Plan ☐	EXISTING &/OR PROPOSED EASEMENTS OR COVENANTS , if applicable Evidence of existing easements and any proposed easements
Yes ☒ NA ☐ Plan ☐	WAIVER REQUESTS Written request for waiver describing request and reason. <u>Waiver Table</u>
Yes ☒ NA ☐ Plan ☐	FINANCIAL CAPABILITY Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes ☒ NA ☐ Plan ☐	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

Provide assessment of compliance with standards and include supplemental documentation, as applicable.

Submit each Tab as one PDF file and bookmark the items as noted below

Tab 2 - TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ☐ ☒ ☐	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
Yes NA Plan ☒ ☐ ☐	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
Yes NA Plan ☐ ☒ ☐	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
Yes NA Plan ☒ ☐ ☐	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)
Yes NA Plan ☐ ☒ ☐	Public Transit (14-526 (a) 3), if applicable - Existing available transit services - Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ☒ ☐ ☐	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
Yes NA 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)
Yes NA Plan ☒ ☐ ☐	Snow Storage (14-526 (a) 4 d) Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ☐ ☒ ☐	Traffic Demand Management (TDM) (14-526 (a) 5), if applicable Develop TDM with Trip Reduction Targets and Strategies

Tab 3 - ENVIRONMENTAL AND LANDSCAPE FEATURES			
Check list			Assess/Provide/Document:
Yes	NA	Plan	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	Plan	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	Plan	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	Plan	Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable Landscaped islands within parking areas (Technical Manual, Section 4)
☐	☒	☐	
Yes	NA	Plan	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
☒	☐	☐	
Tab 4 - ENVIRONMENTAL AND STORMWATER			
Check list			Assess/Provide/Document:
Yes	NA	Plan	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
☒	☐	☐	

Tab 5 - PUBLIC INFRASTRUCTURE AND SAFETY			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	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	Plan	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	Plan	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
☒	☐	☐	
Tab 6 - SITE DESIGN			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	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	Plan	Shadows (14-526 (d) 2), if applicable Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
☐	☒	☐	
Yes	NA	Plan	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	Plan	View Corridors (14-526 (d) 4), if applicable Protection of designated view corridors (Portland Design Manual, Appendix 1)
☐	☒	☐	

Yes NA Plan ☐ ☒ ☐	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 Plan ☒ ☐ ☐	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 Plan ☐ ☒ ☐	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 Plan ☐ ☒ ☐	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 Plan ☒ ☐ ☐	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
Tab 7 - Construction Management Plan	
Check list	
Yes NA Plan ☒ ☐ ☐	Construction Management Plan <u>Construction Management Document</u> and Plan

Level II and Level III Site Plan Checklist Please upload the following drawings with the listed details into e-Plan	
☐	RECENT BOUNDARY SURVEY (stamped by Maine Licensed Surveyor)
Must be in compliance with Technical Manual, Section 13	
SITE PLAN(s) (stamped by Maine Licensed Engineer) including:	
☒	Existing Conditions • Approximate location of structures on abutting property • Topography • Locate water courses • Delineate wetlands • Zone lines
☒	Proposed Site Plan • Ground floor area, and grade elevations for all buildings
☒	Access, Circulation, and Parking • Streets and intersections adjacent to site , any proposed geometric modifications • Location, dimensions and materials of all existing and 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 • Existing and proposed transit infrastructure with dimensions/ engineering specifications • Location of vehicle and bicycle parking with dimensions and engineering specifications
☒	Site Considerations • Identify snow storage areas • Location of fire hydrants • Location of solid waste management facilities
☒	UTILITY PLAN including:
	• Existing utilities on site and within public streets • 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 • Electric utility infrastructure

☒ GRADING and DRAINAGE PLAN including:
• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☒ EROSION CONTROL
• Must be in compliance with Technical Manual, Section 5
☒ LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • 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 & RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans

March 14, 2019

Caitlin Cameron
Urban Designer
City of Portland Maine
389 Congress Street
Portland, Maine 04101

Re: Hammond House - R-6 Design Review Responses

Dear Caitlin,

Please see the attached revised design for Hammond House with revisions based on our Workshop and meeting with you and Matt Grooms after the workshop. We think the design has come a long way to address the design review and planning board comments. Below is a list of items we have revised to address those comments:

- 1.) Removed roof top decks and stairwells
- 2.) Recessed Main Entry to scale facade
- 3.) Moved stair and elevator deeper into building and away from front facade, eliminating elevator over ride on facade and adds living space on street
- 4.) Removed hallway space on front facade and replaced with residential space
- 5.) Added planters to the entry facade
- 6.) Added front porch and columns to further scale entry to street
- 7.) Simplified materials palate more consistent with context, lighter color scheme to fit better with context
- 8.) Added bays to front facade to scale building width and recall triple decker typology
- 9.) Added porch columns at street facade corner porches to a more contextual triple decker context

207-747-5159

senatorearchitecture.com

ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101



10.) Added more traditional cornice detail in keeping with context

11.) Added recessed decks on mid point of side facades to break scale of building

12.) Added notched corner deck to West end of Fox Street Facing facade to scale elevation length down

13.) Brought down cornice 1 story and added material color change at 3rd floor on Fox street facade to scale building.

We look forward to discussing the project at the upcoming Planning Board workshop.

Sincerely,



Ryan Senatore, AIA LEED AP

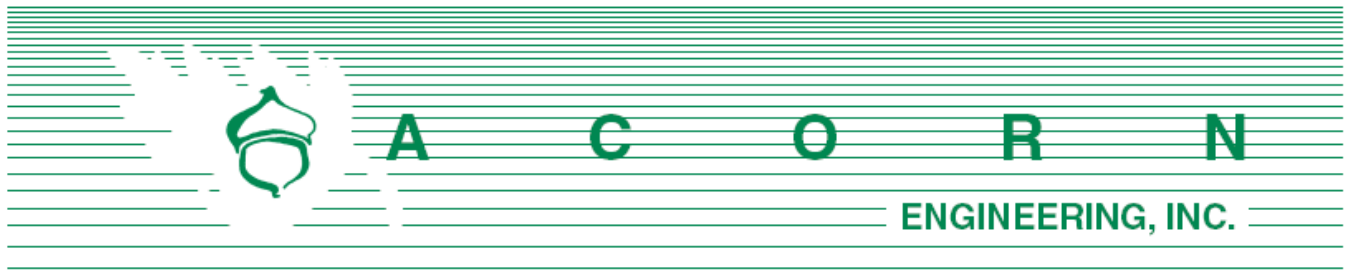
Principal

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ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101



10 Hammond St. Redevelopment Level III Site Plan/Subdivision Application

Neighborhood Meeting Minutes

January 15, 2019 / 5:30 pm

The Root Cellar

Project Team Attendees:

Kevin O'Rourke (KO): Developer/Presenter – (The Preserve at South Ridge, LLC)

Will Savage (WS): Civil Engineer/Presenter (Acorn Engineering)

Sam Lebel (SL): Civil Engineer/Note Taker (Acorn Engineering)

Ryan Senatore (RS): Architect/Presenter (Ryan Senatore Architecture)

Reid Tozier (RT): Architect/Presenter (Ryan Senatore Architecture)

Meeting started at approximately 5:35 pm.

Presentation:

Kevin O'Rourke:

- Developer and Applicant
- Based out of Yarmouth
 - o Focus has been on single-family and historic restoration
 - o Yarmouth Planning Board chair for 5 years
 - o Accustomed to listening to the public and weighing their concerns with the legal rights of the property owner
 - o Was approached by property owner for this project site
 - o Proposing 16 units vs the allowed 20 based on lot size
 - o Goal is to fit in the neighborhood
 - o Artistic feel with sculptures and landscaping to help link Washington Ave with Fox and Anderson St.

Will Savage:

- Neighborhood Meeting is a City requirement for a Level III Application.
- Held a pre-app meeting with the City on Nov. 7, 2018

- Sign In sheet is available for everyone which will become public record along with the meeting minutes
- Acorn and RSA are familiar with the area and have completed projects in the vicinity such as 89 Anderson, 70 Anderson, Munjoy Heights, 93 Washington Ave, 123 Washington Ave, as well as assisted the East Bayside Neighborhood Organization (EBNO) with the Kennedy Park lighting upgrades.
- Two single family homes would be demolished as part of this project
- The site is zoned as R-6. Surrounding zones include the B5, B-2b, and I-L
- The site slopes steadily from Hammond toward Anderson Street
- The building is proposed to feature 3 stories with 16 units vs. the allowed 20.
- Vehicular access will be provided on the right-hand side from Hammond. A sloped driveway to a garage door provides access to the subsurface garage which keeps the garage door off the front façade and promotes living space to the front with “eyes on the street”
- Two existing curb cuts will be reduced to one, allowing for an additional on-street parking spot
- The on-site parking will have one space per unit with interior bicycle and solid waste storage
- Sidewalk will be rebuilt to City standards with two street trees and sculptures by a local artist
- Proposed workforce equates to 1.6 units. Current plan is to build at least one. From there, the Developer will either pay into the Housing Fund for the remaining 0.6 or build an additional workforce unit on site.
- All utilities will meet standards and service the project underground
- A 6” water line will provide a sprinkler service and a 4” line will provide potable water
- Sewer lateral will be routed to the municipal sewer in the street.
- There is 15 feet of grade change from the front to the rear of the site
- There will be increase in impervious area so a subsurface detention system will store all of the roof runoff and be slowly released to the separated storm system in Fox Street. This system will provide quality and quantity benefits.

Ryan Senatore:

- Overview of basement with storage at head of parking
 - o Grey hatch on plans represent backfill (or soil that’s above the elevation of the basement)
 - o 2 egress stairs and elevator
 - o Bike room with rear exit
- Overview of first floor
 - o Center corridor for circulation
 - o Outdoor deck or patio so the building can interact with the street
- Similar floor plan as you move up the building
- Attached balconies for the non-street side units
- 3 bedroom units on the third floor with roof decks

Reid Tozier:

- Overview of materials and exterior architecture
- Front façade
 - o Wood veneer for the center of the building



- Brick veneer along the bottom and center to help with the scale of the building
 - Blue fibercement panels and lap siding for the dwelling units.
 - Black trim to break up the massing
- The rear and sides of the building feature a transition from the brick veneer to fiber cement with paneling to create a rhythm.
 - The bandline serves to delineate the basement from the living area
 - Rooftop appurtenances will be hidden toward the middle
 - Contextual renderings shown – one viewed on Hammond St. looking south towards the site and one viewed on Winthrop St. looking north towards the site.

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. Q or C denotes Question or Comment from the Public.

Q: What is the distance from the back of the building to the property line?

WS: 20.5 feet

Q: What is the plan for snow removal?

WS: We've shown snow storage next to the exterior parking, but snow may need to be removed occasionally during the winter.

Q: How tall are the stories?

RS: 11' from floor to floor.

Q: Who's responsible for winter maintenance and sidewalk plowing?

KO: There will be a Homeowner's Association with monthly dues. The intent is not for these units to be rental.

C: That is good to hear.

Q: What does the code require for parking? If there are up to 35 more people, will there be 35 cars?

WS: The requirement is 13 per code. We usually see the neighbors wanting more parking and the City wanting less.

Q: If a unit has 2 cars, will the additional car have to park on the street?

WS: Yes.

Q: Is there any way for the Condo Association to restrict cars?



KO: A lot of times a family will downsize from two vehicles to one when moving from the suburbs to the City.

Q: Could the storage space at the head of the parking be another parking space?

KO: That's a possibility, but at this point the design is a secure storage unit like a POD.

C: It's a nice feature to provide storage on site.

Q: What's the height in the garage?

RS: 8.5' of clearance

Q: Where are the other entrances?

RS: There is a sidewalk on the south side of the building that will lead to a mid-story door. There is also a door in the rear that enters the basement.

C: I appreciate the parking you provided. Anything you could add in the Condo docs to help with this would be nice.

Q: What is the plan for HVAC?

RS: Mostly on the roof.

C: I don't remember a rendering for 89 Anderson HVAC, but they are not attractive as built.

KO: There is the potential to cluster the equipment in the center and screen it.

Q: So not on top of the deck stairwells?

KO: Correct.

Q: Do you need another fire hydrant?

WS: There is one existing hydrant at the corner of Fox and Hammond and the Fire Dpt will not require another as part of this project. The building will be sprinkled.

Q: What is your best guess on the timeframe?

WS/KO: The goal is 10-12 months of construction based on the Contractors' estimates. So there's the potential to start late summer of 2019 and complete late summer of 2020.

Q: Will there be any blasting?

WS: We have not taken borings, but based on our knowledge of the soils in the area and previous projects in the area, it is not anticipated to have to blast any ledge.



C: I respect the rights of the property owner and understand weighting what's allowed with the neighborhood perspective. The two existing single family homes are the same size and scale as most of the other houses on the street. The attempt to break up the massing and scale of the proposed building is sincere, but it's still a large building. Trees and art are a nice feature. I understand the economics are tough on expensive lots, but the building feels big. Two affordable units currently replaced with either 1 and a fee to the City or 2 replacements.

C: Hammond isn't like Anderson Street so the sculptures and landscaping aren't like the rest of the street.

C: I own two properties on Washington Avenue. Avesta has 18 units which are small units. There are issues with renters who aren't vested in the community. It's nice to see this project will have homeowners who will be interested in the neighborhood and community.

Q: What's the price range?

KO: The market is in some flux right now. They will probably be lower than Munjoy Hill prices, but it's hard to say. I've been discussing with my real estate advisors, but haven't put a number on it.

Q: Do you create the condo docs?

KO: I will work with my attorney on the docs.

WS: These will be submitted to the City for review.

Q: Could these be Air BnB's?

KO: We'll have to take a look at that.

C: The project looks out of place when comparing the existing to the proposed.

Q: Is anyone from the City here?

WS: No, it's not custom for City staff to attend.

C: Site Plan looks big for this area.

KO: Other buildings in the area are of similar height.

C: You might be able to recess the top floor.

Q: What is the bedroom mix?

RS: Six 1-bedrooms, seven 2-bedrooms, three 3-bedrooms. Some of the 3-bedrooms will be flexible on whether the third bedroom is actually a bedroom or more a study given the lack of windows.

Q: What is the address?



A: 10 Hammond Street.

Q: How will we get to know the neighbors?

KO: We looked at having seating in front of the building, but there isn't much room due to matching the abutting setbacks. The porches on the front façade will help create a presence on the street. We might also have double doors for a vestibule where there would be mail and bulletin board.

C: The bulletin board is a good idea.

Q: You mentioned the sidewalk? Will it be functional or in bad shape as it is now?

WS: The sidewalk will be rebuilt to City standards and will be concrete to match the existing sidewalk network on Hammond Street. A lot people prefer concrete since it's less slippery than brick in the winter

Q: Will the only crosswalk be the one shown across Hammond? Did you pick it?

WS: Right now that is the only one proposed as requested by the City. The City does not prefer mid-block crosswalks.

Q: Could we get a crosswalk from Winthrop to Hammond? How do we advocate for the new impact fees to influence the neighborhood of the actual project that creates the revenue?

WS: I would recommend sending your comments to the City Planner.

C: I would like to advocate for a potential raised or jarred crosswalk across Fox Street for pedestrian safety.

Q: Will there be a traffic study?

WS: A traffic study is not required for a project of this size.

Q: Will there be a landscape design?

WS: Yes, there is one submitted with buffers for the neighbors.

C: I would like to echo the pedestrian safety and be on the record. Hammond is a cut-thru and there will be more cars with more units. I'm concerned with those who currently park illegally on Fox making it hard to pull out of Hammond.

WS: We can delineate the on-street parking on Hammond within the Site Plan.

C: I'm concerned for pedestrians all along the neighborhood like Washington Ave and Fox St. such as school children. This might be better taken up directly with the city, but cars fly by.

Q: What will the construction be like? Will workers park on the street or on the site?



KO: The Contractor will put together a construction management plan. I will encourage them to park remotely at an off-site lot and carpool to the site. I don't anticipate full closure of the street – some interruptions during utility construction.

C: 89 Anderson had large equipment in the street at times during construction.

KO: We have an advantage by potentially starting in the summer. Once the garage is built, workers can potentially park within the structure as they build up.

Q: Could there be access from Anderson Street?

WS: No, there is a steep slope there with riprap.

Q: Will there be other meetings?

KO: We'll have a planning board workshop and then a public hearing, both of which the public can attend. There are no dates yet.

Q: What is the design of the driveway like?

WS: We are proposing a retaining wall within the site to keep the abutting property as is. The driveway will slope down into the garage while the retaining wall, fence, and plantings provide a buffer. A formal design of the wall and fence will be submitted further down the line.

Q: What's the distance between driveway and side property line as well as the building and side property line?

WS: Approximately 5-6' and 29'.

Q: Where can I see these plans?

WS: The Planning Dpt has them at City Hall and online. Acorn will provide the plans to EBNO.

Meeting concluded at approximately 7:00 pm.

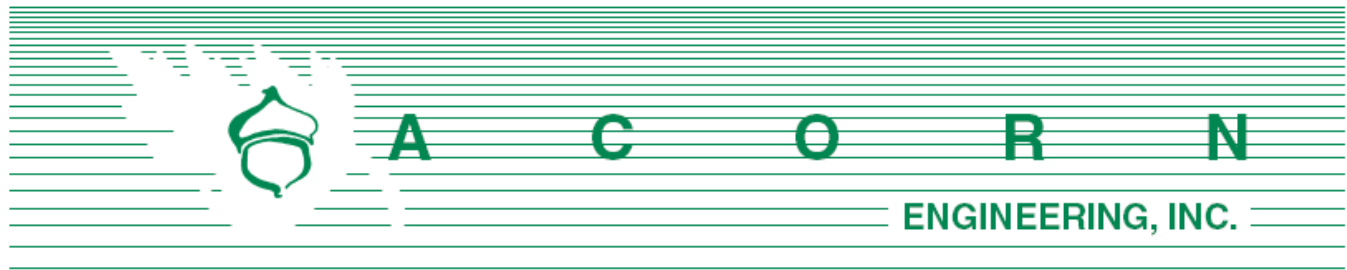
The abovementioned material was as interpreted and recorded from handwritten notes. Please note and relay any discrepancies or disputed information in the recorded minutes to the below address so that they can be reviewed, revised, and resubmitted as necessary.

Recorded by,



Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.
slebel@acorn-engineering.com





Matthew Grooms – City Planner
Planning Division, City of Portland
389 Congress Street
Portland, ME 04101

February 12, 2019

Subject: Comment Response Letter
10 Hammond Street Redevelopment – Portland, Maine

On behalf of Hammond House, LLC we are pleased to respond to the comments that we've received thus far.

Matthew Grooms, Planning

Comment – *It is understood that required bicycle parking will be located interior to the building. Would the applicant consider providing publicly accessible bicycle racks as well?*

Response – Given the residential use of Hammond Street, space dedicated to the art installations between the building and sidewalk and the abundance internal bicycle storage on site, no exterior bicycle rack is proposed.

Comment – *The application includes lighting details, though no photometric plan. This plan should be made available as part of the final plan submittal. Also, what lighting is being provided for lighting along pedestrian pathways and how are CPTED standards being met?*

Response – The lighting package was submitted under Document N. Lighting, which includes a photometric plan and cut sheets. Lighting will be provided along all pedestrian and vehicles ways. Additionally, a swing gate will further help delineate the public way from private as well as add another layer of security.

Comment – *The proposed development appears to encroach upon the property line. Does the applicant anticipate needing temporary construction easements from adjacent property owners?*

Response – The project does not encroach on adjacent properties is not anticipated to require a temporary construction easement. All walls, fencing, structures, and landscaping will be within the subject property.

Comment – *The site plan shows storage units in the garage with doors that open outward. Would it be feasible to change out these doors for roll-up garage doors?*

Response – The Architect and Applicant would prefer to leave the garage design as is.

Tom Errico, Traffic

Comment – *Contractor parking in the neighborhood is not permitted and should be specifically noted. Additionally, sidewalk impacts and closure details shall be provided.*

Response – This note has been clarified within the Construction Management Report. Sidewalk closures will be managed by the General Contractor and will be outlined in their Maintenance of Traffic (MOT) Plan prior to the pre-construction meeting.

Comment – *Dimensions for the two outside parking spaces shall be provided.*

Response – Please refer to the revised Site Plan for this information. The spaces meet the Technical Standard.

Comment – *I support a waiver from the City's Technical Standards for driveway width given low traffic volumes and traffic characteristics on Hammond Street.*

Response – We agree with your assessment.

Comment – *Sight distance measurements shall be provided at the driveway.*

Response – Looking south toward Fox Street, the sight distance is approximately 120 feet which is the distance to the intersection. Looking north, the sight distance is approximately 250 feet. It is anticipated that the dominant move out of the driveway will be a right turn towards Fox Street which is the safest maneuver both from a total travel length and a sight distance perspective.

Comment – *The Applicant shall provide additional information in support of the waiver from the City's standard for driveway separation. This shall include the proposed driveway separation and factors that prevent maximizing separation.*

Response – The primary design intent was to locate the driveway as far away from the intersection as possible. This allows for a greater reaction time and stopping sight distance should a vehicle turn onto Hammond Street from Fox while a resident of 10 Hammond Street is maneuvering and vice versa. Secondly, the City's design standards for the R-6 zoning district strongly encourage driveways to be oriented within the side yard rather than designing a garage door on the front façade. This allows for the parking to be more concealed from the public way while also allowing for the majority of the front façade to contain living space with "eyes on the street".

Comment – *The Applicant should identify strategies for avoiding backing maneuvers for the two outside parking spaces.*

Response – The two exterior spaces will likely have access to the garage door which will allow them open the door, enter the garage, and turn their vehicle around before leaving the site.

Woodard & Curran, Civil Engineering

Comment – *The erosion and sedimentation control detail sheet includes a detail for silt fence. The plan calls for erosion control berm. Please provide an erosion control berm detail to be consistent with the plan*



Response – A detail of the erosion control berm has been added to Sheet C-47.

Comment – *It is suggested that additional permanent erosion control be provided on the adjacent slope beyond the spillway outlet. This would require a temporary construction easement.*

Response – The slope on the down-gradient abutter's property directly next to the proposed infiltration trench is currently riprapped. Furthermore, the post-development flowrates for the 2, 10, and 25-year storms will be reduced when compared to the existing condition.

Comment – *The stormwater management report and the details note that inspection ports will be provided within the Stormtech Chambers within the underdrained subsurface sand filter. The plan should show locations of these features.*

Response – Sheet C-30 outlines these locations within the USSF inset.

Comment – *The proposed infiltration trench is located immediately adjacent to a steep slope on the neighboring property. The Applicant should address the potential of the infiltration trench compromising the slope, i.e. flow exiting the side of the trench instead of draining vertically into the ground. Additional soil condition information should be obtained to ensure that the system will drain as intended.*

Response – We will consult with a geotechnical engineer on the existing soils, the stability of the bank, and the likelihood of seepage from the infiltration trench horizontally towards the slope. If their findings point to a likelihood of horizontal flow and bank instability, the design of the trench will be adjusted accordingly. A potential adjustment would be to line the sides of the trench with an impermeable liner.

Comment – *The Applicant has received confirmation of ability to serve from the Portland Water District. The letter from PWD notes that a new 6-inch fire service and 4-inch domestic water service may be installed from the water main in Hammond Street. The plans show a single combined connection to the main. Please confirm that the layout as shown is acceptable to the Portland Water District.*

Response – The Utility Plan as submitted has been approved by PWD. Any changes to the water system proposal will be resubmitted to the District for approval.

Robert Thompson, Fire Department

Comment – *The new building shall not affect the egress, escape, or required fire department access for the neighboring building(s)*

Response – The new building is not proposed to worsen any condition. Along the northerly side of the building, the separation between buildings will be significantly increased, providing greater firefighting access.

Comment – *The street address shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.*



Response – The Owner will work with the Addressing Officer for this approval.

Jeff Tarling, Landscaping

Comment – *The proposed Hammond Street project is quite large in scale compared to the surrounding residential properties. The proposed landscape is somewhat weak in providing scale and buffering a project of this scope would ideally provide. While the available planting space is minimal, a more robust tree and landscape plant is recommended. On the south side, for example, we note Rhododendron, Clethra, Lily Turf, and Tiger Lily, none of these plants provide much in the way of buffering or landscape screening value.*

Response – The Landscape Plan has been revised to provide additional buffering in the rear of the site. It should be noted that at the rear property line the topography drops off in elevation significantly with a rip rapped slope that leads to the adjacent parking lot.

Comment – *Street-trees - the two proposed 'Accolade' Cherry street trees is acceptable for the space out front, contribution to the Planning Tree Fund to meet the per unit standard is recommended to plant trees in the vicinity of the project.*

Response – The Applicant will make a financial contribution to the street tree fund for the remaining required street trees.

Comment – *We would be available to suggest planting options with the project team.*

Response – We have reached out to you via e-mail and will consider alternative planting options.

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

Sincerely,



William H. Savage, P.E.
Principal - Project Manager
Acorn Engineering, Inc.



Samuel J. Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.



January 28, 2019

Caitlin Cameron
Urban Designer
City of Portland Maine
389 Congress Street
Portland, Maine 04101

Re: Hammond House - R-6 Design Review Responses

Dear Caitlin,

Please see the attached revised design for Hammond House with revisions based on your R-6 Design Review letter dated 1/16/19.

- 1.) See additional rendering from Fox Street
- 2.) A-1 and A-2, we have simplified the roof form at the entry and flanking elevator and stair to a more clean simple form
- 3.) We have kept the roof deck access doghouses set back from the street facade 20 plus feet to minimize visual impact from the neighborhood, please see the attached renderings as to how they relate will be seen from the neighborhood
- 4.) B-1, we have simplified the roof forms to address this item
- 5.) F-5 and F-6, we revised the entry and bay to scale it down and give it a residential feel by reducing its height, removing the spandrel glass and removing the vertical signage.
- 6.) G-1, we minimized the panel material at the balconies and used more lap siding
- 7.) G-2, we reduced the amount of brick to one story adjacent to the entry and have utilized a fibercement panel with an 18" reveal pattern to scale the facade to a residential scale.

207-747-5159

senatorearchitecture.com

ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101

8.) (i) 1, we have simplified the roof form at the entry and flanking elevator and stair to a more clean simple form

We look forward to discussing the project 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

Re plan number PL-000418-2018

jwent@gwi.net <jwent@gwi.net>

Jan 3, 2019 3:45 PM

Posted in group: **Planning Board**

Dear Planning Staff,

I am writing in regard to a proposed development at 4-12 Hammond Street. I am a resident of Hammond Street, residing at #42 with my wife and daughter. I welcome the development of additional housing in our city center as the existing shortage is impacting prices for renters and the ability of many people to live near where they work or go to school.

Clearly this is a huge departure from the scale of all the other residential structures on Hammond Street and as such feels a bit like an invasion, a continuation of the process that is gentrifying our neighborhood in dramatic ways. The two single family homes that will be demolished to make way for this very large building are old and in poor condition but they have for the past 100 plus years been places where families of very modest means were able to afford to live and grow. Trading that for 16 units of market rate rentals is not a swap that I consider progress if it means that people (families) with low incomes will gain nothing or at best a low value apartment in a building full of units out of reach financially. While I understand that the forces of our "free market" housing system make these types of buildings more profitable for developers and that is why we get them when affordable housing is what we really need, I would like the City to use every tool at it's disposal to force this developer to make rents affordable. If this neighborhood is going to be transformed from single family homes and small apartment units into large imposing buildings that fundamentally change the character of this place, at least let it be done with some benefit for the people who cannot afford \$2,500 a month for an apartment.

As for the proposed structure itself, I'm thrilled that there will be art and two street trees to compensate for the block that will replace these old, little, less than attractive homes. Though I know the city has little authority to require creative design, it would be nice to at least raise the issue about this cement siding trend getting old. The other glaring omission of the developer is the lack of response to the serious and potentially catastrophic problem of climate change. 2"x6" walls and heat pumps is not going to help solve this problem in any measurable way and for a building that will be around for the next 100 years, this is the height of irresponsibility. At the very least the unattractive rooftop decks and stairwells could be exchanged for photovoltaics, maybe even for about the same price. The developer will argue that solar costs too much but they will ignore that granite counter tops and two-vanity master baths drive up costs as well. If the developer chooses to ignore our collective responsibility for climate change they should at least consider a future boat dock in their site plan as Anderson Street could easily become part of Back Cove in the lifetime of this building.

My hope is that the review process can result in a good concept being turned into a great project that benefits all of us who live in the neighborhood.

Sincerely,

Jason Wentworth

42 Hammond Street

Portland

Hammond St House condominium project

jonathan gartland <jonathan.gartland@gmail.com>

Jan 4, 2019 4:04 PM

Posted in group: **Planning Board**

Hello,

I live diagonally across from this proposed building lots. I am concerned as it will impact our view so severely as designed that it will effectively ruin the water view from the third floor addition and deck we just invested in building last year.

Could someone point me to a link where I may object to these plans in some way or file an some sort of 'neighborhood crank' style objection (I'm new to this nimby stuff) to try to get the site plan lowered? I'm all for development and replacing the tired old housing stock in the neighborhood, but this seems really to be too much too soon.

Regards,

Jonathan Gartland
18 Fox St.

PL-000418-2018

JESSICA LOCKHART <jlockha1@maine.rr.com>

Jan 5, 2019 2:33 PM

Posted in group: **Planning Board**

Hello Planning Board-

Regarding the redevelopment of 4-12 Hammond Street, I am concerned of the scale, a 16 unit building does not match any other building on Hammond Street. I don't oppose new buildings but this is not keeping with the nature of the rest of the street which has individual homes and 3-6 unit apartment buildings. Please don't allow this too big structure to be built on our quiet street.

Come on this isn't right!

Thanks,
Jessica Lockhart
29 Hammond St.

10 Hammond St Development

Carolyn Treat <ctreat5@yahoo.com>

Feb 26, 2019 11:21 AM

Posted in group: **Planning Board**

To the Planning Board,

As a long time homeowner on Hammond St. I am writing to express my dismay and disappointment in the proposed design and scale of the new condominium planned for the double lot at 10 Hammond St. This building is completely out of scale with the rest of the neighborhood and the design as proposed makes little effort to align itself with or complement the existing single family homes or other apartment buildings on the street. The sheer mass of the structure, taking up two entire lots that are currently individual homes, and extending behind and down the hill, corrupts the tenor of our community. It blocks air, space and light for all those now presiding in the adjacent homes on Hammond and Fox Streets, introducing a building density that is completely out of place. This type of structure could be absorbed in other parts of the city, but Hammond St is still part of the original working class neighborhoods in Portland and specifically Munjoy Hill. What is now called "East Bayside" was originally considered part of "The Hill" and had it's own moniker of "Hammond Heights" for folks that grew up here. The 1880s structures that are still being maintained, along with those that have been modernized and updated, still retain the feel and intimacy of a small neighborhood. Even the newest development at the other end of Hammond St, although not especially inspiring in design, was at least divided into two structures and the height kept within a reasonable range, an effort was made not to overwhelm the block. I can find no such effort here for the 10 Hammond St. plan aside from the color choice. Groovy sculptures and street level landscaping will not do the trick.

The number of added apartments and thus increased street traffic and parking is also a major concern in an area that is already feeling the effects of an explosion of nearby businesses. There were days during this past Summer and Fall when we were not able to even find parking on our street due to people using Hammond as parking to access businesses on Washington Ave as well as Anderson and Fox St. We have already become an island of residential homes squeezed and hemmed in by the burgeoning development in East Bayside. Please do not add further stress and hardship to our street by allowing such a huge change in scale. This "highly desirable neighborhood" is fast becoming overly congested and will lose the very thing which is now attracting such attention: it's intimacy and character, it's street trees and sunlight and most importantly it's sense of community.

Please consider this when reviewing the proposed plan for 10 Hammond St. and do the right thing. Find ways to reduce the impact. Respect the existing neighbors who have put years of work, time and equity into their homes and community.

Thank you for your time-
Sincerely,
Carolyn Treat
41 Hammond St.

10 Hammond Street

Kate Clay <kateclay88@gmail.com>

Feb 26, 2019 2:54 PM

Posted in group: **Planning Board**

Dear all:

I am writing in advance of this afternoon's workshop about the Hammond Street project. What I have to say will not be new, but you are hearing it from the viewpoint of a property owner who shares a property line and view of the project from my kitchen window at 37 Fox St.

2 reactions to the architect's drawings: 1) this thing is huge. Way too big for the surrounding neighborhood. It looks ridiculous among the homes and apartment buildings on Fox and Hammond. I know we are a profit-driven society but this feels like a really in-your-face replacement of two single family homes. 2) It is ugly, an industrial looking box in the same style and colors as much of the new construction in Portland. Such a missed opportunity to be innovative, and to embrace sustainable resources such as solar panels.

We love this neighborhood and worry that this structure will set an unfortunate precedent. If you have the power to mitigate the size and style of this building, we will be grateful.

Regards,

Catharine Clay

10 Hammond Street project

Gartland, Donna <dgartland@healthdialog.com>

Feb 26, 2019 3:25 PM

Posted in group: **Planning Board**

Hello,

I am looking forward to the meeting later today regarding the 10 Hammond Street project. My family's primary residence is diagonally across the street at 18 Fox Street.

My concerns for the design of this particular project continue to be the scale/mass in relation to the neighborhood. I have reviewed the helpful information shared by Cindy and understand that what is being proposed is in alignment with current R6 and other city planning guides. However, I wanted to share my thoughts as a resident about my perception of how this project design fits/doesn't fit into the existing neighborhood.

After attending the January meeting with the design team, I left thinking that, in part, the concerns brought by myself and my neighbors have less to do with this particular project design and more to do with the gradual impacts of Portland peninsula development over the past 5 or so years. An example of this is foot and car traffic in the region. During the meeting, there was good discussion about the pros and cons of parking spaces for the 10 Hammond Street project. On one hand, having parking spaces could be perceived as encouraging driving in an already crowded area. On the other hand, not having enough parking spaces could be perceived as not realistically taking into account that individuals have cars and will need a place to park them. Again, I believe that some of this feedback has less to do with this particular project and instead reflects a need for city strategic planning to address parking on the peninsula. I had the opportunity to attend the District 1 City Meeting last December and also heard feedback and questions wanting to understand the strategic plans in place to encourage public transportation and to incent off-peninsula parking, for example, in relation to the new corporate businesses in the Fore Street/Thames Street region.

Another valid concern that was raised during the January meeting was related to airbnb and other property sharing methods. What are the expectations surrounding condo owners of the 10 Hammond Street unit? What mechanisms are in place to enforce those expectations?

I look forward to more conversation and appreciate the process put in place to allow for this on-going dialogue.

Thank you,

Donna Gartland

207 809-9745

donnagartland@gmail.com



Donna Gartland, RN MSN
Quality and Accreditation Manager

P: 207.822.3707 • C: 603.325.2150
www.healthdialog.com

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[HD.2018]

10 Hammond Street

Joanna Shaw <jkshaw9@gmail.com>

Feb 27, 2019 11:10 AM

Posted in group: **Planning Board**

Hi Matt,

I am an architect in Portland and a Hammond Street resident. I attended the workshop yesterday and reviewed the City's Staff Report, which I very much agree with. I hope this will influence the design of the building.

Portland is surrounded by so much beauty and I believe the built fabric of our city should reflect this. The developer / owner talks about this neighborhood in terms of art and wanting to add sculpture to the street, but why is the architecture not regarded as art? Why is the architecture not inspiring and reflective of the place in which we live? I hope, with your help, the project can become something this neighborhood and Portland can be proud of.

A few thoughts based on the presentation:

- the precedents referenced early in the presentation were all outside of the B-6 zone and neighborhood in which the building is being built. I think it would be beneficial for the design team and the developer to look more closely to the B-6 building typology. This residential neighborhood is small and nestled amongst other building zones, but within the neighborhood and this street the character of one and two family dwellings is a great contribution to the quality of life. People stand in the street to talk to each other while shoveling snow together, share garden space along the west side of the street, and sit on the stoops to talk. I believe the adjacent zones should not be a primary precedent, but rather the characteristics of the buildings in the zone where the project is proposed.

- Massing is certainly a great part of this conversation and I believe there are many ways to achieve this, particularly in a capacity where the design is not singularly looking to changing materials to break-up the mass. Truly, a big bulky box with stripes is still a big bulky box. The architect has room within the set-backs to play more thoughtfully with the volume of the units and the overall form of the building. Some areas of the building could be wider, while others narrower benefiting the aesthetic character of the building as well as day light in the units (and ultimately the developer and the home owners). Or, the building mass could reflect a series of townhouses, each with doors and balconies in a more appropriate density and taking on the proportions of the buildings on Hammond Street.

- I am interested to better understand the interpretation and intention of the ordinance with regards to roof overruns. My interpretation is that this provision is intended to allow for un-inhabited spaces (ie elevators overruns or chimneys) or maintenance access to mechanical equipment and rooftops. The proposed roof overruns are intended as habitable space, both the stair and roof decks are part of the living space. While this may have minimal impact to the street immediately below the building, the additional height will impact people living in adjacent properties and since the impact is caused by habitable space, it feels as if it should meet the building height criteria.

While aesthetically quite different from this neighborhood... I think Michael Maltzan's ability to design for the homeless and Mass Design Group's cost sensitive and contextually sensitive designs set such great precedents meaning residential development in Portland Maine has the capacity to be beautiful and respectful.

Thank you very much,

Joanna

--

Joanna Shaw

hammond street condo workshop feedback

jonathan gartland <jonathan.gartland@gmail.com>

Feb 28, 2019 2:41 PM

Posted in group: **Planning Board**

Members of the Board,

I appreciate the need for more housing in Portland, and fully understand that something is going to be built on those lots, but two things were glaringly obvious coming away from that meeting.

Mr O'Rourke is motivated only by greed, and clearly doesn't understand city living or urban design - or if he does he doesn't care and just wants to flip expensive condo's to owners who can then act as short term rental hosts.

The discussion around the comparisons between the current Anderson St. development was interesting. The architect was saying everything except 'the Anderson St. project fits the neighborhood and this one clearly doesn't' when trying to explain the different footprints of the projects.

If Mr. O'Rourke had thought about designing an interesting building, that gave consideration to privacy for both neighbors and tenants, and fit the tone of the neighborhood, I would be excited to welcome the development. The complete lack of effort in this design speaks to everything wrong with this project. Mr. O'Rourke should stick to the suburbs or let the architect do his job of designing an appropriate building(s) for the location.

Given his lack of taste, i shudder to think of the 'public art' he would force upon us.

Thank you for humouring my ramblings, I know we can't stop development, but that doesn't mean we have to accept poor taste or design from suburban builders who think they can simply cash in on our neighborhood.

Regards,
Jonathan Gartland
18 Fox St.
Portland, ME 04101

Hammond St proposal

jonathan gartland <jonathan.gartland@gmail.com>

Mar 23, 2019 9:09 PM

Posted in group: **Planning Board**

I am writing as a concerned neighbor, again, to record my displeasure at the revised design for this project.

Regardless of the fact that the proposed building technically conforms to the neighborhood zoning, Hammond street is among a few streets in the zone that are unique to the overall neighborhood zone and that should have been included in the moratorium overlay that covers munjoy hill.

This building as redesigned is still much too big in volume for hammond st.

It will negatively impact too many of the current residents to allow this to happen as is. It is insulting to the intelligence of any interested party that this building benefits anyone except the developer. This design works on washington ave, or anderson, or even madison , but not Hammond Scale should be preserved to benefit those of us who appreciated it enough to buy houses here before the real estate boom made it convenient for speculators.

This project is simply a money grab by the developer. The tone deaf building plan alone is evidence of this. The building will be an eyesore that diminishes the value of my property and negatively impacts the neighborhood. I say this as a resident who bought here 15 years ago.

If Mr. O'Rourke were building an ugly home like the cookie cutter ones he built in Yarmouth to live in himself, i would have less to say - that is his right as a builder who lacks taste and style, but his greed and laziness is going to ruin my view and quality of life for no good reason. If Mr. O'Rourke were a talented developer who understood city living and commissioned a design that was appropriate for the street, I would support new building, but the old housing stock he's tearing down to build this ugly box are already more aesthetically pleasing than the submitted design.

Letting this plan pass just because we need housing will effectively ruin the neighborhood we moved to and simply to allow a developer who has shown no ability to comprehend or understand the neighborhood of city living to cash in on speculation. At the least this needs to be broken up into two buildings if not 3 or 4. I shudder to imagine the nightmare of this guy managing the project, for a year, in a tight neighborhood. If he had the ability he would already be building here. It should be noted that in the suburbs, bad design can be hidden by trees. This eyesore will be visible by anyone passing by or through Portland.

Thank you again for humoring my futile attempts to stave off this hack developer from ruining my neighborhood.

Regards,
Jonathan Gartland
18 Fox St.

4-12 Hammond St

Carolyn Treat <ctreat5@yahoo.com>

Mar 25, 2019 10:04 AM

Posted in group: **Planning Board**

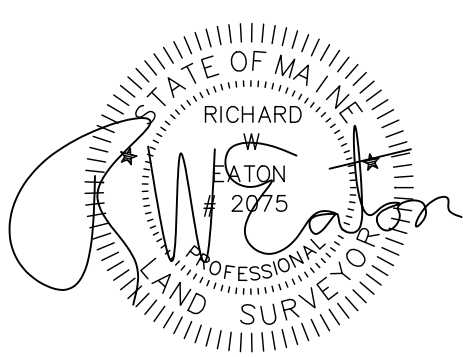
To the Planning Board,

I am writing to you for the second time to express my absolute dismay regarding the proposal for the development of 4-12 Hammond St. The changes to the design that have been submitted since the initial review, still do not adequately address the problem of inappropriate massing of the building in relation to the neighborhood. While an attempt has been made to break up the facade on several sides of the building, these changes are not enough to mask the sheer size of the development which extends over several lots. This plan as presented is still completely out of scale with the rest of the buildings on the street. Dividing the development into two buildings is really the only way for this project to move forward in a manner that will not unduly impact the surrounding neighborhood.

I urge you to consider the impact this building will have on the culture and environment of this small, intimate and historic street and surrounding neighborhood. It will be forever changed as it loses more open space, light and trees. Once you allow such a radical departure from the existing structures, you are also opening the door to similar projects, with lots priced only for developers, thus shutting out the single family homes and smaller apartment dwellers. Once this happens there is no turning back from the loss of one of this city's historic neighborhoods.

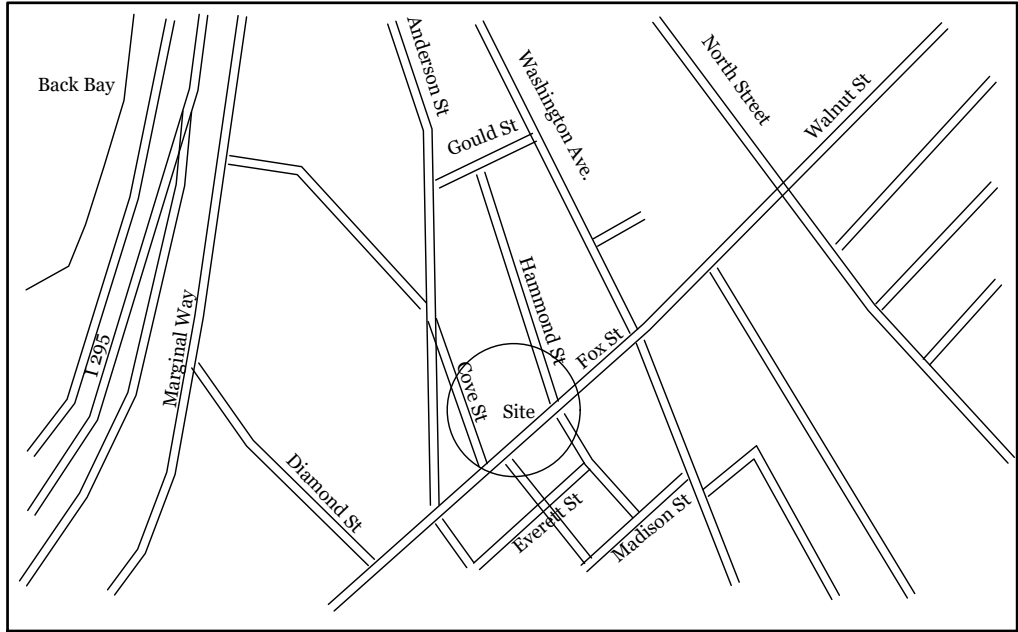
Respectfully,
Carolyn Treat
41 Hammond St

CERTIFICATION



RICHARD W. EATON P.L.S. # 2075

Location



NTS

N.F. Peninsula Community LP
20561/263

General Notes:

- 1) Area of Maloney Parcel 7,768 Square Feet Or 0.18 Acres
Area Of Didonato Parcel 7,665 Square Feet Or 0.18 Acres
- 2) Basis of Bearing, Maine State Plane NAD 1983 1802 West Zone Base Point, Granite Monument
With DH at Fox Street and Anderson Street T102-77-2, N303502.3570 E2929187.9000
Azimuth Point, Monument With Bolt on Anderson St. T102-77-2, N303502.3570, E2929187.9000
Azimuth S41-34-20E 455.86' Feet
- 3) Vertical Datum is NGVD 1929 City Datum Benchmark is PK Nail on CMP Pole #8 South Side Fox St Elevation = 11.04'
Provided By City of Portland Public Works Engineering
- 4) Subject Tax Map 012 Block C Lot 6,8,10,11, & 14
- 5) Flood Zone C Areas Of Mininmal Flooding Panel 230051 0013 Sheet 13 of 17 Dated July 17, 1986
- 6) Bench Mark Nail In Pole CMP 6 17.36' Feet
- 7) Waterline & Gas Lines Are from Dig Safe Marking And Street Valves

PLAN REFERENCE

- 1) Street Line Of Anderson, Fox, Gould, Plowman & Hammond St. By City of Portland Engineering Dep.
Survey By Camille Alden On File At Engineering Vault
- 2) Peninsula Community LP 510 Cumberland Ave. Anderson Street Subdivision Plan
By Pinkham & Greer Dated June 18, 2002 And Recorded In Plan Book 203 Page 313
- 3) Standard Boundary Survey On Cove Street For Portland Housing Authority
By Owen Haskell dated May 8th, 1997
- 4) Plan Of Property Made For Patrick Lee By R.P. Titcomb Associates
Dated November 3rd 1987 And Recorded In Book 167 Page 13
- 5) City of Portland Maine Parks & Public Works Dept. Fox Street Reconstruction
Dated 1990 Project No 90330-30-60-12 Sheet 2 of 20
- 6) Right Of Way Sheets Of Hammond & Fox Street
- 7) Standard Boundary Survey On Cove St For Portland Housing Authority
By Owen Haskell, Dated May 8, 1997

LEGEND

- 5/8" Rebar Set With Cap
- Rebar/Iron Pipe Found
- ⊕ Utility Pole
- N.F. Now or Formerly
- 1324/98 Book & Page
- ⊗ Water Valve
- Fence

R. W. EATON ASSOCIATES
LAND SURVEYING & REAL ESTATE

58 PLEASANT STREET, WESTBROOK, MAINE 04092

PHONE: 207-854-2402 FAX: 856-7167 E-MAIL: RWEATON@MAINE.RR.COM

September 4th 2018

N.F. Remo DiMillo
2993/435
4031/71

Space & Bulk Standards:

Zone. R-6	Required
Mimum Lot Size	2,000 S.F.
Minimum Frontage	20'
Minimum Yard Dimensions	
Front Yard	5' Or Avarage Depths of Adjacent Yards
Rear Yard	10'
Side Yard	5'
Dwelling Unit	725 Square Feet
Maximum Lot Coverage	60%
Minimum Lot Width	20'
Maximum Building Height	45'

N.F. Portland Housing
Development Corp.
12639/206

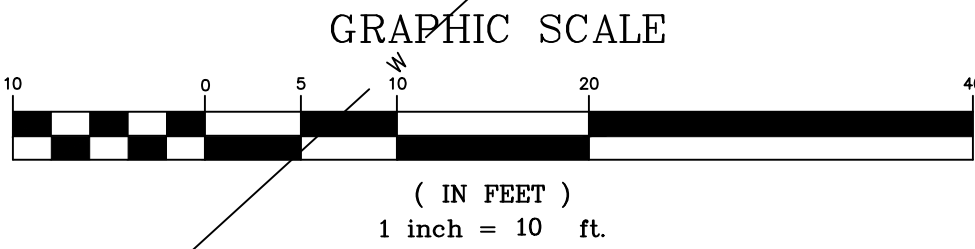
N.F. Amy Lippmann
31784/227

N.F. Fox Hole LLC
30563/163

N.F. Steven Oldford et al
34575/58

Boundary Survey & Topographical Map
With Existing Conditions

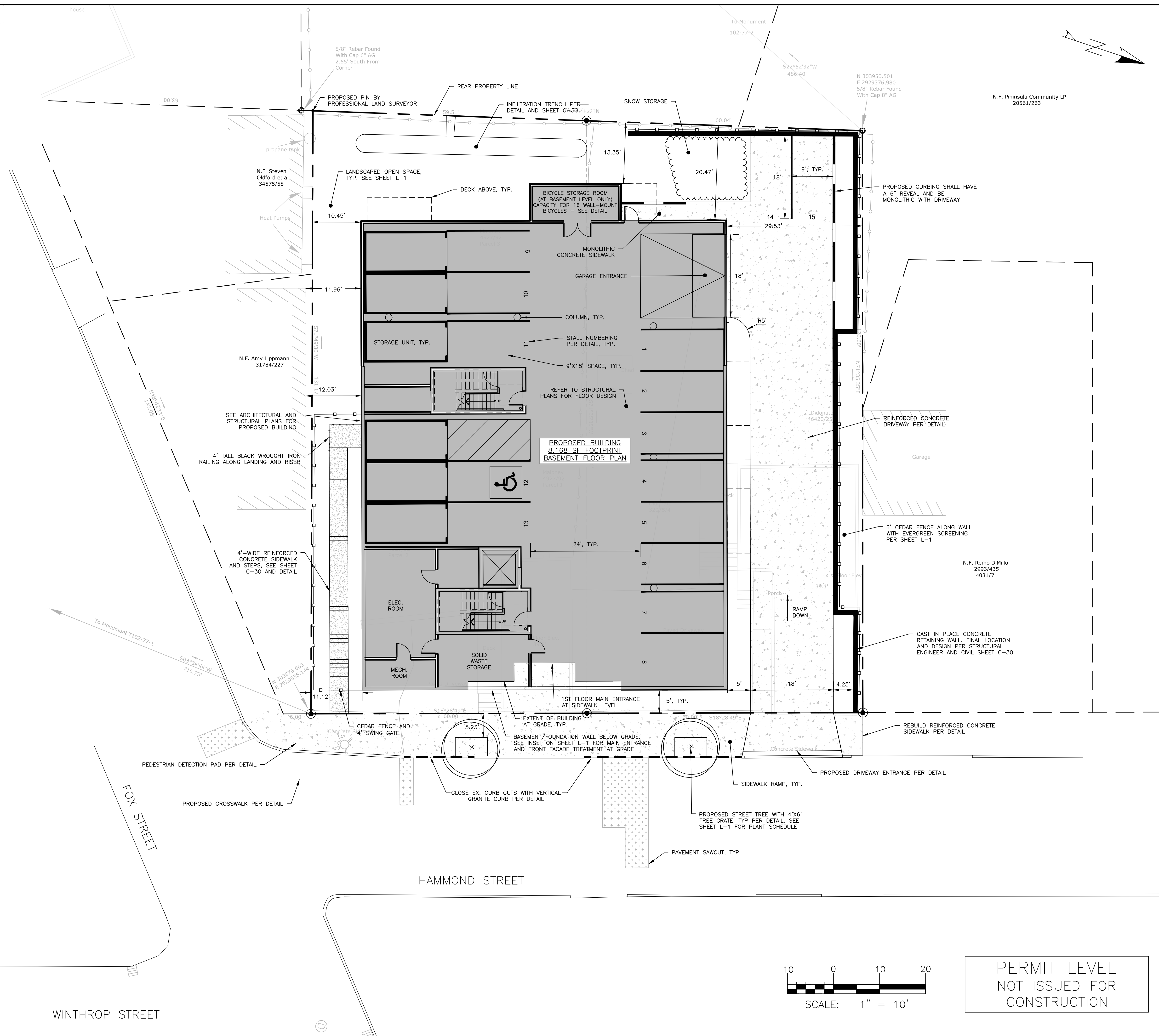
Land Located at:	4,6,8, & 10 Hammond Street Portland, Maine 04101
Land Owned By:	Kevin O'Rourke
Address:	94 South Street Yarmouth, Maine 04096
Deed Reference:	Book 35146 Page 119 & 121 Book 35234 Page 16



SCALE: 1:10
DRAWN BY: R.W.E.
CHECKED BY: R.W.E.
CAD FILE: 638 DWG
PROJ #: 638
ORIG DATE: 03-28-17
0 REV DATE: 00-00-00
1 REV DATE: 00-00-00
2 REV DATE: 00-00-00
3 REV DATE: 00-00-00

1. STRIPING AS INDICATED ON SITE PLAN SHALL BE 4" WIDE. STRIPING ON A CONCRETE MATERIAL SHALL BE YELLOW UNLESS OTHERWISE NOTED.
2. 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.
3. PUBLIC CURBING SHALL BE GRANITE AND PRIVATE CURBING SHALL BE CONCRETE CURB MONOLITHIC WITH THE DRIVEWAY AND WALKWAY.

SPACE AND BULK STANDARDS		
ZONE: R6	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	15,433 SF
MINIMUM STREET FRONTAGE	20'	120'
MINIMUM FRONT YARD SETBACK	NONE (ABUTTER AVG.)	5.12'
MINIMUM SIDE YARD SETBACK	5'	10.45'
MINIMUM REAR YARD SETBACK	10'	13.35'
STRUCTURE STEPBACKS (SIDE YARD ABOVE 35')	10'	> 10'
STRUCTURE STEPBACKS (REAR YARD ABOVE 35')	15'	> 15'
MAXIMUM LOT COVERAGE	60%	56%*
MINIMUM LOT WIDTH	20'	120'
MAXIMUM BUILDING HEIGHT	45'	39.82' (SEE C-30)
MINIMUM LANDSCAPED OPEN AREA	20%	25%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 21	16
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 13 SPACES	15
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 6	> 6
MAXIMUM GARAGE OPENING	20'	18'
*INCLUDES DECK AREA		

[illegible]

DRAWING NAME	SITE PLAN
PROJECT NAME	HAMMOND HOUSE REDEVELOPMENT
CLIENT	HAMMOND HOUSE, LLC 94 SOUTH STREET, YARMOUTH, ME 04096



ACORN ENGINEERING, INC.

85 HANDOVER ST., PORTLAND, MAINE 04101

(207) 775-2655

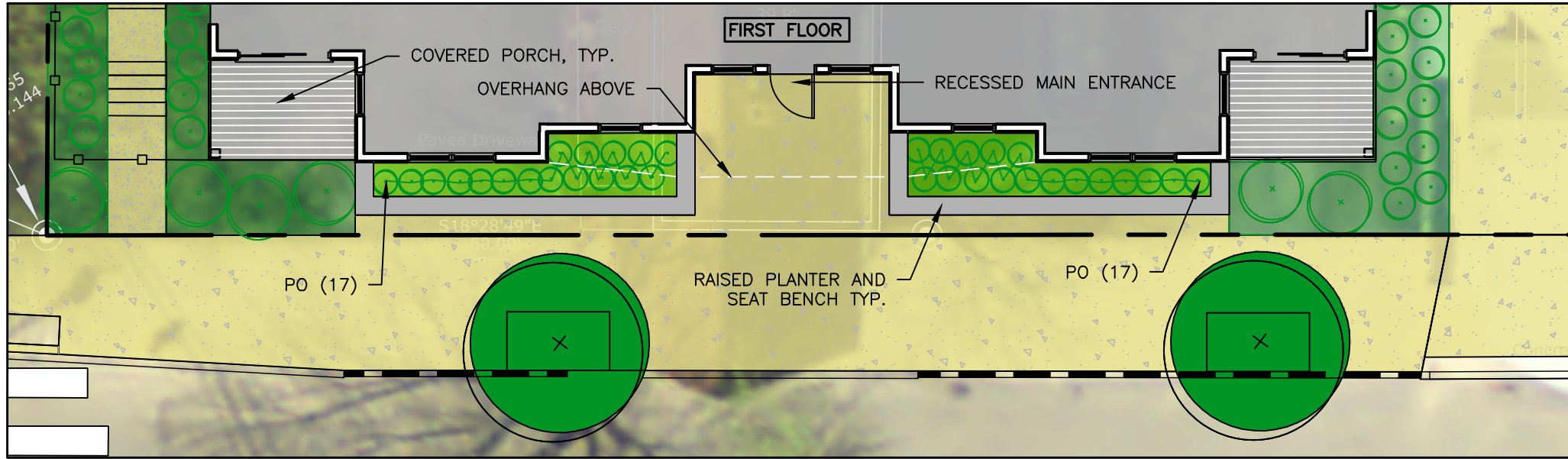
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FILE:	1112_CIVIL
JN:	1112
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

DRAWING NO.
C-10

- GENERAL NOTES:
1. CONTRACTOR TO BE HELD RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS AS NECESSARY.
 2. CONTRACTOR TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING INSTALLATION.
 3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
 4. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
 5. ALL CONTAINER MATERIAL TO BE GROWN IN CONTAINER MINIMUM OF 6 MONTHS. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMEN.
 6. CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
 7. THE ENGINEER MAY TAG ALL PLANTS AT THE NURSERY AND INSPECT THEM AFTER DELIVERY TO THE SITE; ALL PLANT MATERIALS SHALL BE INSPECTED BY THE ENGINEER ON SITE PRIOR TO INSTALLATION.
 8. SEE PERMANENT SEEDING TABLE ON SHEET C-47 FOR LAWN AREAS.

PLANT SCHEDULE				
ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
TREES				
PA	PRUNUS 'ACCOLADE'	ACCOLADE CHERRY	2	3" CA. BB
AP	ACER PALMATUM 'FIREGLOW'	FIREGLOW JAPANESE MAPLE	1	15 GAL.
JC	JUNIPERUS COMMONIS 'PENCIL POINT'	PENCIL POINT JUNIPER	43	5'
JB	JUNIPERUS CHINENSIS 'BLUE POINT'	BLUE POINT JUNIPER	10	5'
SHRUBS				
CB	CORNUS BAILEYI SERICEA 'FARROW'	ARCTIC FIRE REDTWIG DOGWOOD	6	3 GAL.
R	RHODODENDRON	RHODODENDRON 'HENRY'S RED'	2	5 GAL.
PG	PICEA GLAUCA 'CONICA'	DWARF ALBERTA SPRUCE	2	3-4'
PERENNIALS				
RH	RUDBECKIA HIRTA	BLACK EYED SUSAN	18	1 GAL.
SS	SALVIA SYLVESTRIS	SAGE 'MAY NIGHT'	7	1 GAL.
L	LIRIOPE	LILY TURF	25	1 GAL.
PO	PENNISETUM ORIENTALE 'KARLEY ROSE'	KARLEY ROSE FOUNTAIN GRASS	34	1 GAL.
A	ASTRANTIA	GREAT MASTERWORT MAJOR 'STAR OF FIRE'	68	1 GAL.
LT	LILIUM TIGRINUM	TIGER LILY	6	1 GAL.



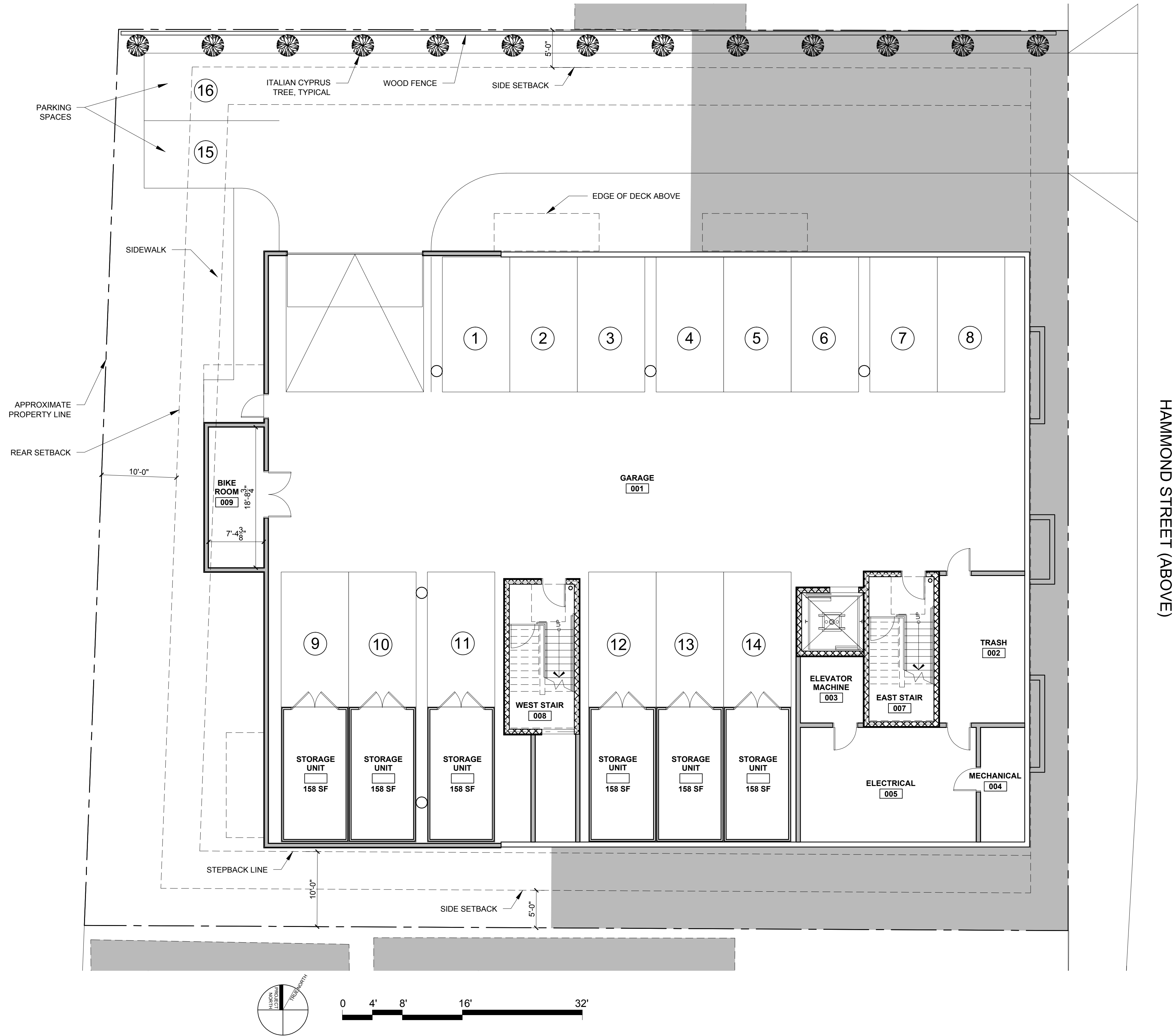
FRONT FACADE
LANDSCAPE TREATMENT
1"=10'



ISSUED FOR	BY
FINAL APP.	WHS
COMMENT RESPONSE	WHS
BUILDING REV.	WHS
PROJECT NAME: LANDSCAPE PLAN	
PROJECT NAME: HAMMOND HOUSE REDEVELOPMENT	
CLIENT: HAMMOND HOUSE, LLC	
94 SOUTH STREET, YARMOUTH, ME 04096	
DRAWING NO. L-1	

FILE: 1112_CIVIL
JN: 1112
SCALE: 1"=10'
DESIGNED BY: SJL
DRAWN BY: SJL
CHECKED BY: WHS

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION



1 BASEMENT FLOOR PLAN
1/8" = 1'-0"

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HAMMOND HOUSE
10 HAMMOND STREET
PORTLAND, MAINE

RSA
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senatorearchitecture.com

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REVISIONS:
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MARCH 12 2019

DATE:

PROJECT No. 1846

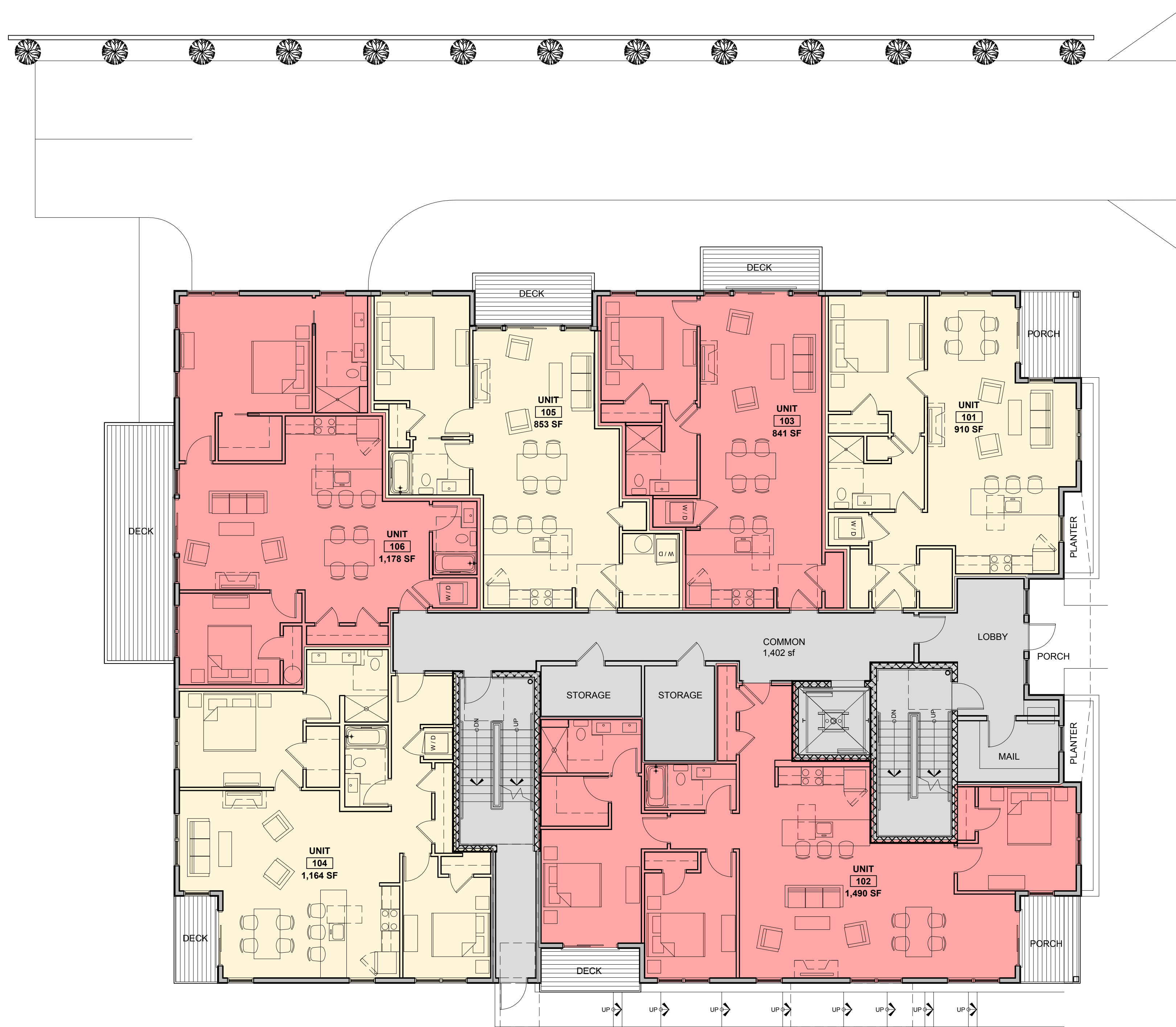
DRAWN BY: RRT, RJS

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
BASEMENT
FLOOR PLAN

A1-0



1 FIRST FLOOR PLAN
1/8" = 1'-0"

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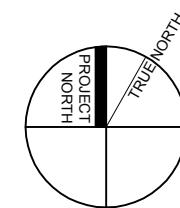
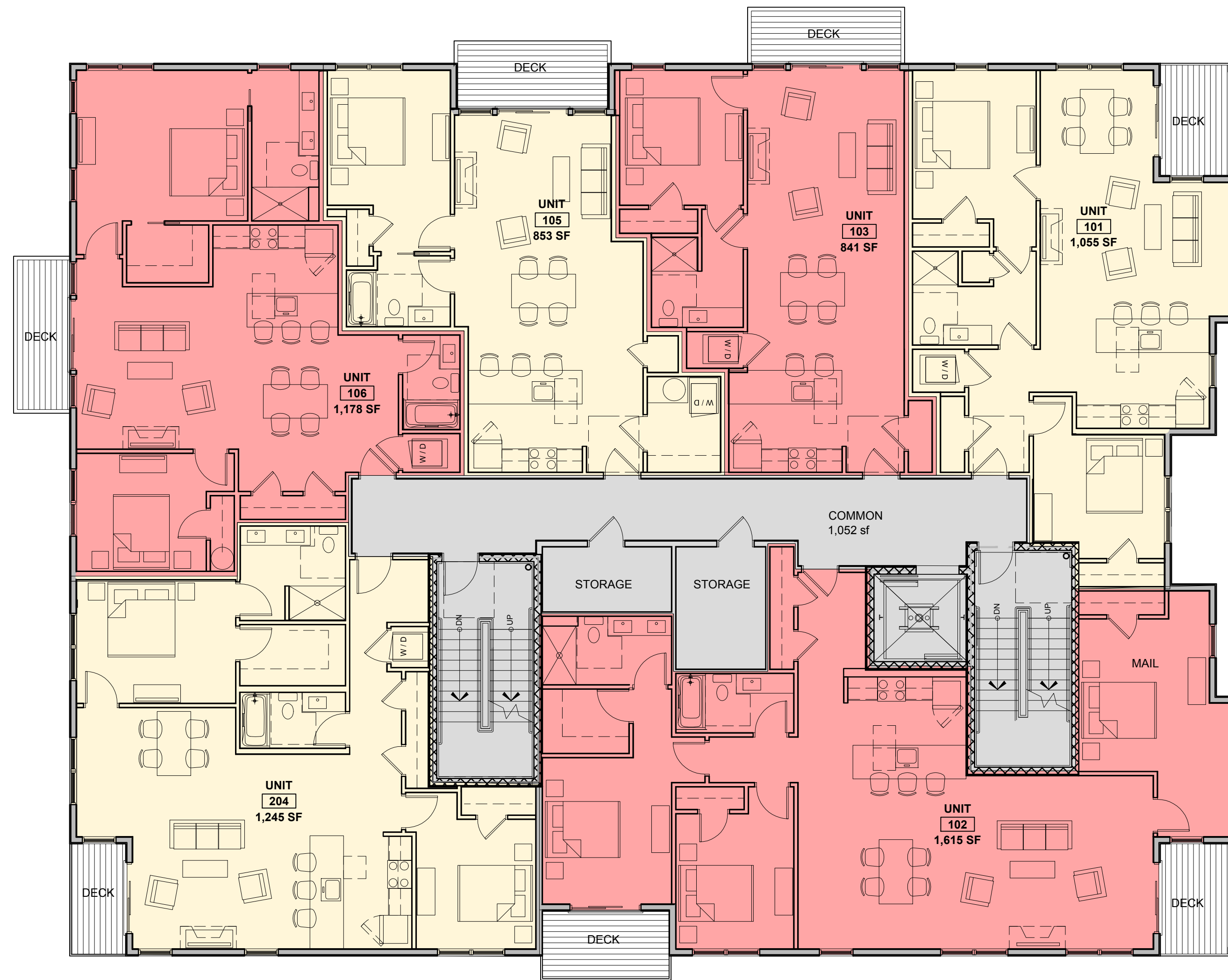
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SCALE: AS NOTED

SHEET TITLE:
FIRST FLOOR
PLAN

A1-1



1 SECOND FLOOR PLAN
1/8" = 1'-0"

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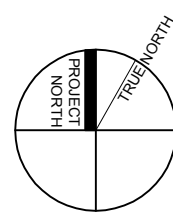
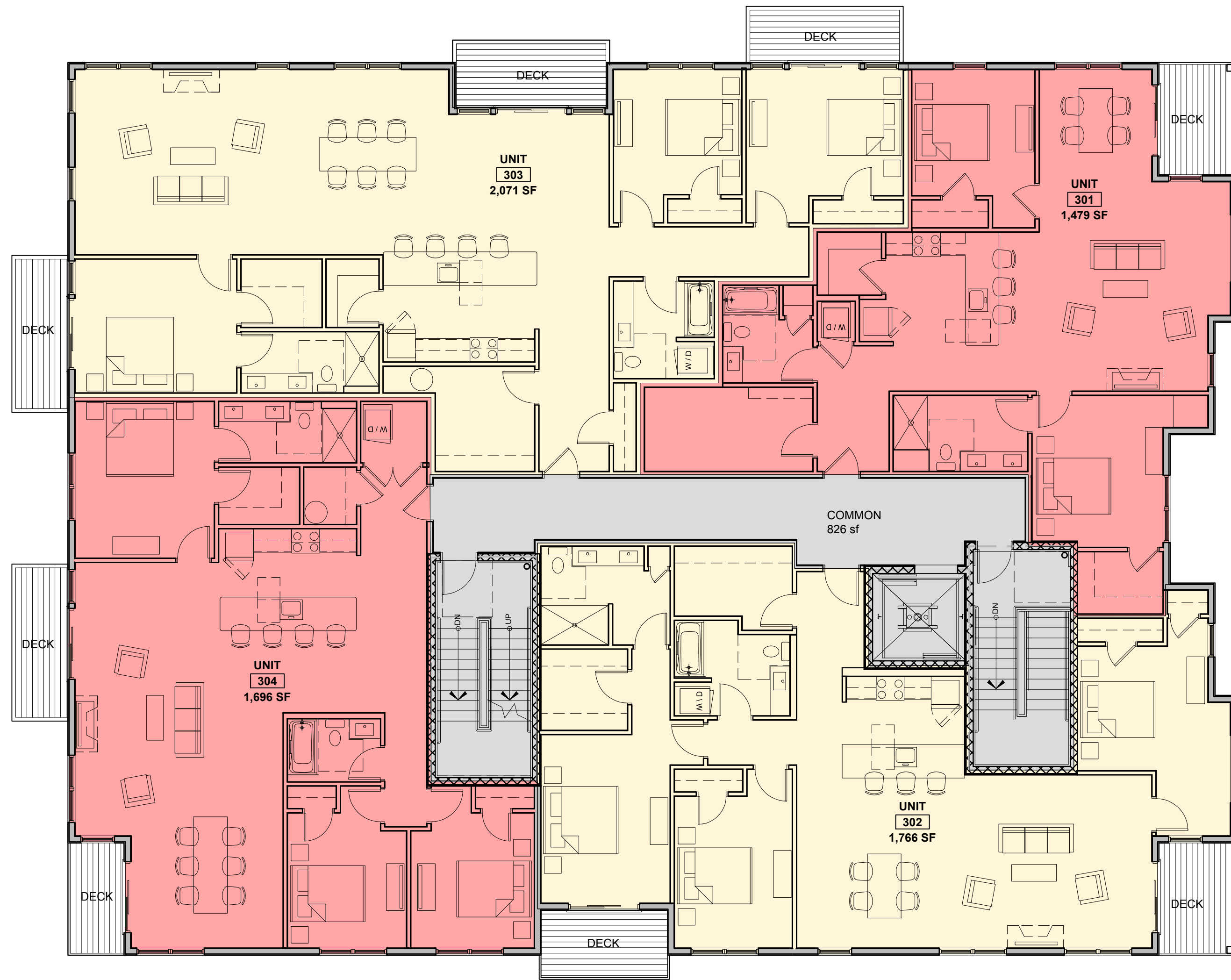
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SCALE: AS NOTED

SHEET TITLE:
SECOND FLOOR
PLAN

A1-2



1 THIRD FLOOR PLAN
1/8" = 1'-0"

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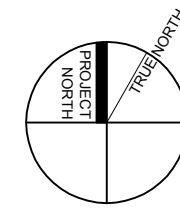
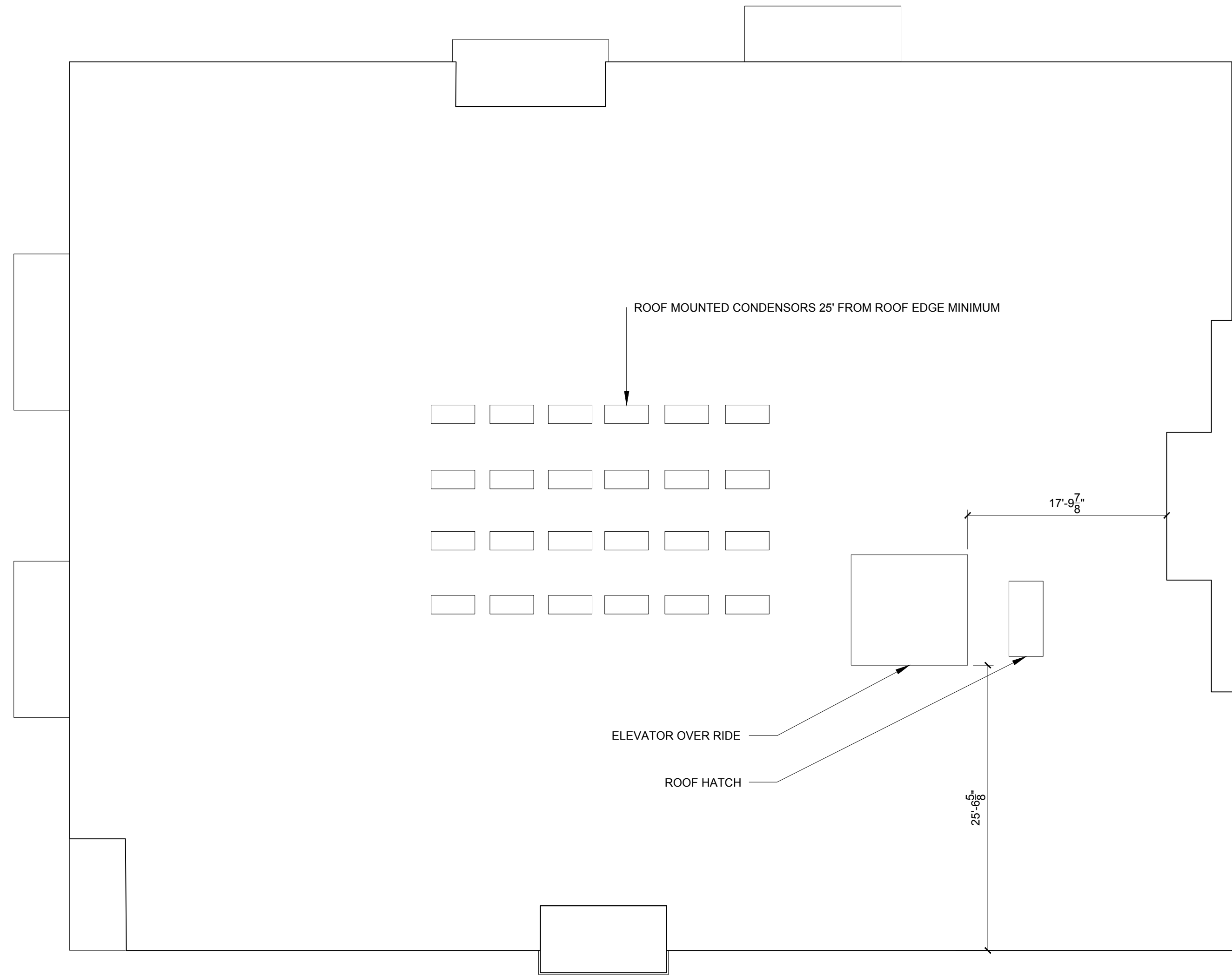
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SHEET TITLE:
THIRD FLOOR
PLAN

A1-3



1 ROOF PLAN
1/8" = 1'-0"

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SCALE: AS NOTED

SHEET TITLE:
ROOF PLAN

A1-4



1 EAST ELEVATION
1/4" = 1'-0"

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SCALE: AS NOTED

SHEET TITLE:
EAST
ELEVATION

A2-0



1 WEST ELEVATION
1/8" = 1'-0"

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SCALE: AS NOTED

SHEET TITLE:
WEST
ELEVATION

A2-1



1 SOUTH ELEVATION
1/4" = 1'-0"

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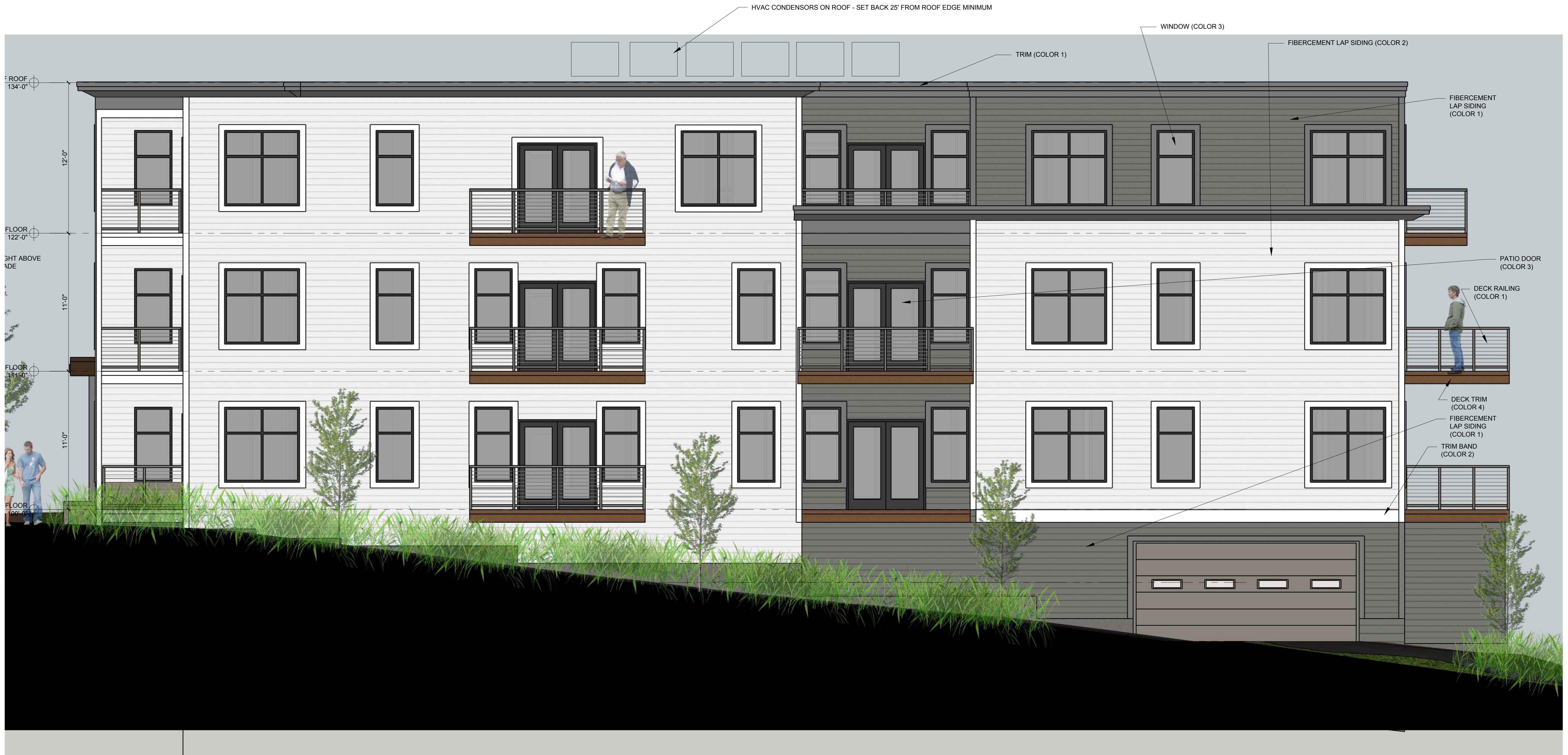
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SCALE: AS NOTED

SHEET TITLE:
SOUTH
ELEVATION

A2-3



1 NORTH ELEVATION
1/4" = 1'-0"

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SCALE: AS NOTED

SHEET TITLE:
NORTH
ELEVATION

A2-2



1 VIEW LOOKING SOUTH FROM HAMMOND STREET
NTS

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SCALE: AS NOTED

SHEET TITLE:
SITE CONTEXT
IMAGE 2

A2-6



1 VIEW LOOKING NORTH FROM WINTHROP STREET
NTS

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ARCHITECTURE

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CONSULTANTS:

REVISIONS:
PROGRESS PRINT ONLY
Not for Construction
MARCH 12 2019

DATE:

PROJECT No. 1846

DRAWN BY: RRT, RJS

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
SITE CONTEXT
IMAGE 1

A2-5



1 VIEW LOOKING NORTH FROM FOX STREET

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MARCH 12 2019

DATE:

PROJECT No. 1846

DRAWN BY: RRT, RJS

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
SITE CONTEXT
IMAGE 3

A2-7



1 VIEW LOOKING NORTH FROM FOX STREET
NTS

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DATE:

PROJECT No. 1846

DRAWN BY: RRT, RJS

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
SITE CONTEXT
IMAGE 4

A2-8

4-12 Hammond St. Project

Seth Brayton <sethbrayton@gmail.com>

Mar 26, 2019 7:57 AM

Posted in group: **Planning Board**

Hi Planning Board,

I live at 19 Hammond St. diagonally across the street from this proposed development.

First, I want to thank you for pushing back on the original design. This second iteration is vastly improved in its aesthetics and expresses a much more cohesive design than its predecessor.

That said, I think the building is still very problematic and has a long way to go to successfully integrate with our community. I do see this project more as a missed opportunity than an inherent and necessary failure. There is nothing wrong with urban density and development itself, in fact, density is a vital solution to the problems of efficiency and shared resources. The central failure of this building is that it doesn't respond to the surrounding community or fully address the conditions of its site. Its footprint dominates the site and crowds the sidewalk leaving the majority of the lot's green space wasted at the back of the building. And its massing is absolutely out of character for the neighborhood and expresses an arrogance that many of us neighbors find offensive. I believe in the power of good architecture and I that it's absolutely possible to do something really positive within the constraints of this project. Great architecture is born from tough constraints and it is certainly possible for a new construction building of this scale in this location if well designed to actually benefit everyone involved, the developer, the architects, the inhabitants, and the community.

To that effect, architecture is expression. The design of a building communicates to its inhabitants and the surrounding community a suggestion of what is important. The expression of values is inherent in any architectural project, whether overt or subtle, intentional or accidental, expression is the result of design. For precedent, the variety of buildings on Hammond street all clearly express a modest hard-working sensibility. It's obvious when you walk down Hammond street that the architecture of our neighborhood is not arrogant or opulent, but reflects shared values of community and humility. Even the contemporary multi-units at the opposite end of Hammond express this kind of working class modesty. Their design is contemporary in its restraint but expresses a modern ethic of efficiency and compact living. We are a neighborhood that shares cohesion just by existing together and sharing a street and our cohesion together is most obviously expressed in the scale and personal details of our homes.

When I consider the proposed Hammond House development in this context it seems to suffer from a lack of cohesion within itself and within its surroundings. It's very unclear what exactly this building is trying to express and what the guiding principles and values are of its design. What do they want this building to say? As it reads now, with its massive flat vertical front stretching forty feet up from the street in one stroke it expresses mostly arrogance and intimidation towards the street through its unyielding scale. It's not a welcoming building, but instead seems to unapologetically stand as a symbol to nothing more than to real-estate development itself. It is utterly self-referential. No matter how the facade is decorated or arranged, the scale of this building does not belong within our Hammond street community. It is an imposition of values and sets an un-nerving precedent for future development in our neighborhood. There's a short sightedness to this design that seems to underestimate the long term implications of such a massive building within our modest Hammond Street community.

Imagine instead if this building was designed around a set of core principles that were essentially modern and contemporary in their substance and based on the belief that Portland can be a healthy, equitable, social, and beautiful place to live, made strong by the fabric of it's neighborhoods. Imagine if the building was based on principles of well-being, health and communal space. Imagine a building that encouraged social interaction. How might this building look different?

One small example of how a principle might be expressed architecturally would be to replace the private rooftop decks with a single shared roof deck. This would require only one route of circulation, greatly reducing the added mass of all the private stairwells, and would give everyone in the building a chance to enjoy what I'm sure will be amazing sunsets off the backside of the structure. This would be an equitable use of space. It also creates a common space in the building large enough for all the residents to congregate, perhaps even encouraging a sense of community among residents. And community is inherently

good thing, and designing around a principle like this would help tie the purpose of this new building into the fabric of our pre-existing community.

Another problematic part of this building is how it fails to respond to the slope of the hill. The underground garage buried in the hill is the most site-specific part of this building and probably its greatest success as it directly responds to the conditions of the site. The rest of the building is an utterly generic monolithic box placed on top of this garage. This results in the oversized massing that everyone recognizes as completely out of place. One way to solve this problem would be to terrace the floor plates rather than lining them all up in column. The way a building meets the street says a lot about its attitude towards the community. If the Hammond St. facade was broken up by each floor being set back 10 or so feet, it would drastically reduce the mass of the front and in doing so create usable outdoor terrace space the whole width of the building rather than the corner balconies as it is now drawn. To think of each floor as a layer, overlapping and overhanging them would make the building much more functional and less monolithic while retaining the programmatic scale. Let the architecture react to the slope of the hill rather than fight it with a single boxed mass. I realize changes of this scale are unlikely to happen this late in the process, but I think it's helpful to consider what this building could be when trying to address what it currently is not.

As a concerned neighbor, I ask the planning board to please consider the values that this building promotes. What does this building express and how does that expression of values reflect on us as citizens of Portland? We all have a stake in this project, it represents all of us. And as such, it is a design that deserves to be seriously reconsidered. I know the financial machinery of this process is already in place, but to prioritize efficiency over thoughtfulness is maddening for those of us who will have to live next door to this for decades to come.

Thanks for your time and due consideration.

Sincerely,

Seth Brayton

19 Hammond St.

--

sethbrayton@gmail.com
207-210-8570



Memorandum

Planning and Urban Development Department

Planning Division

To: Sean Dundon , Chair and Members of the Portland Planning Board
From: Matthew Grooms, Planner
Date: March 22, 2019
Re: 121 Cassidy Point Drive, Project Management, INC
Project #: PL-000439-2019
Meeting Date: March 26, 2019

I. INTRODUCTION

Project Management, INC has submitted a Level II Site Plan and Conditional Use application for a new low-impact industrial building at 121 Cassidy Point Drive for use by small-scale light industrial operations geared towards craft persons, marine businesses and small trades. In July of 2018, an Administrative Authorization and Conditional Use application were approved by the Planning Board for reuse of the existing buildings on-site (previously occupied by Coach Works) for use by these tenants, with the understanding that a second phase would be forthcoming, that would involve demolition of the existing wood-structure building and construction of a new building.



Figure 1: Site of proposed development

This property is located within the Waterfront Port Development Zone (WPDZ) and is subject to the zone specific and general conditional use standards as a result of the proposed uses, which are identified as conditional uses within the WPDZ. Zone specific standards are intended to ensure adequate waterfront access to water-dependent and marine-related users while the general standards facilitate site compatibility between conditional uses and uses permitted by right. Conditional use applications, when submitted in conjunction with a site plan or administrative authorization, are required to go before the Planning Board for review and approval.

A total of thirty-seven (37) notices were sent to property owners within 500 feet of the site and interested party list. A legal ad ran on the March 19th and 20th, 2019 editions of the Portland Press Herald. As of the writing of this report, no public comments have been received by the Planning Office.

Applicant: Cyrus Hagge, Project Management, INC

Consultants: Will Savage, P.E., Acorn Engineering, Faith Thomas, Acorn Engineering, Tracie Reed, Dextrous Creative, LLC, Samuel Glidden, Owen Haskell, INC.

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Driveway Design (Width)– 60’ feet x 2 <u>Staff Comment:</u> The applicant should explore alternative design solutions that narrow	Technical Manual Section 1.7.2.4 – Requires that industrial two-way driveways be no greater than 30’ feet in width.

driveways to the extent possible. Mountable granite curbing should be used to allow for larger vehicle movements.	
Driveway Spacing: Less than 100 feet <u>Staff Comment:</u> Given the existing local conditions, driveway separation of 100' feet or more is not possible between this site and the Asia West Warehouse site, and for this reason, staff are supportive of this waiver request.	Technical Manual Section 1.7.2.7 – Requires that minimum separation for driveways on streets with 25 mph speed limit be 100 feet.
Number of Driveways – 4 <u>Staff Comment:</u> Staff understand that the unique site geometry makes it difficult for required vehicle maneuvering/loading and unloading to occur without a minimum of three curb cuts, one along southerly frontage and two along northerly frontage. It is recommended that the westerly curb cut be closed using mountable curb, that may infrequently be used for movement of vessels.	Technical Manual Section 1.7.2.8 – Requires that sites contain no more than two (2) curb cuts.
Sidewalk Waiver – Southerly Frontage <u>Staff Comment:</u> Staff are favorable to the provision of a sidewalk along only the northerly frontage given that sidewalks are not found elsewhere along the southerly portion of Cassidy Point Drive, and that existing sidewalks already connect the site with W. Commercial Street along the northerly portion of Cassidy Point Drive. This sidewalk is being improved as part of this project. A formal recommendation based on waiver criteria will be included at the time of the public hearing.	Site Plan Standard Section 14-526(a)(2)(c) – Requires that sidewalks be constructed along portions of a property's frontage.
Review	Applicable Standards
Site Plan	Section 14-526
Conditional Use	Section 14-474, Section 14-320

III. PROJECT DATA

Existing Zoning	Waterfront Port Development Zone (WPDZ)
Existing Use	Previously occupied by Coach Works Automotive
Proposed Use	Warehouse/Light Industrial
Parcel Size	.575 Acres

	<i>Existing</i>	<i>Proposed</i>	<i>Net Change</i>
Building Footprint	6,918 SF	10,249 SF	3,331 SF
Building Floor Area	8,798 SF	17,736 SF	8,938 SF
Impervious Surface Area	20,885 SF	20, 203 SF	-682 SF

Parking Spaces	13	12	-1
Bicycle Parking Spaces	0	4	4
Estimated Cost of Project	Not listed		

IV. PROPOSED PROJECT DESCRIPTION

The former CoachWorks site consists of two separate structures, including a 5,237 square foot metal building constructed in 1924 that features 6 large overhead doors and a smaller 1,666 square foot two-story wooden structure constructed in 1910. Aside from building area, the site is largely impervious, consisting of paved areas, gravel and broken-up concrete with very limited vegetation. Between lower portions of the site (along the southerly portion of Cassidy Point Drive) and the upper portions of the site (along the northerly portion of Cassidy Point Drive) there is a significant grade differential of approximately ten (10) feet, or one story.

Under this proposal, the applicant would demolish the existing wood-framed structure, and construct a new 17,500 square foot, four-story light-industrial building with overhead doors (intended to facilitate moving of sculptures, equipment and sheet goods) accessible from both frontages along Cassidy Point Drive (both first and second floor). The existing wood-framed building extends across the applicant's property line into the city right-of-way, and because of this, the footprint of the new building has been pulled closer to the northerly Cassidy Point frontage so as to meet zoning requirements.

Other site improvements include new gas, water and overhead electrical service connections, roof mounted solar panel installations, closure of a single curb-cut along the northerly Cassidy Point Drive frontage for a total of four (4) curb cuts, construction and repair of sidewalks along the northerly Cassidy Point Drive frontage, the repaving of surface parking areas and planting of minimal landscaping at the western edge of the site and along the southerly Cassidy Point Drive frontage.



Figure 2: Site at present with wood frame building at right and metal building at left

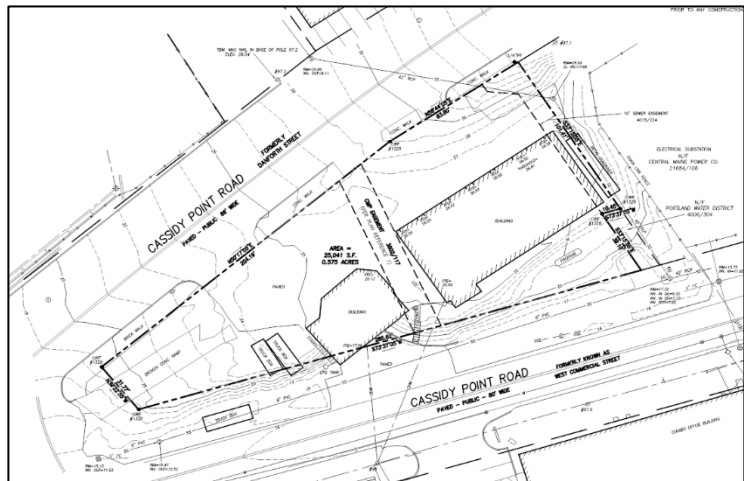


Figure 3: Existing Conditions Survey

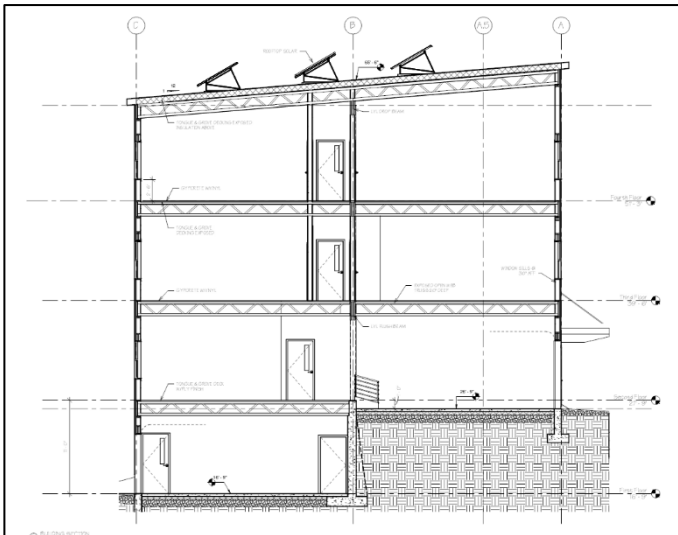


Figure 4: Section View of Proposed Building

According to the applicant, the goal of this project is to provide small 1,000 to 2,500 square foot spaces for users engaged in small trade, craft and marine businesses. The primary tenant will be SailMaine, who is seeking to relocate to this site, and they are requesting conditional use approval for marine repair services, yacht brokerage, boat storage and the storage and repair of fishing equipment. Other potential users encompass welding and metal working/fabrication, carpentry/cabinet shops and craft production and print making.

V. COMPLIANCE OF DRIVEWAYS AND SIDEWALKS WITH CITY STANDARDS

The Planning Board, with recommendation from staff, approved the administrative authorization and conditional use application for Phase I of this proposed

development (change of use within the existing buildings) at 121 Cassidy Point in July of 2018, with the understanding that the site in its current condition does not meet City Technical standards for driveway width, number of curb cuts and sidewalks. Approval of that application was based upon the limited scope of work, which did not trigger a Level II or Level III site plan application, that would have required more substantial changes to the site layout to better conform with City standards.

The proposed building triggers a Level II Site Plan application, as it is a new industrial building of less than 20,000 square feet. The initial application, featured five curb cuts with driveway width of up to one-hundred (100) feet and removal of existing sidewalks. In preliminary comments, staff stated that they were not supportive of this design, and strongly encouraged the applicant to revise their site design so as to meet City standards. Based upon those preliminary comments, the applicant partially reconfigured their site by closing one curb cut, narrowing others and proposing a new concrete sidewalk along the northerly Cassidy Point Drive frontage. This is the version of the plan being considered by the Planning Board at the March 26th workshop. While this version reduces the level of non-conformity, staff are continuing to encourage the applicant to explore alternative more compliant design concepts.

A. On-Site Meeting with Applicant (March 19th)

On March 19th, city staff, including Barbara Barhydt, Development Review Services Manager, Tom Errico, Traffic Engineer with T.Y. Lin, Bruce Hyman, Transportation Program Manager, Michael Tremblay, Senior Engineer with DPW and Matthew Grooms, Planner, met with the project engineer and architect on-site to discuss opportunities for improving site compliance, better understand the site's unique geometry and also the needs of existing and proposed tenants.

The project engineer explained that the site is to be utilized by a variety of delivery trucks, including trucks with trailered sailing vessels that require ample space to maneuver. The parking area as shown does not provide the requisite maneuvering space and so multiple driveways are therefore required (turning templates have been provided as part of this application). Also, due to setback requirements and the size of the proposed building, it is impossible to provide internal connection between the general parking area and boat storage area, located at the western edge of the property, and so a separate driveway is required for access to that portion of the site. In looking at the lower portion of the site, it was explained that the width of the driveway was directly related to the location of the loading bays, which according to the engineer and architect, could not be brought closer together due to the fact that they serve separate tenant spaces.

At this meeting, staff recommended that driveways be narrowed to the extent possible. One suggestion was to narrow the curb cuts to meet city standards and use mountable curbs on either side of those curb cuts to allow for maneuvering by vehicles that require additional driveway width. This suggestion was carried further to use mountable curbing across the entire existing curb cut at the western edge of the site (which provides access to the boat staging area) given its infrequent usage. The driveway off of the southerly Cassidy Point Drive frontage could be further narrowed if loading bays along that façade were brought closer together.

Other suggestions included further protection of landscaped areas, bolstering of erosion control measures on significant slopes, and submission of a waiver request for sidewalk and curbing along the southerly Cassidy Point Drive frontage.

VI. ZONING ANALYSIS

The proposed project is a four-story light industrial building with surface parking for nine (9) vehicles and internal parking for three (3) vehicles for a total proposed parking count of twelve (12) spaces. Proposed uses are as follows, which include both permitted and conditional uses within the Waterfront Port Development Zone (WPDZ):

Marine	Industrial
• Marine Repair and machine shops • Marine retail and wholesale sales • Boat storage facilities • Fabrication, storage and repair of fishing equipment	• Low impact industrial uses • Light manufacturing • Manufacture of products • Welding and metal fabrication • Storage of materials incidental to proposed uses

Dimensional standards for the WPDZ are limited and are intended to provide flexibility to property owners, particularly for storage of equipment and vehicle maneuvering, while maintaining visual access to the water. The project meets all applicable dimensional standards, which are as follows:

	Required	Proposed
Lot Size	< 5 acres, limited to 1 building greater than the maximum applicable height allowed under the permitted use dimensional standards.	25,041 square feet, with building shorter than maximum allowable height.
Maximum Lot Coverage	100%	80.7%
Maximum Height	60' feet	44.27' feet
Off-Street Parking Spaces	12 (note 50% reduction under Div. 20 for properties in WPDZ)	12 spaces (9 surface, 3 interior)

A. ZONE SPECIFIC CONDITIONAL USE STANDARDS – SEC. 14-320(a)

The project site is located in the Waterfront Port Development Zone (WPDZ) and does not feature direct water access. Uses identified as conditional uses within this zone are subject to five additional standards that are intended to ensure water access to water-dependent and marine-related users. Those standards are as follows:

In addition to the provisions of section 14-474 (c)(2) such uses will:

1. Not impede or preclude existing or potential water-dependent development on other lots;
 - a. Applicant Response: The parcel located at 121 Cassidy Point Drive is not a waterfront lot and is separated from the nearest waterfront lot by Cassidy Point Drive, a major intermodal

transportation route. Due to site location, the proposed uses will not impede or preclude existing or potential water-dependent development on other lots.

- Staff Comment: The development site, 121 Cassidy Point Drive is unique in the context of the WPDZ as it has no direct water access and existing rights-of-way provide ample access for other users. All non-marine uses being proposed are to be housed entirely within the existing structures and will in no way impede water-dependent development on other lots. Marine-related activities associated with SailMaine will occur outside of the two structures.
2. Allow for adequate access to the water;
 - a. Applicant Response: The parcel located at 121 Cassidy Point Drive is not a waterfront lot and is separated from the nearest waterfront lot by Cassidy Point Drive, a major intermodal transportation route. Due to the site location, the proposed conditional uses will allow for adequate access to the water.
 - b. Staff Comment: See previous staff comment.
 3. Be compatible with water dependent and marine uses;
 - a. Applicant Response: The parcel located at 121 Cassidy Point Drive is not a waterfront lot and is separated from the nearest waterfront lot by Cassidy Point Drive, a major intermodal transportation route. Due to the site location, the proposed conditional uses are compatible with water-dependent and marine uses.
 - b. Staff Comment: The primary tenant for this facility is a marine-related enterprise that will benefit from its location within the WPDZ. Other uses being proposed do not preclude marine-related and water-dependent development and are uses typical of an industrial port zone.
 4. 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; and
 - a. Applicant Response: The parcel located at 121 Cassidy Point Drive is not a waterfront lot and is separated from the nearest waterfront lot by Cassidy Point Drive, a major intermodal transportation route.
 - b. Staff Comment: As stated in the previous staff comment, SailMaine is a marine-related use that will benefit from its location and benefit other marine-related and water-dependent users. Proposed activities include marine repair, yacht brokerage, boat storage and the storage and repair of fishing equipment.
 5. Meet any additional performance and dimensional standards
 - a. **Outdoor Storage**
Applicant Response: All storage of materials shall be indoors or in sealed storage containers with no offsite runoff
 - b. **Noise**
Applicant Response: All onsite conditional uses shall be indoor and will not exceed the maximum 55 decibel maximum level.

- c. **Vibration**
Applicant Response: All on site vibration shall be imperceptible without instruments at lot boundaries.
- d. **State and Federal Environmental Regulations**
Applicant Response: The proposed changes of use will comply with all federal and state environmental statutes and regulations.
- e. **Discharge into Harbor areas**
Applicant Response: The proposed conditional uses will not discharge into the harbor water areas.
- f. **Storage of Vehicles**
Applicant Response: The proposed conditional uses will not store any unregistered automotive vehicles on the premises for more than sixty (60) days.
- g. **Landfill of Docking & Berthing Areas**
Applicant Response: N/A, due to the parcel's lack of waterfront access.
- h. **Off-Street Parking**
Applicant Response: Off-Street parking is provided in accordance with Division 20 (off-street parking), as shown in the Transportation Analysis.
- i. **Off-Street Loading**
Applicant Response: Any loading is accommodated by the loading dock located along the north-facing portion of Cassidy Point Drive.
- j. **Shoreland and Flood Plain Regulations**
Applicant Response: This property does not have waterfront access and is not located in the flood plain.
- k. **Lighting**
Applicant Response: Exterior lighting will be shielded such that direct light sources shall not unreasonably interfere with vessels transiting the harbor nor have an unreasonable adverse impact on adjacent residential zones.
- l. **Signage**
Applicant Response: Existing signs to remain untouched.
- m. **Storage of Pollutants**
Applicant Response: There will not be storage of pollutants or oily wastes on site.
- n. **Compatibility with Marine Uses**
Applicant Response: The proposed conditional uses are compatible with nearby marine uses.
- o. **Design and Visual Character**
Applicant Response: See Architectural Design Narrative and Compiled Civil Plan Set.

The staff finds the proposal to be compliant with all applicable zone-specific conditional use standards.

B. GENERAL CONDITIONAL USE STANDARDS – SEC. 14-474

All conditional uses are subject to the general conditional use standards as listed under Section 14-474, which are intended to ensure compatibility and integration of a conditional use with other surrounding uses permitted by right. This is achieved through three separate standards related to traffic/parking impacts, unsanitary or harmful conditions and site design. The specific standards are as follows:

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;
 - a. Applicant Response: The site is located at 121 Cassidy Point Drive, which is a major intermodal transportation center with direct access to Route 1 and I-295. The proposed use will reduce the amount of traffic in this area, transitioning from an auto and truck repair business (Coachworks) with an estimated 250 weekday trips to approximately 60. The house of operation, pavement and number of parking spaces will not interfere with the neighboring marine and trucking uses.

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 typically occur at surrounding uses or other allowable uses in the same zone.
 - b. Staff Comment (Tom Errico, Traffic Engineer with T.Y. Lin): I have reviewed the projects (referring to 121 Cassidy Point Drive in addition to 128 Cassidy Point Drive) as it relates to the Conditional Use Standards and Conditions. Specifically, “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.” As it relates to this specific standard, I find that the projects comply and will not substantially increase traffic and parking conditions.
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; and
 - a. Applicant Response: All of the proposed uses are internal to the buildings, except for the outdoor storage of boats. There are no proposed changes to the site that would create noise, glare, dust, odors or lighting. All trash will be disposed of using dumpsters.
 - b. Staff Comment: The staff agrees that the proposed uses will not have an adverse impact as it relates to noise, glare, dust, sewage disposal, emissions to the air, odor, lighting or litter.
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.
 - a. Applicant Approach: Generally, design of site is consistent with nearby existing and permitted uses, with several notable site improvements, including repair and extension of the existing sidewalk, planting of additional vegetation and clear delineation of parking and maneuvering areas.

- b. Staff Comment: We continue to work with the applicant to develop an acceptable site configuration that more closely approximates city standards for the number of curb cuts, driveway width and placement of sidewalks. The site geometry is unique which makes full compliance with city standards difficult.

Staff would stress that if possible:

- One or more curb cuts should be eliminated
- Driveways should be narrowed to the extent practicable. Mountable curbing may be used to facilitate this outcome.
- Proposed landscaping should be separated from the roadway via curbing or guardrail to ensure viability.
- A formal waiver request should be submitted for the absence of curbing along the southerly property frontage.

The staff finds the proposal to be generally compliant with the city's general standards for conditional uses and is suggesting one condition of approval related to site lighting and siting of exterior waste storage.

VII. DEVELOPMENT REVIEW

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations. Staff comments are listed below.

1. Transportation Standards

- a. Impact on Surrounding Street Systems and Access and Circulation- The proposed development will have minimal traffic impacts. Staff continue to work with the applicant on proposed circulation patterns, notably the number of driveways and maneuvering patterns for delivery vehicles.

Mike Tremblay, P.E. and Senior Engineer with DPW, has reviewed the plans and offers the following comments:

- Driveway widths shall be shown as narrow as possible in order to facilitate typical (passenger vehicles/small trucks) turning movements. Turns by large trucks, vehicles with trailers, etc. should be accommodated using mountable granite curb. I have included a sketch showing how this may be achieved on the northern driveway at the bottom of this email (the areas I added are hatched in green with a grass symbol; In reality, not all of this area will be able to be landscaped). Similar consideration should be given to the southern driveway, which is measured at 56 feet at the property line but is 94 feet at the roadway.
- Given the nature of the site, driveways should not be designed to facilitate right turns into or out of any driveways. Designing of these right turns may increase driveway widths (at the roadway, if not at the property line). Left turns require less driveway room, and right turns should be unnecessary given the multiple points of access onto Cassidy Point Drive. A possible exception may be made for right turns into the southern driveway.
- At the acute point where the east-west portion of Cassidy Point Drive meets the northeast-southwest portion of the roadway, no curb cut shall be permitted. A mountable curb may be utilized in order to facilitate boat storage on that side of the property. The area within the City ROW shall be kept clear at all times to maintain site distance; no boats or vehicles shall be stored in this area. DPW recommends that the area within the City ROW receives loam and seed, with the exception of the area where vehicles will be loading/unloading boats, which should be concrete, porous pavers, or another structural material.

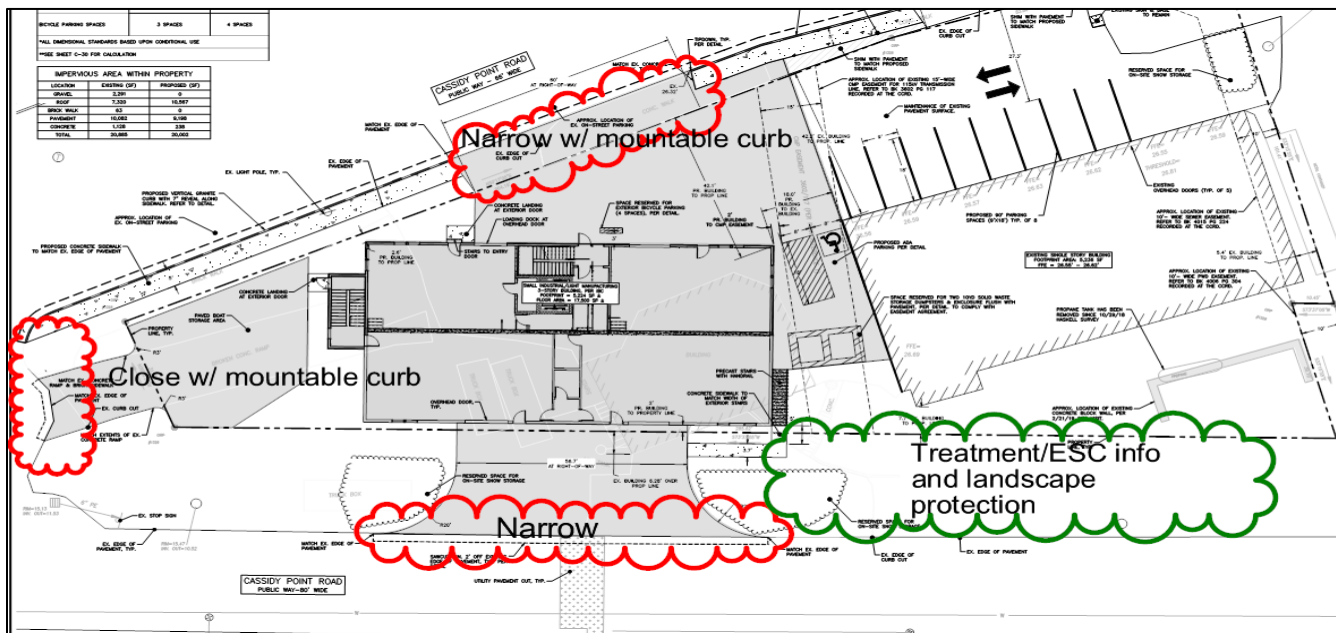


Figure 5: Changes suggested by staff

b. Sidewalks

The applicant is proposing to close one existing curb cut, and narrow other existing curb cuts along the northerly Cassidy Point Drive frontage, to reduce crossing distances for pedestrians. The existing sidewalk is in disrepair, and will be replaced with a new concrete sidewalk with granite curbing, as the property is located within a concrete district. Staff are asking that a waiver request be submitted for curbing along the southerly Cassidy Point Drive property frontage. A sidewalk waiver has been submitted for the property's southerly frontage, that is supported by staff given the existence of a sidewalk along the northerly frontage that is better connected with Commercial Street.

c. Public Transit Access

The public transit requirements do not apply to this project.

d. Parking

Twelve (12) parking spaces are being proposed, including nine (9) exterior spaces and three (3) internal spaces. The proposed parking meets city zoning requirements for off-street parking.

e. Bicycle Parking

The proposal includes exterior bicycle parking with space for four (4) bicycles which meets the site plan standard requiring a minimum of two bicycle parking spaces for every ten (10) vehicle parking spaces.

2. Environmental Quality Standardsa. Preservation of Significant Natural Features

There are no known significant natural features on the site.

b. Landscaping and Landscape Preservation

A landscaping plan was submitted as part of the application. The plan shows multiple street trees (Armstrong Red Maple, Eastern Red Cedar and Regal Prince Oak) along with a variety of shrubs and perennial ground cover along the southerly Cassidy Point Drive frontage and at the western edge of the property. These planting types are revised to reflect feedback from the City Arborist, Jeff Tarling, who had requested that larger tree species, more viable in this location be selected.

While the landscape plan has been revised to address staff comments, staff are asking that a physical barrier, such as curbing or guardrail be provided along the southerly Cassidy Point Drive frontage to prevent vehicles and snow plows from disturbing landscaped areas.

c. Water Quality, Storm Water Management and Erosion Control

Once developed, on-site impervious surface will be reduced by approximately 800 square feet, and is therefore not required to meet Maine DEP Chapter 500 flooding and or stormwater quality control standards. The applicant has provided erosion and sedimentation control details and a written plan in accordance with the Basic Standard. While no treatment systems are provided, the applicant has stated that proposed vegetation will provide additional treatment beyond what currently is provided. Similarly, stormwater will be managed via a new catch basin, storm drains and building foundation drains.

Lauren Swett has reviewed the applicants plans and project details, and offers the following comments (Attachment 1):

- We understand from the notes provided on the plans, that additional information is needed to be able to show locations of existing storm drainage and confirm the inverts and locations of proposed SD connections from the building and proposed catch basin. The applicant should make considerations for potential conflicts with other utilities in the area, for example, the approximate invert provided for connection of roof drains to the stormdrain on the southern side of the property appears to be close in elevation of the sewer in that area.
- Projects applying for Level II Site Plans are required to comply with the City of Portland's Section 5 Stormwater Standards as well as Chapter 500 Regulations. The project must consider the Basic, General, Flooding and Redevelopment Standards. The following comments should be addressed:
 - The Applicant has provided erosion and sedimentation control details and a written plan in accordance with the Basic Standards. Erosion control features have been called out on the Construction Management Plan, sheet C-03. Please add catch basin protection to this plan.
 - The Applicant is not increasing impervious surface, and is not required to provide any treatment or flooding control as required for the General and Flooding Standards.
 - The Applicant should evaluate the redevelopment standard for the site. Areas of pavement that are regraded are considered in the redevelopment calculation. The area to the north of the building is being regraded to direct stormwater in a different direction. It appears that the area will not meet the 5,000 square foot threshold, but the Applicant should confirm.

3. Public Infrastructure and Community Safety Standards

a. Public Safety and Fire Prevention

Mike Thompson, Division Chief of the Fire Prevention and Community Outreach Division, has reviewed the submitted plans and found them to be acceptable, noting the following points (Attachment 1):

- The Fire Dept. has no access or water supply concerns with this proposed project.
- The number of boats on site, and the purpose of the boats, repair or storage, should be provided.

b. Availability and Adequate Capacity of Public Utilities

The project will be served by Central Maine Power, the Portland Water District, City Department of Public Works. Evidence of utility capacity has been provided for all but wastewater capacity, which is currently being reviewed.

4. Site Design Standards

a. Snow and Ice Loading

Based upon the roof design, it is not anticipated that snow or ice loading will be a concern to pedestrians within the public right-of-way or on the applicant's property.

b. View Corridors

This site is not within a Protected View Corridor as per the "View Corridor Protection Plan" approved by the Portland City Council in 2001. Further, the site is located outside of the zone for which view corridors are required per the WPDZ ordinance.

c. Historic Resources

The site is not located within a historic district or within 100 feet of a historic district, landmark or landscape and as a result, this project is not required to be reviewed by Historic Preservation.

d. Exterior Lighting

The applicant has submitted a lighting and photometric plan. The plan shows seven (7) exterior, building-mounted wall packs near the entrance, pedestrian walkway and loading areas, including three fixtures proposed on the existing building. All exterior site lighting including lighting of building entrances will be full cutoff with no light emitted above the horizontal plane and light trespass falls within the allowable limits as stipulated under Section 12 of the Technical Manual.

e. Noise and Vibration

No HVAC systems are currently being proposed, and industrial activities are all housed within the proposed building and are not anticipated to result in impacts related to noise or vibration.

f. Signage and Wayfinding

The applicant has indicated that all street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

VIII. NEXT STEPS

- Provide responses to Board and Staff comment, and in particular, identify erosion control measures and measures to preserve proposed landscaping.
- Continue to evaluate solutions to reduce level of site non-conformity as it relates to number of driveways, driveway width and the provision of sidewalks.
- Hold Planning Board public hearing.

IX. ATTACHMENTS

STAFF REVIEW

1. Planning and Traffic Review Comments
2. Landscape Review Comments
3. Civil Engineering and Stormwater Comments
4. DPW Comments

APPLICANT'S SUBMITTAL

- A. Cover Letter
- B. Level II Final Site Plan Application & Checklist
- C. Right, Title and Interest
- D. Zoning Assessment

- E. Written Easements
- F. Requests for Waivers
- G. Financial Capacity
- H. Technical Capacity
- I. Conformity with Land Use Ordinance
- J. Stormwater Management Report
- K. Erosion and Sedimentation Control Report
- L. Fire Department Letter
- M. Wastewater Capacity
- N. Lighting
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- P. Utilities
- Q. Construction Management Report
- R. Transportation Analysis
- S. Solid Waste Disposal
- T. Solar Power Letter
- U. Acorn Response Letter
- V. Conditional Use Cover Letter
- W. Permitted Uses Analysis
- X. Transportation Analysis
- Y. Previous PB Approval

PLANS

- | | |
|---------|---|
| Plan 1 | Cover Sheet |
| Plan 2 | General Notes |
| Plan 3 | Existing Conditions Plan |
| Plan 4 | Construction Management Plan |
| Plan 5 | Site Plan |
| Plan 6 | Landscape Plan |
| Plan 7 | Utility Plan |
| Plan 8 | Grading Plan |
| Plan 9 | Site Details |
| Plan 10 | Utility Details |
| Plan 11 | Erosion & Sedimentation Control Details |
| Plan 12 | First Floor Plan |
| Plan 13 | Second Floor Plan |
| Plan 14 | Third Floor Plan |
| Plan 15 | Fourth Floor Plan |
| Plan 16 | South Elevation |
| Plan 17 | West Elevation |
| Plan 18 | North Elevation |
| Plan 19 | East Elevation |
| Plan 20 | Section & Details |
| Plan 21 | Perspectives |
| Plan 22 | Photometric Plan |

Planning and Urban Development Department

Planning Division



Subject: R-6 Small Infill/Multi-family Design Review – 10 Hammond Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Tuesday, March 19, 2019

A design review according to the *City of Portland Design Manual* Standards was performed for the revised proposal for new construction of a multi-family dwelling at 10 Hammond Street. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Matt Grooms, Planner. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual) as well as the *Two-family, Special Needs Independent Living Units, Multiple-family, Lodging Houses, Bed and Breakfasts, and Emergency Shelters* (Section I of the Design Manual).

Design Review Criteria:

The project was reviewed with the Alternative Design Review which has the following criteria:

- A. Proposed design is consistent with all of the Principle Statements
- B. The majority of the Standards within each Principle are met
- C. The guiding principle for new construction under the alternative design review is to be compatible with the surrounding buildings in a two-block radius in terms of size, scale, materials, and siting, as well as the general character of the established neighborhood, thus Standards A-1 through A-3 shall be met.
- D. The design plan is prepared by an architect registered in the State of Maine.

Findings of the Design Review:

The proposed design passes all of the criteria of the R6 Alternate Design Review – please refer to comments below:

- Staff find the applicant has adequately responded to the comments and concerns from the Planning Board and public comment.
- The revisions include
 - Simplification of the roof form to a compatible, simple flat roof with overhanging eaves (removal of stair towers and roof decks)
 - Massing and material variation and articulation elements introduced on street-facing facades to create scale and mass more similar to the traditional built patterns
 - Massing, material, and articulation variation introduced on the Fox Street-facing elevation to mitigate the scale impacts and relate to the composition patterns found in the context
 - Revise the entrance and building interface with the street to evoke the porches and front yard planters typically found in the R-6 residential context.

Design Review Comments (*red text denotes principles or standards that are not met; bold text denotes updated comment*):

Appendix 7: R-6 Infill Development

Principle A Overall Context – Met – see below.

- *A-1 Scale and Form:* The context is predominantly single and two-family buildings with simple forms, one and a half to two and half stories in height, vertical proportions, and masonry bases with clapboard siding. Larger multi-family buildings typically are 3 stories, use balconies or bay windows, flat roofs, and vertical proportions. In those rare instances where a larger scale, wider building has been built, the scale is mitigated by keeping setbacks as a buffer and through massing variation with elements such as bay windows and porches, and scaling elements such as canopies, material variation, and balconies. Some scale mitigation has been achieved by varying the massing at the front, maintaining a three-story flat roof, and varying materials – **in the revised proposal, significant and effective massing variation was introduced to better relate this larger building with the context.** The design creates façade compositions reminiscent of triple-deckers at the corners of the building to create a relatable scale and form. **Staff now find the design relates enough to the scale and form of the surrounding residential buildings. Staff suggested mass and scaling elements be incorporated and that the roof form be simplified in order to meet the standard – these were adopted.**
- *A-2 Composition of Principal Facades:* The façade composition takes the approach of using material placement, **massing variation, and articulation elements** to relate to a triple-decker composition. The strategies emphasize vertical proportions and provides local symmetry and windows. The façade composition is largely impacted by placement of circulation at the front façade and the overall width of the building, which at 80', is much wider than the surround buildings with which it shares the streetscape. Predominantly, traditional façade compositions include vertical proportions and narrower buildings. **The Fox and Hammond Street facades include relationships and elements that relate to the patterns found in the context.**
- *A-3 Relationship to the Street:* The street wall is maintained and building placement in relationship to the street is consistent with the neighboring properties. The building sits close to the street with a slight front yard setback buffer consistent with residential architecture in this neighborhood. The established pattern on this street varies – some buildings are directly at the sidewalk while others allow a small front yard setback to accommodate stoops, bays, and landscaping for privacy. Given the scale of this proposed building, a setback creates a respectful relationship and is in keeping with the patterns in the context. The building pattern also varies – there is not a clear, established rhythm of building/drive. This project incorporates a side driveway which does respect the building placement patterns of the streetscape/neighborhood. **At a detailed level, the building interface with the street is now compatible with the predominant character-defining architectural features of the neighborhood – raised planters, entrance porch with canopy, recessed entry. The project differs from historic homes in that the entrance is at the sidewalk grade – this is the result of Fair Housing and ADA requirements. The ground level residential units, though not as raised as most traditional homes, maintains a privacy through setbacks, planted buffers.**

Principle B Massing – Met – The building is larger in scale than what is found in the context in both height and width of the building. **The project revisions increased the amount of massing variation to elicit references to the proportions, forms, and massing found in traditional multi-**

family buildings and to mitigate the scale impact of this larger building adjacent to small, single family buildings. Staff find, though the project is larger in scale than the adjacent buildings, that the massing now creates a building that reflects and reinforces the traditional building character of the neighborhood.

- *B-1 Massing:* The proposed mass is wider on the street and longer in length on Fox Street than the typical building context. **Given the scale and massing of this new project is taller and wider than the residential context, the proposed massing variation breaks down the perceived scale.** In this case, the balconies, three-story flat roof, and material placement/articulation define portions of the building into smaller, vertical proportions that are harmonious with the massing of the existing buildings. **Where previously the building relied on surface-level elements to integrate the larger scaled building, now there are physical pushes and pulls to the massing – the effect is masses and forms that relate to the scale and proportions of the context.**
- *B-2 Roof Forms:* The proposed flat roof form is in keeping with the traditional multi-family building types found in the context. Simple forms define the context – **the roof was simplified to meet this standard and is referential of the simple, flat roofs found on the multi-family buildings nearby. This form is emphasized with a strong, overhanging cornice line.**
- *B-3 Main Roofs and Subsidiary Roofs:* There is a clear main roof form.
- *B-4 Roof Pitch:* The roof is flat.
- *B-5 Façade Articulation:* The project employs a covered entry, bay window.
- *B-6 Garages:* The garage is attached and buried with a side entry and living space above.

Principle C Orientation to the Street – Met – There are some living spaces at the ground level separated from the sidewalk with a front setback and balconies – these provide a positive and contextual level of activity towards the street while appropriately raised above and setback from the sidewalk for privacy. **The project entrance was revised to provide a transition appropriate to the small-scale residential street (recessed entry, porch canopy, front setback.**

- *C-1 Entrances:* The main entry directly faces the street and is emphasized by **a recessed entry, special materials, canopy, and side lights.**
- *C-2 Visual Privacy:* Visual privacy is adequately addressed; all living spaces are elevated **or set back from the street with a planter/balcony buffer.**
- *C-3 Transition Spaces:* The transition from the sidewalk to the building entrance **was revised to provide a more residential-style transition from sidewalk to entry with a recessed entry, “porch” with canopy.** The front setback with ground level plantings and artwork and the direct vestibule provide a transition – **the more commercial aspects of the sidewalk interface and entrance were removed to provide a more residential character. The ground floor living spaces have a buffer from the street with plantings, balconies.**

Principle D Proportion and Scale – Met – The proportion and massing of the front façade was revised to be referential of the vertical proportions of triple-deckers – this is addressed by creating a façade composition through materials and articulation that relates to the proportions found in the context. Some individual building elements are human-scaled. **Staff previously expressed that more could be done to introduce substantial scaling elements beyond applied material and trim elements – this was accomplished with changes to the front façade massing and planes, the relationship of the roof line and balconies, and the recess of the central circulation space.**

- *D-1 Windows:* The majority of windows are rectangular and have a vertical proportion, though different size and proportion from what is found in the context. The entrance and balconies have additional window types appropriate for the uses behind.
- *D-2 Fenestration:* The project appears to meet the 12% fenestration requirement and appropriately scaled to the massing of the building. Window variation follows programmatic needs inside. The side elevations include an appropriate level of fenestration given the scale and proportions of the facades.
- *D-3 Porches:* The balconies meet the size and integration requirement.

Principle E Balance – Met – The building façade composition creates a sense of balance with good use of overall and local symmetry and articulation of façade materials.

- *E-1 Window and Door Height:* The majority of window and door head heights align along a common horizontal datum.
- *E-2 Window and Door Alignment:* The majority of windows shall stack so that centerlines of windows are in vertical alignment.
- *E-3 Symmetricality:* Primary window compositions are arranged symmetrically around discernable vertical axes.

Principle F Articulation – Met – Articulation is provided through material texture, strong, overhanging cornice lines, changes in façade planes, and emphasized entry.

- *F-1 Articulation:* The design uses balconies, bays, a strong roof line, and the texture of the material to provide surface articulation and visual interest.
- *F-2 Window Types:* **More than two window types are used** – there is design justification for some of the variation (circulation, inactive uses). Windows are rectangular with vertical proportion but **type differs from the double-hung windows found in the surrounding residential context.**
- *F-3 Visual Cohesion:* The visual cohesion of the Hammond Street façade is good. The massing variation and material placement are harmonious with the intent to relate the building to the smaller scale residential context.
- *F-4 Delineation between Floors:* The balconies provide the most apparent floor delineation. The entry canopy also makes this distinction.
- *F-5 Porches, etc.:* **The entrance was revised to be similar to a porch – the recessed entry and extended canopy are incorporated into the design.** The balconies meet this standard – integrated into the overall massing and façade composition.
- *F-6 Main Entries:* **The character of the entrance was revised to reference residential characteristics – recessed entry, extended canopy/porch roof, special materials, side lights.** The main entry is emphasized with prominent placement facing the street.
- *F-7 Articulation Elements:* The rake of the roof meets the 6" requirement; no trim; offsets in the principal façade are at least 12", cornice line is pronounced.

Principle G Materials – Met – The material choices of clapboard and panel with brick foundation are contextual and fine-grained. Material placement is used to mitigate the scale of the building. **The material variation on the side facades was revised; material variation now used to accentuate massing variation and help mitigate scale impacts of the building.**

- *G-1 Materials:* The residential context is predominantly clapboards with occasional shingle or brick. The clapboard is a fine-grain materials in keeping with the context. Brick at the ground floor is logical and grounds the building.

- *G-2 Material and Façade Design:* The materials are appropriately placed according to their nature. The use of clapboard relates the building to the context. The natural wood material emphasizes the entrance. The material placement on Hammond Street helps break down the façade composition and delineate the circulation and entrance from the living spaces. **Material placement follows the rationale of the massing and façade composition.**
- *G-3 Chimneys:* Not applicable.
- *G-4 Window Types:* **More than two window types are used on the front façade** – the variation in most cases follows program (balcony doors, entrance windows). Detailing is consistent throughout.
- *G-5 Patios and Plazas:* n/a

(i) Two-family, Special Needs Independent Living Units, Multiple-Family, Lodging Houses, Bed and Breakfasts, and Emergency Shelters (red text denotes standards that are not met; bold text denotes updated comments):

Standard 1 – Met – The project design includes certain strategies of material placement, massing variation, and articulation to create proportions and scale that relate to the context of single and two-family homes. Simple roof forms are predominant throughout the East End context – a flat roof is appropriate here for a multi-family building made up of mostly one and a half and two and half story buildings with simple roof forms. Given the scale and massing of this new project is taller and wider than the residential context, **revisions include additional design elements to meet the standards around compatibility especially around scale, simplicity of materials, form, and articulation.**

Standard 2 – Met – The building sits close to the street with a slight front yard setback buffer consistent with residential architecture in this neighborhood. The established pattern on this street varies – some buildings are directly at the sidewalk while others allow a small front yard setback to accommodate stoops, bays, and landscaping for privacy. Given the scale of this proposed building, a setback creates a respectful relationship and is in keeping with the patterns in the context. The building pattern also varies – there is not a clear, established rhythm of building/drive. This project incorporates a side driveway which does respect the building placement patterns of the streetscape/neighborhood. **The entrance and building interface with the street was revised to become more residential in character. The artwork, branding were removed in favor of more subtle, residential characteristics such as an extended canopy similar to a porch structure, recessed entry, side lights.** This building does differ from the established context in the width of the building itself – this building is much wider than the residential buildings in the context. **The revisions incorporate scaling and articulation elements to relate to its residential context and the predominant character surrounding.**

Standard 3 – Met – The project provides balcony space for each dwelling unit.

Standard 4 – Met – The project has a high level of fenestration and the provision of balconies also contributes to residents’ access to light and air. Storage is provided within each unit.

Standard 5 – Met – The parking is structured and screened from view. The garage door is side-facing accessed from a side yard driveway.

Standard 6 – Not Applicable

10 Hammond Landscape Plan

Jeff Tarling <jst@portlandmaine.gov>

Fri, Mar 22, 2019 at 12:05 PM

To: Matthew Grooms <mgrooms@portlandmaine.gov>

Cc: Mike Tremblay <mtremblay@portlandmaine.gov>

Hi Matt -

The revised landscape plan is improved and meets the suggested topics from the earlier plan review comments.

We did have a question about the sidewalk street-tree opening and use of the NEENAH Tree Grate shown. The typical street tree & sidewalk requirement is to maintain an ADA sidewalk width between the back of sidewalk and the tree pit or planter. It looks like the one spec is from the NEENAH 'Boulevard Collection' # R-8811 which is 48" x 72" vs the NEENAH 'Avenue Collection' R-8810 which is 36" x 60" (see examples below).

The tree grate would not be required if the proper ADA sidewalk width can be created, we would be open for further discussion on that option. Location of the tree pit is dependent on the location of the underground utilities, trees should maintain adequate distance from underground electric, water, gas & sewer services.

Overall the proposed, revised landscape plan is acceptable with the condition that the sidewalk & street-tree details are refined to meet ADA standards acceptable to Public Works Engineering and the Planning Authority. I copied Mike T to see if he and PW had suggestions or comments.

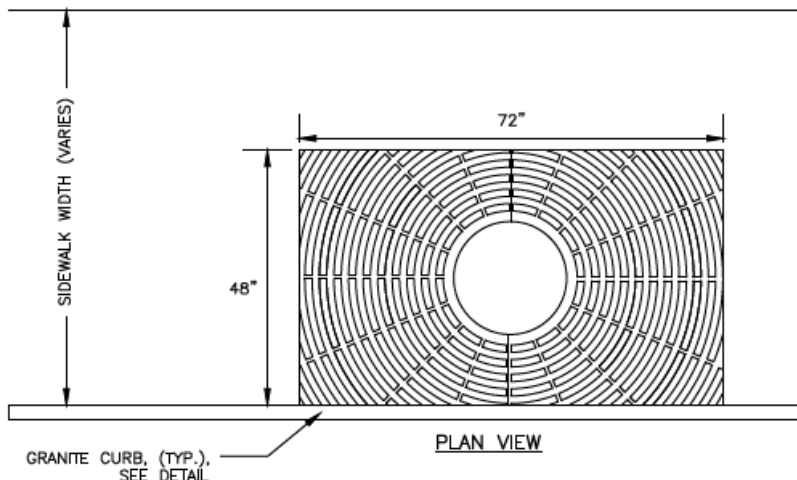
Thanks,

Jeff

This is from the Hammond Street project Landscape Spec sheet:

NOTES:

1. 16" EXPANDABLE TREE OPENING; .25" SLOT OPENINGS.
2. SIDEWALK MATERIAL PER PLAN.
3. WHEN INSTALLED IN A BRICK SIDEWALK, GRATE REQUIRES A FRAME TO BE INSTALLED TO HOLD GRATE IN PLACE.



EXPANDABLE TREE GRATE
NEENAH MODEL R-8810
NOT TO SCALE

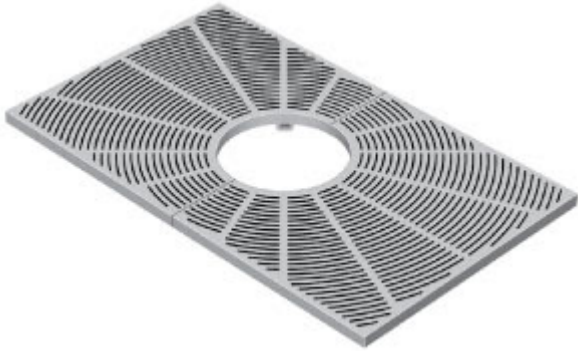
This is from the NEENAH Catalog:

Neenah Foundry | Avenue Collection <p></p>

R-8810

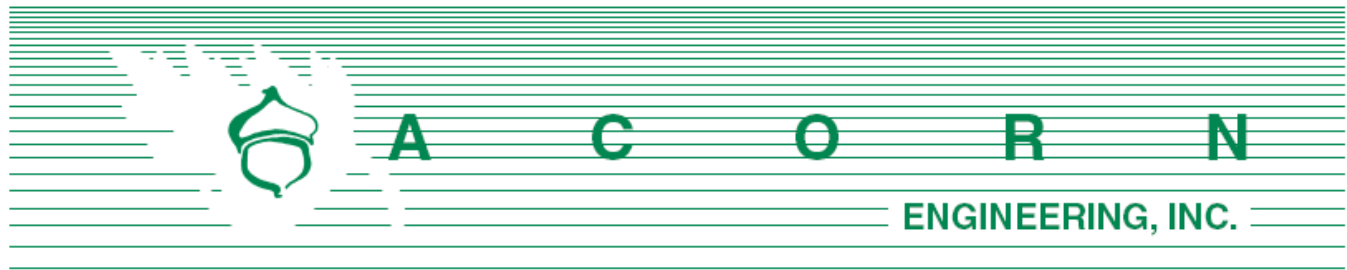
Avenue Collection Tree Grate

36" x 60"



Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities Department
Forestry & Horticulture
212 Canco Road
Portland, ME. 04103
(207) 808-5446
jst@portlandmaine.gov

On Fri, Mar 22, 2019 at 11:09 AM Matthew Grooms <mgrooms@portlandmaine.gov> wrote:
[Quoted text hidden]



Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

January 2, 2019

Subject: Level II Final Site Plan Application
Redevelopment of 121 Cassidy Point Drive

To Whom It May Concern:

On behalf of Project Management, Inc. (Owner's Representative) and 534 Danforth LLC (Owner), we are pleased to submit the accompanying submission material package related to the proposed redevelopment at 121 Cassidy Point Drive, located within the City's Waterfront Port Development Zone (WPDZ). The project proposes to demolish the existing, 2-story wood-framed building and construct a new, 4-story building primarily for "maker spaces" in which crafters and tradespeople would rent low impact bench spaces, as allowed within Sec. 14-319 Table, Group "Industrial" with a "C Use Category." The site will continue to facilitate "Marine Uses", with tenants such as SailMaine, as allowed within Sec. 14-319 Table, "Marine" Group with a "P/C¹ Use Category." The parcel is unique to the zone because it doesn't feature direct water access and as a result, will have no adverse impacts on Marine Use, per Sec. 14-318.5, as outlined in the following paragraph.

Under the Sec. 14-319 Table, the project complies with the "Industrial Use" Group with a "C Use Category." The project will facilitate the following occupant services: low impact industrial use including but not limited to, light manufacturing, manufacture of products, welding and metal fabrication, storage of materials incidental to proposed uses, carpentry, woodworking, cabinet shops, art and craft production and print making. The parcel doesn't feature direct water access and as a result, also meets Sec. 14-320 Conditional Use Standards. The proposed use will not impede or preclude existing or potential water-dependent development on other lots, and it will continue to allow for adequate access to the water, be compatible with water dependent and marine uses, operationally support one or more water dependent uses, and meets the performance and dimensional standards in Sec. 14-320.2.

Under Sec. 14-319, the project also complies with the "Marine Use" Group with a designed "P/C¹ Use Category." The proposed building height is less than the 60-foot maximum applicable height allowable under the permitted use dimensional standards, which results in a permittable use rather than conditional. The Marine Use designation comes from current and anticipated future uses by SailMaine that include marine repair and machine shops, marine retail and wholesale sales, boat storage facilities, and fabrication, storage and repair of fishing equipment.

The project has been designed with sustainable and low impact practices. This includes the use of roof-mounted solar panels in the building's construction. Stormwater treatment or storage is not required; however, the project anticipates the installation of a catch basin, foundation drains and

landscape plantings which will treat and slow the rate of stormwater runoff into the City's storm drain line.

We are pleased to submit this application as the proposed development will boost the opportunity for economic development within Portland by providing space for artisans and other tradespeople to create products. This submission package is intended to meet the City's Submission Requirements as outlined in the Level II Site Plan Application procedures.

The owner of 121 Cassidy Point Drive, 534 Danforth LLC, has compiled a team of leading professionals from the development, green building and construction industries to complete the design. If you have any questions regarding these materials or the completeness of the application materials, please contact us within the next five (5) days.

Sincerely,



William H. Savage, 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: Level II Final Site Plan Application & Checklist
- Section C: Right, Title, Interest
- Section D: Zoning Assessment
- Section E: Summary of Written Easements
- Section F: Request for Waivers
- 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: Fire Department Letter
- Section M: Wastewater Capacity Letter
- Section N: Lighting
- Section O: Architectural Design Narrative
- Section P: Utilities
- Section Q: Construction Management Plan
- Section R: Transportation Analysis
- Section S: Solid Waste Disposal

Drawings:

- Civil Site Plan Set
- Architectural Plan Set



Section B

**Level II Site Plan
Application & Checklist**



LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Please submit each document as a separate PDF file.

Please confirm by electronically checking the boxes to the left

General Application Documents

Checklist	Items to be Provided
Yes ☒ NA ☐ Plan ☐	PROJECT DESCRIPTION Cover Letter with detailed project description
Yes ☐ NA ☒ Plan ☐	COMPLETED CHECKLIST – LEVEL III APPLICATION
Yes ☒ NA ☐ Plan ☐	RIGHT, TITLE AND INTEREST Deeds, leases, or purchase and sales agreements
Yes ☐ NA ☒ Plan ☐	EVIDENCE OF STATE OR FEDERAL APPROVALS , if applicable Permits or letters of non-jurisdiction, if applicable
Yes ☒ NA ☐ Plan ☐	ZONING ASSESSMENT Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes ☒ NA ☐ Plan ☐	EXISTING &/OR PROPOSED EASEMENTS OR COVENANTS , if applicable Evidence of existing easements and any proposed easements
Yes ☐ NA ☒ Plan ☐	WAIVER REQUESTS Written request for waiver describing request and reason. Waiver Table
Yes ☒ NA ☐ Plan ☐	FINANCIAL CAPABILITY Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes ☒ NA ☐ Plan ☐	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

Provide assessment of compliance with standards and include supplemental documentation, as applicable.

Please submit each document as a separate PDF file.

TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ☒ ☐ ☐	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
Yes NA Plan ☒ ☐ ☐	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
Yes NA Plan ☒ ☐ ☐	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
Yes NA Plan ☐ ☒ ☐	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)
Yes NA Plan ☐ ☒ ☐	Public Transit (14-526 (a) 3), if applicable - Existing available transit services - Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ☒ ☐ ☐	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
Yes NA 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)
Yes NA Plan ☒ ☐ ☐	Snow Storage (14-526 (a) 4 d) Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ☐ ☒ ☐	Traffic Demand Management (TDM) (14-526 (a) 5), if applicable Develop TDM with Trip Reduction Targets and Strategies

ENVIRONMENTAL AND LANDSCAPE FEATURES			
Check list			Assess/Provide/Document:
Yes	NA	Plan	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	Plan	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	Plan	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	Plan	Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable Landscaped islands within parking areas (Technical Manual, Section 4)
Yes	NA	Plan	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			
Check list			Assess/Provide/Document:
Yes	NA	Plan	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			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	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	Plan	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	Plan	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			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	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	Plan	Shadows (14-526 (d) 2), if applicable Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
☒	☐	☐	
Yes	NA	Plan	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	Plan	View Corridors (14-526 (d) 4), if applicable Protection of designated view corridors (Portland Design Manual, Appendix 1)
☐	☒	☐	

Yes NA Plan ☐ ☒ ☐	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 Plan ☒ ☐ ☐	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 Plan ☐ ☒ ☐	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 Plan ☐ ☒ ☐	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 Plan ☒ ☐ ☐	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 Plan ☒ ☐ ☐	Construction Management Plan Construction Management Document and Plan

Level II and Level III Site Plan Checklist Please upload the following drawings with the listed details into e-Plan as separate pdfs.	
☒ RECENT BOUNDARY SURVEY (stamped by Maine Licensed Surveyor)	
	Must be in compliance with Technical Manual, Section 13
SITE PLAN(s) (stamped by Maine Licensed Engineer) including:	
☒ Existing Conditions • Approximate location of structures on abutting property • Topography • Locate water courses • Delineate wetlands • Zone lines ☒ Proposed Site Plan • Ground floor area, and grade elevations for all buildings ☒ Access, Circulation, and Parking • Streets and intersections adjacent to site , any proposed geometric modifications • Location, dimensions and materials of all existing and 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 • Existing and proposed transit infrastructure with dimensions/ engineering specifications • Location of vehicle and bicycle parking with dimensions and engineering specifications ☒ Site Considerations • Identify snow storage areas • Location of fire hydrants • Location of solid waste management facilities	
☒ UTILITY PLAN including:	
• Existing utilities on site and within public streets • 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 • Electric utility infrastructure	

☒	GRADING and DRAINAGE PLAN including:
	- Existing grades and drainage - Proposed grades - Proposed stormwater management meeting Technical Manual (Section 5) standards - Location and proposed alteration of a water course - Preservation or alteration of wetlands
☒	EROSION CONTROL
	Must be in compliance with Technical Manual, Section 5
☒	LANDSCAPE PLAN including:
	- Existing vegetation to be preserved and preservation measures - 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 & RENDERINGS including:
	- Exterior building elevations, color renderings, illustrations of all sides - Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening - Provide context drawings, if applicable (Design Manual, page 1) - Floor plans

Section C

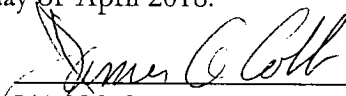
Right, Title, Interest

CORRECTIVE WARRANTY DEED

James O. Cobb of 19 Estate Drive Scarborough, Maine 04074 ("Grantor") for consideration paid grants to **P & D Real Corp.**, a Maine corporation with a mailing address of c/o Peter Speeches, 34 Whistler Landing, Scarborough, Maine 04074 ("Grantee"), with WARRANTY COVENANTS the land in Portland, Cumberland County, Maine described in Exhibit A attached hereto (the "Premises").

This deed is given to correct the legal description of the Premises set forth in a Warranty Deed from Grantor to Grantee dated January 27, 2000 which is recorded in the Cumberland County Registry of Deeds in **Book 15299, Page 96**.

Witness my hand and seal this 10th day of April 2018.



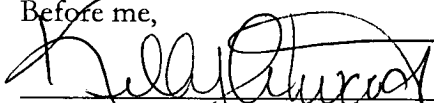
JAMES O. COBB

STATE OF MAINE
CUMBERLAND ss.

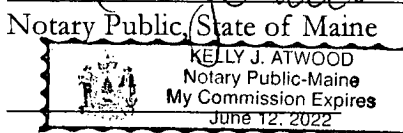
Dated: April 10, 2018

Then personally appeared the above-named James O. Cobb and acknowledged the foregoing instrument be his free act and deed.

Before me,



Notary Public, State of Maine



Printed Name of Notary: _____

My Commission Expires: _____

SEAL

EXHIBIT A

Those certain lots or parcels of land situated between the southerly side of Cassidy Point Road, formerly a portion of Danforth Street, and the northerly side of West Commercial Street in the City of Portland, County of Cumberland and State of Maine, being bounded and described as follows:

A certain lot or parcel of land with the buildings thereon, situated at the junction of Danforth and West Commercial Street, in the City of Portland and being the same premises conveyed to Wilfred E. Ricker by James A. Romito by Warranty Deed dated March 23, 1923, and recorded in the Registry for Cumberland County, Book 1131, Page 87, and containing approximately 22,377 square feet.

Excepting, however, from the above described parcel, so much thereof as was conveyed by said Wilfred E. Ricker to the State of Maine by deed dated April 26, 1938 and recorded in said Registry of Deeds in Book 1548, Page 90.

Also a certain other lot or parcel of land adjoining the above-described parcel on its northeasterly side and being the second parcel described in a Warranty Deed from Peter J. Hollywood to Wilfred E. Ricker dated February 28, 1931, and recorded in said Registry of Deeds in Book 1368, Page 230

Being the same premises conveyed to James O. Cobb by deed from George R. McAllister and Leo B. Groder dated August 27, 1973 and recorded in said Registry of Deeds in Book 3450, Page 52.

Excepting, however, from the above described premises so much thereof as was conveyed by James O. Cobb to Cianbro Corporation by deed dated July 1, 1974, and recorded in said Registry of Deeds in Book 3567, Page 293. Also excepting so much thereof as was conveyed by James O. Cobb to the Portland Water District by deed dated April 29, 1977, and recorded in said Registry of Deeds in Book 4006, Page 304.

The above described premises are subject to an easement given by James O. Cobb to Central Maine Power Company, dated September 23, 1974, and recorded in said Registry of Deeds in Book 3602, Page 117.

Also another certain lot or parcel of land together with the buildings thereon, if any, situated in Portland in said County and State bounded and described as follows:

Beginning on the southerly side of Danforth Street in said Portland at a stake marking the most northeasterly corner of a lot conveyed by George R. McAllister to said James O. Cobb August 27, 1973, recorded in the Cumberland County Registry of Deeds in Book 3450, Page 52; thence in an easterly direction along said Danforth Street a distance of 23.5 feet to another stake; thence in a general southeasterly direction along a course parallel to the most easterly boundary of said lot conveyed by said McAllister et al a distance of 102 feet, more or less, to a stake; thence in a westerly direction in a line parallel to West Commercial street 24.55 feet, more or less to said land conveyed by McAllister et al; thence in a northwesterly direction along said line of land conveyed by McAllister et al to said Cobb to the point of beginning.

The herein conveyance is subject to the following:

A sewer easement held by the Portland Water District as described in a Notice of Condemnation dated May 13, 1977 and recorded at said Registry of Deeds in Book 4015, Page 224.

An easement to Central Maine Power Company dated September 23, 1974, and recorded at said Registry of Deeds in Book 3602, Page 117.

A Department of Environmental Protection Commissioner's Certification of Completion of Response Actions under a Partial Voluntary Response Action Plan dated March 1, 1995 and recorded at said Registry of Deeds in Book 11839, Page 110.

An Indenture Agreement entered into between Portland Water District and James O. Cobb dated February 4, 1999 recorded at Book 14540, Page 279.

This Deed is given to correct a scrivener's error wherein a portion of the description was inadvertently omitted from the third parcel contained in a deed from James O. Cobb to P & D Real Corp. dated January 27, 2000 and recorded in the Cumberland County Registry of Deeds in Book 15299, Page 96, and to convey any and all interest I have in the above described premises.

Received
Recorded Register of Deeds
Apr 12, 2018 01:05:56P
Cumberland County
Nancy A. Lane



ZONING ANALYSIS Relevant Zone(s) WPDZ

All Projects:

	Required	Proposed
Lot Size	5 AC	25,041 SF
Area Per Dwelling Unit	N/A	N/A
Minimum Street Frontage	N/A	N/A
Front Yard Minimum	N/A	N/A
Front Yard Maximum	N/A	N/A
Rear Yard	N/A	N/A
Yard Right	N/A	N/A
Yard Left	N/A	N/A
Side Street Setback	N/A	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	100%	80.7%
Minimum Lot Coverage	N/A	N/A
Maximum Height	60 FT	44.27 FT
Open Space	N/A	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	12	12
Loading Bays	1	1
Other 1		
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size	N/A	N/A
Minimum Lot Area per Dwelling	N/A	N/A
Maximum # Units per Building	N/A	N/A
Maximum Building Length	N/A	N/A
Maximum Accessory Building Length	N/A	N/A
Minimum Setbacks	N/A	N/A
Minimum Building Separation	N/A	N/A
Minimum Open Space	N/A	N/A

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density	N/A	N/A	N/A
Height	N/A	N/A	N/A
Setback Reduction	N/A	N/A	N/A
Recreation Space	N/A	N/A	N/A
Maximum Accessory Building Length	N/A	N/A	N/A
Minimum Setbacks	N/A	N/A	N/A
Minimum Building Separation	N/A	N/A	N/A
Minimum Open Space	N/A	N/A	N/A
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Section E

Summary of Written
Easements

E. Summary of Written Easements

- Existing Easements – The Existing Conditions Plan developed by Owen Haskell, Inc. identified two existing easements:
 - A Central Maine Power easement within the existing property that contains a 115kV underground transmission line. The description of this easement is further detailed on Page 92 of Attachment D: Right, Title and Interest.
 - A Portland Water District sewer easement and Notice of Condemnation that abuts property owned by Central Maine Power, Book 21684, Page 106. The description of this easement and Notice of Condemnation are further detailed on Page 92 of Attachment D: Right, Title and Interest.
- Proposed Easements – There are no proposed easements at this time.



Section F

Request for Waivers

F. Request for Waivers

The following is a list of known project-related waivers:

1. Driveway Design

- a. A waiver is requested for Industrial two-way driveway design width standards, per Technical Manual Section 1.7.2.4. There are five existing driveway curb cuts, three of which exceed the standard 30-foot Industrial two-way width. The proposed conditions reduce the number of curb cuts to four, with three to exceed the standard 30-foot Industrial two-way width. Given the site geometry, in order to maintain access and circulation routes that avoid conflicts with existing turning movements and traffic flows and provide safe and reasonable access and internal circulation for the entire site for all users, the driveways must be greater than 30-feet wide at the property line. Anticipated vehicles include, but are not limited to, hydraulic boat trailers, flatbed trucks, light commercial vans/trucks and passenger vehicles, see Circulation Exhibits 5 and 6 for example truck turning templates. In relation to abutting parcels, the proposed driveway widths are equal to or less than those in proximity of the site, as shown on Exhibit 7: Site Plan Overview.
- b. A waiver is requested for driveway spacing, per Technical Manual Section 1.7.2.7. Proposed driveways on site meet the minimum separation for a 25mph or less zone, but do not meet the 100-foot minimum separation in relation to the curb cuts at the Cianbro Office Building and former Advantage Gases & Tools.
- c. A waiver is required for the number of driveways, per Technical Manual Section 1.7.2.8. There is a proposed reduction from five existing driveways to four proposed driveways for ingress and egress onto the site. The number of proposed driveways is designed to provide safe and reasonable access and internal circulation for the site as well as facilitate proposed sidewalks. See Circulation Exhibits 5 and 6 for circulation routes of anticipated traffic, and Site Plan, Sheet C-10.

2. Sidewalk Construction and Materials

- a. A waiver is requested for the absence of sidewalks along the southerly edge of the parcel due to the lack of sidewalks along the entire southerly portion of Cassidy Point Drive to join.
- b. A waiver is requested for 4" vertical granite curb, rather than the typical 7", at the location designed on the Site Plan, Sheet C-10. Mountable 4" vertical granite curbs are proposed on northern Cassidy Point at the concrete sidewalk located between curb cuts to allow access for infrequent oversized deliveries unable to maneuver without crossing curbing. This design is intended to allow the addition



of a concrete sidewalk and limit curb cut widths while still allowing oversized vehicular access and circulation to the overhead doors, loading docks and on-site parking.



Section G

Financial Capacity



December 3, 2018

RE: 534 Danforth LLC - Cyrus Y. Hagge
121 Cassidy Point, Portland, ME

To Whom It May Concern:

Cyrus Hagge has been a Gorham Savings Bank customer since 2011. All business and personal obligations have been handled in a satisfactory manner.

Based on the information provided to the Bank to date, Mr. Hagge appears to have the financial capacity for this real estate transaction; however, all loan approvals are subject to underwriting and conditions which are property specific.

We look forward to assisting Mr. Hagge with financing for this construction project.

If you have any further questions, I can be reached at 207-222-1495.

Sincerely,

Julie L. Viola
Business Banking Lending Manager
Vice President

Section H

Technical Capacity

H. Technical Capacity

Acorn Engineering, Inc. has successfully permitted and engineered over 15 level II/III projects in Portland in the past 5 years, many of which have been constructed. Some examples include:

- Eldredge Lumber Expansion
- 127 York Street – Harborview Townhomes
- Munjoy Heights
- 89 Anderson St. – East Bayside Lofts
- 667 Congress St – The Hiawatha
- 121 Washington Ave Redevelopment
- 31 Fore Street Condominiums

Additionally, the rest of the team is outlined below.

- Project Management, Inc. (Owner – 534 Danforth LLC., Cyrus Hagge) – Cyrus Hagge is a Portland based developer and philanthropist. He has been a vital part of the community while serving on a variety of boards, such as Casco Bay Lines, Portland Planning Board, Waterfront Development and Master Planning Committee and others.
- Dextrous Creative (Architect – Tracie Reed) – Tracie Reed is a Maine Licensed, LEED AP and NCARB certified architect based in Portland. Her work encompasses a wide variety of commercial, residential and construction builds. In addition, she performs field work for High Performance Building Model Assessments in accordance with ASHRAE Level 2 Energy Audits guidelines, with the aim of reducing energy and water consumption. Tracie has received awards from the American Institute of Architects and has appeared in publications for the Journal of Green Building and Young Architect Forum Connection.



Section I

Conformity with Land Use
Ordinance

I. Conformity with Land Use Ordinance

The following outline is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-526 as well as the City of Portland Technical Manual, Chapter 14 Standards for Local Site Location of Development Review.

OVERVIEW

The proposed 4-story building has been designed to conform to City standards as well as improve upon existing non-conformities. This project conforms with Portland's Land Use Ordinance Section 14-526 as demonstrated in the following narrative.

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

- a. The site is located at 121 Cassidy Point Drive which is a major intermodal transportation center with direct access to Route 1 and I-295. The proposed use will reduce the amount of traffic in this area, transitioning from an auto and truck repair business with an estimated 250 weekday trips to approximately 60.
 - (i) Reviewed by Tom Errico, Traffic Engineer with T.Y. Lin and presented to Planning Board on 7/10/18

2. Access and Circulation:

a. Site Access and Circulation:

This project conforms with the design standards of Section 14-526 as demonstrated in the following narrative:

- (i) The development will provide safe access and internal circulation for both pedestrians and vehicles as seen on the Site Plan, see Sheet C-20.
- (ii) Points of access and egress have been located to avoid conflicts with existing turning movements and traffic flows.
- (iii) The site does not feature drive up services as mentioned in this requirement.

b. Loading and Servicing:

- (i) The site will have minimal loading for the establishment. Any loading will be accommodated by the loading dock located along the north-facing portion of Cassidy Point Drive. Dumpster placement has been located to facilitate the



approach, loading and departure of a trash truck.

c. Sidewalks:

- (i) This project seeks a sidewalk modification from the Planning Board. The existing concrete and brick walkways are in a degenerative state and have served as vehicular parking spaces, based upon Google Earth imagery dating back to 1997. Acorn believes that sidewalks should be waived for the following reasons, pursuant to Sec. 14-506:
 - a. There is no reasonable expectation for pedestrian usage coming from, going to and traversing the site.
 - b. A safe alternative-walking route is reasonable and safely available. Street lights are located on the opposite side of Cassidy Point Drive from project site, which provide a safer route for the few pedestrians that walk along Cassidy Point Drive.

3. Public Transit Access:

- a. Not applicable.
- b. Not applicable.
- c. Not applicable.

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

- (i) The proposed project requires 12 off-street parking spaces. This is derived from Sec 14-332 (l), for business/manufacturing/industrial building not catering to retail trade and with floor area over 3,000 square feet with one parking space for every 1,000 square feet of floor area. The 50% allowable reduction for the Waterfront Port Development Zone (WPDZ) from Sec. 14-332.1 (j) has also been applied. The proposed building with approximately 17,500 square feet of floor area, existing metal building with approximately 5,236 square feet of floor area and a 50% parking reduction results in a total of 12 required spaces. The proposed plan suggests three interior and nine exterior parking spaces for a total of twelve spaces, one of which is an ADA van-accessible space located on the northerly side of the proposed building.
- (ii) A parking study is not required.
- (iii) The proposed parking count of 12 spaces meets the required 12 spaces after applying the 50% allowable reduction for the WPDZ.
- (iv) There are no proposed parking stalls or aisles.



- (v) There is no proposed parking lot.
- b. Location and Required Number of Bicycle Parking Spaces:
 - (i) The site plan includes one proposed bicycle rack (to accommodate four bicycles) meeting and exceeding the required three spaces per City standards.
- c. Motorcycles and Scooter Parking:
 - (i) There are no areas designated for motorcycles or scooters.
- d. Snow Storage:

Locations for snow storage are indicated on Site Plan, see Sheet C-20.

- 5. Transportation Demand Management (TDM):
 - a. A TDM plan is not required for this project.
 - b. A TDM plan is not required for this project.
 - c. A TDM plan is not required for this project.

(b) Environmental Quality Standards

- 1. Preservation of Significant Natural Features:
 - a. Not applicable.
 - b. Not applicable.
 - c. A waiver is not requested.
- 2. Landscaping and Landscaping Preservation:
 - a. Landscape Preservation:
 - (i) No existing trees or plants at project site.
 - (ii) There are no trees >10" dbh within any required setbacks.
 - (iii) It is not anticipated that the project will necessitate any tree protection.
 - (iv) A waiver is not requested.
 - (v) Not applicable.
 - b. Site Landscaping:
 - (i) Landscaped Buffers:



- a. Solid waste is anticipated to be stored in the designated dumpster enclosure located between the two buildings on site.
- b. Not applicable.
- c. Not applicable.
- d. Not applicable.

(ii) Parking Lot Landscaping:

- a. Not applicable
- b. Not applicable
- c. Not applicable.
- d. Not applicable.
- e. Not applicable.

(iii) Street Trees:

- a. Per Section 4.6.3 – Landscape and Landscape Preservation Standards of the Technical Manual for Commercial, Industrial and Institutional Development, a total of fifteen street trees are required. The Amelanchier spp. (Serviceberry) & Carpinus Caroliniana (American Hornbeam) were chosen from the City of Portland Recommended Tree List as native street trees to be planted on the parcel property or within the public right-of-way. The Juniperus Virginiana (Eastern Red Cedar) was also chosen as a native tree to plant within the parcel property to meet the required tree count. The proposed tree placement is provided on private property within 10 feet of the property line along the street frontage, due to the abundance of utility lines, easements and overhead lines within the public right-of-way. See Sheet L-1, Landscape Plan, located within the Civil Plan Set.
- b. Not applicable.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

- (i) The site drainage will not be directed to flow or pond onto adjacent lots. A new catch basin and improved site grading is proposed on the southerly side of Cassidy Point, to capture stormwater runoff previously uncaptured.
- (ii) Any stormwater that flows onto adjacent lots will not exceed the pre-development



flows.

- (iii) The runoff from the site into the City property is anticipated to remain the same as the pre-development condition.
- (iv) Not applicable.
- b. 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 K and L, the Stormwater Management and Erosion & Sedimentation Control Plans, respectively, for more information.
- c. The project is not located in a watershed of an urban impaired stream as listed by the MEDEP.
- d. Not applicable.
- e. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The project will be serviced by a public wastewater system.
- f. The development will provide for adequate and sanitary disposal of sewage in accordance with Section 2 of the Technical Manual.

(c) Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans:
 - a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure.
 - b. Not applicable.
2. Public Safety and Fire Prevention:
 - a. The site has been designed to promote safe and inviting public access.
 - b. Adequate emergency access has been provided to allow an ambulance and fire truck to access 3 sides of the building.
 - c. The nearest fire hydrant is located approximately 79.8' from the proposed southwesterly building corner.
3. Availability and Adequate Capacity of Public Utilities:
 - a. Public utilities in the vicinity of the site have capacity to serve the project. Ability to Serve letters have been sent to the respective companies. Responses received thus far have been included in the submission.



- b. The electrical service will be restrung using overhead lines.
- c. The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual.
- d. The project will be served by connecting to the public sewer system within Cassidy Point Drive.
- e. The sanitary sewer collection system meets all applicable sections of the Technical Manual. The stormwater management system is designed to meet the basic standards of Chapter 500. Treatment is not required; however, some stormwater will be treated through the addition of landscaping features that do not currently exist.
- f. The facility is expected to store solid waste on site within the enclosed dumpsters located between the two buildings and will be handled by a private company.

(d) Site Design Standards

- 1. Massing, Ventilation and Wind Impact:
 - a. Not applicable.
 - b. Not applicable.
 - c. Not applicable.
- 2. Shadows:
 - a. The shadows created by the building will not influence public open spaces.
- 3. Snow and Ice Loading:
 - a. The structures will not distribute snow and ice onto adjacent properties.
- 4. View Corridors:
 - a. The project site is located outside the Downtown Vision View Corridor Protection Plan.
- 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 designated landmarks, historic district, or historic landscape district.
 - c. There are no known archaeological resources on the site.



6. Exterior Lighting:

a. Site Lighting.

(i) Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual. A photometric plan designed by Swaney Lighting Associates, Inc is included within the Civil Plan Set.

(ii) Not applicable.

b. Architectural and Specialty Lighting.

(i) No architectural or specialty lighting is proposed.

(ii) No up-lighting is proposed.

c. Street Lighting.

(i) No new street lights are proposed.

7. Noise and Vibration:

a. No HVAC system is currently proposed.

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) Existing sign to remain untouched.

(iii) Not applicable.

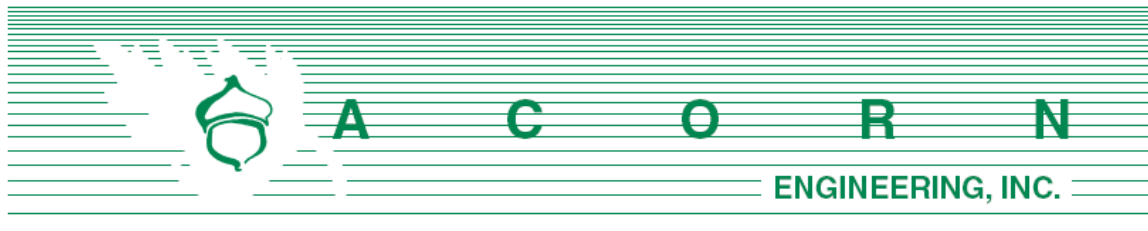
9. Zoning Related Design Standards:

a. The project has been designed to meet the standards set forth in the WPDZ zone. Please refer to Sheet C-10, Site Plan, located within the Civil Plan Set for more information on Space & Bulk Standards.



Section J

Stormwater Management Report



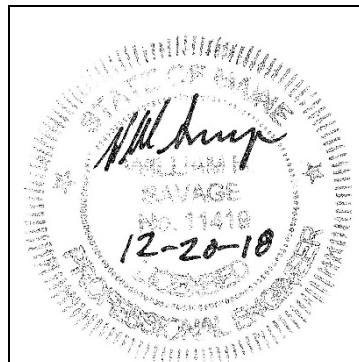
J. STORMWATER MANAGEMENT **REPORT**

Prepared For:

**Project Management, Inc.
225 Commercial Street, Suite 502
Portland, Maine 04101**

Prepared By:

**Acorn Engineering, Inc.
65 Hanover Street
Portland, Maine 04101**



January 2019

INTRODUCTION

Acorn Engineering, Inc. has been retained by Project Management, Inc. to provide civil engineering services for the proposed redevelopment of 121 Cassidy Point Drive. The project proposes to demolish the existing, 2-story wood-framed building and construct a new, 4-story building designed as “maker space” in which crafters and tradespeople can rent within a low impact industrial conditional use, as specified in Sec. 14-319 of the City of Portland Chapter 14 – Land Use.

A stormwater analysis has been prepared to demonstrate that the project will meet the following requirements of the City of Portland (the City):

- City of Portland Land Use Ordinance Chapter 14, Article V. Site Plan Section 14-523. Required Approvals and Applicability (E) Level II Site Plan Review.
- City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management.

The proposed project is expected to decrease the impervious area by approximately 682 square feet. The increased landscaping will help retain and filter stormwater on site, reducing the demand on the City’s storm system.

EXISTING CONDITIONS

The proposed project is located at 121 Cassidy Point Drive. A boundary plan has been prepared by Owen Haskell, Inc. of Falmouth, Maine dated October 29, 2018.

The site and its abutters reside within the Waterfront Port Development Zone. The majority (approximately 83.4%) of the site is impervious in the form of gravel, pavement or roof cover.

The project team is not aware of the presence of any existing significant natural features located on the site. Given the urban setting, and existing impervious surfaces, a field inventory of significant natural feature was not undertaken. The project is not located within a watershed classified as an Urban Impaired Stream.

PROPOSED DEVELOPMENT

The proposed project is a four-story building with a small industrial/light manufacturing designation. Pedestrian access to the site will be provided via concrete walkways on the northern side of Cassidy Point Drive. The development will be served by Portland Water District, Department of Public Works (sewer and storm), Unitil (natural gas), CMP (electric), Charter (cable), and Consolidated (telephone). Sewer, storm and natural gas utilities will be routed underground. Telephone, cable and electric will be routed on overhead lines.

Due to the creation of less than 1,000 square feet of impervious area, stormwater management features for quality control that meet Maine DEP’s Chapter 500 General Standards are not required and have not been designed. However, the proposed vegetation will provide quality and quantity control where none existed previously.



Furthermore, the total impervious area proposed is expected to decrease the impervious area by approximately 682 square feet, which is well under the 5,000 square-foot increase threshold. Please refer to the attached exhibits that display the existing and proposed impervious covers.

In addition to the vegetation, stormwater will be managed by implementing a series of foundation drains, catch basins, and storm drains. Please refer to Sheet C-30 for more information.

SOILS

Onsite soil information has been gathered from the following resources:

- United States Department of Agriculture (USDA) Web Soil Survey (WSS)
- Explorations and Geotechnical Engineering Services Report prepared by S.W. Cole Engineering, Inc.

As a Level II, Site Plan Application, the proposed project isn't required to submit soil surveys, per "Section 7 Soil Survey" of the City of Portland Technical Manual. However, a geotechnical investigation was performed at the site on 10/3/18 by S.W. Cole Engineering, Inc.

The area within and surrounding the project includes soil types listed in Table 1 below. The susceptibility of soils to erosion is indicated on a relative "Kf" scale of values over a range of 0.02 to 0.69. Higher "Kf" values indicate more erodible soils. The Kf value listed was derived from the Revised Universal Soil Loss Equation Version 2 (RUSLE2), identified in the USDA's WSS (Attachment 3). The Soil Types were derived from the Explorations and Geotechnical Engineering Services Report (Attachment 4).

Table 1		
Soils Type	Depth (feet)	Kf Value
Fill	1 - 5	0.2
Marine Sands	20 – 30	-

The "Kf" value for the soil, listed above, shows a low susceptibility to erosion; however, the implementation of the proposed Erosion & Sedimentation Measures by the contractor will be of the utmost importance given the steep slopes on site.

Conclusion

The proposed redevelopment was designed to meet the requirements set forth in "Section 5 -Portland Stormwater Management Standards" in the City of Portland Technical Manual. The proposed project as designed is anticipated to largely maintain existing drainage patterns while decreasing the overall volume and flowrate of stormwater runoff through the addition of foundation drains, vegetation, etc. The project will not cause flooding or erosion problems within the subject site, abutters' sites, nor within the right-of-way.



Attachments

Exhibit 1: Existing Impervious Cover

Exhibit 2: Proposed Impervious Cover

Exhibit 3: United States Department of Agriculture Web Soil Survey

Exhibit 4: Explorations and Geotechnical Engineering Services Report

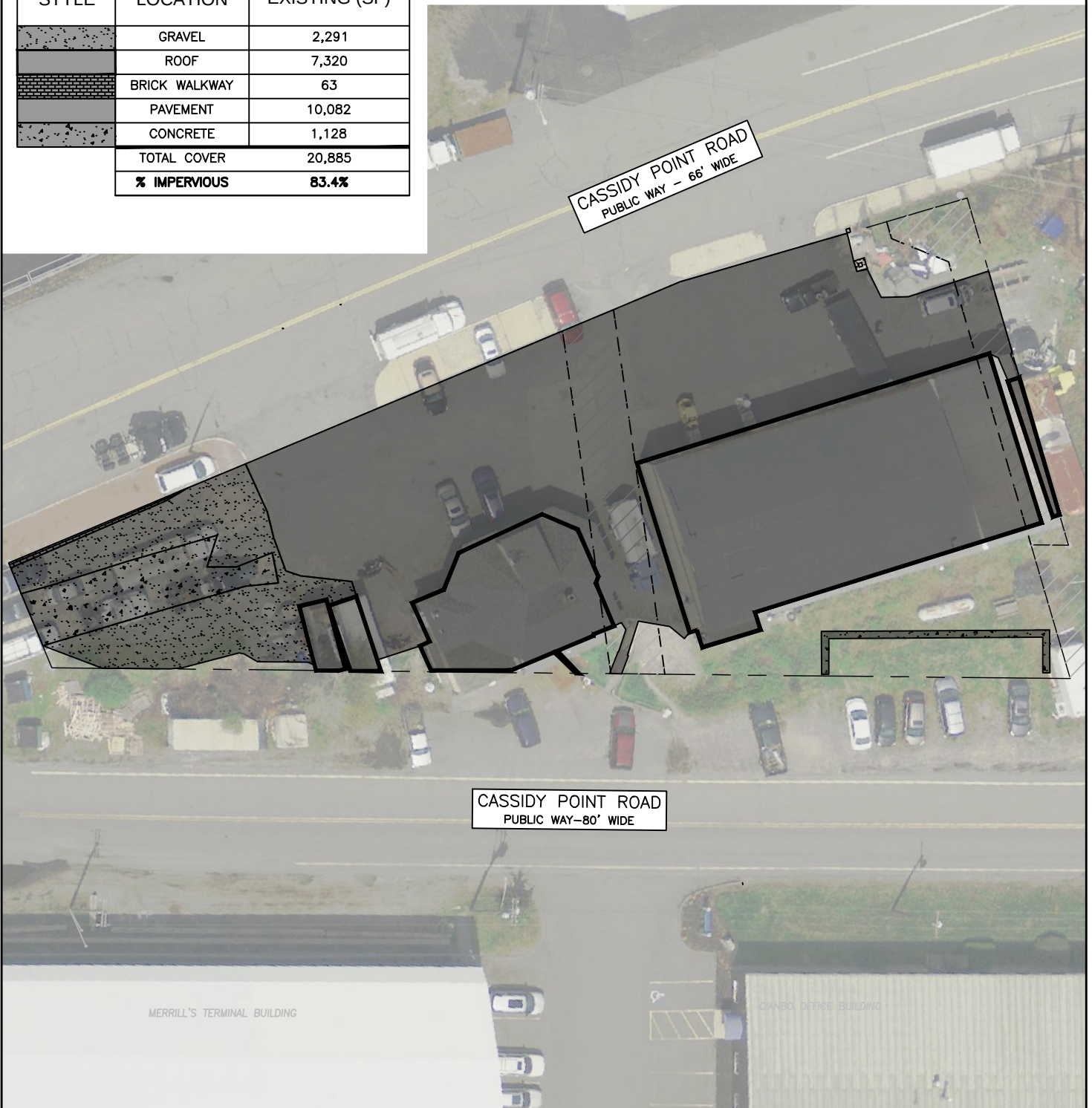


Exhibit 1

Existing Impervious Cover

IMPERVIOUS COVER WITHIN PROPERTY

STYLE	LOCATION	EXISTING (SF)
	GRAVEL	2,291
	ROOF	7,320
	BRICK WALKWAY	63
	PAVEMENT	10,082
	CONCRETE	1,128
TOTAL COVER		20,885
% IMPERVIOUS		83.4%



SCALE: 1" = 40'

PERMIT LEVEL
NOT FOR
CONSTRUCTION

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: 1113_CIVIL
DATE: 12/5/18
JN: 1113
SCALE: AS NOTED
DESIGN BY: FRT
DRAWN BY: FRT
CHECKED BY: WHS



DRAWING NAME:
EXISTING IMPERVIOUS COVER
PROJECT NAME:
121 CASSIDY POINT DRIVE
CLIENT:
PROJECT MANAGEMENT, INC.

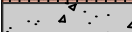
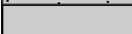
ISSUED FOR	BY
LEVEL II SITE PLAN	DATE WHS
LEVEL II SITE PLAN	12/13/18
	WHS
	1/2/19

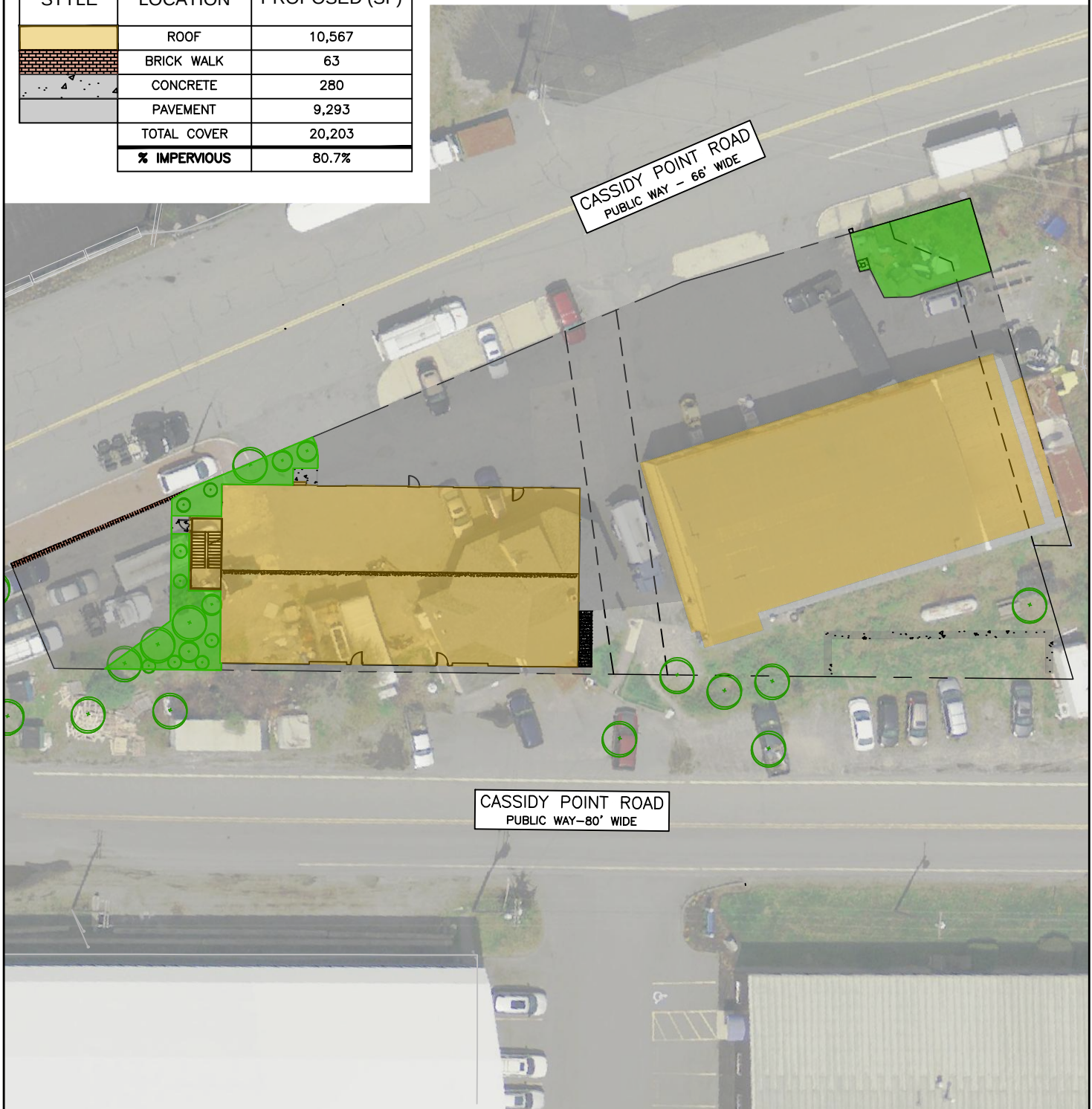
DRAWING NO.
EX-1

Exhibit 2

Proposed Impervious Cover

IMPERVIOUS COVER WITHIN PROPERTY

STYLE	LOCATION	PROPOSED (SF)
	ROOF	10,567
	BRICK WALK	63
	CONCRETE	280
	PAVEMENT	9,293
	TOTAL COVER	20,203
	% IMPERVIOUS	80.7%



SCALE: 1" = 40'

PERMIT LEVEL
NOT FOR
CONSTRUCTION

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: 1113_CIVIL
DATE: 12/5/18
JN: 1113
SCALE: AS NOTED
DESIGN BY: FRT
DRAWN BY: FRT
CHECKED BY: WHS



DRAWING NAME:
PROPOSED IMPERVIOUS COVER

PROJECT NAME:
121 CASSIDY POINT DRIVE

CLIENT:
PROJECT MANAGEMENT, INC.

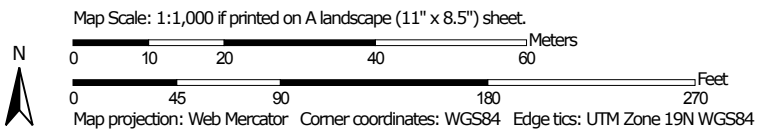
ISSUED FOR	BY DATE
LEVEL II SITE PLAN	WHS 12/13/18
LEVEL II SITE PLAN	WHS 1/2/19

DRAWING NO.
EX-2

Exhibit 3

**United States Department
of Agriculture Web Soil
Survey**

Soil Map—Cumberland County and Part of Oxford County, Maine



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 15, Sep 6, 2018

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

Date(s) aerial images were photographed: Data not available.

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cu	Cut and fill land	2.3	100.0%
Totals for Area of Interest		2.3	100.0%

Cumberland County and Part of Oxford County, Maine

Cu—Cut and fill land

Map Unit Composition

Cut and fill land: 90 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cut And Fill Land

Typical profile

H1 - 0 to 65 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 35 percent

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately low to very high (0.06 to 20.00 in/hr)

Depth to water table: About 24 to 42 inches

Available water storage in profile: Moderate (about 6.6 inches)

Data Source Information

Soil Survey Area: Cumberland County and Part of Oxford County, Maine

Survey Area Data: Version 15, Sep 6, 2018

RUSLE2 Related Attributes

This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the mineral surface horizon. Missing surface data may indicate the presence of an organic surface layer. .

Report—RUSLE2 Related Attributes

Soil properties and interpretations for erosion runoff calculations. The surface mineral horizon properties are displayed. Organic surface horizons are not displayed.

RUSLE2 Related Attributes—Cumberland County and Part of Oxford County, Maine								
Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
Cu—Cut and fill land								
Cut and fill land	90	—	—	.20	—	68.2	23.8	8.0

Data Source Information

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 15, Sep 6, 2018

Exhibit 4

**Explorations and
Geotechnical Engineering
Services Report**

REPORT

18-0851 S

October 3, 2018

Explorations and Geotechnical Engineering Services

Proposed Pre-Engineered Metal Building
121 Cassidy Point Road
Portland, Maine

Prepared For:
Project Management, Inc.
Attention: Cyrus Y. Hagge
225 Commercial Street, Suite 502
Portland, Maine 04101

Prepared By:
S. W. Cole Engineering, Inc.
286 Portland Road
Gray, Maine 04039
T: 207-657-2866



- *Geotechnical Engineering*
- *Construction Materials Testing and Special Inspections*
- *GeoEnvironmental Services*
- *Test Boring Explorations*

www.swcole.com

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Appendix A	Limitations
Appendix B	Figures
Appendix C	Exploration Logs & Key
Appendix D	Laboratory Test Results

18-0851 S

October 3, 2018

Project Management, Inc.
Attention: Cyrus Y. Hagge
225 Commercial Street, Suite 502
Portland, Maine 04101

Subject: Explorations and Geotechnical Engineering Services
Proposed Pre-Engineered Metal Building
121 Cassidy Point Road
Portland, Maine

Dear Cyrus:

In accordance with our Proposal, dated July 2, 2018, we have performed subsurface explorations for the subject project. This report summarizes our findings and geotechnical recommendations and its contents are subject to the limitations set forth in Appendix A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to obtain subsurface information at the site in order to develop geotechnical recommendations relative to foundations and earthwork associated with the proposed construction. Our scope of services included one day of test boring explorations, soils laboratory testing, a geotechnical analysis of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site is located at 121 Cassidy Point Road in Portland, Maine and is currently occupied by a wood-framed commercial building and paved and unpaved parking and vehicle storage areas. The existing building has a walk-out basement on the south side. The majority of the site to the north is relatively flat, but slopes down steeply about 9 feet in elevation towards the road to the south. An underground electric utility

easement bounds the eastern side of the proposed redevelopment area. We understand past site uses included a gas filling station with underground tanks and an on-site septic and leachfield system.

We understand development plans call for razing the existing commercial building and constructing a new pre-engineered metal building. We understand the building will occupy a plan area of 8,000 square feet and will have a walk-out basement level cut into the existing slope on the southern half. We anticipate an upper finish floor elevation of approximately 25 feet (project datum) and finish basement elevation of approximately 17 feet, requiring tapered cuts approaching 9 feet. Proposed structural loads are not available at this time. We understand the building will be utilized for artist studios and light commercial space.

Proposed and existing site features are shown on the “Exploration Location Plan” attached in Appendix B.

2.0 EXPLORATION AND TESTING

2.1 Explorations

Five test borings (B-101 through B-105) were made at the site on August 21, 2018 by S. W. Cole Explorations, LLC. The exploration locations were selected and established in the field by S. W. Cole Engineering, Inc. (S.W.COLE) using measurements from existing site features. The approximate exploration locations are shown on the “Exploration Location Plan” attached in Appendix B. Logs of the explorations and a key to the notes and symbols used on the logs are attached in Appendix C. The elevations shown on the logs were estimated based on topographic information shown on the “Exploration Location Plan”.

2.2 Testing

The test borings were drilled using hollow-stem auger boring methods. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) methods. Pocket Penetrometer Tests (PPT) were performed where stiffer cohesive soils were encountered. SPT blow counts and PPT results are shown on the logs.

Soil samples obtained from the explorations were returned to our laboratory for further classification and testing. Moisture content test results are noted on the logs. Grain size analysis results are attached in Appendix D.

3.0 SUBSURFACE CONDITIONS

3.1 Soil and Bedrock

The borings encountered a subsurface profile generally consisting of fill overlying marine sands, overlying glaciomarine silts and clays and relic bay mud. The principal soils encountered at the explorations are summarized below. Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information.

Fill: The borings encountered about 1.5 to 5 feet of fill consisting of loose to medium dense, brown, gray and black sand with varying portions of silt and gravel.

Marine Sands: Underlying the fill, the borings encountered a marine deposit of loose to medium dense, brown and gray-brown sand with varying portions of silt and gravel to depths of 20 to 30 feet.

Glaciomarine Silts and Clays: Underlying the marine sands, the borings encountered stiff to medium, gray, silty clay and clayey silt at depths varying from approximately 20 to 30 feet below the ground surface (approximate elevations 5 to -5 feet). Borings B-102 through B-105 were terminated in this deposit at depths of 22 to 32 feet.

Relic Bay Mud: Boring B-101 encountered relic bay mud consisting of stiff to medium, gray and black, clay and silt and clayey silt with sand layers at a depth of approximately 25 feet. The boring was terminated in the relic bay mud at a depth of 27 feet.

3.2 Groundwater

Saturated soils were encountered at depths varying from 4 to 15 feet (approximate elevation 10 to 12 feet) at the borings, being shallower on the lower (south) side of the site. Groundwater is likely tidally influenced and likely becomes perched on the relatively impervious silts and clays encountered at the test borings. Long term groundwater information is not available. It should be anticipated that groundwater levels will fluctuate,

particularly in response to periods of snowmelt and precipitation, as well as changes in site use.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General Findings

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principle geotechnical considerations include:

- Spread footing foundations, an upper level slab-on-grade, and a basement floor slab bearing on properly prepared subgrades, as recommended herein, appear suitable for the proposed building.
- The existing fills, organics, pavement, utilities, foundations, and structures are unsuitable for support of the proposed building foundations and floor slabs and should be removed and replaced beneath the entire building footprint. Backfilled prior tank graves and septic systems should also be removed and replaced beneath the entire building footprint.
- Groundwater will be encountered during construction, particularly for excavation of the basement level foundations. We recommend the basement level footings bear on a layer of Crushed Stone wrapped in geotextile fabric to improve bearing conditions, as well as to provide a working mat for foundation construction and construction dewatering. The contractor should be prepared to sump and pump to dewater excavations.
- The contractor should be prepared to shore excavations and underpin as needed to support and preclude undermining the adjacent road, structures, underground electric duct bank and other utilities.
- Earthwork and grading activities should occur during drier, non-freezing weather of Spring, Summer and Fall. Excavation of bearing surfaces should be completed with a smooth-edged bucket to lessen subgrade disturbance.

4.2 Site and Subgrade Preparation

We recommend that site preparation begin with the construction of an erosion control system to protect adjacent drainage ways and areas outside the construction limits. Surficial pavement, organics, roots and topsoil should be completely removed from areas of proposed construction. As much vegetation and pavement as possible should remain outside the construction areas to lessen the potential for erosion and site disturbance.

As discussed, the site has prior and current development. We understand past site uses included a gas filling station with underground tanks and a septic and leachfield system. Fills were encountered at the borings extending to depths varying from about 1.5 to 5 feet. Existing fills, tank backfill, septic system backfill, organics, pavement, utilities, foundations, structures and tanks must be completely removed from beneath the proposed building. The extent of removal should extend 1 foot laterally outward from outside edge of perimeter footings for every 1-foot of excavation depth (1H:1V bearing splay) below perimeter footing bearing elevation.

We recommend that final cut to foundation and slab subgrades be made using a smooth-edged bucket. Footings should be underlain by at least 12 inches of Crushed Stone wrapped in non-woven geotextile filter fabric, such as Mirafi 180N or equivalent. The upper (northern) slab-on-grade should be underlain with at least 12 inches of compacted Structural Fill. The lower (southern) basement floor slab should be underlain with at least 8 inches of compacted Crushed Stone

Overexcavations above ground water should be backfilled with compacted Structural Fill. Overexcavations below ground water should be backfilled with Compacted Crushed Stone wrapped in geotextile filter fabric, such as Mirafi 180N, or Underdrain Sand.

4.3 Excavation and Dewatering

Excavation work will generally encounter existing fills and marine sands. Care must be exercised during construction to limit disturbance of the bearing soils. Earthwork and grading activities should ideally occur during drier, non-freezing weather of Spring, Summer and Fall. Rubber tired construction equipment should not operate directly on saturated subgrade soils. Final cuts to subgrade should be performed with a smooth-edged bucket to help reduce strength loss from soil disturbance.

Groundwater will be encountered during construction, particularly for excavation of the basement level and southern perimeter foundations. Sumping and pumping dewatering techniques should be adequate to control groundwater in excavations. The fabric wrapped Crushed Stone layer recommended below footings will provide a media from which to sump and pump for construction dewatering. Controlling the water levels to at least one foot below planned excavation depths will help stabilize subgrades during construction.

Excavations must be properly shored or sloped in accordance with OSHA Regulations to prevent sloughing and caving of the sidewalls during construction. Care must be taken to preclude undermining adjacent roads, structures, underground electric duct bank and other utilities. The design and planning of excavations, excavation support systems, and dewatering is the responsibility of the contractor.

4.4 Foundations

We recommend the proposed buildings be supported on spread footings founded on at least 12-inches of Crushed Stone fully wrapped in non-woven geotextile fabric, such as Mirafi 180N, bearing on properly prepared subgrades as recommended herein. For foundations bearing on properly prepared subgrades, we recommend the following geotechnical parameters for design consideration:

Geotechnical Parameters for Spread Footings and Foundation Walls	
Design Frost Depth (100 year AFI)	4.5 feet
Net Allowable Soil Bearing Pressure	2.0 ksf
Base Friction Factor	0.35
Total Unit Weight of Backfill	125 pcf
At-Rest Lateral Earth Pressure Coefficient	0.5
Internal Friction Angle of Backfill	30°
Seismic Soil Site Class	E (IBC 2015)
Estimated Total Settlement	1-inch
Differential Settlement	½-inch

4.5 Foundation Drainage

We recommend an underdrain system be installed on the outside edge of the geotextile fabric wrapped Crushed Stone layer recommended below the southern perimeter wall footing of the basement level, where footings are expected to be deepest. The underdrain pipe should consist of 4-inch diameter, perforated SDR-35 foundation drain pipe bedded in

Crushed Stone and wrapped in non-woven geotextile fabric. The underdrain pipe must have a positive gravity outlet protected from freezing, clogging and backflow. Surface grades should be sloped away from the building for positive surface water drainage. General underdrain details are illustrated on the “Foundation Detail Sketch” attached in Appendix B.

4.6 Slab-On-Grade and Basement Slab

On-grade floor slabs in heated areas may be designed using a subgrade reaction modulus of 100 pci (pounds per cubic inch). The upper (northern) on-grade floor slab should be underlain by at least 12-inches of compacted Structural Fill placed over properly prepared subgrades. The lower (southern) basement floor slab should be underlain with at least 8-inches of Crushed Stone. The structural engineer or concrete consultant must design steel reinforcing and joint spacing appropriate to slab thickness and function.

We recommend a sub-slab vapor retarder particularly in areas of the building where the concrete slab will be covered with an impermeable surface treatment or floor covering that may be sensitive to moisture vapors. The vapor retarder must have a permeance that is less than the floor cover or surface treatment that is applied to the slab. The vapor retarder must have sufficient durability to withstand direct contact with the sub-slab base material and construction activity. The vapor retarder material should be placed according to the manufacturer’s recommended method, including the taping and lapping of all joints and wall connections. The architect and/or flooring consultant should select the vapor retarder products compatible with flooring and adhesive materials.

The floor slab should be appropriately cured using moisture retention methods after casting. Typical floor slab curing methods should be used for at least 7 days. The architect or flooring consultant should assign curing methods consistent with current applicable American Concrete Institute (ACI) procedures with consideration of curing method compatibility to proposed surface treatments, flooring and adhesive materials.

4.7 Entrance Slabs and Sidewalks

Entrance slabs and sidewalks adjacent to the building must be designed to reduce the effects of differential frost action between adjacent pavement, doorways, and entrances. We recommend that non-frost susceptible Structural Fill be provided to a depth of at least 4.5 feet below the top of entrance slabs. This thickness of Structural Fill should

extend the full width of the entrance slab and outward at least 4.5 feet, thereafter transitioning up to the bottom of the adjacent sidewalk or pavement gravels at a 3H:1V or flatter slope. General details of this frost transition zone are shown on the “Foundation Detail Sketch” attached in Appendix B.

4.8 Fill, Backfill and Compaction

We recommend the following fill and backfill materials; recycled products must also be tested in accordance with applicable environmental regulations and approved by a qualified environmental consultant:

Structural Fill: Fill to raise grades beneath the building, backfill for overexcavations above groundwater, backfill for foundations, slab-on-grade base material and material below exterior entrance slabs should be clean, non-frost susceptible sand and gravel meeting the gradation requirements for Structural Fill as given below:

Structural Fill	
Sieve Size	Percent Finer by Weight
4 inch	100
3 inch	90 to 100
¾ inch	25 to 90
No. 40	0 to 30
No. 200	0 to 6

Crushed Stone: Crushed Stone, used beneath footings, as backfill for overexcavations below groundwater, and base material beneath the basement floor slab and for underdrain aggregate should be washed ¾-inch crushed stone meeting the requirements of 2014 MaineDOT Standard Specification 703.22 Underdrain Backfill Material Type C.

Underdrain Sand: As an alternative to geotextile wrapped Crushed Stone, backfill for overexcavations beneath the groundwater table may consist clean, free-draining sand meeting the requirements of 2014 MaineDOT Standard Specification 703.22 Underdrain Backfill Material Type B.

Reuse of Site Soils: The on-site soils are unsuitable for reuse in building areas, but may be suitable for reuse as Common Borrow in paved and landscape areas, provided they are at a compactable moisture content at the time of reuse.

Placement and Compaction: Fill should be placed in horizontal lifts and compacted such that the desired density is achieved throughout the lift thickness with 3 to 5 passes of the compaction equipment. Loose lift thicknesses for grading, fill and backfill activities should not exceed 12 inches. We recommend that fill and backfill in building and paved areas be compacted to at least 95 percent of its maximum dry density as determined by ASTM D-1557. Crushed Stone should be compacted with 3 to 5 passes of a vibratory plate compactor having a static weight of at least 500 pounds.

4.9 Weather Considerations

Construction activity should be limited during wet and freezing weather and the site soils may require drying or thawing before construction activities may continue. The contractor should anticipate the need for water to temper fills in order to facilitate compaction during dry weather. If construction takes place during cold weather, subgrades, foundations and floor slabs must be protected during freezing conditions. Concrete and fill must not be placed on frozen soil; and once placed, the concrete and soil beneath the structure must be protected from freezing.

4.10 Design Review and Construction Testing

S.W.COLE should be retained to review the construction documents prior to bidding to determine that our earthwork and foundation recommendations have been properly interpreted and implemented.

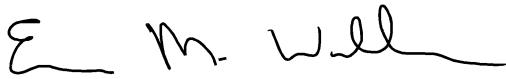
A soils and concrete testing program should be implemented during construction to observe compliance with the design concepts, plans, and specifications. S.W.COLE is available to observe earthwork activities, the preparation of foundation bearing surfaces and pavement subgrades, as well as to provide testing and IBC Special Inspection services for soils, concrete, steel, spray-applied fireproofing, structural masonry and asphalt construction materials.

5.0 CLOSURE

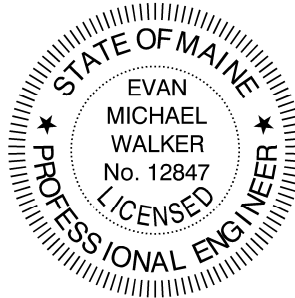
It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you during the construction phase of the project.

Sincerely,

S. W. Cole Engineering, Inc.



Evan M. Walker, P.E.
Geotechnical Engineer



EMW:tjb

APPENDIX A

Limitations

This report has been prepared for the exclusive use of Project Management, Inc. for specific application to the proposed Pre-Engineered Metal Building at 121 Cassidy Point Road in Portland, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

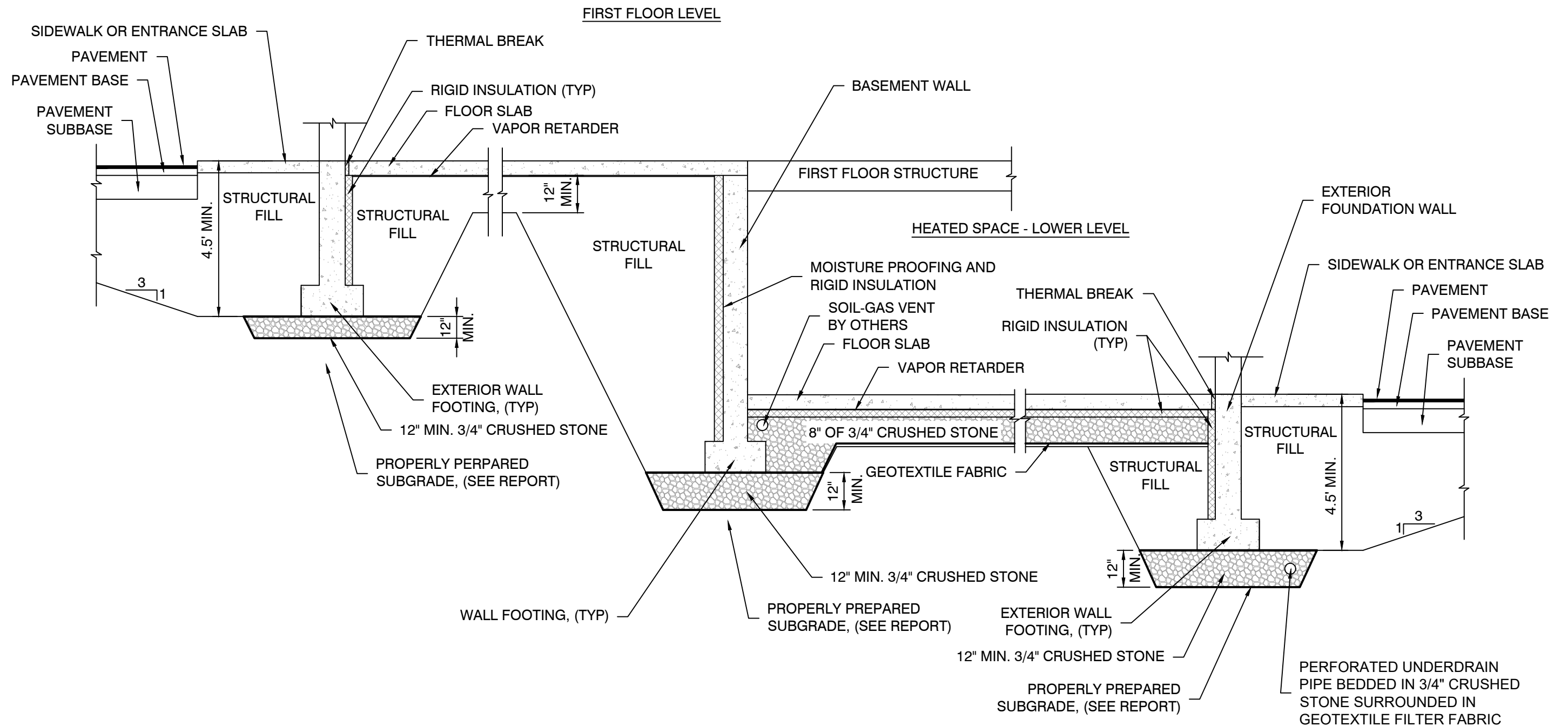
S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.

APPENDIX B

Figures

R:\2018\18-0851\CAD\Drawings\18-0851 FDS.dwg, 10/1/2018 11:35:14 AM, 1:1, CEM, S. W. Cole Engineering, Inc.



NOTE:

1. UNDERDRAIN INSTALLATION AND MATERIAL GRADATION RECOMMENDATIONS ARE CONTAINED WITHIN THIS REPORT.
2. DETAIL IS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY, NOT FOR CONSTRUCTION.



S.W. COLE
ENGINEERING, INC.

PROJECT MANAGEMENT, INC.

FOUNDATION DETAIL SKETCH
PROPOSED PRE-ENGINEERED METAL BUILDING
121 CASSIDY POINT ROAD
PORTLAND, MAINE

Job No.:	18-0851	Scale:	Not to Scale
Date :	10/01/2018	Sheet:	2

APPENDIX C

Exploration Logs and Key



BORING LOG

CLIENT: Project Management, Inc.
 PROJECT: Proposed Pre-Engineered Metal Building
 LOCATION: 121 Cassidy Point Drive, Portland, Maine

BORING NO.: **B-101**
 SHEET: 1 of 1
 PROJECT NO. 18-0851
 DATE START: 8/21/2018
 DATE FINISH: 8/21/2018

Drilling Information

LOCATION: See Exploration Location Plan ELEVATION (FT): 22' +/- TOTAL DEPTH (FT): 27.0 LOGGED BY: Evan Walker
 DRILLING CO.: S. W. Cole Explorations, LLC DRILLER: Jeff Lee DRILLING METHOD: Hollow Stem Auger
 RIG TYPE: Track Mounted CME 850 AUGER ID/OD: 2 1/4 in / 5 5/8 in SAMPLER: Standard Split-Spoon
 HAMMER TYPE: Automatic HAMMER WEIGHT (lbs): 140 CASING ID/OD: N/A /N/A CORE BARREL:
 HAMMER EFFICIENCY FACTOR: 0.75 HAMMER DROP (inch): 30
 WATER LEVEL DEPTHS (ft): 10 ft Soils Damp Below 5', Saturated Below 10' +/-

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
 Water Level
 At time of Drilling
 At Completion of Drilling
 After Drilling
 D = Split Spoon Sample
 U = Thin Walled Tube Sample
 R = Rock Core Sample
 V = Field Vane Shear
 Pen. = Penetration Length
 Rec. = Recovery Length
 bpf = Blows per Foot
 mpf = Minute per Foot
 WOR = Weight of Rods
 WOH = Weight of Hammer
 RQD = Rock Quality Designation
 PID = Photoionization Detector
 S_v = Field Vane Shear Strength, kips/sq.ft.
 q_u = Unconfined Compressive Strength, kips/sq.ft.
 N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD				
20 											

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B-101**



BORING LOG

CLIENT: Project Management, Inc.
PROJECT: Proposed Pre-Engineered Metal Building
LOCATION: 121 Cassidy Point Drive, Portland, Maine

BORING NO.: **B-102**
SHEET: 1 of 1
PROJECT NO. 18-0851
DATE START: 8/21/2018
DATE FINISH: 8/21/2018

Drilling Information

LOCATION: See Exploration Location Plan ELEVATION (FT): 25.5' +/- TOTAL DEPTH (FT): 22.0 LOGGED BY: Evan Walker
DRILLING CO.: S. W. Cole Explorations, LLC DRILLER: Jeff Lee DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 AUGER ID/OD: 2 1/4 in / 5 5/8 in SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic HAMMER WEIGHT (lbs): 140 CASING ID/OD: N/A /N/A CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.75 HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): 13 ft Soils Damp to Moist Below 6', Saturated Below 13' +/-

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level
At time of Drilling
At Completion of Drilling
After Drilling
D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear
Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot
WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.
q_u = Unconfined Compressive Strength, kips/sq.ft.
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD				
25			1D		0.5-2.5	24/10	8-4-3-3		0.2 Asphalt Pavement Loose, brown, gravelly SAND, some silt (Fill)		
			2D		2.5-4.5	24/8	3-4-6-6		2.5 Loose to medium dense, brown and orange-brown, silty fine to medium SAND (Possible Fill)		
20	5		3D		5-7	24/18	11-21- 17-14		4.0 Dense, brown, SAND and GRAVEL, some silt		
15	10		4D		10-12	24/18	5-7-8-8		10.0 Medium dense to loose, brown, fine to medium SAND, some silt Some gravel 11.5' to 12'		
10	15		5D		15-17	24/18	3-7-8-6				
5	20		6D		20-22	24/18	3-4-2-2		21.0 Stiff, gray, silty CLAY		

Bottom of Exploration at 22.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B-102**



BORING LOG

BORING NO.: **B-103**
SHEET: 1 of 1
PROJECT NO.: 18-0851
DATE START: 8/21/2018
DATE FINISH: 8/21/2018

CLIENT: Project Management, Inc.
PROJECT: Proposed Pre-Engineered Metal Building
LOCATION: 121 Cassidy Point Drive, Portland, Maine

Drilling Information

LOCATION: See Exploration Location Plan ELEVATION (FT): 22' +/- TOTAL DEPTH (FT): 27.0 LOGGED BY: Evan Walker
DRILLING CO.: S. W. Cole Explorations, LLC DRILLER: Jeff Lee DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 AUGER ID/OD: 2 1/4 in / 5 5/8 in SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic HAMMER WEIGHT (lbs): 140 CASING ID/OD: N/A /N/A CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.75 HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): 10 ft Soils Moist Below 5', Saturated Below 10' +/-

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level
At time of Drilling
At Completion of Drilling
After Drilling
D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear
Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot
WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.
q_u = Unconfined Compressive Strength, kips/sq.ft.
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD				
20			1D	X	0-2	24/16	2-2-3-7		Vegetation / Loose dark brown and black silty SAND (Fill)		
			2D	X	2-4	24/18	8-10-10-10		Medium dense, light brown with orange staining, silty fine to medium SAND		
5			3D	X	5-7	24/14	4-7-10-10		Medium dense, rust-brown, fine to medium SAND, some silt, trace gravel		
15			4D	X	10-12	24/15	5-7-10-10		Medium dense, brown, fine to medium SAND, trace silt		
10			5D	X	15-17	24/20	4-4-3-2		Loose, gray-brown, silty fine to medium SAND, with frequent clayey silt seams and layers		
5			6D	X	20-22	24/24	WOH-1	q _p =0.5 to 1 ksf	Loose, layered, gray clayey SILT, silty CLAY, and silty SAND		
20			7D	X	25-27	24/20	WOH-1-2				
0											
25											
5											

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B-103**



BORING LOG

CLIENT: Project Management, Inc.
PROJECT: Proposed Pre-Engineered Metal Building
LOCATION: 121 Cassidy Point Drive, Portland, Maine

BORING NO.: **B-104**
SHEET: 1 of 1
PROJECT NO. 18-0851
DATE START: 8/21/2018
DATE FINISH: 8/21/2018

Drilling Information

LOCATION: See Exploration Location Plan ELEVATION (FT): 16.5' +/- TOTAL DEPTH (FT): 27.0 LOGGED BY: Evan Walker
DRILLING CO.: S. W. Cole Explorations, LLC DRILLER: Jeff Lee DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 AUGER ID/OD: 2 1/4 in / 5 5/8 in SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic HAMMER WEIGHT (lbs): 140 CASING ID/OD: N/A /N/A CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.75 HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): 4.5 ft Soils Moist to Wet Below 2.5', Saturated Below 4.5' +/-

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level
At time of Drilling
At Completion of Drilling
After Drilling
D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear
Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot
WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.
q_u = Unconfined Compressive Strength, kips/sq.ft.
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD				
15			1D		0.5-2.5	24/4	4-3-3-2		0.2 Asphalt Pavement		
									Loose, gray-brown, silty gravelly SAND (Fill)		
	5		2D		2.5-4.5	24/4	4-5-5-5		2.0 Loose to medium dense, dark gray and black, silty SAND, some gravel (Fill)		
10			3D		5-7	24/14	2-3-3-5		5.0 Loose, gray-brown, fine to medium SAND, some silt		
	10		4D		10-12	24/18	2-3-3-4		10.0 Loose, gray-brown SAND, trace silt, trace gravel		
5											
	15		5D		15-17	24/18	6-6-5-6		15.0 Medium dense, brown, SAND, trace silt, trace gravel, with occasional clayey silt seams		
0									Gravelly Layer at 18		
	20		6D		20-22	24/20	3-2-2-3		20.0 Loose, brown, fine to medium SAND, trace silt		
-5											
	25		7D		25-27	24/22	4-5-5-5		24.0 Stiff, gray, silty CLAY, with occasional sand seams		
-10											

Bottom of Exploration at 27.0 feet

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B-104**



BORING LOG

CLIENT: Project Management, Inc.
PROJECT: Proposed Pre-Engineered Metal Building
LOCATION: 121 Cassidy Point Drive, Portland, Maine

BORING NO.: **B-105**
SHEET: 1 of 1
PROJECT NO. 18-0851
DATE START: 8/21/2018
DATE FINISH: 8/21/2018

Drilling Information

LOCATION: See Exploration Location Plan ELEVATION (FT): 25' +/- TOTAL DEPTH (FT): 32.0 LOGGED BY: Evan Walker
DRILLING CO.: S. W. Cole Explorations, LLC DRILLER: Jeff Lee DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Track Mounted CME 850 AUGER ID/OD: 2 1/4 in / 5 5/8 in SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic HAMMER WEIGHT (lbs): 140 CASING ID/OD: N/A /N/A CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.75 HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): 15 ft Soils Damp Below 5', Saturated Below 15' +/-

GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level
At time of Drilling
At Completion of Drilling
After Drilling
D = Split Spoon Sample
U = Thin Walled Tube Sample
R = Rock Core Sample
V = Field Vane Shear
Pen. = Penetration Length
Rec. = Recovery Length
bpf = Blows per Foot
mpf = Minute per Foot
WOR = Weight of Rods
WOH = Weight of Hammer
RQD = Rock Quality Designation
PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.
q_u = Unconfined Compressive Strength, kips/sq.ft.
N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION					Graphic Log	Sample Description & Classification	H ₂ O Depth	Remarks
			Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD				
20 <											

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: **B-105**

KEY TO THE NOTES & SYMBOLS

Test Boring and Test Pit Explorations

All stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q _u	-	unconfined compressive strength, kips/sq. ft. - laboratory test
S _v	-	field vane shear strength, kips/sq. ft.
L _v	-	lab vane shear strength, kips/sq. ft.
q _p	-	unconfined compressive strength, kips/sq. ft. – pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W _L	-	liquid limit - Atterberg test
W _P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass.
γ _T	-	total soil weight
γ _B	-	buoyant soil weight

Description of Proportions:

Trace:	0 to 5%
Some:	5 to 12%
"Y"	12 to 35%
And	35+%

Description of Stratified Soils

Parting:	0 to 1/16" thickness
Seam:	1/16" to 1/2" thickness
Layer:	1/2" to 12" thickness
Varved:	Alternating seams or layers
Occasional:	one or less per foot of thickness
Frequent:	more than one per foot of thickness

REFUSAL: Test Boring Explorations - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: Test Pit Explorations - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

APPENDIX D

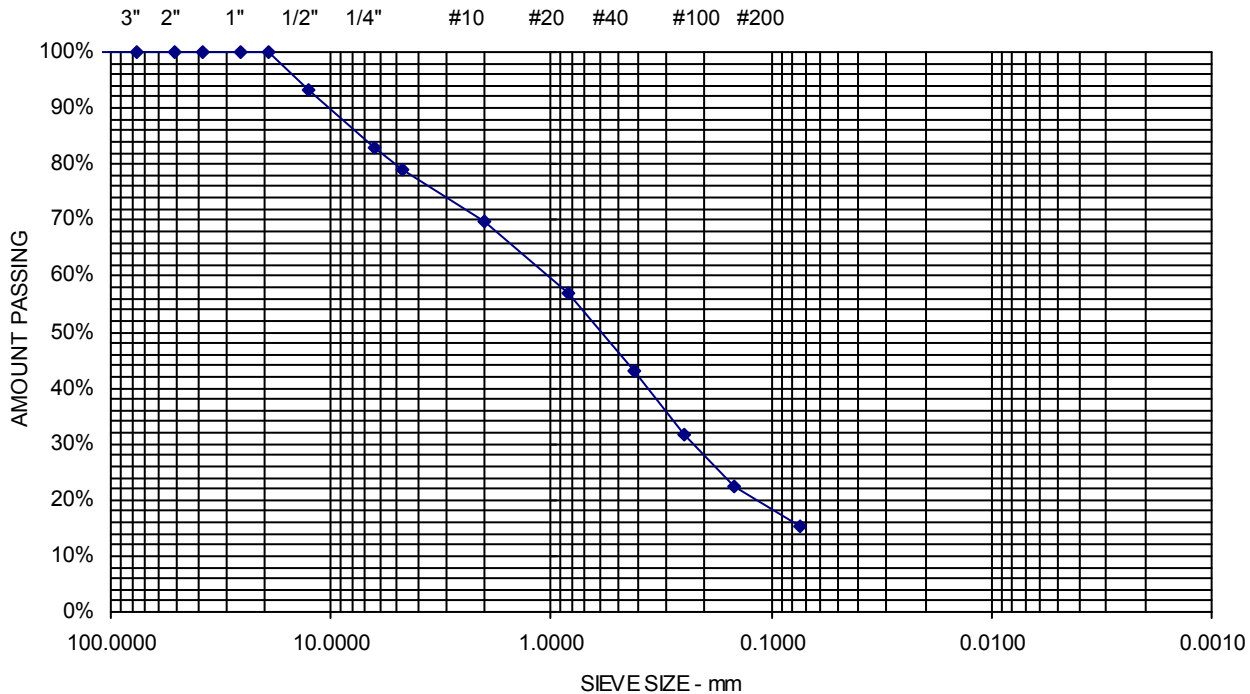
Laboratory Test Results

Project Name PORTLAND ME - PROPOSED PRE-ENGINEERED METAL BUILDING -
GEOTECHNICAL ENGINEERING SERVICES
Client PROJECT MANAGEMENT, INC.

Project Number 18-0851
Lab ID 24433G
Date Received 9/28/2018
Date Completed 10/2/2018
Tested By PAUL SHAFFER

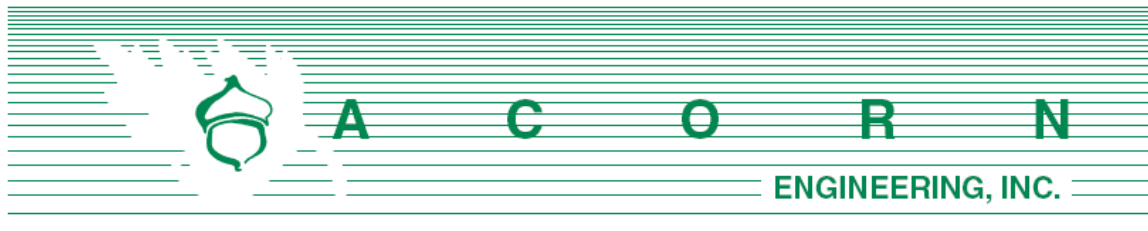
Material Source **B102 1D .5-2.5'**

<u>STANDARD DESIGNATION (mm/μm)</u>	<u>SIEVE SIZE</u>	<u>AMOUNT PASSING (%)</u>	
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	100	
12.5 mm	1/2"	93	
6.3 mm	1/4"	83	
4.75 mm	No. 4	79	20.9% Gravel
2.00 mm	No. 10	70	
850 μm	No. 20	57	
425 μm	No. 40	43	63.9% Sand
250 μm	No. 60	32	
150 μm	No. 100	23	
75 μm	No. 200	15.1	15.1% Fines



Section K

Erosion & Sedimentation
Control Report



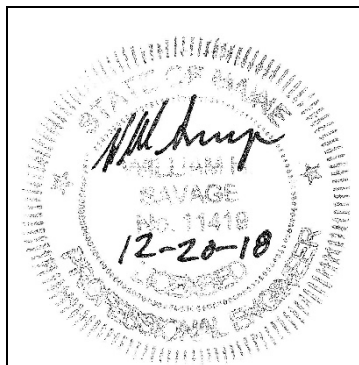
K. EROSION & SEDIMENTATION **CONTROL REPORT**

Prepared For:

**Project Management, Inc.
225 Commercial Street, Suite 502
Portland, Maine 04101**

Prepared By:

**Acorn Engineering, Inc.
65 Hanover Street
Portland, Maine 04101**



January 2019

INTRODUCTION

Acorn Engineering, Inc. has been retained by Project Management, Inc. to provide civil engineering services for the proposed redevelopment of 121 Cassidy Point Drive. The project proposes to demolish the existing, 2-story wood-framed building and construct a new, 4-story building designed as “maker space” in which crafters and tradespeople can rent within a low impact industrial conditional use, as specified in Sec. 14-319 of the City of Portland Chapter 14 – Land Use.

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 is located at 121 Cassidy Point Drive. A boundary plan has been prepared by Owen Haskell, Inc. of Falmouth, Maine dated October 29, 2018.

The site and its abutters reside within the Waterfront Port Development Zone. The majority (approximately 83.4%) of the site is impervious in the form of gravel, pavement or roof cover.

1.1 Existing Soils

Onsite soil information has been gathered from the following resources:

- United States Department of Agriculture (USDA) Web Soil Survey (WSS)
- Explorations and Geotechnical Engineering Services Report prepared by S.W. Cole Engineering, Inc.

As a Level II, Site Plan Application, the proposed project isn’t required to submit soil surveys, per “Section 7 Soil Survey” of the City of Portland Technical Manual. However, a geotechnical investigation was performed at the site on 10/3/18 by S.W. Cole Engineering, Inc.

The area within and surrounding the project includes soil types listed in Table 1 below. The susceptibility of soils to erosion is indicated on a relative “Kf” scale of values over a range of 0.02 to 0.69. Higher “Kf” values indicate more erodible soils. The Kf value listed was derived from the Revised Universal Soil Loss Equation Version 2 (RUSLE2), identified in the USDA’s WSS (Attachment 3). The Soil Types were derived from the Explorations and Geotechnical Engineering Services Report (Attachment 4).

Table 1		
Soils Type	Depth (feet)	Kf Value
Fill	1 - 5	0.2
Marine Sands	20 – 30	-



The “Kf” value for the soil, listed above, shows a low susceptibility to erosion; however, the implementation of the proposed Erosion & Sedimentation Measures by the contractor will be of the utmost importance given the steep slopes on site.

1.2 Existing Erosion Problems

There are no signs of erosion.

1.3 Critical Areas

Critical areas that would require special attention during construction include, but are not limited to, the existing structures, the drainage system within Cassidy Point Drive and slope stabilization located within the vicinity during earthwork and foundation 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 aware that the propane tank previously located on the southern side of the single-story metal building has been removed 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 sediment tracking 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 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 Cassidy Point Drive shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize tracking material offsite and onto 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 $\frac{1}{2}$ the design height.
- 2.1.9 Dust control shall be accomplished using either water, calcium chloride, stone, or an approved MDEP product. Dust control measures 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 foundation drains 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 Erosion and Sedimentation Control Plan is included within the plan set.

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion 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 disturbance areas to locations 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. 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 no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving 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 steeper than 15%. If a slope to be vegetated is not stabilized by September 1st, then one of the following actions 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 be inspected in the manner as described.

6.1 Sediment Barriers

Hay bale barriers, silt fences and filter berms shall be inspected and repaired for the following if there are any signs of erosion or sedimentation below them. If there are signs of undercutting at the center or the edges of the barrier, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary,



the fabric shall be replaced promptly. Sediment deposits should be removed when deposits reach approximately one-half the height of the barrier. Filter berms should be reshaped as needed. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared and seeded.

6.2 Stabilized Stone Construction Entrances

The entrance 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 entrances, 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 that 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. Commence installation of drainage infrastructure.
4. Install all other erosion control devices as necessary throughout the remainder of this schedule.
5. Commence installation of utilities.
6. Continue earthwork and grading to subgrade as necessary for construction.
7. Complete installation of drainage infrastructure, as well as other utility work.
8. Complete remaining earthwork operations.
9. Install sub-base and base gravels in paved areas.
10. Install paving, curbing and brickwork.
11. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
12. 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.
13. Touch up areas without a vigorous catch of grass with loam and seed.
14. Complete site signage and striping.
15. 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 a schedule of the completion of the work to the owner. If the contractor is to commence the construction of more than one item above, they shall limit the amount of exposed areas to those 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
- Permanent Seeding Plan



TEMPORARY SEEDING PLAN

Site Preparation

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

Seedbed Preparation

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

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

Seeding

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

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

Mulching

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

Conclusion

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



PERMANENT SEEDING PLAN

Site Preparation

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

Seedbed Preparation

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

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

Seeding

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

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

Mulching

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

Recommendations

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

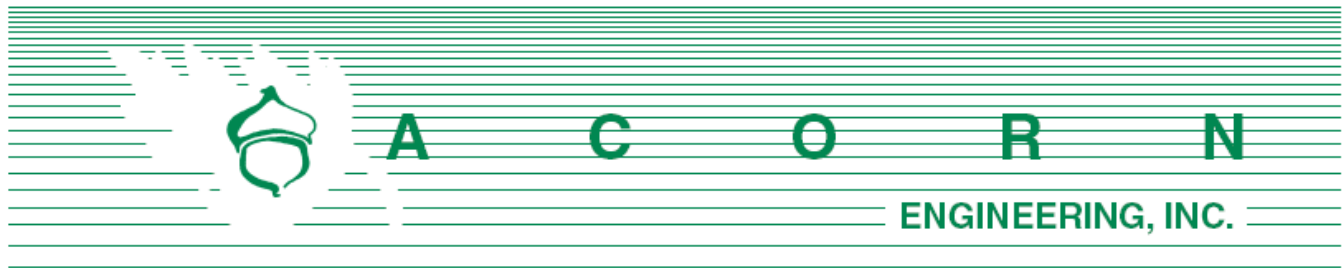
Conclusion

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



Section L

Fire Department Letter



Chief Robert Thompson
City of Portland Fire Department
380 Congress St.
Portland, ME 04101

January 2, 2019

Subject: 121 Cassidy Point Drive – Fire Department Checklist
Section L of Application

On behalf of Project Management, Inc. the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of Applicant

Project Management, Inc.
chagge@mac.com
(207) 274-1547

2. Name address, telephone number of Architect

Dextrous Creative
Tracie Reed
traciereed@dextrouscreative.com
(207) 409-0459

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

NFPA: Business & Industrial / IBC: Factory-2, Business

4. Square footage of all structures

The existing 2-story wooden structure is to be demolished to facilitate the redevelopment.

The proposed 4-story structure to be constructed has the following floor areas:

Proposed Building		
1 st Floor	2,500	sf
2 nd Floor	5,000	sf
3 rd Floor	5,000	sf
4 th Floor	5,000	sf
Total	17,500	sf

5. Elevation of all structures

Based upon the average grade plane defined by the IBC, the proposed building height is 44.27 feet. This height is below the allowable 60 feet within the WPDZ west of the Casco Bay Bridge. For additional information, please refer to the building elevations provided by the Architect.

6. Proposed fire protection of all structures

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

7. Hydrant locations

An existing hydrant is located across the street, approximately 79.8 feet from the southwestern corner of the proposed building. Once received, hydrant flow data from the Portland Water District may be made available to the Fire Department upon request.

8. Water main size and location

The redevelopment will be serviced by the existing water main within Cassidy Point Drive. A 4" fire service line will extend from the existing water main to the building fire suppression system. The building is expected to have internal sprinkler risers and a Fire Department pump connection on the south-facing street side of the building.

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

Access to the structure is provided directly on both north and south sides of Cassidy Point Drive.

It should also be noted that in the event of an emergency, the west side of the building would likely be accessible from Cassidy Point Drive as well, for a total of three accessible sides.

10. The Architect has provided code summaries (attached).

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The project site faces Cassidy Point Drive, a public street, on both north and south sides of the building. The following pavement street width is currently available:

- Cassidy Point Drive (north facing): 66 feet
- Cassidy Point Drive (south facing): 80 feet



Per NFPA 1 – Chapter 18.2.3.3.1, there will be public street access within 50 feet of at least one exterior door. 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: As outlined in #9, the parcel's geometry allows for two sides of access, three in case of emergency. The building will also include a sprinkler system.

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 provides for safe and efficient access along the public street for emergency vehicles.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Response: The building will be provided with exterior doors within 50' of a Fire Department access route, namely Cassidy Point Drive.

3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.

Response: There are no proposed overhead obstructions between the street and proposed building, which meets the required 9 foot clearance height minimum.

3.4.6. Elevators shall be sized to accommodate an 80 x 24-inch stretcher.

Response: See Section O: Architectural Design Narrative

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 will work 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,



William H. Savage, P.E.
Principal
Acorn Engineering, Inc.



Section M

Wastewater Capacity Letter

M. Wastewater Capacity Letter

The proposed project will include the development of four stories with parking available on the 1st floor level, and maker space on portions of the 2nd, and the entirety of the 3rd & 4th floors. Based upon the Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following daily flows:

Estimate of Design Flows			
Classification of Water Demand	Number of Units &/or Users	Gallons per Day per unit	Total Gallons per Day
<i>Proposed</i>			
Warehouse	24 Users	12 per User	288
<i>Existing</i>			
Warehouse	1 Unit	100	100
Total Proposed			288
Total Existing			100
Net Change			+188 GPD
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition			

As shown in the table above, there is an estimated increase in daily flow of 188 gallons. A 6" sewer service that connects to the main beneath the right-of-way on the south-facing side of Cassidy Point Drive is being proposed.



Section N

Lighting

N. Lighting

Please find attached cut sheets and photometric plan within Civil Plan Set.



LNC2 SERIES

Cat.#

Job

Type



HUBBELL
Outdoor Lighting

Approvals

SPECIFICATIONS

Intended Use:

The compact LED LNC2 is designed for perimeter illumination for safety, security and identity. This compact fixture has no uplight and is neighbor friendly with typical mounting heights up to 15ft. Units are supplied with an acrylic diffuser accessory that can be used for lower LED brightness near building entrances or other pedestrian areas. Units have protective polyester finish for long lasting appearance.

Construction:

Decorative die-cast aluminum housing protects components and provides an architectural appearance. Casting thermally conducts LED heat to optimize performance and long life. Powder paint finish provides durability in outdoor environments.

Electrical:

- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- Minimum operating temperature is -40°C/-40°F
- Driver RoHS and IP66
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion

LED(s) CCT:

- 4000K CCT nominal – 70 CRI, 5000K CCT nominal – 67 CRI
- 12 LEDs, 29 input watts, deliver 2868 lumens with 99 LPW efficiency at 5000K CCT
- 18 LEDs, 42 input watts, deliver 4106 lumens at 98 LPW efficiency at 5000K CCT

Optical:

Type III distribution with zero uplight; Individual PMMA acrylic lenses for wide lateral throw, maximum control and efficiency; Acrylic diffuser included where reduced LED brightness is desired

Lumen Maintenance:

L96 at 60,000hrs (Projected per IESNA TM-21-11), see table on page 2 for all values

Installation:

Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box). Gasket seal and secured by two Allen-head hidden fasteners for tamper resistance. Designed for direct j-box mount or conduit feed in single SKU. Conduit feed not available with BBU.

Listings:

- DLC Qualified (Consult DLC website for more details: <http://www.designlights.org/QPL>)
- Listed to UL 1598 for use in wet locations, 40° C ambient environments

Warranty:

Five year limited warranty (for more information visit: <https://www.hubbell.com/hubbelllighting/en/warranty>)

PRODUCT IMAGE(S)



LNC2-12LU

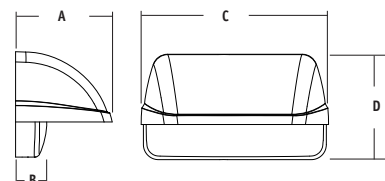


LNC2-18LU



With diffuser

DIMENSIONS



A	B	C	D	Weight
6.25"	1.6"	10.25"	5.6"	7.0 lbs.
158.7 mm	40.2 mm	260.4 mm	142.2 mm	3.2 kg

SHIPPING INFORMATION

Catalog Number	G.W(kg)/CTN	Carton Dimensions			Carton Qty. per Master Pack
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)	
LNC2-12LU	14.3 (6.5)	14.5 (37)	11.4 (29)	8.4 (21.5)	2
LNC2-18LU	14.8 (6.7)	14.9 (38)	11.4 (29)	8.4 (21.5)	2

CERTIFICATIONS/LISTINGS



ORDERING INFORMATION – STOCK

Catalog Number	System Watts	Delivered Lumens	Distribution	Voltage	CCT	# Drivers/Current	Weight lbs. (kg)	Finish	Options
LNC2-12LU-4K-3-1	29w	2,662	3	120-277V	4000K	1@700mA	7.0 (13.3)	Dark Bronze	*
LNC2-12LU-5K-3-1	29w	2,868	3	120-277V	5000K	1@700mA	7.0 (13.3)	Dark Bronze	*
LNC2-12LU-5K-3-1-PC-U	29w	2,868	3	120-277V	5000K	1@700mA	7.0 (13.3)	Dark Bronze	Photocell
LNC2-18LU-4K-3-1	42w	3,806	3	120-277V	4000K	2@700mA	7.0 (13.3)	Dark Bronze	*
LNC2-18LU-5K-3-1	42w	4,106	3	120-277V	5000K	2@700mA	7.0 (13.3)	Dark Bronze	*
LNC2-18LU-5K-3-1-PC-U	42w	4,106	3	120-277V	5000K	2@700mA	7.0 (13.3)	Dark Bronze	Photocell

REPLACEMENT PART/ACCESSORIES

CATALOG NUMBER	DESCRIPTION
93044013	Frosted comfort shield, improves uniformity with only 5% lumen reduction (see page 2)
93055143XX	LNC2 back plate and gasket with 0.875" opening for 1/2" conduit, XX = Specify finish (see page 2)
LNC2-SCBB-XX	LNC2 back plate with gasket and fittings to accommodate BB-GEO-XX, XX = Specify finish (see page 2)
BB-GEO-XX	LNC2 back box, XX = Specify finish (see page 2)



HUBBELL
Outdoor Lighting

Hubbell Outdoor Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000

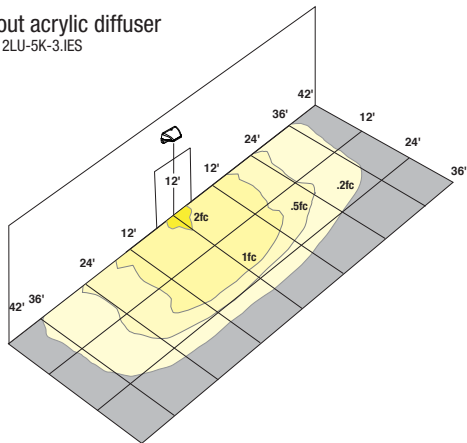
Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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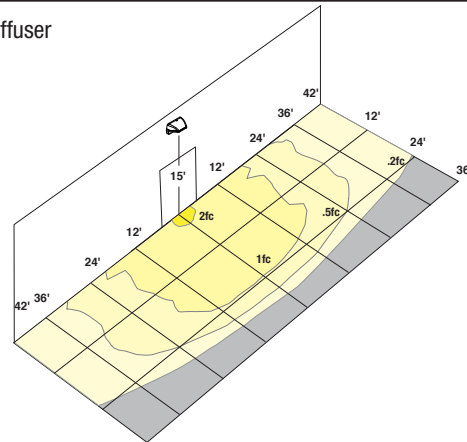
OCTOBER 22, 2018 8:42 AM

PHOTOMETRICS

Without acrylic diffuser
LNC2-12LU-5K-3.IES



Without acrylic diffuser
LNC2-18LU-5K-3.IES



LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0° C	32° F	1.02
10° C	50° F	1.01
20° C	68° F	1.00
25° C	77° F	1.00
30° C	86° F	1.00
40° C	104° F	0.99

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

PROJECTED LUMEN MAINTENANCE

Ambient Temp.	OPERATING HOURS					L70 (hours)
	0	25,000	50,000	TM-21-11' L96 60,000	100,000	
25°C / 77°F	1.00	0.98	0.97	0.96	0.95	>791,000
40°C / 104°F	0.99	0.98	0.96	0.96	0.94	>635,000

1. Projected per IESNA TM-21-11 * (Nichia 219B, 700mA, 85°C Ts, 10,000hrs)

Data references the extrapolated performance projections for the LNC-12LU-5K base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

ELECTRICAL DATA

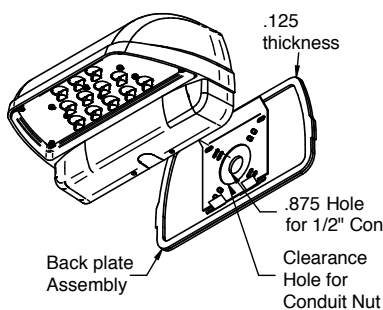
# OF LEDS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (w)
12	STD. (700mA)	120	0.24	28.9
18		277	0.10	27.7
		120	0.35	41.0
		277	0.15	41.5

BACK PLATE - 93055143XX

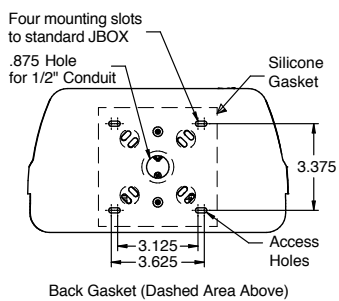


Mounting Plate interior

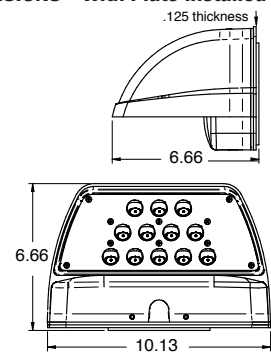
Mounting Plate Exterior



MOUNTING PLATE DETAILS



DIMENSIONS - With Plate Installed



LNC2-SCBB-XX SURFACE CONDUIT BACK PLATE



LNC2 FIXTURE



LNC2-SCBB-XX



BB-GEO-XX



LNC2-SCBB-XX and BB-GEO-XX SHOWN ATTACHED TO FIXTURE



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Section 0

Architectural Design
Narrative

December 23, 2018

Caitlin Cameron
Urban Designer
City of Portland Maine
389 Congress Street
Portland, Maine 04101



Re: Cassidy Point Studios - Narrative

The proposed building to be located on a land-locked parcel along Cassidy Point Road in the City's Waterfront Port Development Zone. The proposed building will house four-stories of light-industrial and artist studio spaces, with two levels including overhead doors to facilitate moving of sculptures, equipment and sheet goods.

Cassidy Point Drive forms a loop along Western Commercial Street with a traffic light and left-hand turning lane at the Eastern End. Rail line and a power transfer station separate the parcel from West Commercial Street.

Along lower Cassidy Point Drive are Cianbro's Marine Facility. The lot features a two-story, pre-fabricated metal building over 150'-0" in length with a low-slope gable roof. Busy cranes and heavy construction equipment move goods around a fenced asphalt yard, while trucks enter and exit from Merrill's Marine Terminal yard along adjacent Cassidy Point Drive.

Rounding Cassidy Point loop a towering pile of coal 3-4 stories high sits awaiting loading and transport, and the former Advantage Gas Tool and Equipment building. This two-story building has baby blue vinyl siding, a prominent loading dock, small punched openings at regular intervals and a low-sloped gable roof.

Sharing the lot as the proposed building, is a single-story, pre-fabricated metal building with barrel roof, oversized overhead doors, and a footprint nearly identical to the building proposed.

The proposed building design seeks to respectfully integrate within the massing and material context of the industrial zone with sharp contrast in our resource consumption. Passengers flying into Portland will see a roof-mounted solar array on the metal mono-pitch roof in contrast to the pile of coal across the street.

The building siding, as proposed, includes exposed-fastener, horizontally-applied corrugated galvalume. Metal siding is prevalent among adjacent buildings and also provides texture to the design. Siding will be capped with galvalume corner boards, and window trim.

Double-hung windows, spaced in regular intervals along the façade, will have dark frames in contrast with the siding, further reinforcing the simplicity of the design, and maintaining fenestration patterns of adjacent buildings.

Dextrous Creative
dextrouscreative.com
traciereed@dextrouscreative.com
46 Cushman Street #4, Portland, ME 04102

The building's main entrance along upper Cassidy Point features a projecting asymmetrical canopy with colorful trim, in contrast to the raw galvalume siding. The entrance door will also feature a complimentary vibrant color to the canopy and serve as a welcoming place to enter the building's upper workspaces.



The design of Cassidy Point Studios reflects the industrial use of the building and adjacent land uses while using material, massing and rhythm as elements to integrate it into the existing contextual fabric of Cassidy Point. We look forward to discussing the project with you soon.

Sincerely,

A handwritten signature in black ink that reads "Tracie J. Reed". The signature is fluid and cursive, with the first name "Tracie" and last name "Reed" clearly legible.

Tracie J. Reed, Maine Licensed Architect, LEED AP, NCARB
Principal

Dextrous Creative
dextrouscreative.com
traciereed@dextrouscreative.com
46 Cushman Street #4, Portland, ME 04102

CODE REVIEW
121 Cassidy Point

BUILDING DESCRIPTION

New construction of four-story, sprinklered & monitored building, approx. 17,500 SF in size, to house light-industrial artist studios such as woodworkers and metal fabricators on first two floors (classified as F-2 per IBC). These two floors will feature overhead doors to facilitate work with large sheet goods and moving of finished pieces. Both of these levels have exit and overhead doors at grade. The top two floors will house smaller artist studios for artists like painters, print makers, fiber, textile and ceramic artists. The lot also houses an existing single story pre-fabricated metal building, of approx. 5,000 SF to remain.

ZONING

- CBL: 072 B001001
- Address: 121 Cassidy Point
- Lot size: 0.5847

- Zone: Waterfront Port Development Zone (WPDZ)
- Minimum yard setback: N/A
- Min. lot size: N/A, 5 acres for conditional uses
- Max. coverage: 100%
- Max. height: 60'-0"
- Max. length: 450'-0"
- Parking: 50% of required spaces by Division 20

IBC 2015

- Construction Type: 5B
- Use: Factory-2 (lower two floors), Business (third and fourth floor)
- Size: approx. 50'-0" x 100'-0" footprint
 - First floor: 2,500 (25'-0" x 100'-0") F-2
 - Second floor: 5,000 (50'-0" x 100'-0") F-2
 - Third floor: 5,000 (50'-0" x 100'-0") Business
 - Fourth floor: 5,000 (50'-0" x 100'-0") Business
- Allowable height above grade plane: 60'-0" VB for both F&B (504.3)
- Allowable stories: 3 above grade plane F&B (504.4)
- Allowable area: 27,000 SF (506.2)
- Required separation of occupancies: B & F2 1-hour (508.4)
- Fire resistance: 5B – none for walls, floors, roof (601)
- Fire separation distance: >10'-0" for types B&F-2 = none required (602)
- Max. opening based on fire separation distance: 45% for 10'-0" to 15'-0" and 75'-0" for 15'-0" to 20'-0" by story (705.8)
- Opening in fire resistance barrier: limited to 25% of interior wall width (707.6)
- Shaft enclosures: 1-hour rating when connecting less than 4-stories, and 2-hours for shafts connecting four stories or more (713.4)
- Fire stopping: Required for penetrations in rated walls tested in accordance with ASTM E814 or UL 1479. Rating at penetration to equal or exceed rating of assembly being penetrated. (714.3.1.2 and 714.4.1.2)
- Interior finishes (803.11)
 - Business: exit stairs B; corridor C; rooms C
 - Factory: C (all)
- Floor area allowances (1004.1.2)
 - Accessory or mechanical rooms: 300 SF gross
 - Business areas: 100 SF gross
 - Industrial areas: 100 SF gross
- Stairway width: occupant load x 0.3 inches (1005.3.1)
- Other egress components: occupant load x 0.2 inches (1005.3.2)
- Area of refuge: not required in sprinklered buildings (1009.3.5)
- Stairway width: Serving capacity under 50 persons = 36" (1011.2.1)
- Riser height & tread depth: Max. 7" riser and 11" min. run (1011.5.2)
- Roof access: unoccupied roof permitted via hatch no less than 16 SF (1011.12.2)
- Roof access stair: alternating tread device permitted for uninhabited roof (1011.14)
- Ramp width: no narrower than stair width. Min. of 36" clear BTW handrails (1012.5.1)
- Ramp landing: no shorter than 60" (1012.6.3) with changes in direction min. 60"x60" (1012.6.4)
- Handrail type: Type I, circular BTW 1.25"-2" in diameter (1014.3.1)
- Handrail extensions: 12" beyond top and length of 1-tread @ bottom (1014.6)

CODE REVIEW
121 Cassidy Point

- Handrail clearance: 1.5" clear from wall (1014.7)
- Guard: guard required at mezzanine over 30" (1015.2)
- Guard height: 42" min. above surface (1015.3)
- Guard opening limitations: shall not allow passage of 4" sphere (1015.4)
- Enclosure of stairs: 1-stair shall be provided that does not require travel through an elevator lobby (1016.2.1)
- Corridor rating: none required with sprinkler system (1020.1)
- Min. corridor width: 36" for load under 50 persons (1020.2)
- Elevator door opening: elevator doors shall not open onto exit stairways (1023.4)
- Exit discharge: Exits shall discharge on the exterior of building (1028.1)
- Multi-story buildings & mezzanines: Shall have an accessible route when aggregate area is over 3,000 SF (1104.4)
- Accessible entrances: at least 1-accessible entrance shall be provided to each tenant space, at least 60% of public entrances shall be accessible (1105.1 and 1105.1.6)
- Accessible parking: 1 accessible spot per 25 spaces (1106.1)
- Accessible bathrooms: each toilet/bathing facility shall be accessible. At clustered single-use bathrooms 50% must be accessible. (1109.2)

NFPA 101-2009

- Chapters 38 (new business occupancies) and Chapter 40 (industrial occupancies)
- Fire alarm system: required (40.3.4.1)

UPC 2015 (422.1)

- 150 total building occupants = 75 men and 75 women
- Toilets and sinks: (2):51-75 men and women = (4) total
- Utility sink: 1
- Drinking fountain: 1:1-250

IECC 2015

- Climate Zone I 6A

Insulation values req. per IECC 2015 table C402.1.3

- Roof (Insulation entirely above roof deck): R-30ci
- Metal building – walls, above grade: R-13 + R-13ci
- Wood framed: R-13+ R-7.4ci or R-20 + R.38ci
- Walls below grade: R-7.5 ci
- Floors: R-30
- Unheated slab on grade: R-10 for 24" below
- Heated slab: R-15 for 36" below
- Opaque Doors (non-swinging): R-4.75

Window Factors per table C402.4

- Fixed fenestration: 0.36
- Operable fenestration: 0.43
- Entrance doors: 0.77
- Solar heat gain coefficient (SHGC) by orientation:

Protection Factor	SEW	N
PF < 0.2	0.40	0.53
0.2 ≤ PF < 0.5	0.48	0.58
PF ≥ 0.5	0.64	0.64

Max air leakage per table C402.5.2 in (CFM/FT²)

- Garage doors: 0.40
- Swinging doors: 0.20
- Commercial glazed swinging entrance doors: 1.0

ADA 2010

- Elevator Exception: Only applicable for buildings under 3,000 sf (36.401(d)(2))

CODE REVIEW
121 Cassidy Point

- Clear floor space: 30"x48" (305.3)
- Unobstructed forward reach: 48" (308.2)
- Obstructed forward reach: 44" (308.2.2)
- Unobstructed side reach: 15-44" (308.3.1)
- Clear door width: 32" (404.2.3)
- Pull clearance at door: 18"x60" (404.2.4.1)
- Push clearance at door: 12"x48" (404.2.4.1)
- Door hardware install height: 34"-48" AFF (404.2.7)
- Interior door push force: 5# max, exterior door exception (404.2.9)
- Ramp slope: No greater than 1:12 (405.2)
- Cross slope: No greater than 1:45 (405.3)
- Ramp landings with turn: 60"x60" (405.7)
- Mirror location: No more than 40" AFF in front of sinks (603.3)
- Water closet: 16"-18" from wall (604.2)
- Clearance around water closet: 56" from rear and 60" wide (604.3.1)
- Side toilet grab bar: 12" clear from rear wall 42" long (604.5.1)
- Rear toilet grab bar: 6" clear from rear wall and 36" long (604.5.2)
- Toilet paper: 7"-9" in front of toilet and 15"-48" AFF (604.7)
- Sink clearance: front approach (606.2)
- Sink height: rim of sink at least 34" AFF (606.3)
- Exposed pipes: insulated to protect from contact (606.5)
- Fire alarms: visible & audible (702.1)

Section P

Utilities

P. Utilities

The proposed project includes installing multiple utility services to the proposed building, which can be seen on the Utility Plan, see Sheet C-20.

Water:

It is proposed to tap a 4" services off the water main within Cassidy Point Drive on the south-facing side of the property. The 4" line will serve as the sprinkler line with a 2" child connection for domestic services.

Sewer:

No service card was found for this property. It is proposed to tap a 6" service off the sewer main within the Cassidy Point Drive right-of-way on the south-facing side of the property.

Stormwater:

There is currently no drainage infrastructure on site. It is proposed to implement several measures to handle runoff which includes vegetation, foundation drains and a catch basin. These measures are designed to intercept and filter roof and pavement runoff that would otherwise drain offsite.

UGE/T/C:

All new services will be re-run overhead from Pole #98 to the proposed building.

Gas:

There is currently one natural gas line on the property that services the existing metal building which is to remain. It is proposed to install an additional gas service to the new building that taps into the gas main within Cassidy Point Drive.

Ability to serve letters have been sent out to the respective utility companies on September 25, 2018 in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(7). Responses from the utility companies can be found attached to this section.





November 19, 2018

Faith Thomas
Acorn Engineering

Re: 121 Cassidy Point Dr. new proposed building

Dear Faith,

Thank you for your interest in using natural gas for the above referenced project.

Unitil has a 6 inch steel, high pressure natural gas main on Cassidy Point Dr. and can service the proposed building. Unitil will have to install a farm tap – pressure reducing device on customer's property; location of such device to be determined by Unitil engineering department once we have the BTU requirement for the building broken down by meter. My understanding is the customer is looking for 5 meters in total. 4 meters for tenants and 1 house meter.

As the project progresses, please send me the breakdown of natural gas equipment so that the information can be added to our records. If you have any further questions or require additional information, please contact me directly at (207) 541-2543 or at carpenters@unitil.com.

Sincerely,

Scott Carpenter

Scott Carpenter
Senior Business Development Representative
Unitil Corporation
(o) 207-541-2543 (f) 207-541-2593

ME GAS CUSTOMER ENERGY SOLUTIONS
1075 Forest Avenue
Portland, ME 04103-3586

T 207-541-2508 www.unitil.com



Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

December 4, 2018

Faith Thomas, E.I.
Acorn Engineering, Inc.
PO Box 3372
Portland, ME 04104

Re: 121 Cassidy Point Drive, PO
Ability to Serve with PWD Water

Dear Ms. Thomas:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on December 3, 2018. Based on the information provided per December 3, 2018, 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. 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 4-inch fire service (parent) and 2-inch domestic service (child) may be installed from the water main in Cassidy Point Drive. The service(s) should enter through the properties frontage on Cassidy Point Drive at least 10-feet from any side property lines.
- An approved backflow prevention device must be installed on the domestic service line directly after the meter prior to service activation. Please refer to the PWD website for more information on cross-connection control policies.
- The existing site is currently served with a ¾-inch domestic water service; the size of this service is undersized for the proposed use. This service must be terminated by shutting the corporation valve and cutting the pipe from the water main.
- The Portland Water District does not have record of any other existing infrastructure in public roads 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.

Prior to construction, the owner or contractor will need to make an appointment to complete a service application form and pay all necessary fees. The appointment shall be requested through MEANS@pwd.org or by calling 207-774-5961 ext. 3199. Please allow (3) business days to process the service application paperwork. PWD will guide the applicant through the new development process during the appointment.



Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper domestic service line provides 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 an 8-inch diameter concrete lined cast iron water main in Cassidy Point Drive and a public fire hydrant located approximately 75 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 106 psi on July 6, 2018.

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 Portland 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 conditions. If the data is out of 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

A handwritten signature in black ink, appearing to read "Robert A. Bartels".

Robert A. Bartels, P.E.
Senior Project Engineer



November 27, 2018

Acorn Engineering, Inc.
C/O Ms. Faith Thomas, E.I.
PO Box 3372
Portland, Maine 04104

RE: 121 Cassidy Point Drive, Portland, Maine

Dear Ms. Thomas,

This letter is to advise you Central Maine Power has sufficient three phase electrical capacity in the area to serve the subject project.

Once the project is accepted by the City of Portland, the owner will need to call our Customer Service Center at 1-800-565-3181 to sign up for a New Account and a SAP Work Request Order so we may provide an actual cost.

If you have any questions please feel free to call me at 629-1487.

Sincerely,

Paul DuPerre
Energy Service Specialist

162 Canco Road, Portland, ME 04103
Telephone 800.750.4000, Fax 207.791.1026
cmpco.com



An equal opportunity employer



From: Pelletier, Mark <Mark.Pelletier@charter.com>
Sent: Monday, November 19, 2018 4:00 PM
To: Faith Thomas <ftthomas@acorn-engineering.com>
Subject: RE: Cassidy Point Ability to Serve

Faith.

Spectrum has existing coax and fiber services on existing pole lines. Coax goes all the way to the point and fiber stops at pole CMP97 and goes into Cianbro Office bldg, We are in the Utility easements on pole lines. We can provide services to the bldg. Coax, fiber and or both depending what the request is from tenant.

If services are to be underground, then one 4 inch conduit will be needed with a ¼" pull rope. This is from the riser pole to the customer point of demark in or outside of bldg for coax and or fiber. Conduit sweeps will be at point of demark and above final floor grade and at riser pole above final grade and against the riser pole.

Hope this email will be sufficient as the letter to serve..

Happy Thanksgiving

Mark

Section Q

Construction Management
Plan

Q. Construction Management Plan

Project Address:

121 Cassidy Point Drive

Project Description:

Acorn Engineering, Inc. has been retained by Project Management, Inc. to provide civil engineering services for the proposed redevelopment of 121 Cassidy Point Drive. The project proposes to demolish the existing, 2-story wood-framed building and construct a new, 4-story building designed as “maker space” in which crafters and tradespeople can rent within a low impact industrial conditional use, as specified in Sec. 14-319 of the City of Portland Chapter 14 – Land Use.

Project Team Summary:

Owner:	534 Danforth LLC
Owner’s Representative:	Project Management, Inc.
General Contractor (GC):	TBD
Civil Engineer:	Acorn Engineering, Inc.
Structural Engineer:	Structural Integrity Consulting Engineers, Inc.
Architect:	Dextrous Creative

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 measures to be taken during construction.

The following outline has been developed in accordance with the City of Portland Construction Management Plan General Template and shall be referenced by the GC during construction.

A. Construction Management Principles

The control of noise, vibrations, ground movement, truck traffic, and other construction related factors will be of utmost importance. Care shall be taken to minimize these effects in the best interest of neighbors and the general public. GC to ensure that work hours conform to the City of Portland’s Ordinance.

B. Development Review of Construction Management Plan



Logistics and safety program shall be submitted at or prior to the preconstruction meeting by the GC with all pertinent information required by the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

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

Guarantees and fees will be paid at the time of the respective application. All necessary permits will be obtained prior to work and compliance with Sections 14-530 and 14-532 is required.

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 with all measures of 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.

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 contact information shall be posted on a sign on the construction fence along the Cassidy Point Drive frontage. Additional signage necessary for communication shall be provided but will be temporary and removed upon completion of the project. The contract information for the project personnel is:

Cyrus Hagge
Project Management Inc.
(207) 274-1547

GC and Subcontractor information will be posted along the Cassidy Point Drive frontage once contracted.

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.

Due to the limited space within the project parcel, deliveries will need to be stored in an alternate location or deliveries must be small enough to fit within the property. Deliveries will be scheduled between 7 am and 5 pm.

The estimated timeframe of the proposed project is outlined below:

<u>Project Start Date:</u>	Fall 2019
<u>Project End Date:</u>	Summer 2020

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:
 - o Good Housekeeping
 - o On-site security
 - o Installation of new fire protection systems as construction progresses
 - o Preservation of existing systems during demolition
 - o Organization and training of an on-site fire brigade
 - o Development of a pre-fire plan with the local fire department
 - o Rapid communication
 - o Consideration of special hazards resulting from previous occupancies
 - o 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. This will apply to the new connections within Washington Avenue.

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 Cassidy Point Drive. 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 Cassidy Point Drive 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 for 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 removal of such 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 material staging areas, on-site temporary construction trailers, on-site truck delivery holding areas, 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. Upon arrival to 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 along Cassidy Point Drive or arrangements for off-street parking at an off-site location shall be provided.
2. Truck Routes and Volumes: The following quantities are estimated as part of the reconstruction:
 - Gravel & Cr. Stone – 125 CY. Earthwork subcontractor(s) pit to project site.

L. Special Measures as Necessary

The neighboring buildings at 60, 92, 128 & 133 Cassidy Point Drive will be subject to a pre and post construction survey to monitor any effects from construction. The surveys shall consist of photographs of the foundation as viewed from outside and inside if granted permission.



Section R

Transportation Analysis

R. Transportation Analysis

The site is located at 121 Cassidy Point Drive which is a major intermodal transportation center with direct access to Route 1 and I-295. The proposed use will reduce the amount of traffic in this area, transitioning from an auto and truck repair business (Coachworks) with an estimated range of 214-386 trips per weekday to approximately 59-98. The hours of operation, pavement and number of parking spaces will not interfere with the neighboring marine and trucking uses.

The volume and type of vehicle traffic to be generated, hours of operation, expanse of pavement and number of parking spaces required are not substantially greater than would typically occur at surrounding uses or other allowable uses in the same zone;

COACHWORKS ESTIMATED AVERAGE DAILY CUSTOMER TRIPS (DATA PROVIDED BY PREVIOUS TENANT)

Customer repairs, 20-30 per day	100-120 Trips per day
Parts and supply delivery, 10-16 per day	20-32 Trips per day
Vender delivery, 5-10 per day	10-20 Trips per day
Repair and Body Shop estimates, 4-6 per day	8-16 Trips per day
7-9 Employees per day	28-36 Trips per day
Test drives, 10 per day	20 Trips per day
Misc. visitors, 10-15 per day	20-30 Trips per day
<u>Auto sales, 4-5 per day</u>	<u>8-12 Trips per day</u>
Total Trips per Day	214-386 Trips per day
8-10 Cars parked daily	
<u>1-3 Trucks parked daily</u>	
Total Parking 30 spaces	

PROPOSED CONDITIONAL USES AVERAGE DAILY TRIPS (ESTIMATES BASED UPON BUILDING USE)

Studios 1-9, 3-4 Employees per day	27-36 Trips per day
Studios 10-17, 1-2 Employees per day	7-14 Trips per day
Ex. Metal Building, 3-5 Employees per day	3-5 Trips per day
Studios 1-17 & Ex. Metal Building, 2-4 Deliveries per day	2-4 Trips per day
Studio 1-17, 1-2 Visitors per day	17-34 Trips per day
<u>Ex. Metal Building, 3-5 Visitors per day</u>	<u>3-5 Trips per day</u>
Total Trips per Day	59-98 Trips per day



The parking requirement was calculated by applying the “Business/Manufacturing/Industrial Use” requirement of 1 parking space per 1,000 square feet of floor area from Chapter 14, Sec. 14-332 (l) with the allowable 50% Waterfront Zone parking reduction from Sec. 14-332.1 (j).

Building Description	Area (sf)
Proposed Building	17,500
1-Story Existing Metal Building	5,236
Total Floor Area	22,736

Per City of Portland Chapter 14, “Floor Area” is defined as, “A floor space enclosed by exterior or standard fire walls, exclusive of vent shafts and courts. The total floor area of 22,736 square feet for the existing 1-story metal building and proposed 4-story building yields 23 required parking spaces; 12 spaces are required after applying the 50% allowable reduction. The proposed parking count of 12 spaces, 9 surface spaces and 3 internal, meet the requirement using the 50% allowable reduction.

The unique property line geometry, existing grades combined with the oversized delivery trucks that are ancillary to the approved zone uses create a challenging site circulation with a limited number of curb cuts. With that said, the proposed driveways and curb cuts have been reduced from five existing curb cuts to four. They have also been reconfigured to significantly reduce the driveway width, provide additional space for sidewalks, landscaping and parking space screening. The driveway widths are now equal to or less than those in proximity of the site. Mountable 4” vertical granite curbs are proposed on northern Cassidy Point at the concrete sidewalk located between curb cuts to allow access for infrequent oversized deliveries unable to maneuver without crossing curbing. This design is intended to allow the addition of a concrete sidewalk and limit curb cut widths while still allowing oversized vehicular access and circulation to the overhead doors, loading docks and on-site parking. See Circulation Exhibits 5 & 6 for circulation routes of anticipated traffic and Exhibit 7: Site Plan Overview for an aerial view of the proposed project in relation to abutters.

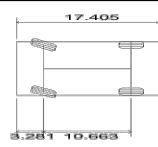
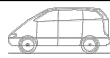


Exhibit 5

Circulation – Commercial
Van

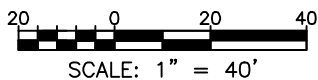
Vehicle Tracking Vehicle Details

Ref:



Vehicle Name:
Type:
Category
Classification

Mercedes Sprinter Chassis 211CDI Short Crew Cab
Small van
(Unspecified)
(Unspecified)



PERMIT LEVEL
NOT FOR
CONSTRUCTION

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: 1113_CIVIL
DATE: 12/5/18
JN: 1113
SCALE: AS NOTED
DESIGN BY: FRT
DRAWN BY: FRT
CHECKED BY: WHS



DRAWING NAME:
CIRCULATION - COMMERCIAL VAN

PROJECT NAME:
121 CASSIDY POINT DRIVE

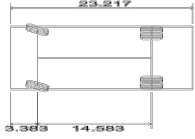
CLIENT:
PROJECT MANAGEMENT, INC.

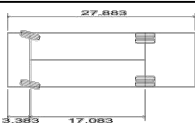
ISSUED FOR	BY
COMMENT RESPONSE	DATE
	WHS
	3/12/19

DRAWING NO.
EX-5

Exhibit 6

**Circulation – Refuse &
Delivery Trucks**

Vehicle Tracking Vehicle Details		Ref:			
Vehicle Name:	Hino 238 J	Type:	Rigid vehicle		
Category:	(Unspecified)				
Classification:	(Unspecified)				

Vehicle Tracking Vehicle Details		Ref:		
Vehicle Name:	Hino 338 M + Wayne Royal GT14 Refuse Truck	Type:	Refuse vehicle	
Category:	Autodesk			
Classification:	Autodesk			





SCALE: 1" = 40'

PERMIT LEVEL

NOT FOR

CONSTRUCTION

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: 1113_CIVIL DATE: 12/5/18 JN: 1113 SCALE: AS NOTED DESIGN BY: FRT DRAWN BY: FRT CHECKED BY: WHS	 ACORN ENGINEERING, INC. ACORN ENGINEERING, INC. P.O. BOX 3372 PORTLAND, MAINE 04104 (207) 775-2655	DRAWING NAME: CIRCULATION – REFUSE & DELIVERY TRUCKS	ISSUED FOR COMMENT RESPONSE	BY DATE WHS 3/12/19
	DRAWING NO. EX-6		PROJECT NAME: 121 CASSIDY POINT DRIVE CLIENT: PROJECT MANAGEMENT, INC.		

Exhibit 7

Site Overview

[illegible]

Section S

Solid Waste Disposal

S. Solid Waste Disposal

External dumpsters for solid waste disposal will be located within a dumpster enclosure, situated between the proposed building and existing 1-story metal building to remain. See location on Site Plan, Sheet C-10 and enclosure detail on Sheet C-40. Solid waste pickup to be coordinated with private waste disposal company during non-business hours to allow access to ADA parking spaces during such hours.



Section T

Solar Power Letter

March 11, 2019

Matthew Grooms, AICP
Planner
City of Portland Maine
389 Congress Street
Portland, Maine 04101



Re: Cassidy Point Studios – Solar Power Generation

The proposed building on Cassidy Point Drive in the City's Waterfront Port Development Zone will feature a roof-mounted solar array on the metal mono-pitch roof in contrast to the pile of coal across the street.

The roof-mounted solar array is intended to offset electrical loads generated by the building's mechanical system. Division II 'Solar Energy Generation' of Article X of the City of Portland's Zoning Ordinance, Alternative Energy outlines systems in compliance with zoning criteria. A roof-mounted system is permitted in waterfront zones per the table on 14-925.

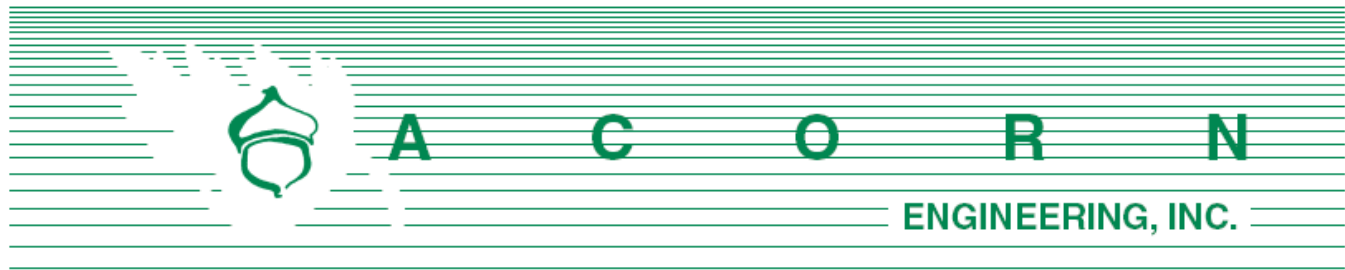
Issues of maintenance, attachment details, roof access for workers, etc. shall comply with all applicable codes and the City of Portland's Technical Design Manual, as appropriate. This information will be supplied as components of our building permit application for review at a later date.

Sincerely,

A handwritten signature in black ink that reads "Tracie J. Reed". The signature is fluid and cursive, with the first name "Tracie" and last name "Reed" clearly legible.

Tracie J. Reed, Maine Licensed Architect, LEED AP, NCARB
Principal

Dextrous Creative
dextrouscreative.com
traciereed@dextrouscreative.com
46 Cushman Street #4, Portland, ME 04102



Matthew Grooms – City Planner
Planning Division, City of Portland
389 Congress Street
Portland, ME 04101

March 12, 2019

Subject: Comment Response Letter
Redevelopment of 121 Cassidy Point Drive – Portland, Maine

On behalf of Project Management, Inc we are pleased to respond to the comments that we've received thus far.

Matthew Grooms, Planning

Comment – *Prior to the issuance of any building permits, a copy of all utility capacity letters shall be provided to the Planning Authority*

Response – Utility capacity letters from Unitil, Portland Water District, Central Maine Power and Charter Communications (Spectrum) have been obtained and are attached in Section P. within this Comment Response submission.

Comment – *City staff are recommending the closure of curb cuts and reconfiguration of driveways, which would provide additional space for sidewalks and required parking lot landscaping and screening of parking spaces. Please submit a revised landscape plan based upon reconfiguration.*

Response – The unique property line geometry, existing grades combined with the oversized delivery trucks that are ancillary to the approved zone uses provide for a challenging site circulation should the number of curb cuts be limited. With that said the proposed driveways and curb cuts have been reduced from five existing curb cuts to four. They have also been reconfigured to significantly reduce the driveway width, provide additional space for sidewalks, landscaping and parking space screening. The driveway widths are now equal to or less than those in proximity of the site. See Site Plan, Sheet C-10, Landscape Plan, L-1, Exhibit 7: Site Plan Overview and the request for waivers for additional information.

Comment – *The site plan identifies a dumpster with enclosure, however no details are provided. Please submit enclosure detail with future submittal.*

Response – Dumpster enclosure detail has been added to plan set. See Site Details, Sheet C-40.

Comment – *Building elevations and section views show roof mounted solar energy systems. The applicant shall provide evidence that the proposed systems comply with Sec. 14-430(e) Roof Mounted Solar Energy Systems. Please provide relevant details for panels and roof-mounted racking systems.*

Response – See attached Section T. from architect addressing solar energy systems compliance within this Comment Response submission.

Comment – *The general notes page references a retaining wall and the grading plan shows what would appear to be a retaining wall at the southeast corner of the site (behind the existing building). Would the applicant please clarify if a retaining wall is being constructed and relevant details to determine if more information is needed?*

Comment – Sheet C-02 Civil Site Note #10 of the Civil Plan Set that references a retaining wall does not apply and has been removed. Acorn's understanding is that there is no proposed retaining wall within the scope of the redevelopment. There is an existing concrete block wall residing at the southeast corner of the site that is to remain undisturbed.

Jeff Tarling, Forestry & Horticulture

Comment – *The project proposed 8 trees along the road frontage, we would like to see larger scale trees and increasing plant sizes. The recommendation would be to have 4 'Armstrong' Red Maple or similar sized, upright trees along the lower Cassidy Point Road and 4 'Regal Prince' upright Oak trees along the upper section.*

Response – Replaced original landscape plan Amelanchier and Hornbeam trees with the 'Armstrong' Red Maple trees along lower Cassidy Point Road and 'Regal Prince' upright Oak trees along the western side of Cassidy Point Road. See Landscape Plan, L-1 for locations of proposed trees.

Comment – *It would be good to see an upgrade of plant size and cultivar on the Juniper, the first is the Redcedar, which is an upright growing plant. This should be planted at a 5-6' height size vs. 5-gallon size proposed and the 'Mother Lode' Juniper type be changed to 'Blueberry Delight' cultivar of the native common juniper. The size of the Juniper shrubs should be 3-gallon vs the proposed 1-gallon."*

Response – Replaced original landscape plan 1-gallon size 'Mother Lode' Juniper with 3-gallon size 'Blueberry Delight'. Updated size of Juniper Redcedar from 5-gallon to 5-6' height size.

Bruce Hyman, Planning & Transportation

Comment – *The location and type of bicycle racks is to be revised to be 1) closer to building entrances and 2) a different style of bicycle rack that provides two points of contact with the bicycle frame and bike rack.*

Response – The proposed Dero Hi-Roller bicycle rack was relocated between the building entrance and ADA access aisle on upper Cassidy Point Drive. The bicycle rack to provide two points of contact with the bicycle rack and frame, as shown on Sheet C-40 of the Civil Plan Set.

Comment – *A sidewalk is to be provided along the northerly edge of the property that connect to the sidewalk over the RR bridge – a sidewalk waiver is required for the southerly edge of the parcel – the existing brick sidewalk is to be replaced with concrete (its width can be narrowed, currently ≈ 10') which would allow landscaped buffer between the edge of sidewalk and boat storage area (if*



allowed/continued)

Response – A reinforced concrete sidewalk with vertical granite curbing has been added to the Site Plan, Sheet C-10 of the Civil Plan Set. The proposed concrete sidewalk along the northeastern corner of the parcel ends at the property boundary with a width matching that of the existing sidewalk that spans the railroad bridge.

Comment – *A parking analysis should be provided for both adjacent parcels – it is unclear how the parking demand, if any, is being met for the other adjacent building.*

Response – See parking analysis table addition on Site Plan, Sheet C-10 of the Civil Plan Set. The parking analysis is attached within Section R of this Comment Response submission. The analysis accounts for the existing single-story building to remain with a floor area of 5,236 SF ± and the proposed building with a floor area of 17,500 SF ±, each with a designation of “Business/Manufacturing/Industrial Use” from Chapter 14, Sec 14-332(l). The allowable 50% Waterfront Zone parking reduction from Sec 14-332.1 (j) was also applied in the analysis. The existing building to remain and proposed building both reside on the City of Portland Assessor’s Chart 72, Block B, Lot 1. There are a total of 12 proposed spaces, 9 surface and 3 internal within the proposed building garage bays.

Comment – *The site plan does not appear to show the full extent of the parcel *the SW point/corner.”*

Response – Site plan has been modified to display additional information along the SW point/corner. Please also refer to the aerial Exhibit 7: Site Plan Overview for additional contextual information.

Tom Errico, Traffic

Comment – *The proposed project does not meet City standards for several driveway design elements including: number of driveways, width of driveways, spacing of driveways and corner clearance requirements. The applicant has not provided sufficient information in support of waivers from the City’s Technical Standards. I do not support the current driveway configuration/design and the Applicant should incorporate changes that minimizes the non-conformities as much as practical. Configuration should be based upon the types of vehicles needing access to overhead doors and loading docks and on-site truck parking. Truck turning templates shall be used to help justify the configuration. The number and configuration of driveways is to be considered in the context of the adjacent parcel also having the same ownership.”*

Response – The proposed number of driveways and curb cuts is to decrease from five existing to four. The proposed curb cut widths have been significantly reduced from the first submission however the driveway widths and spacing are justified by the range of turning templates for marine and industrial use vehicles requiring access and circulation to overhead doors, loading dock and on-site parking. Mountable 4” vertical granite curb is proposed on northern Cassidy Point between the two curb cuts to allow access for infrequent oversized deliveries unable to maneuver into the site. This design is intended to allow the addition of a concrete sidewalk and limit curb cut widths while still allowing oversized vehicular access and circulation to the overhead doors, loading docks and on-site parking.

The unique property line geometry, existing grades combined with the oversized delivery trucks that



are ancillary to the approved zone uses and provide support for the number and configuration of the proposed curb cuts. In relation to abutting parcels, the proposed driveway widths are equal to or less than those in proximity of the site, as shown on Exhibit 7: Site Plan Overview.

The nearest driveway from the unsignalized intersection of Fore River Parkway and Cassidy Point Drive is a distance of roughly 325-feet ($\pm$), which meets and exceeds the minimum of 75-feet for an unsignalized intersection according to MaineDOT, Chapter 299 2.1.C. The nearest driveway from the signalized intersection of Fore River Parkway and Cassidy Point Drive is a distance of roughly 829-feet ($\pm$), which meets and exceeds the minimum of 125-feet for a signalized intersection according to MaineDOT, Chapter 299 2.1.C.

Woodard & Curran, Civil Engineering

Comment – *The applicant should clarify the proposed impact areas. Limits of new pavement and landscaping are proposed, but they do not line up with existing curb lines that appear to remain in place.*

Response – See Site Plan, Sheet C-10 for revised presentation of limits of existing pavement, landscaping and curb lines. Pavement extents were modified to reduce curb cut widths and addition of sidewalks along the northern portion of Cassidy Point Drive.

Comment – *Trees are proposed in areas that overlap with proposed snow storage. Some of the areas where trees are proposed currently have paved surfaces and the site and landscaping plans do not propose any changes in surface. Please clarify the landscaping intent in these areas.*

Response – See Site Plan, Sheet C-10 and Landscape Plan, L-1 for revised landscaping and tree locations in relation to proposed snow storage areas. Landscaping features displayed with estimated tree canopy for graphical representation only.

Comment – *We understand from the notes provided on the plans, that additional information is needed to be able to show locations of existing storm drainage and confirm the inverts and locations of proposed SD connections from the building and proposed catch basin. The Applicant should make considerations for potential conflicts with other utilities in the area, for example, the approximate invert provided for connection of roof drains to the stormdrain on the southern side of the property to be close in elevation of the sewer in that area.*

Response – See Grading Plan, Sheet C-30 and Utility Plan, Sheet C-20 for approximate inverts of both stormdrain and sanitary sewer line based upon surveyed existing conditions. Estimated vertical separation of stormdrain and sanitary sewer line specified on Grading Plan, with stormdrain installation above sanitary line.

Comment – *The applicant has provided erosion and sedimentation control details and a written plan in accordance with the Basic Standards. Erosion control features have been called out on the Construction Management Plan, Sheet C-03. Please add catch basin protection to this plan.*

Response – Catch basin protection detail can be found on the Erosion and Sedimentation Control Details, Sheet C-42.



Comment – *The Applicant should evaluate the redevelopment standard for the site. Areas of pavement that are regraded are considered in the redevelopment calculation. The area to the north of the building is being regraded to direct stormwater in a different direction. It appears that the area will not meet the 5,000 square foot threshold, but the Applicant should confirm.*

Response – Site Plan has been adjusted to reflect extents of new pavement. Existing pavement to maintain existing hydraulic grade line is specified on the Site Plan, Sheet C-10. The total proposed non-roof impervious redeveloped area within the property line is approximately 1,850 sf ±. The redeveloped area remains less than the specified 5,000 square foot threshold specified within Section 5, II D of the City of Portland Technical Manual. Non-roof impervious areas to be redeveloped are new pavement and concrete walkway extents located at the proposed boat storage, exterior exits and driveways located at both northerly and southerly sides of Cassidy Point Drive.

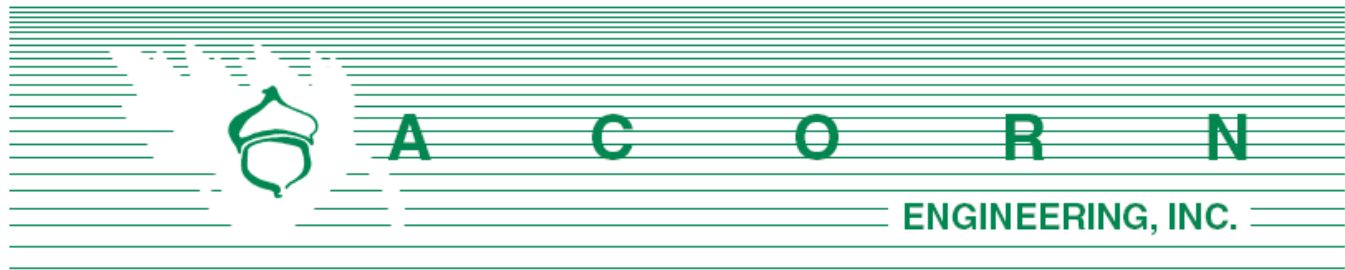
Comment – *The Applicant has identified that space will be reserved for dumpsters within the existing CMP Easement. Please confirm that this location will be acceptable for dumpsters with CMP and also clarify if the enclosure will be installed with a concrete pad.*

Response – Per the easement recorded at the Cumberland County Registry of Deeds Book 3602, Page 117, CMP as the Grantee encased its transmission facilities in a concrete encasement “so as not to interfere with the construction of a building by the Grantor, his heirs or assigns, of up to four stories above the existing grade levels.” If CMP maintenance on the transmission line is required, the dumpsters can be readily relocated.

Comment – *The Applicant has shown a concrete block wall to the south of the existing building. Please confirm that this is an existing structure and that no changes are proposed.*

Response – The concrete block wall to the south of the existing building is an existing structure that is to remain unchanged.





Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

January 2, 2019

Subject: Level II Final Site Plan Application
Redevelopment of 121 Cassidy Point Drive

To Whom It May Concern:

On behalf of Project Management, Inc. (Owner's Representative) and 534 Danforth LLC (Owner), we are pleased to submit the accompanying submission material package related to the proposed redevelopment at 121 Cassidy Point Drive, located within the City's Waterfront Port Development Zone (WPDZ). The project proposes to demolish the existing, 2-story wood-framed building and construct a new, 4-story building primarily for "maker spaces" in which crafters and tradespeople would rent low impact bench spaces, as allowed within Sec. 14-319 Table, Group "Industrial" with a "C Use Category." The site will continue to facilitate "Marine Uses", with tenants such as SailMaine, as allowed within Sec. 14-319 Table, "Marine" Group with a "P/C¹ Use Category." The parcel is unique to the zone because it doesn't feature direct water access and as a result, will have no adverse impacts on Marine Use, per Sec. 14-318.5, as outlined in the following paragraph.

Under the Sec. 14-319 Table, the project complies with the "Industrial Use" Group with a "C Use Category." The project will facilitate the following occupant services: low impact industrial use including but not limited to, light manufacturing, manufacture of products, welding and metal fabrication, storage of materials incidental to proposed uses, carpentry, woodworking, cabinet shops, art and craft production and print making. The parcel doesn't feature direct water access and as a result, also meets Sec. 14-320 Conditional Use Standards. The proposed use will not impede or preclude existing or potential water-dependent development on other lots, and it will continue to allow for adequate access to the water, be compatible with water dependent and marine uses, operationally support one or more water dependent uses, and meets the performance and dimensional standards in Sec. 14-320.2.

Under Sec. 14-319, the project also complies with the "Marine Use" Group with a designed "P/C¹ Use Category." The proposed building height is less than the 60-foot maximum applicable height allowable under the permitted use dimensional standards, which results in a permittable use rather than conditional. The Marine Use designation comes from current and anticipated future uses by SailMaine that include marine repair and machine shops, marine retail and wholesale sales, boat storage facilities, and fabrication, storage and repair of fishing equipment.

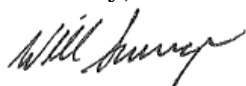
The project has been designed with sustainable and low impact practices. This includes the use of roof-mounted solar panels in the building's construction. Stormwater treatment or storage is not required; however, the project anticipates the installation of a catch basin, foundation drains and

landscape plantings which will treat and slow the rate of stormwater runoff into the City's storm drain line.

We are pleased to submit this application as the proposed development will boost the opportunity for economic development within Portland by providing space for artisans and other tradespeople to create products. This submission package is intended to meet the City's Submission Requirements as outlined in the Level II Site Plan Application procedures.

The owner of 121 Cassidy Point Drive, 534 Danforth LLC, has compiled a team of leading professionals from the development, green building and construction industries to complete the design. If you have any questions regarding these materials or the completeness of the application materials, please contact us within the next five (5) days.

Sincerely,



William H. Savage, 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: Level II Final Site Plan Application & Checklist
- Section C: Right, Title, Interest
- Section D: Zoning Assessment
- Section E: Summary of Written Easements
- Section F: Request for Waivers
- 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: Fire Department Letter
- Section M: Wastewater Capacity Letter
- Section N: Lighting
- Section O: Architectural Design Narrative
- Section P: Utilities
- Section Q: Construction Management Plan
- Section R: Transportation Analysis
- Section S: Solid Waste Disposal

Drawings:

- Civil Site Plan Set
- Architectural Plan Set



Permitted Uses

Permitted Uses

The following outline is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article III, Division 18.5.

OVERVIEW

The proposed 4-story building has been designed to conform to City standards as well as improve upon existing non-conformities. Under Sec. 14-319, we are requesting the following permitted conditional uses:

Marine:

- Marine repair services and machine shops
- Marine retail and wholesale sales, including yacht brokerage
- Boat storage facilities
- Fabrication, storage and repair of fishing equipment

Industrial:

- Low impact industrial uses
- Light manufacturing
- Manufacture of products
- Welding and metal fabrication
- Storage of materials incidental to proposed uses
- Carpentry, woodworking and cabinet shops
- Art and craft production
- Print-making

Other:

- Accessory uses customarily incidental and subordinate to the location, function and operation of permitted uses

Sec. 14-320. Conditional Use Standards

- a) Conditional uses shall be permitted in the Waterfront Port Development Zone, provided that, notwithstanding section 14-471(c), or any other provision of this Code, the Planning Board shall be substituted for the Board of Appeals as the reviewing authority.

In addition to the provisions of Section 14-474(c)(2) such uses will

- not impede or preclude existing or potential water-dependent development on other lots;
 - i) **The parcel located at 121 Cassidy Point Drive is not a waterfront lot and is separated from the nearest waterfront lot by Cassidy Point Drive, a major intermodal transportation route. Due to the**



site location, the proposed uses will not impede or preclude existing or potential water-dependent development on other lots.

- allow for adequate access to the water;
 - i) **The parcel located at 121 Cassidy Point Drive is not a waterfront lot and is separated from the nearest waterfront lot by Cassidy Point Drive, a major intermodal transportation route. Due to the site location, the proposed conditional uses will allow for adequate access to the water.**
- be compatible with water-dependent and marine uses;
 - i) **The parcel located at 121 Cassidy Point Drive is not a waterfront lot and is separated from the nearest waterfront lot by Cassidy Point Drive, a major intermodal transportation route. Due to the site location, the proposed conditional uses are compatible with water-dependent and marine uses.**
- operationally support one or more water-dependent use(s), or be located in a building or structure that is physically adaptable or relocated to make way for future development of water-dependent uses; and
 - i) **The parcel located at 121 Cassidy Point Drive is not a waterfront lot and is separated from the nearest waterfront lot by Cassidy Point Drive, a major intermodal transportation route.**
- meet any additional performance and dimensional standards set forth below.
 - i) **See below**

Sec. 14-320.1 Prohibited Uses

- a) The proposed uses are conditional and do not include prohibited uses.

Sec. 14-320.2 Dimensional Requirements

In addition to the provisions of article III, division 25 of this Code, lots in the waterfront port development zone shall be subject to the following requirements:

- a) Dimensional Table
 - 1. **The existing structure to remain was constructed prior to the WPDZ implementation and is therefore grandfathered. The proposed structure to facilitate the conditional uses abides by the dimensional requirements, as displayed on Sheet C-10 of the Civil Plan Set, “Space and Bulk Standards” table.**
- b) Additional bulk, height and location standards:
 - 1. For structures exceeding the maximum applicable height allowed under the permitted use dimensional standards



- **Proposed structure height of 42.72' is below the maximum applicable height allowable of 60'.**
2. For each lot, at least one view corridor of at least ninety (90) feet in width shall be left unbuilt to preserve a clear line of sight between West Commercial Street and the water.
- **Proposed structure allows for one view corridor of at least ninety (90) feet in width between West Commercial Street and the water, along upper Cassidy Point Drive.**

Sec. 14-320.3 Performance Standards

Proposals in the Waterfront Port Development Zone that qualify for Site Plan review shall submit, in addition to the submission requirements of section 14-527, an impact mitigation narrative summarizing how the project intends meets the applicable performance standards:

- a) Outdoor storage of materials:
 - **All storage of materials shall be indoors or in sealed storage containers with no offsite runoff.**
- b) Noise:
 - **All onsite conditional uses shall be indoor and will not exceed the 55-decibel maximum level.**
- c) Vibration:
 - **All onsite vibration will be imperceptible without instruments at lot boundaries.**
- d) Federal and state environmental regulations:
 - **The proposed conditional uses will comply with all federal and state environmental statutes and regulations**
- e) Discharges into harbor areas:
 - **The proposed conditional uses will not discharge into the harbor water areas.**
- f) Storage of vehicles:
 - **The proposed conditional uses will not store any unregistered automotive vehicles on the premises for more than sixty (60) days.**
- g) Landfill of docking and berthing areas:
 - **Not applicable, due to the parcel's lack of waterfront access.**
- h) Off-street Parking:
 - **Off-street parking is provided in accordance with Division 20 (off-street parking), as shown in the Transportation Analysis.**



- i) Off-Street Loading:
 - **Any loading is accommodated by the loading dock located along the north-facing portion of Cassidy Point Drive.**
- j) Shoreland and flood plain management regulations:
 - **This property does not have waterfront access and is not located within the flood plain.**
- k) Lighting:
 - **Exterior Lighting will be shielded such that direct light sources shall not unreasonably interfere with vessels transiting the harbor nor have an unreasonable adverse impact on adjacent residential zones.**
- l) Signs:
 - **Existing sign to remain untouched.**
- m) Storage of pollutants and oily wastes:
 - **There will be no storage of pollutants and oily wastes on site.**
- n) Compatibility of non-marine uses with marine uses:
 - **The proposed conditional uses are compatible with nearby marine uses.**
- o) Design and Visual Character shall:
 - **See attached Architectural Design Narrative and Compiled Civil Plan Set.**



Transportation Analysis

Transportation Analysis

The site is located at 121 Cassidy Point Drive which is a major intermodal transportation center with direct access to Route 1 and I-295. The proposed use will reduce the amount of traffic in this area, transitioning from an auto and truck repair business (Coachworks) with an estimated 250 weekday trips to approximately 60. The house of operation, pavement and number of parking spaces will not interfere with the neighboring marine and trucking uses.

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 typically occur at surrounding uses or other allowable uses in the same zone;

COACHWORKS ESTIMATED AVERAGE DAILY CUSTOMER TRIPS (DATA PROVIDED BY PREVIOUS TENANT)

Customer repairs, 20-30 per day	100-120 Trips per day
Parts and supply delivery, 10-16 per day	20-32 Trips per day
Vender delivery, 5-10 per day	10-20 Trips per day
Repair and Body Shop estimates, 4-6 per day	8-16 Trips per day
7-9 Employees per day	28-36 Trips per day
Test drives, 10 per day	20 Trips per day
Misc. visitors, 10-15 per day	20-30 Trips per day
<u>Auto sales, 4-5 per day</u>	<u>8-12 Trips per day</u>
Total Trips per Day	214-386 Trips per day

8-10 Cars parked daily
1-3 Trucks parked daily
Total Parking 30 spaces

PROPOSED CONDITIONAL USES AVERAGE DAILY TRIPS

Units A-E, 10-12 Employees per day	20-48 Trips per day
Units A-E, 10-20 Deliveries per day	20-40 Trips per day
<u>Units A-E, 10-20 Visitors per day</u>	<u>20-40 Trips per day</u>
Total Trips per Day	80-128 Trips per day

12, J-22 sail boats
8-10 Cars parked daily
2-5 Trucks parked daily
Total Parking 20 spaces



Division 20: Off-Street Parking Requirement

The parking requirement was calculated by applying the “Business/Manufacturing/Industrial Use” requirement of 1 parking space per 1,000 square feet of floor area from Chapter 14, Sec. 14-332 (l) with the allowable 50% Waterfront Zone parking reduction from Sec. 14-332.1 (j).

Building Description	Area (sf)
4-Story Proposed Building	17,500
1-Story Existing Metal Building	5,236
Total Floor Area	22,736

Per City of Portland Chapter 14, “Floor Area” is defined as, “A floor space enclosed by exterior or standard fire walls, exclusive of vent shafts and courts. The total floor area of 22,736 square feet for the existing 1-story metal building and proposed 4-story building yields 23 required parking spaces; 12 spaces are required after applying the 50% allowable reduction. The proposed plan suggests three interior and nine exterior parking spaces for a total of twelve spaces, one of which is an ADA van-accessible space located on the northerly side of the proposed building.



Previous Conditional Uses Approval

CITY OF PORTLAND, MAINE

PLANNING BOARD

Sean Dundon, Chair
Brandon Mazer, Vice Chair
David Eaton
David Silk
Austin Smith
Maggie Stanley
Lisa Whited

August 22, 2018

Cyrus Hagge
Project Management, INC
225 Commercial Street, Suite 502
Portland, ME 04101

Project Name:	121 Cassidy Point Drive	Project ID:	CU-000084-2018
Address:	121 Cassidy Point Drive	CBL:	072-B-001, 072-B-003
Applicant:	Project Management, INC		
Planner:	Matthew Grooms		

Dear Mr. Hagge:

On July 10, 2018, the Planning Board considered the conditional use application for change of use at 121 Cassidy Point Drive in the Waterfront Port Development Zone to allow marine retail and storage, and low impact industrial uses, identified as conditional uses under Section 14-320 of the land use code. The Planning Board reviewed the proposal for conformance with the conditional use standards and standards for an administrative authorization. The Planning Board voted 5-0 (Dundon, Smith absent) to approve the application as presented below:

Conditional Use

The Planning Board voted 5-0 (Dundon, Smith absent) that the plan is in conformance with the conditional use standards as listed under Section 14-320 and Section 14-474 of the Land Use Code, permitting marine retail/storage and repair along with low impact industrial uses at 121 Cassidy Point Drive subject to the following conditions of approval to be met prior to issuance of a Certificate of Occupancy:

1. The applicant shall provide updated information regarding future site lighting, specifically

the location of lighting and relevant lighting details demonstrating compliance with Section 10 of the Technical Manual.

2. The applicant shall provide an updated site plan showing the location of the proposed dumpster and enclosure along with details for its enclosure, demonstrating compliance with the site plan ordinance.

The approval is based on the submitted plans and the findings related to conditional use review standards as contained in the Planning Report for application CU-000084-2018, which is attached.

Standard Conditions of Approval

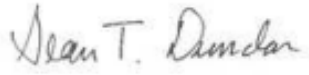
Please Note: The following standard conditions of approval and requirements apply to all approved site plans:

1. 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. Modification of any approved site plan or alteration of a parcel which was the subject of site plan approval after May 20, 1974, shall require the prior approval of a revised site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.
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. 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.
4. 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 Permit (s) is required for your site. Please contact the Department of Public Works Permit Clerk at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Matthew Grooms at (207) 874-8725

Sincerely,

A handwritten signature in dark ink, reading "Sean T. Dundon". The signature is written in a cursive, flowing style.

Sean Dundon, Chair
Portland Planning Board

Attachments:

1. TY Lin Review Comment
2. Planning Board Report
3. Performance Guarantee Packet

PROJECT MANAGEMENT, INC.
PORTLAND, MAINE

_____ USE _____
 _____ 4"W _____ 4"W _____
 _____ 6" _____ 6"
 _____ GAS _____
 _____ > _____ > _____
 _____ S _____ S _____

C-01	COVER SHEET & LEGEND
C-02	GENERAL NOTES
EX	EXISTING CONDITIONS PLAN BY OWEN HASKELL, INC.
C-03	CONSTRUCTION MANAGEMENT PLAN
C-10	SITE PLAN
L-1	LANDSCAPE PLAN
C-20	UTILITY PLAN
C-30	GRADING PLAN
C-40	SITE DETAILS
C-41	UTILITY & DRAINAGE DETAILS
C-42	EROSION CONTROL DETAILS & NOTES

CALL BEFORE YOU DIG
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1-888-344-7233

UNITIL SERVICE CORP
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: SCOTT CARPENTER
(207) 541-2543

WRIGHT RYAN CONSTRUCTION, INC.
10 DANFORTH STREET
PORTLAND, ME 04101
CONTACT: MARC BOURGEOIS
(207) 773-3625

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CL	CENTERLINE
CM	CONSTRUCTION MANAGER
CMP	CENTRAL MAINE POWER
CONC.	CONCRETE
CY	CUBIC YARD
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE
FT.	FEET
GAL.	GALVANIZED
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
M.E.P	MECHANICAL, ELECTRICAL, PLUMBING
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

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

[illegible]

COVER SHEET & LEGEND

CASSIDY POINT REDEVELOPMENT

PROJECT MANAGEMENT, INC.
2225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

PROJECT NAME:

CLIENT:



A C O R N
ENGINEERING, INC.

FILE: 1113_DETAILS

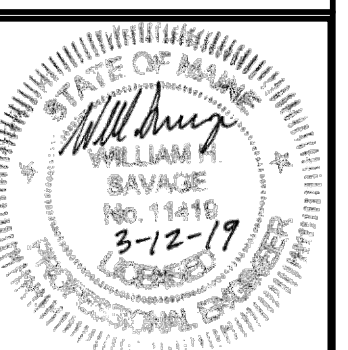
N:	1113
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CALE:	NTS
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DESIGNED BY: FRT

RAWN BY: FRT

HECKED BY: WHS



DRAWING NO.

C-01

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, 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 SERVING 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 AUTOCAD FORMAT AND PAPER, STAMPED "AS-BUILT". IF AUTOCAD 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 EXISTING CONDITIONS SURVEY BY OWEN HASKELL, INC AT #121 CASSIDY POINT ROAD, DATED OCTOBER 29, 2018.
8. SUBSURFACE DATA HAS BEEN OBTAINED BY S.W. COLE ENGINEERING, INC. AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ALSO REVIEW THE REPORT PRIOR TO BID SUBMISSION.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THROUGH 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 BY ACORN ENGINEERING 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 FOR ADJACENT STRUCTURES. A COPY OF THE SURVEY SHOULD BE PROVIDED TO THE OWNER. DOCUMENT WITH PICTURES AT A MINIMUM.
14. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH ACORN, IF ANY.

1. THE CONTRACTOR WILL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP AND CONSTRUCTION DRAWINGS WILL BE CHECKED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR ENGINEER'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR WILL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER 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 WILL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE GENERAL 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, WILL 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, IF PRESENT, UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.
12. ALL PAVEMENT JOINTS SHALL BE SAWCUT AND APPLIED WITH TACK COAT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
13. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS, AS WELL AS SITE DRAINAGE, SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.
2. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT.
3. 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.
6. 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.
7. 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. INTERIM 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.
8. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER

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 REGISTERED 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 CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER 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 DRIVEWAYS AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND IN USE AT ALL TIMES.

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL II SITE PLAN APPLICATION FROM THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.
3. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRES A STREET OPENING PERMIT FROM THE CITY OF PORTLAND. ADDITIONALLY, COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS.

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED WITHIN THE PROPOSED LIMITS OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY LOAM 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. 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 OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST 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 CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. 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 S.W. COLE ENGINEERING, INC.
6. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.
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, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. 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.
3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDDED 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.
4. 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.
5. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
6. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

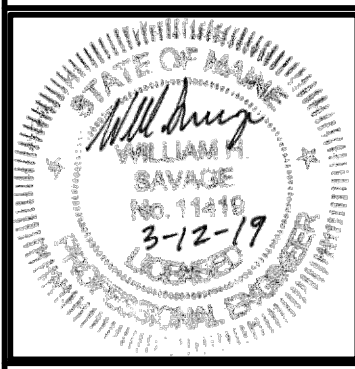
1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. 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 THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES, PRIOR TO THE ORDERING OF STRUCTURES.
3. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED BEFORE 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.
4. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
5. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.

15. 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.

3. THE CLIENT HAS NOT REQUESTED NOR HAS ACORN COMPLETED A PHASE I - ENVIRONMENTAL SITE ASSESSMENT FOR THE PROPERTY.

DRAWING NAME:	GENERAL NOTES
PROJECT NAME:	CASSIDY POINT REDEVELOPMENT
CLIENT:	PROJECT MANAGEMENT, INC. 225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

FILE:	1113_DETAILS
JN:	1113
SCALE:	NTS
DESIGNED BY:	FRT
DRAWN BY:	FRT
CHECKED BY:	WHS

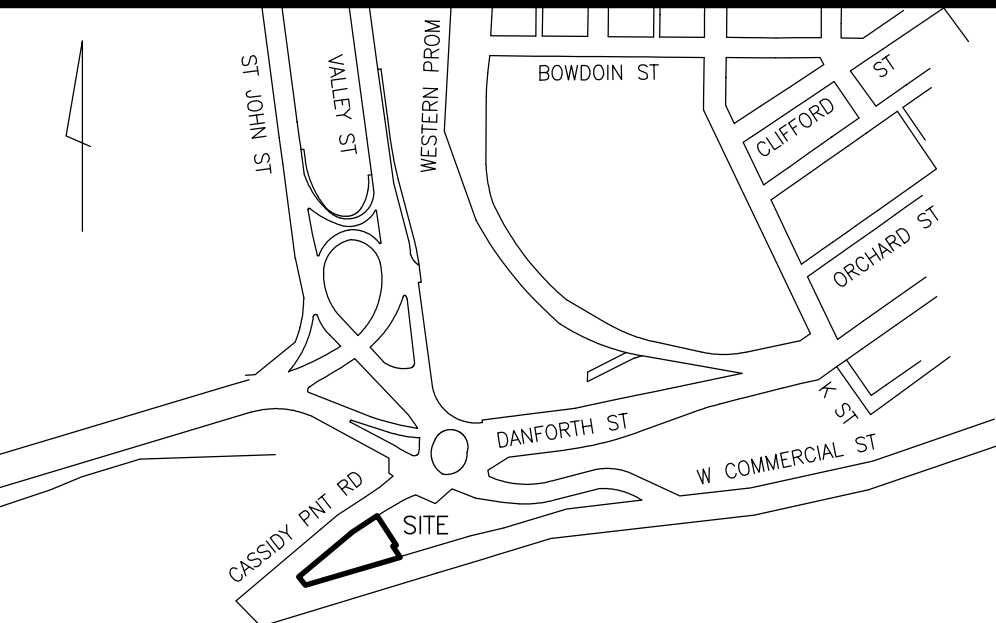


DRAWING NO.
C-02



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 SURVEYOR HAS NOT PHYSICALLY LOCATED 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.



LOCATION MAP

N.T.S.

LEGEND

●	IRON PIPE OR ROD FOUND	—X—X—	FENCE
○	UTILITY POLE	—○—○—	STONEWALL
○	MANHOLE	—	CURB
—	SIGN	—OHW—	OVERHEAD WIRES
—	CATCH BASIN	—UG—	UNDERGROUND POWER
—	HYDRANT	—W—	WATER LINE
—	WATER VALVE OR SHUTOFF	—G—	GAS LINE
—	LIGHT POLE	—SS—	SANITARY SEWER
—	GAS VALVE	—20—	1' CONTOUR
		—IPF/IRF—	IRON PIPE OR ROD FD
		—N/F—	NOW OR FORMERLY
		—000/000—	DEED BOOK / PAGE
		—CONC.—	CONCRETE

PLAN REFERENCES

- "STANDARD BOUNDARY SURVEY ON WEST COMMERCIAL & DANFORTH STREETS, PORTLAND, MAINE FOR COACHWORKS, INC." BY WAYNE T. WOOD & CO., DATED APRIL 1997.
- "STANDARD BOUNDARY SURVEY FOR PROPOSED ELECTRICAL SUBSTATION, WEST COMMERCIAL STREET, PORTLAND, MAINE, MADE FOR CENTRAL MAINE POWER, CMP# 956-3-1," BY TITCOMB ASSOCIATES, DATED JAN 2004 AND REVISED THROUGH 8/17/2004. RECORDED IN PLAN BOOK 204 PAGE 571.

GENERAL NOTES

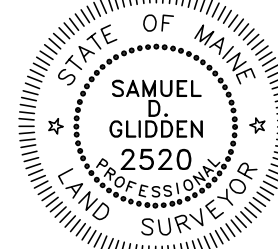
- OWNER OF RECORD: P & D REAL CORP
TAX MAP 72 BLOCK B LOT 1
C.C.R.D. BOOK 34772 PAGE 91
- BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83.
- ELEVATIONS ARE BASED ON CITY DATUM (NGVD 1929) BASED UPON MAINE DEPARTMENT OF TRANSPORTATION DISK L 5 (NGS) RESET 1997 FOUND SET IN CONCRETE BRIDGE ABUTMENT THAT SUPPORTS THE BEACH STREET ON RAMP WHERE IT CONNECTS TO THE CASCO BAY BRIDGE.
- PROPERTY LINES AND DIMENSIONS ARE TAKEN FROM PLAN REFERENCE 1.

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.

Samuel D. Glidden
SAMUEL D. GLIDDEN, PLS #2520

10/29/2018
DATE



TOPOGRAPHIC SURVEY

AT

#121 CASSIDY POINT ROAD

PORTLAND, MAINE

MADE FOR

CYRUS HAGGE

225 COMMERCIAL STREET, PORTLAND, MAINE



OWEN HASKELL, INC.

PROFESSIONAL LAND SURVEYORS

390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105

DRAWN BY: TMK

CHECKED BY: SDG

DATE: MAY 17, 2018

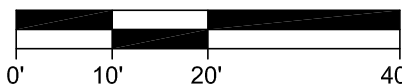
SCALE: 1"=20'

JOB NO.

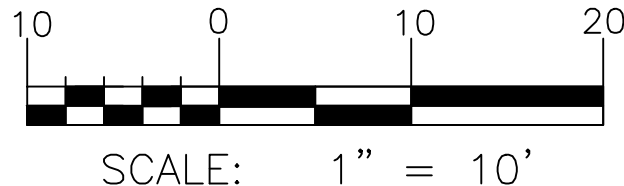
2018-070P

DRWS. NO. 1

SCALE: 1" = 20'



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 LOCAL PUBLIC AGENCY 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 TO BE 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 AND MAINTAIN IN ACCORDANCE WITH MANUFACTURER, PER DETAIL.
8. DEMOLITION SHALL BE CONDUCTED IN ACCORDANCE WITH THE CITY OF PORTLAND ITEMS 1-10. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS OF LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS. 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 CONSTRUCTION PERIOD.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.



PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

[illegible]

CONSTRUCTION MANAGEMENT PLAN

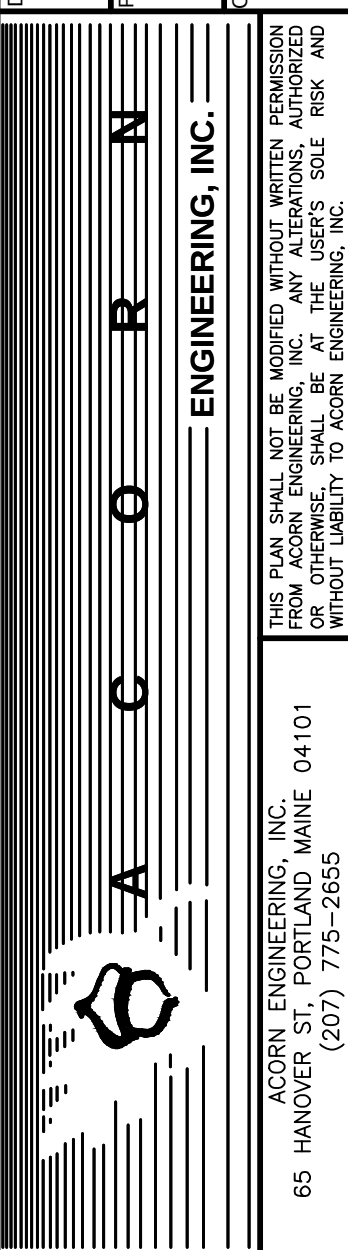
CASSIDY POINT REDEVELOPMENT

PROJECT MANAGEMENT, INC.
COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

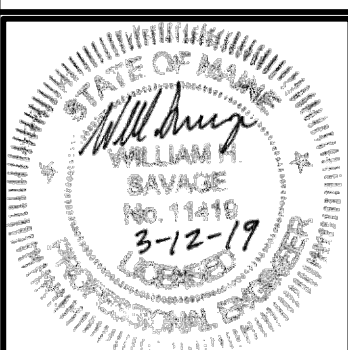
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PROJECT NAME:

CLIENT:



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CHECKED BY:	WHS



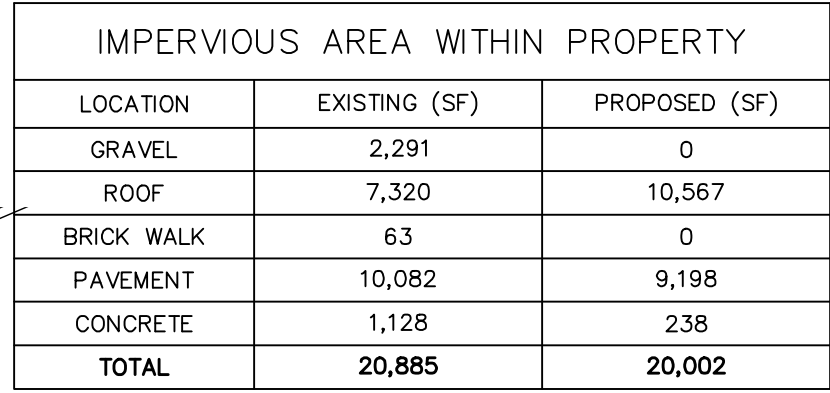
DRAWING NO.

C-03

IMPERVIOUS AREA WITHIN PROPERTY		
LOCATION	EXISTING (SF)	PROPOSED (SF)
GRAVEL	2,291	0
ROOF	7,320	10,567
BRICK WALK	63	0
PAVEMENT	10,082	9,198
CONCRETE	1,128	238
TOTAL	20,885	20,002

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LOCATION	EXISTING (SF)	PROPOSED (SF)
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BRICK WALK	63	0
PAVEMENT	10,082	9,198
CONCRETE	1,128	238
TOTAL	20,885	20,002

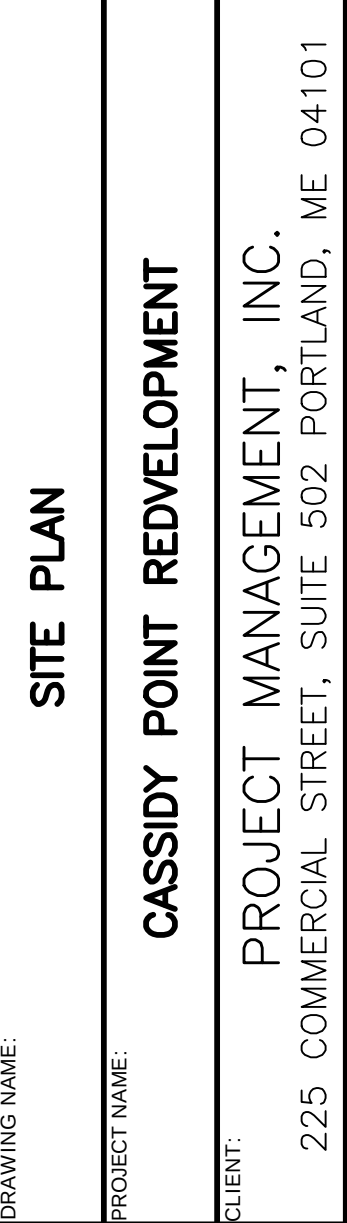
IMPERVIOUS AREA WITHIN PROPERTY		
LOCATION	EXISTING (SF)	PROPOSED (SF)
GRAVEL	2,291	0
ROOF	7,320	10,567
BRICK WALK	63	0
PAVEMENT	10,082	9,198
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DRAWING NAME:	SITE PLAN
PROJECT NAME:	CASSIDY POINT REDVELOPMENT
CLIENT:	PROJECT MANAGEMENT, INC. 225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

DRAWING NAME:	SITE PLAN
PROJECT NAME:	CASSIDY POINT REDVELOPMENT
CLIENT:	PROJECT MANAGEMENT, INC. 225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

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CLIENT:	PROJECT MANAGEMENT, INC. 225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

PLANT SCHEDULE				
ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
TREES				
AF	ACER X FREEMANII 'ARMSTRONG'	ARMSTRONG RED MAPLE	4	2"
JP	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	7	5-6'
RB	ROBUR X BICOLOR 'LONG'	REGAL PRINCE OAK	4	2"
SHRUBS				
HB	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	4	3 GAL
PERENNIAL GROUND COVER				
JC	JUNIPERUS COMMUNIS 'AMIDAK'	BLUEBERRY DELIGHT JUNIPER	6	3 GAL
PS	PHLOX STOLONIFERA 'BRUCE'S WHITE'	CREeping PHLOX	12	1 GAL

GENERAL NOTES:

1. CONTRACTOR TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING INSTALLATION.
2. ALL PROPOSED GREEN SPACES AND ASSOCIATED PLANT SPECIES ARE TO COMPLY WITH THE CITY OF PORTLAND TECHNICAL STANDARDS. ANY SUBSTITUTIONS SHALL BE REVIEWED FOR APPROVAL BY THE CITY ARBORIST.
3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
4. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
5. ALL CONTAINER MATERIAL TO BE GROWN IN CONTAINER - MINIMUM OF 6 MONTHS.
6. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
7. CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
8. THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUED CARE AND MAINTENANCE OF THE LANDSCAPED AREA. NEW PLANTINGS THAT SHOW SIGNS OF CONSTRUCTION DAMAGE WITHIN A ONE YEAR PERIOD FOLLOWING CONSTRUCTION SHALL BE REJECTED AND REPLACED PRIOR TO ANY DEFECT GUARANTEE AT NO COST TO THE OWNER.
9. THE ENGINEER MAY TAG ALL PLANTS AT THE NURSERY AND INSPECT THEM AFTER DELIVERY TO THE SITE; ALL PLANT MATERIALS SHALL BE INSPECTED BY THE ENGINEER ON SITE PRIOR TO INSTALLATION.
10. SEE PERMANENT SEEDING TABLE ON SHEET C-45 FOR LOAM AND SEED AREAS.
11. AERIAL IMAGERY, DATED 2017, PLAN ACCESSED FROM MEGS ORTHOMAGERY TOOL. MAY NOT HOLD TRUE TO CURRENT, ON-SITE CONDITIONS. CONTRACTOR TO FIELD VERIFY LOCATIONS OF PLANTINGS.



ISSUED FOR	BY
PRELIMINARY PLAN	DATE
LEVEL II SITE PLAN	WHS
LEVEL II SITE PLAN	WHS
COMMENT RESPONSE	WHS
12/12/19	

DRAWING NAME	LANDSCAPE PLAN
PROJECT NAME	CASSIDY POINT REDEVELOPMENT
CLIENT	PROJECT MANAGEMENT, INC.
	225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

ACORN ENGINEERING, INC.	ENGINEERING, INC.
158 DANFORTH ST. PORTLAND MAINE 04102	
(207) 775-2655	

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JN:	1113
SCALE:	AS NOTED
DESIGNED BY:	FRT
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CHECKED BY:	WHS

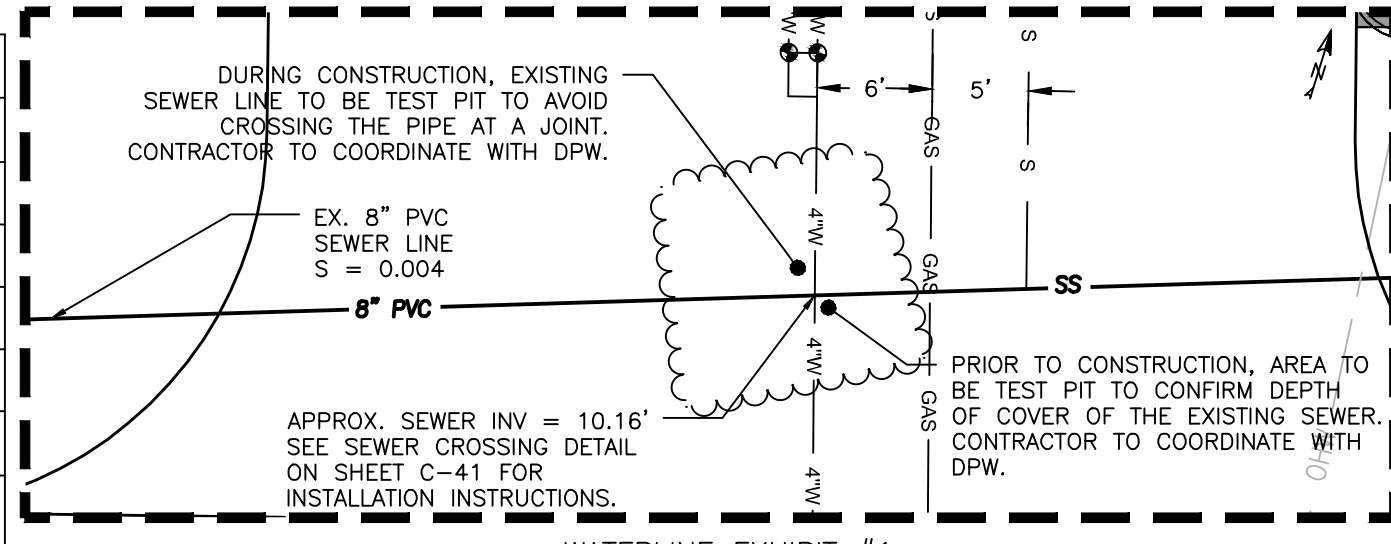
STATE OF MAINE
WILLIAM A. SAVAGE
No. 11416
3-12-19
EXPIRES

DRAWING NO.
L-1

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 DESIGN MEANS. CONTRACTOR IS TO BE ADVISED THAT SUCH INFORMATION IS NOT TO BE USED. 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 EXISTING UTILITIES. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENCES FROM 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. CONTRACTOR TO COORDINATE WITH ARCHITECT FOR ALL UTILITIES CONNECTIONS WITHIN THE BUILDING.
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 CITY OF PORTLAND CITY CENTER 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 COORDINATED BY M.E.P. ENGINEER. DOMESTIC WATER MAIN SIZES WILL BE BASED ON 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 STANDARDS.
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 UNIFIT.
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 NEEDED, TO BE DEFINED BY M.E.P. ENGINEER. FINAL SERVICE CONNECTION TO BUILDING.
9. ELECTRICAL CONSTRUCTION SHALL CONFORM WITH CMP GUIDEBOOK STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
10. 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.

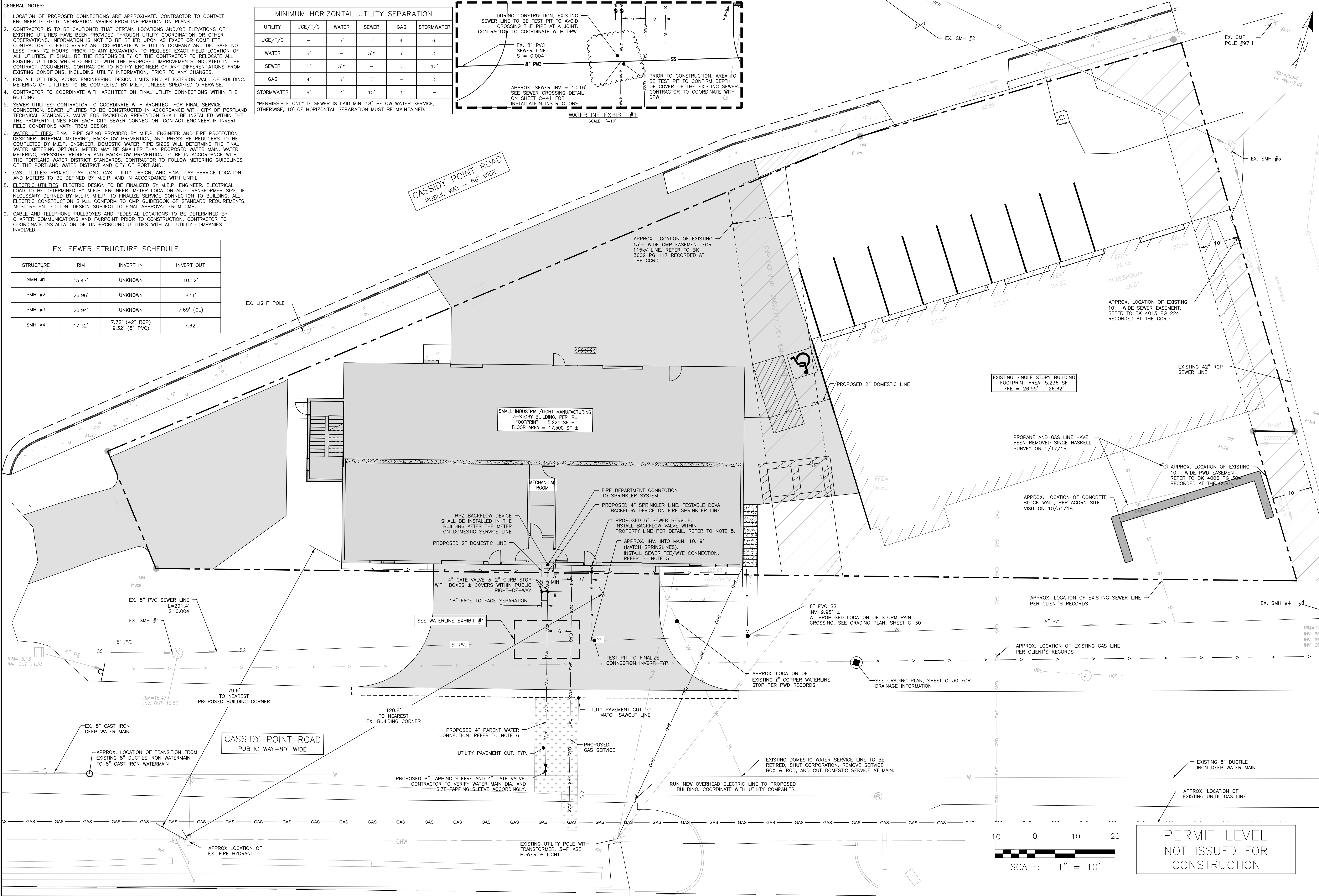
MINIMUM HORIZONTAL UTILITY SEPARATION					
UTILITY	UGE/T/C	WATER	SEWER	GAS	STORMWATER
UGE/T/C	—	6'	5'	4'	6'
WATER	6'	—	5*	6'	3'
SEWER	5'	5*	—	5'	10'
GAS	4'	6'	5'	—	3'
STORMWATER	6'	3'	10'	3'	—

*PERMISSIBLE ONLY IF SEWER IS LAID MIN. 18" BELOW WATER SERVICE; OTHERWISE, 10' OF HORIZONTAL SEPARATION MUST BE MAINTAINED.



WATERLINE EXHIBIT #1
SCALE 1"=10'

EX. SEWER STRUCTURE SCHEDULE			
STRUCTURE	RIM	INVERT IN	INVERT OUT
SMH #1	15.47'	UNKNOWN	10.52'
SMH #2	26.96'	UNKNOWN	8.11'
SMH #3	26.94'	UNKNOWN	7.69' (CL)
SMH #4	17.32'	7.72" (42" RCP) 9.32" (8" PVC)	7.62'

[illegible]

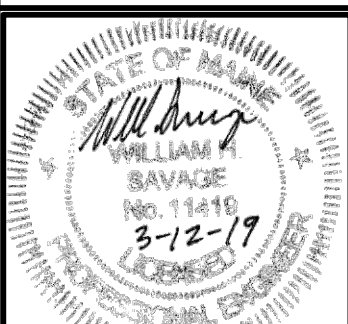
DRAWING NAME:	UTILITY PLAN
PROJECT NAME:	CASSIDY POINT REDEVELOPMENT
CLIENT:	PROJECT MANAGEMENT, INC. 225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

A C O R N ENGINEERING, INC.

ACORN ENGINEERING, INC. MAINE 04102
 158 DANFORTH AVENUE
 (207) 775-2655
 (207) 775-2655

THIS FLOOR PLAN WAS PREPARED BY THE ARCHITECTS AND ENGINEERS OF THE FIRM OF ACORN ENGINEERING, INC. 158 DANFORTH AVENUE, MAINE 04102. THE ARCHITECTS AND ENGINEERS OF THE FIRM OF ACORN ENGINEERING, INC. ARE NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION CONTAINED HEREIN.

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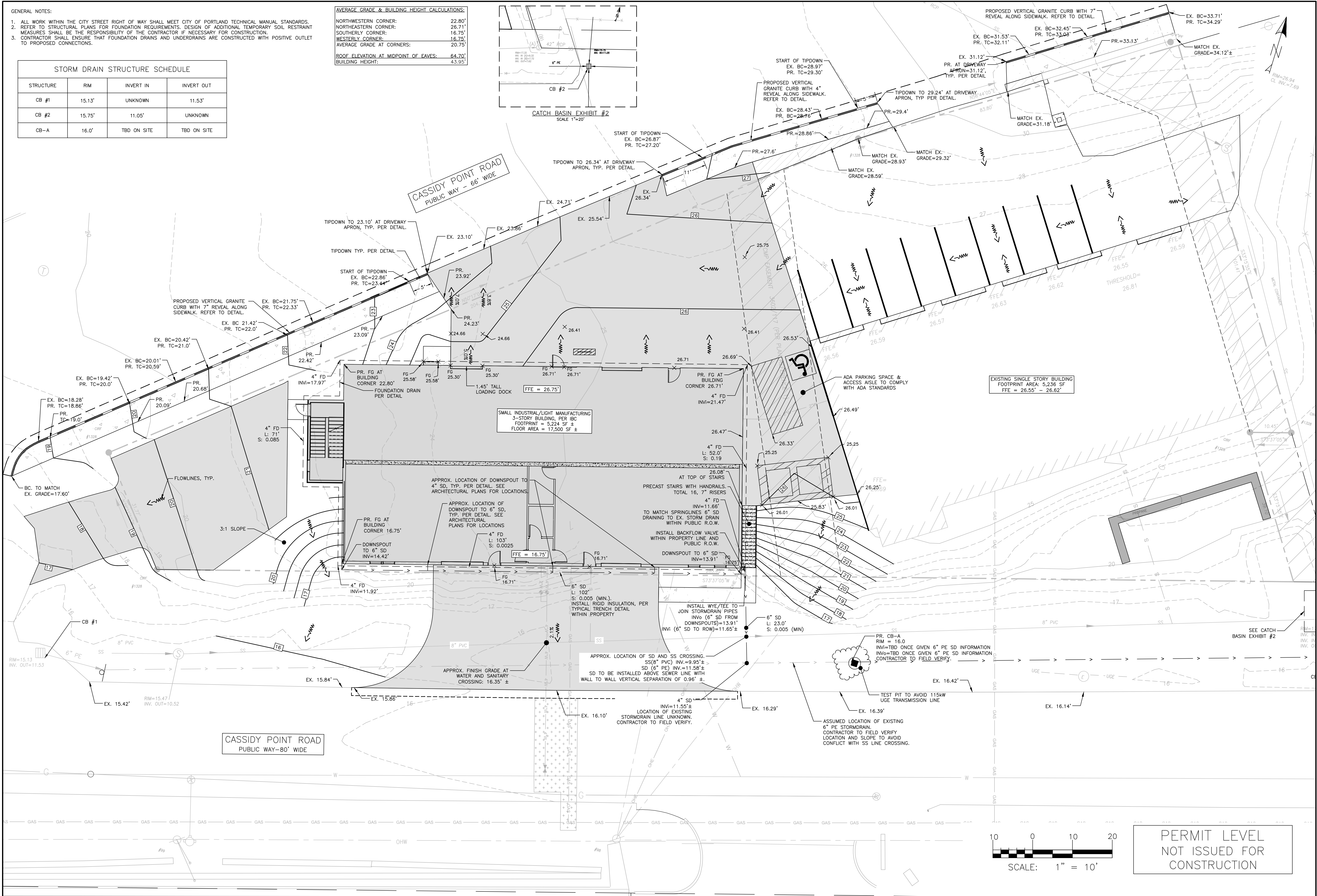
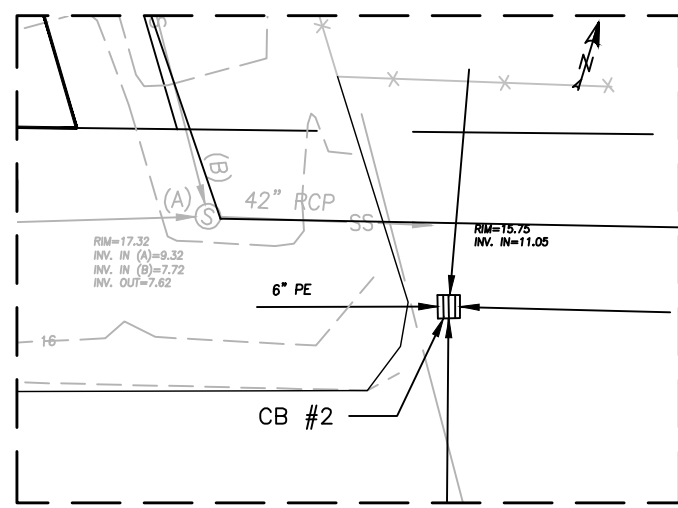


DRAWING NO.
C-20

- GENERAL NOTES:
- ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
 - REFER TO STRUCTURAL PLANS FOR FOUNDATION REQUIREMENTS. DESIGN OF ADDITIONAL TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
 - CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.

AVERAGE GRADE & BUILDING HEIGHT CALCULATIONS:	
NORTHWESTERN CORNER:	22.80'
NORTHEASTERN CORNER:	26.71'
SOUTHERLY CORNER:	16.75'
WESTERLY CORNER:	16.75'
AVERAGE GRADE AT CORNERS:	20.75'
ROOF ELEVATION AT MIDPOINT OF EAVES:	64.70'
BUILDING HEIGHT:	43.95'

STORM DRAIN STRUCTURE SCHEDULE			
STRUCTURE	RIM	INVERT IN	INVERT OUT
CB #1	15.13'	UNKNOWN	11.53'
CB #2	15.75'	11.05'	UNKNOWN
CB-A	16.0'	TBD ON SITE	TBD ON SITE



ISSUED FOR	BY
PRELIMINARY PLAN	FRT
LEVEL II SITE PLAN	WHS
LEVEL II SITE PLAN	WHS
SOILS ANALYSIS	FRT
COMMENT RESPONSE	WHS

GRADING PLAN	PROJECT NAME:
CASSIDY POINT REDEVELOPMENT	CLIENT:
	225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

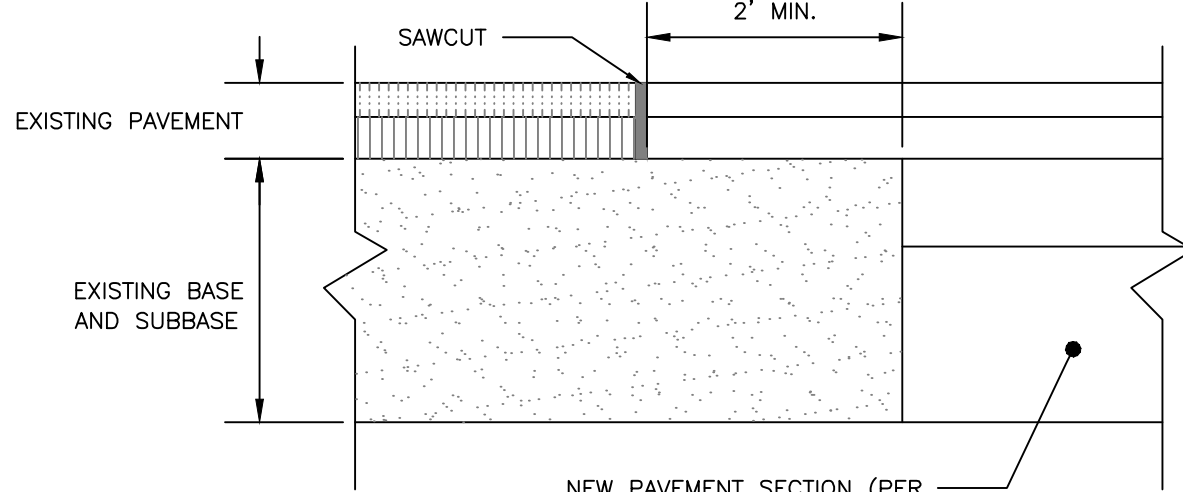
ACORN ENGINEERING, INC.	ENGINEERING, INC.
158 DANFORTH ST. PORTLAND, MAINE 04102	(207) 775-2655

FILE:	1113_CIVIL
JN:	1113
SCALE:	AS NOTED
DESIGNED BY:	FRT
DRAWN BY:	FRT
CHECKED BY:	WHS

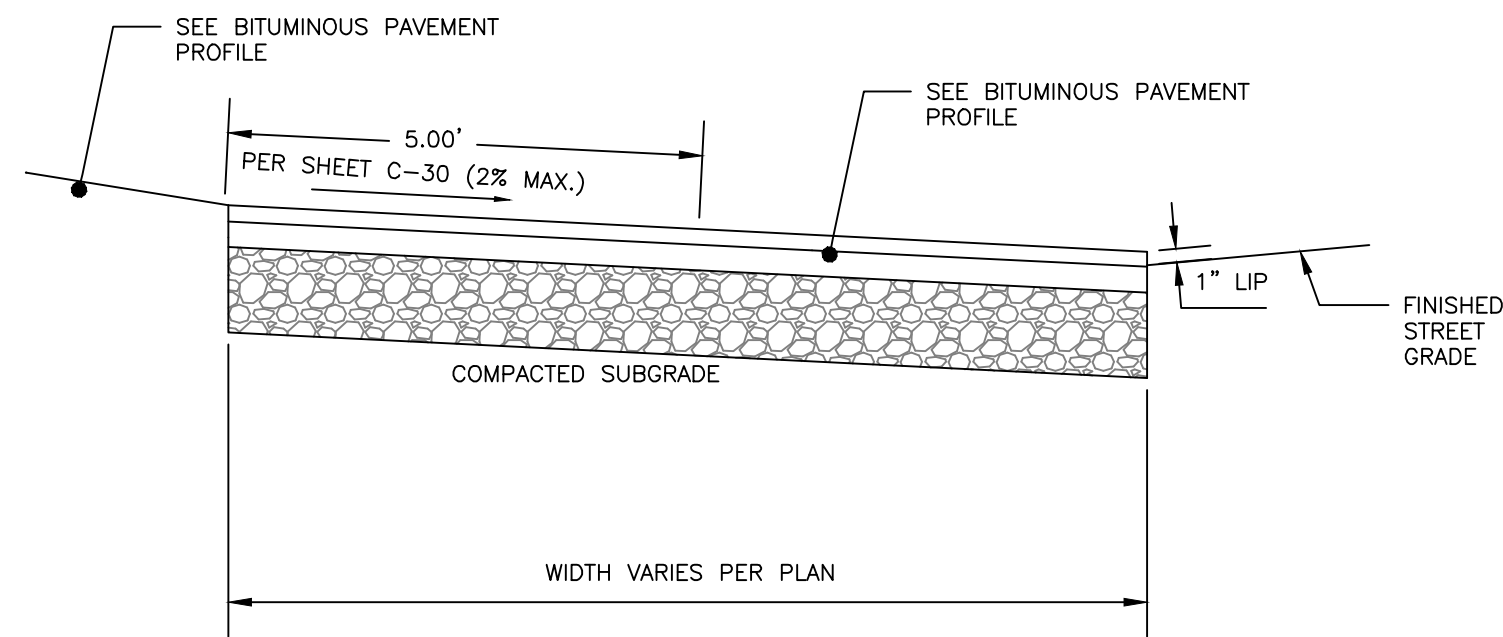
DRAWING NO.	C-30
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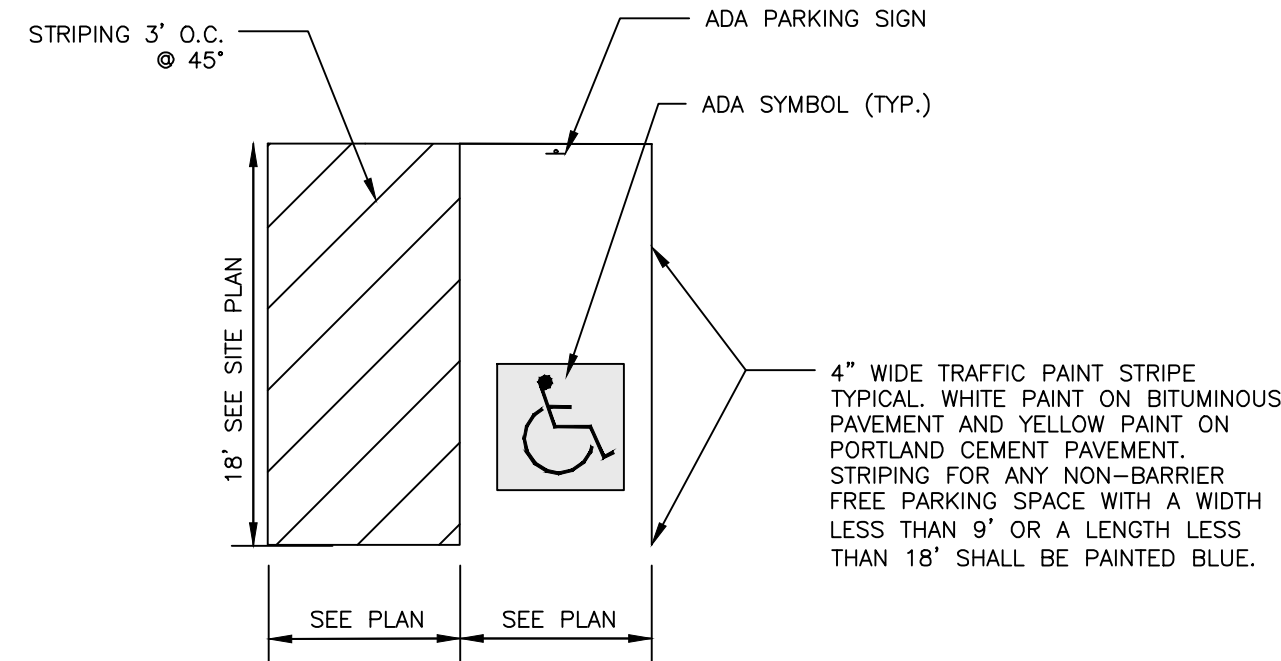
1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.
2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL
NOT TO SCALE



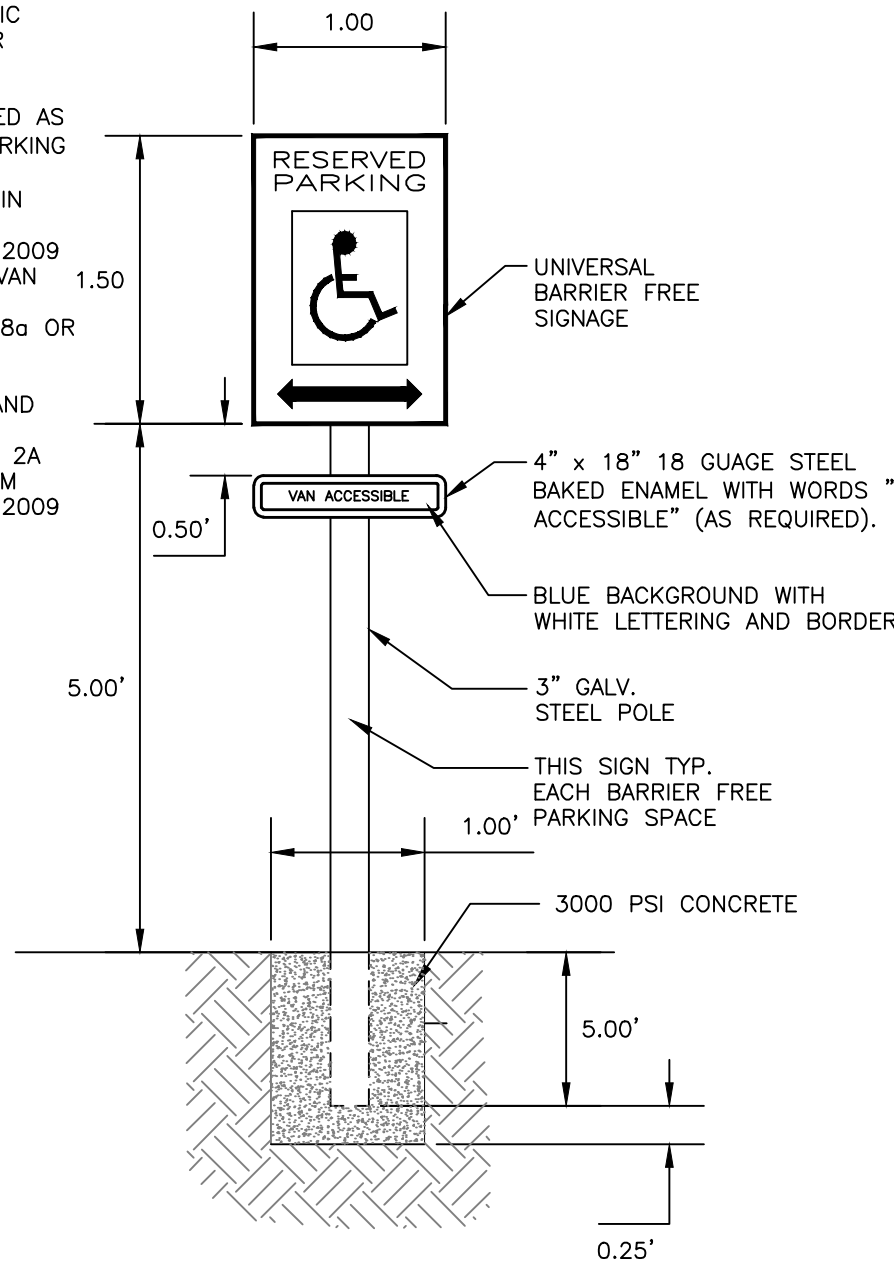
BITUMINOUS DRIVEWAY APRON DETAIL
NOT TO SCALE



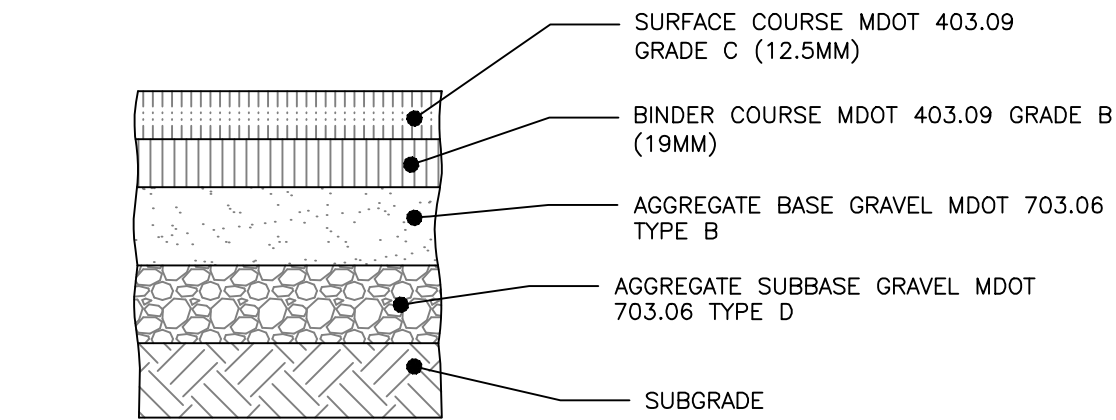
PARKING SPACE DIMENSIONS
NOT TO SCALE

NOTES:

1. ALL ASPECTS OF RESERVED PARKING SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
2. SIGN SHALL BE CONSTRUCTED AS SIGN R7-8 UNDER THE "PARKING AND STANDING SIGNS AND PLAQUES" (R7 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION. VAN ACCESSIBILITY SHALL BE CONSTRUCTED AS SIGN R7-8a OR R7-8b.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.



BARRIER FREE PARKING SIGN
NOT TO SCALE

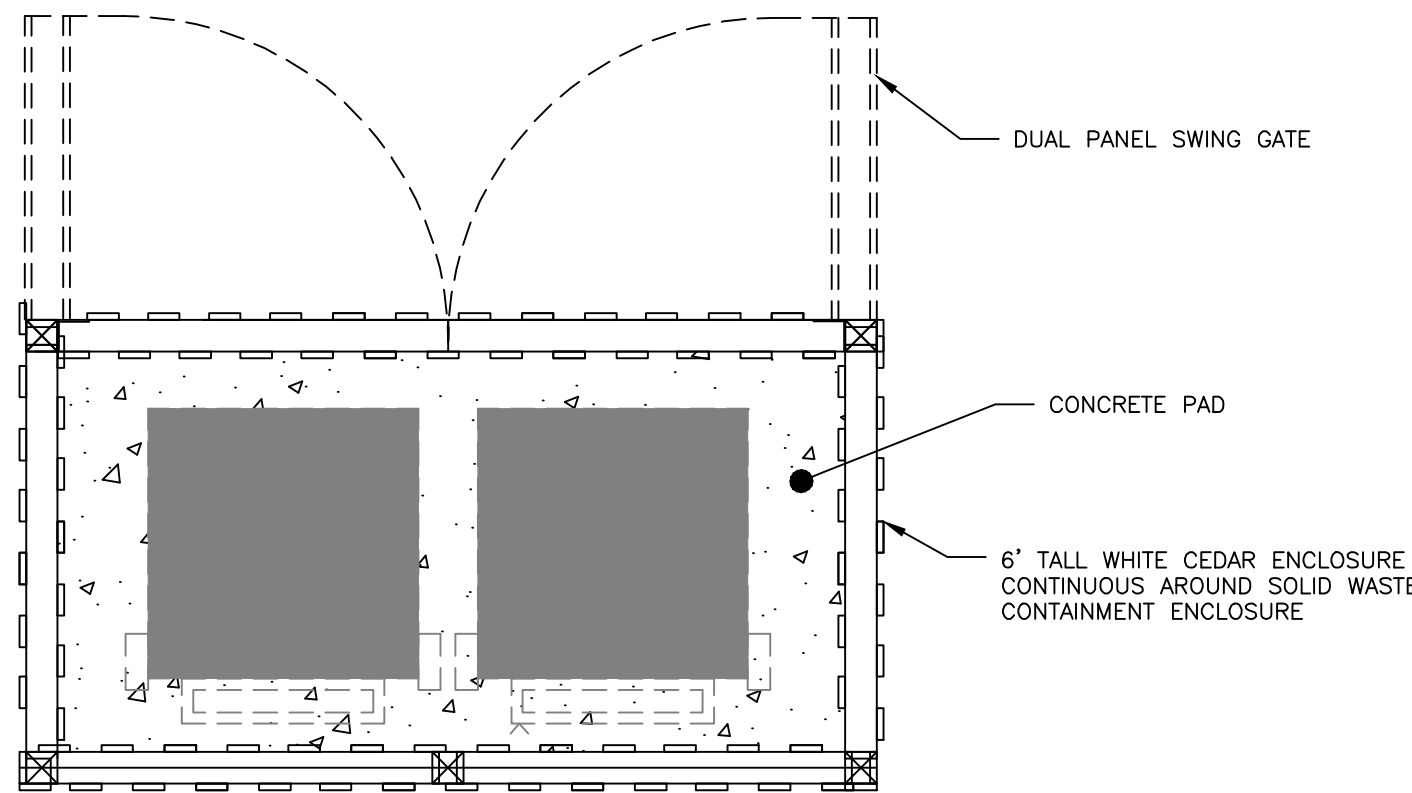


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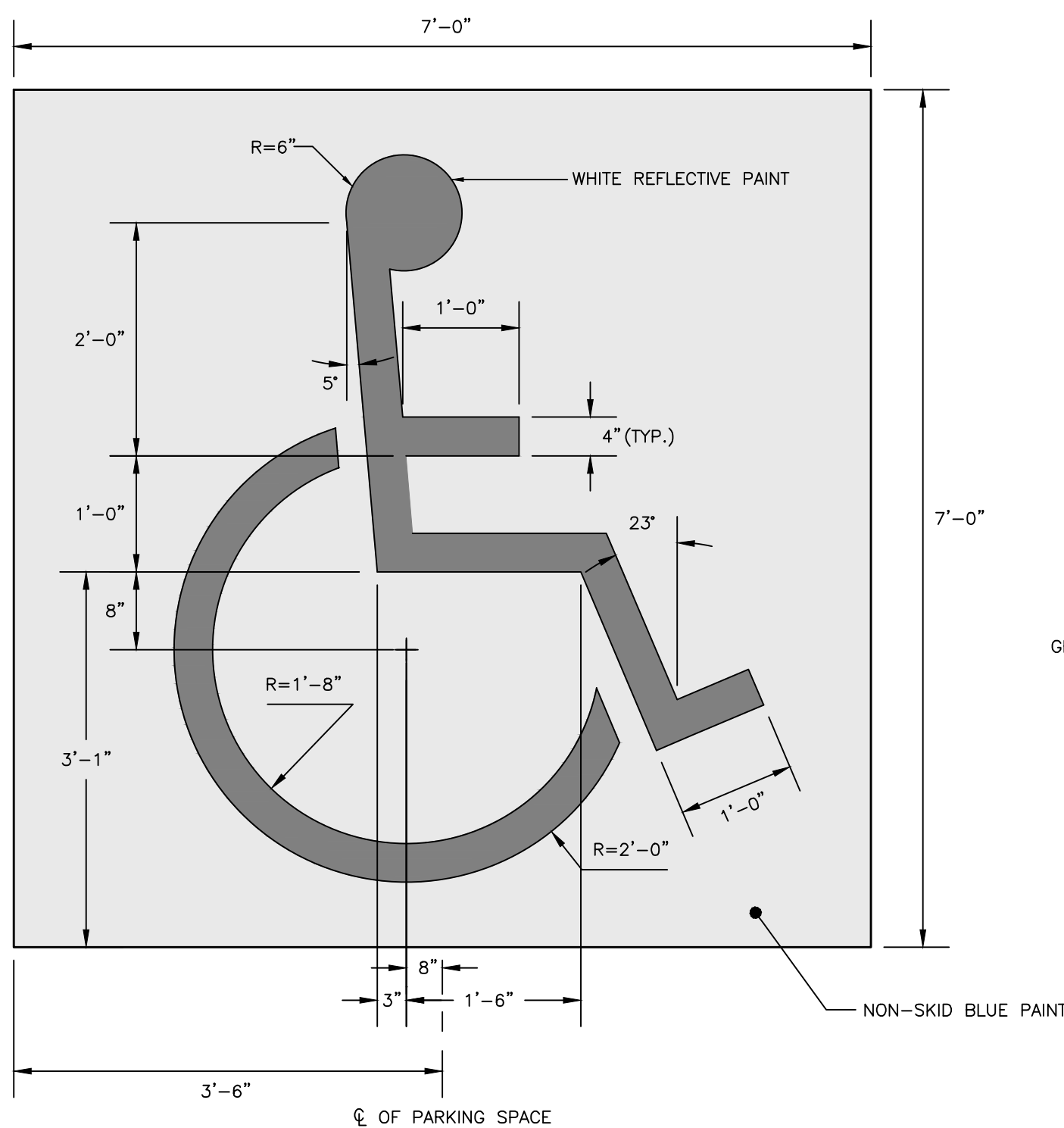
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

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
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

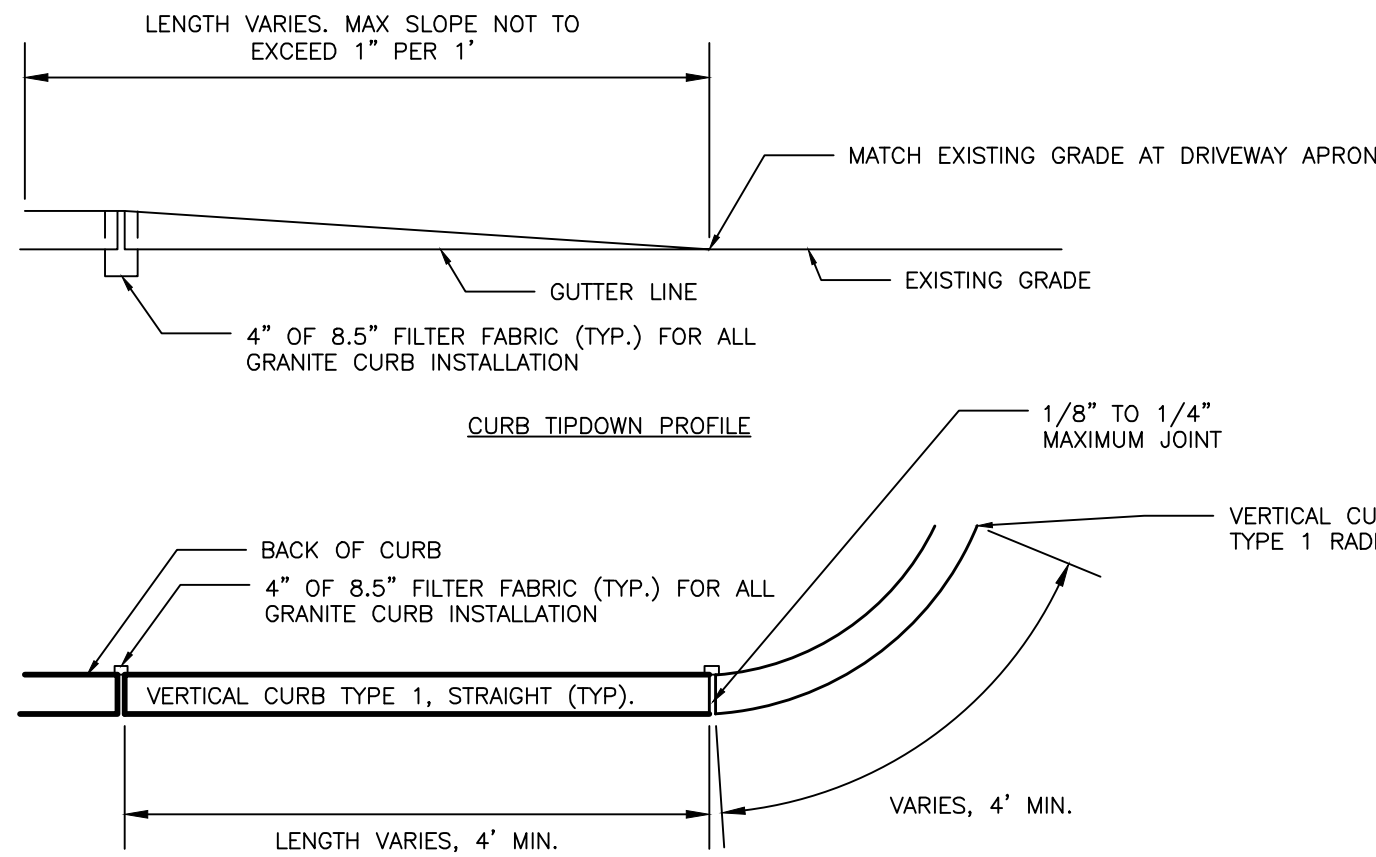
BITUMINOUS PAVEMENT PROFILE:
CASSIDY POINT DRIVE & INTERNAL PARKING LOT
NOT TO SCALE



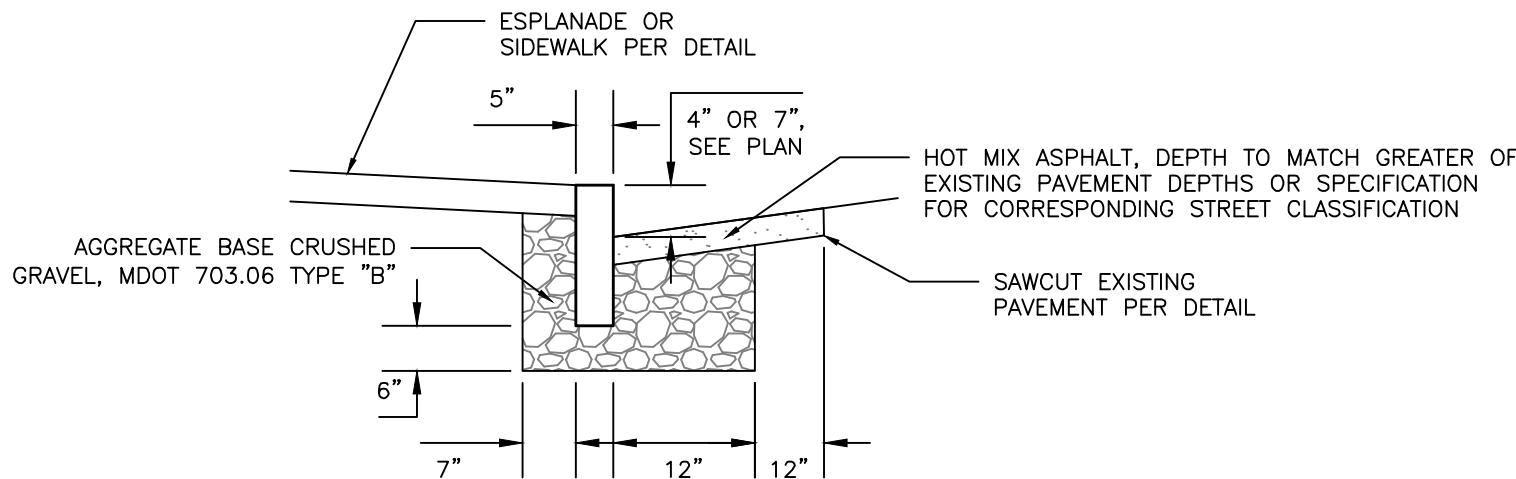
DUMPSTER ENCLOSURE
NOT TO SCALE



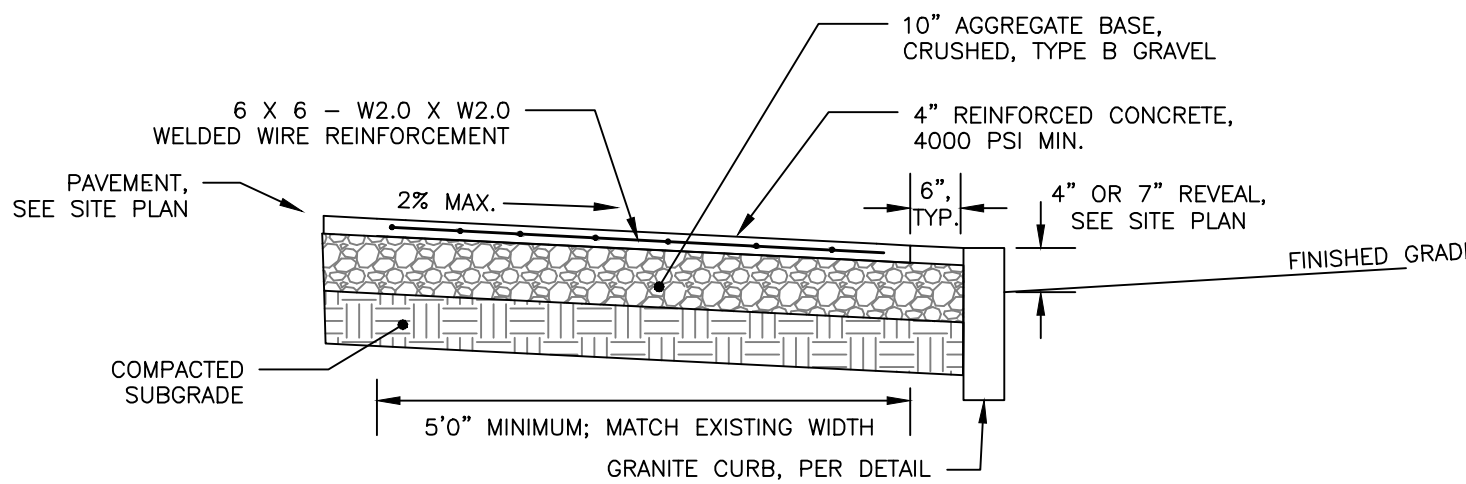
INTERNATIONAL BARRIER FREE SYMBOL
NOT TO SCALE



VERTICAL GRANITE CURB PLAN VIEW



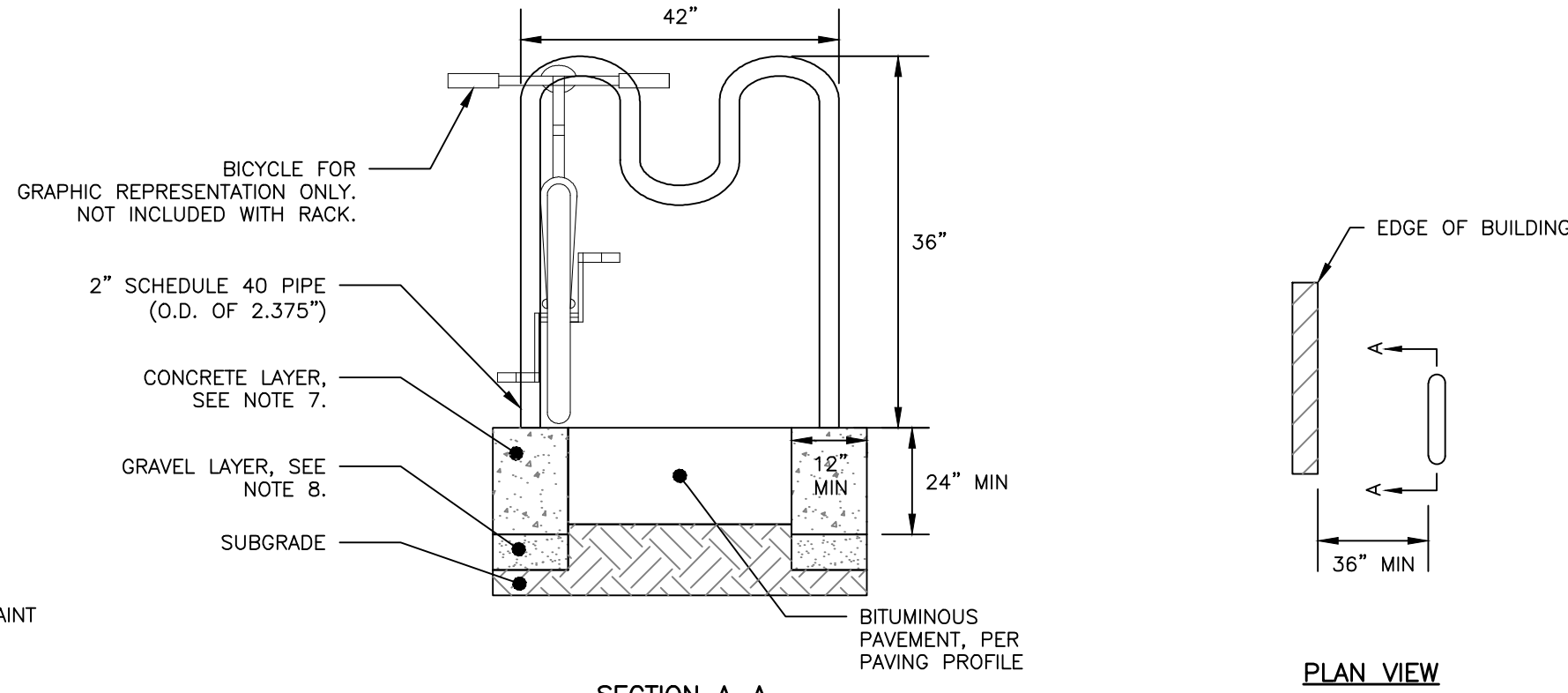
VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION
NOT TO SCALE



REINFORCED CONCRETE SIDEWALK
NOT TO SCALE

NOTES:

1. BICYCLE RACK SHALL HAVE CAPACITY FOR FOUR 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 BICYCLE 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 HI ROLLER", AS MANUFACTURED BY DERO BIKE RACKS.
5. MINIMUM OFFSETS SHOWN. MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.
6. ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.
7. CONCRETE SHALL BE 4000 PSI @28 DAYS. BOTTOM OF CONCRETE SHALL BE AT TOP OF GRAVEL ELEVATION.
8. GRAVEL LAYER SHALL BE INSTALLED IN ACCORDANCE WITH BITUMINOUS BASE DETAIL, AND SHALL BE MAINTAINED 703.06 TYPE B.

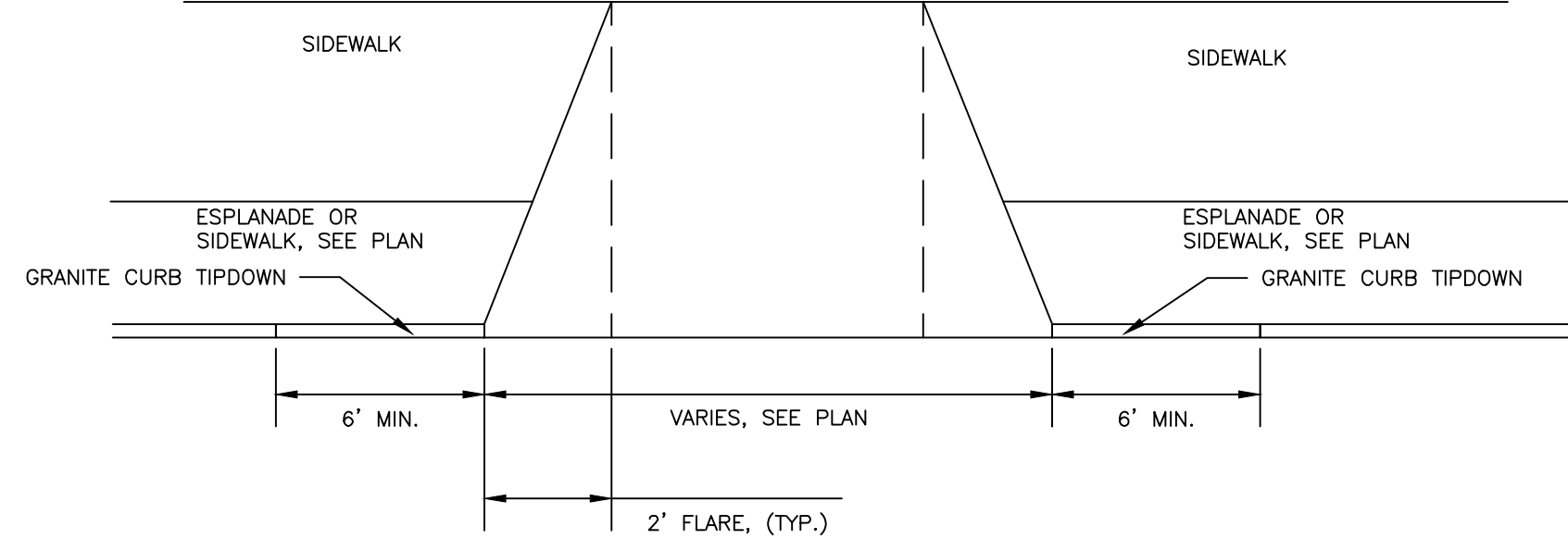


SECTION A-A

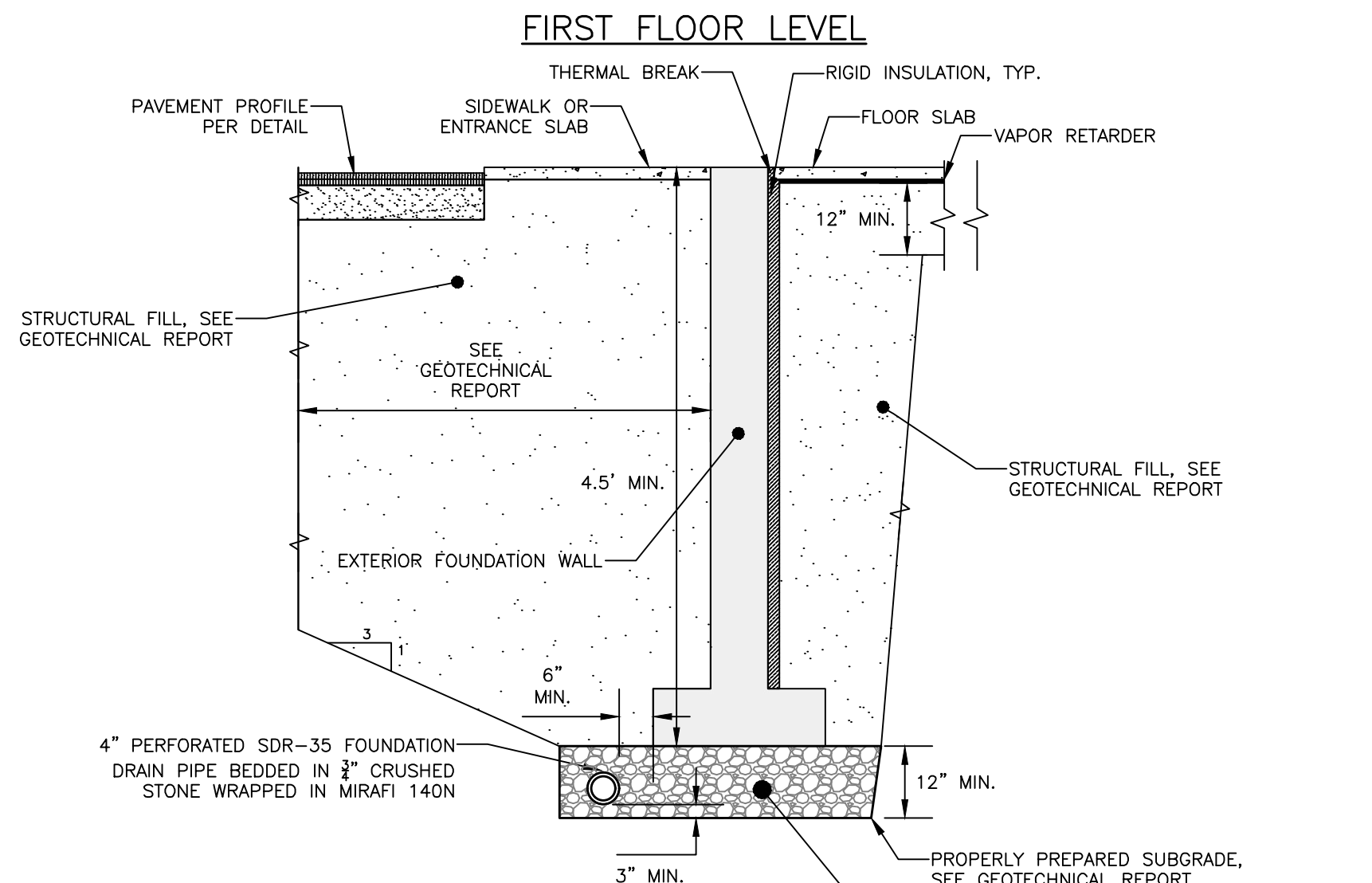
BICYCLE RACK DETAIL
NOT TO SCALE

NOTES:

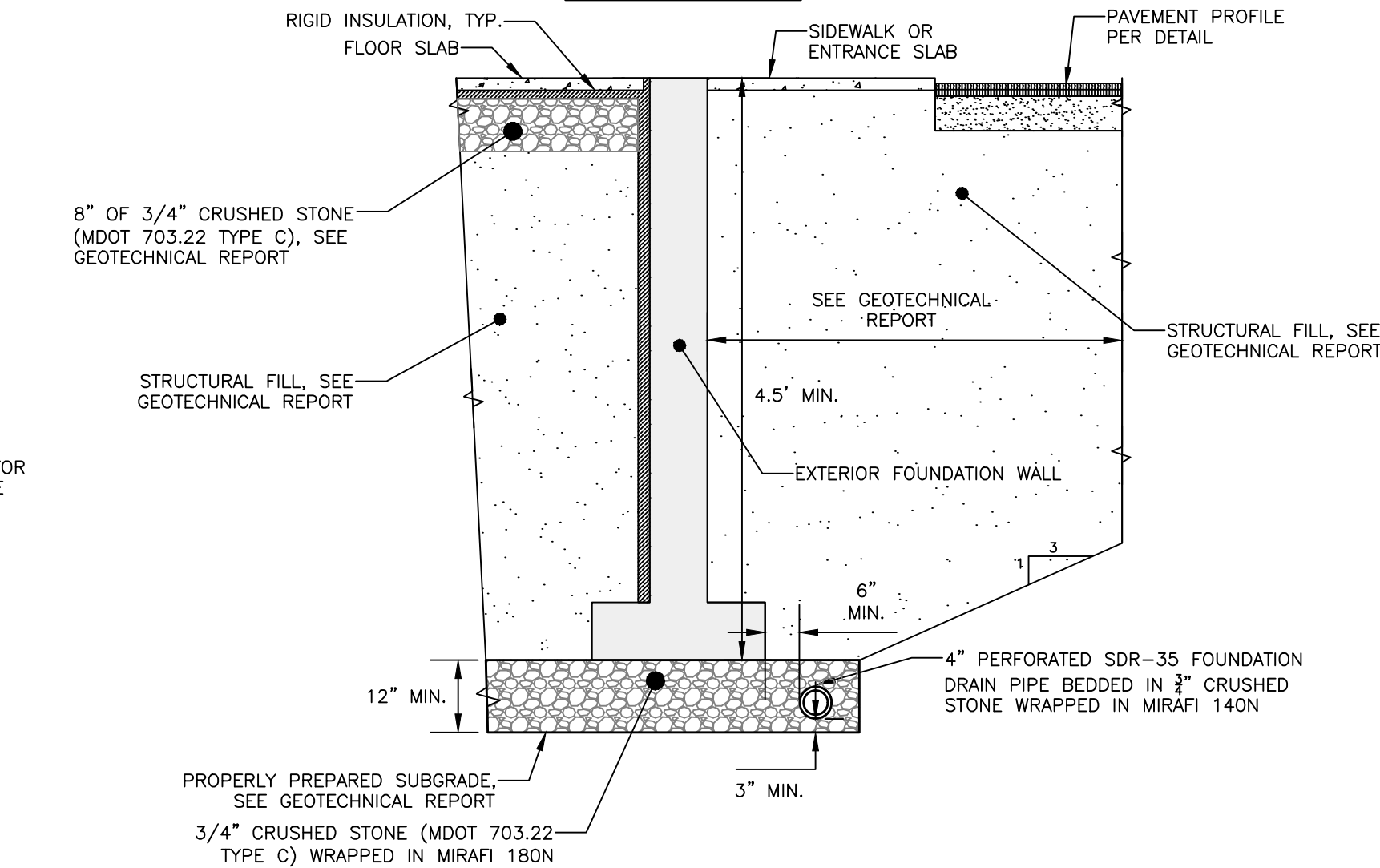
1. REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR SITE GRADING.
2. MATERIALS/DETAILS OF DRIVEWAY APRON TO BE APPROVED BY CITY (DPW AND PLANNING) PRIOR TO IMPLEMENTATION.
3. TECHNICAL MANUAL SECTION 1.7.2.4: MAXIMUM DRIVEWAY WIDTH (TWO-WAY) FOR INDUSTRIAL USE - 30 FT.



DRIVEWAY APRON LAYOUT DETAIL
NOT TO SCALE



LOWER LEVEL



FOUNDATION DRAIN DETAIL
NOT TO SCALE

NOTES:

1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. INSTALL STONE DRIP EDGE IN A LOCATIONS SUBJECT TO ROOF RUNOFF. WIDTH SHALL BE A MIN. 12" BEYOND THE PROJECT OF THE ROOF EYE.
4. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4.5 FT BELOW ADJACENT FINISH GRADE. REFER TO STRUCTURAL ENGINEER'S PLANS AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.
5. FOUNDATION DRAIN DETAIL FROM GEOTECHNICAL REPORT. SEE REPORT FOR ADDITIONAL INFORMATION. GEOTECHNICAL REPORT DETAIL TO SUPERSEDE IF ANY VARIES FOUND.

ISSUED FOR	BY
LEVEL II SITE PLAN	WHS
LEVEL II SITE PLAN	WHS
COMMENT RESPONSE	WHS

SITE DETAILS

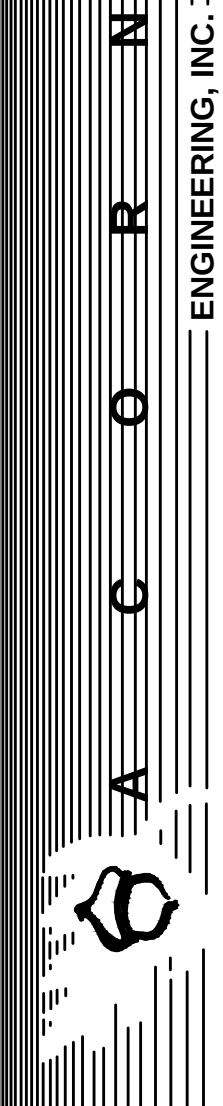
CASSIDY POINT REDEVELOPMENT

PROJECT MANAGEMENT, INC.
225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

DRAWING NAME

PROJECT NAME

CLIENT



ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACCOR ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, SHALL BE THE RESPONSIBILITY OF THE USER WITHOUT LIABILITY TO ACCOR ENGINEERING, INC.
65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

FILE: 1113_DETAILS

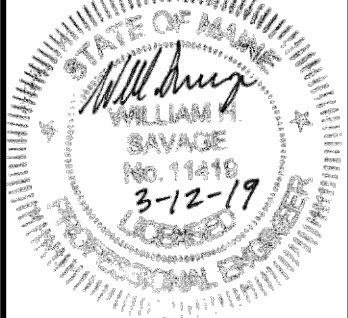
JN: 1113

SCALE: NTS

DESIGNED BY: FRT

DRAWN BY: FRT

CHECKED BY: WHS



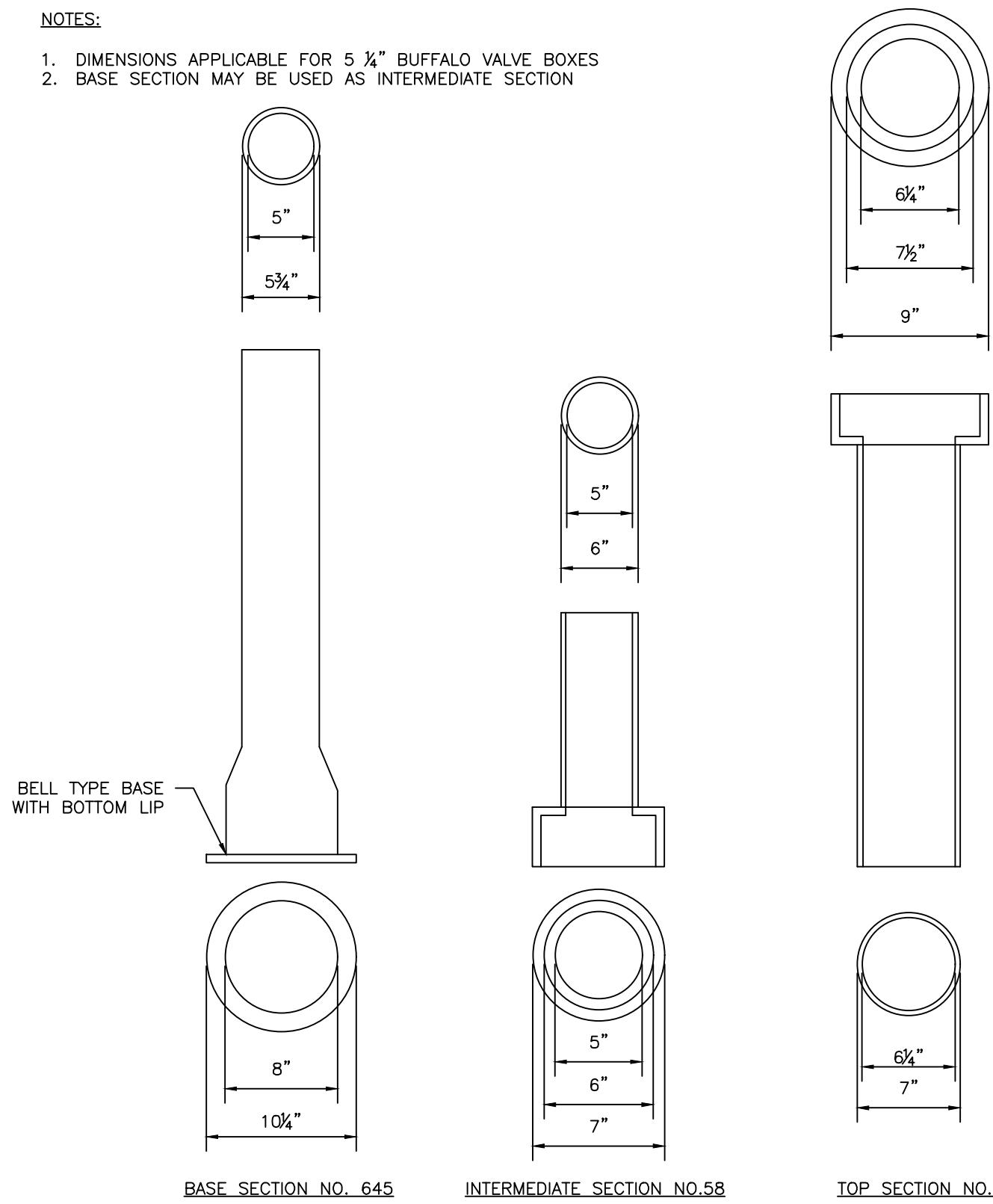
DRAWING NO.

C-40

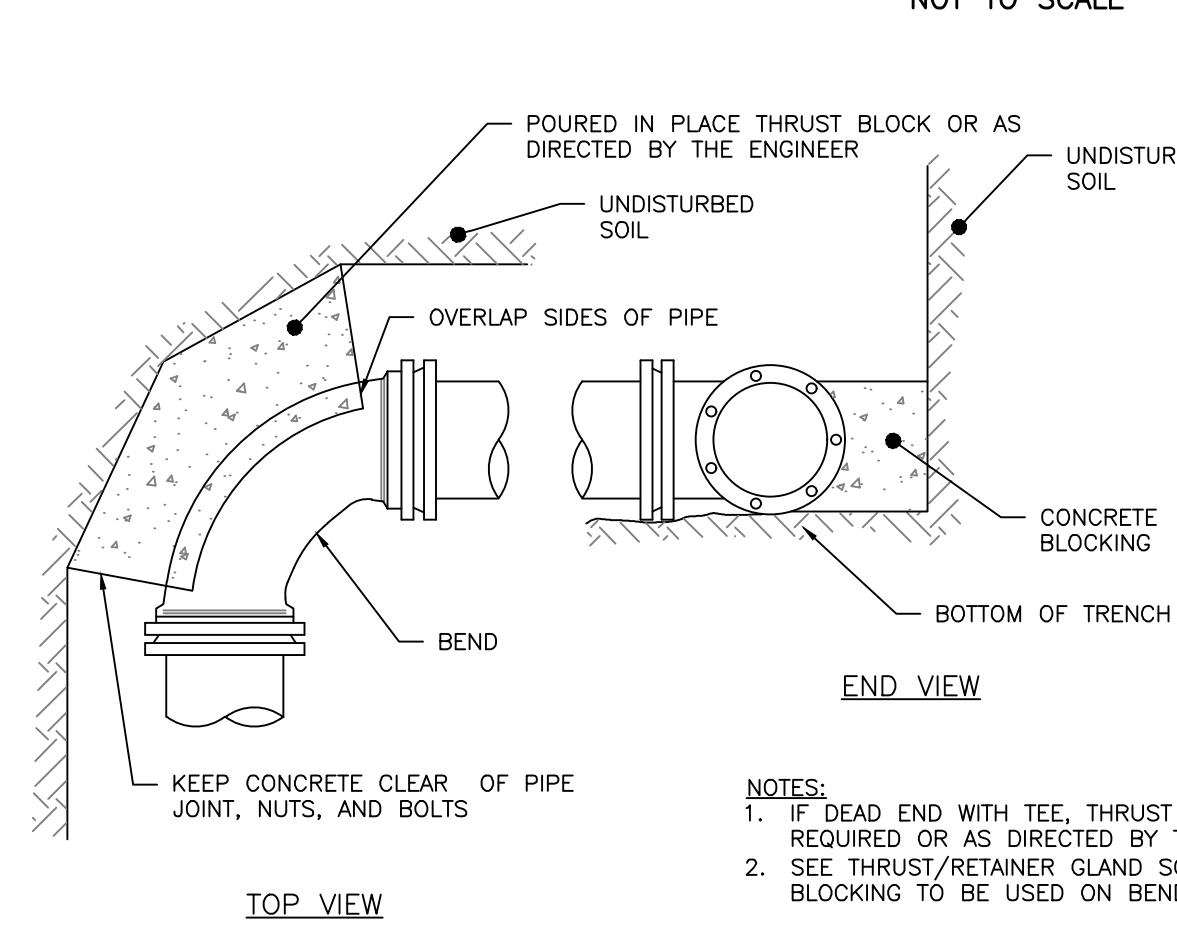
PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

NOTES:

- DIMENSIONS APPLICABLE FOR 5 1/2" BUFFALO VALVE BOXES
- BASE SECTION MAY BE USED AS INTERMEDIATE SECTION

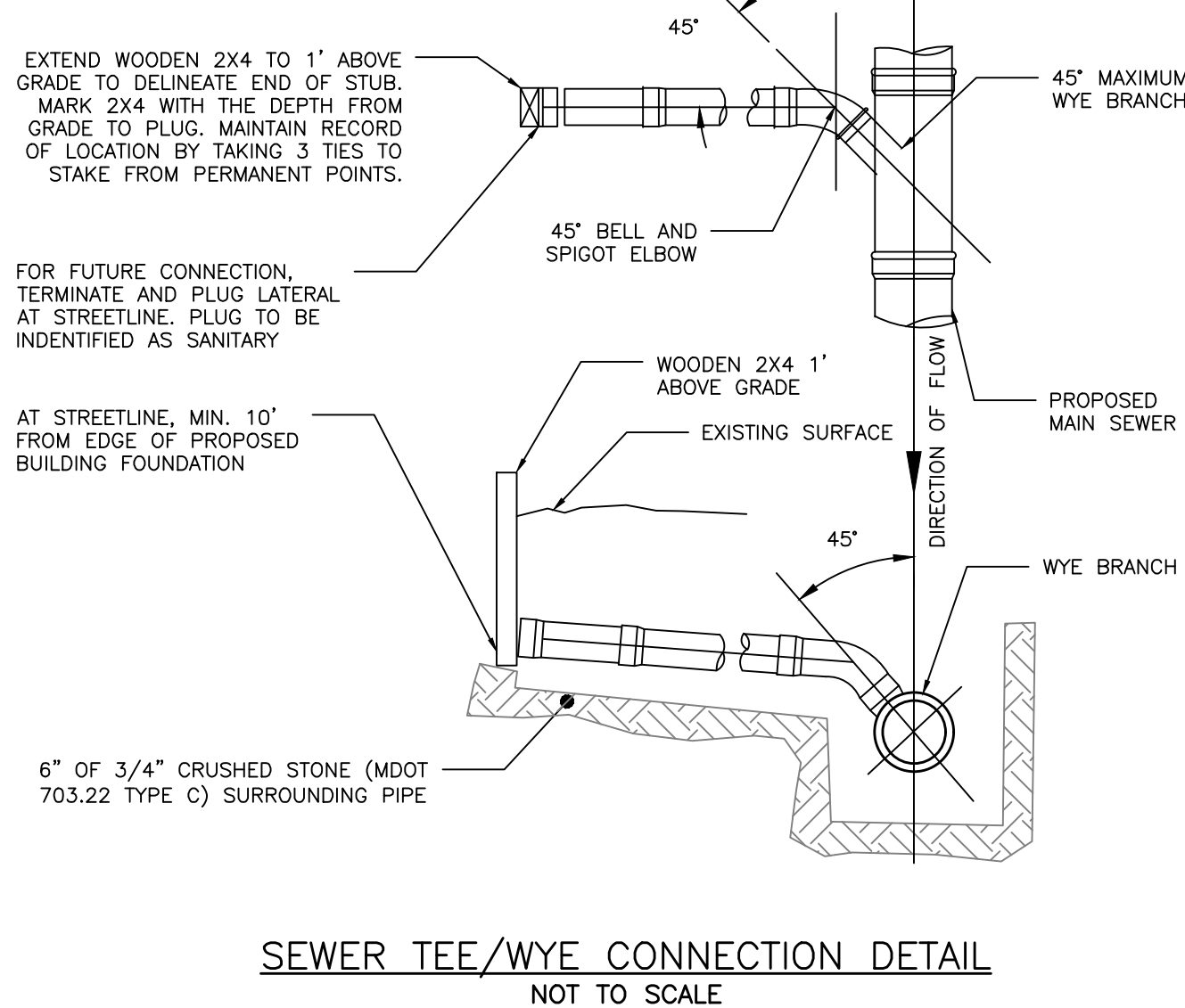


VALVE BOX & COVER
NOT TO SCALE



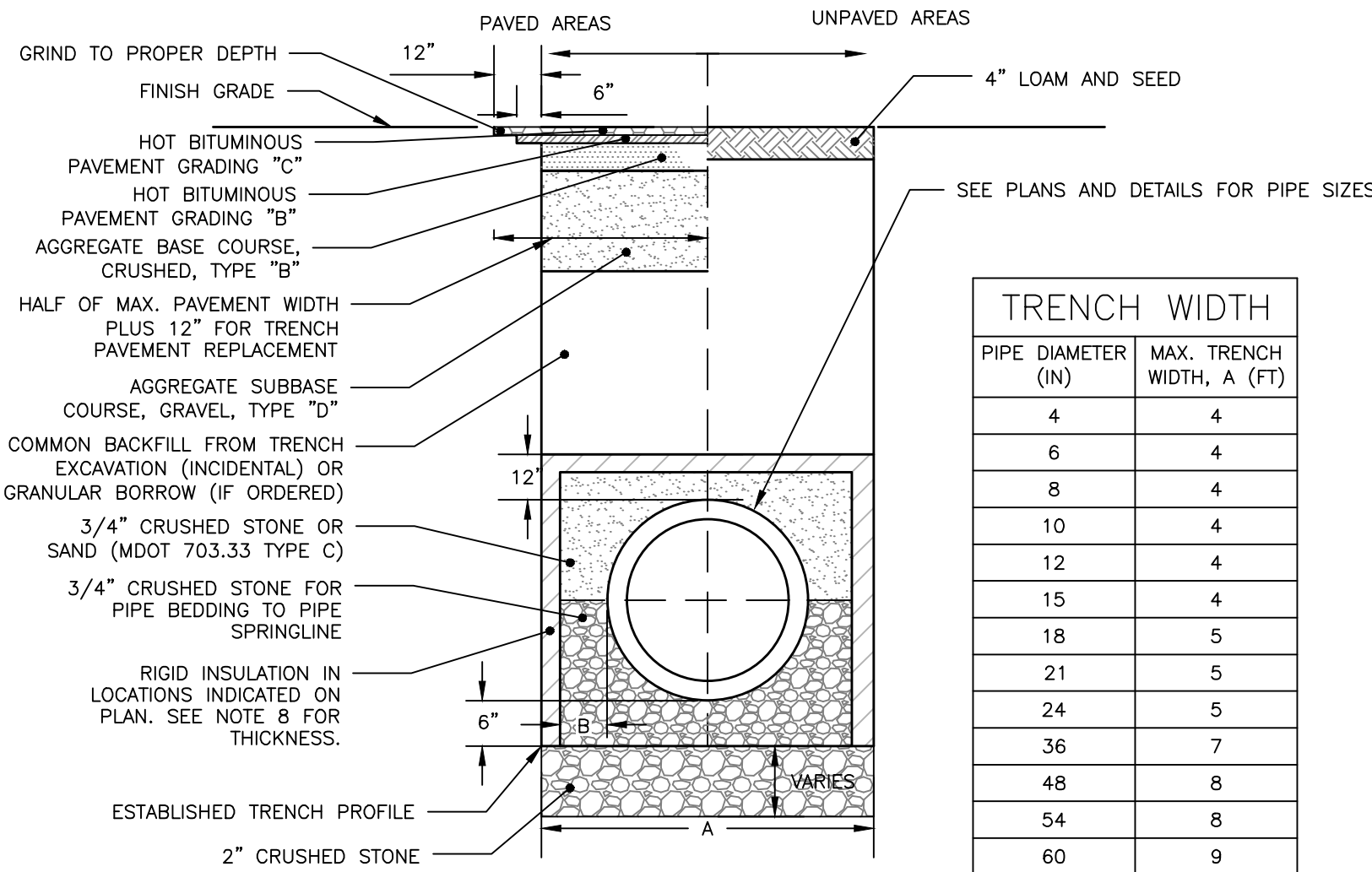
NOTES:

- LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
- SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO STRUCTURE PLUMBING WITH ARCHITECTURAL CONTRACTOR.
- 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.



DESIGN NOTES:

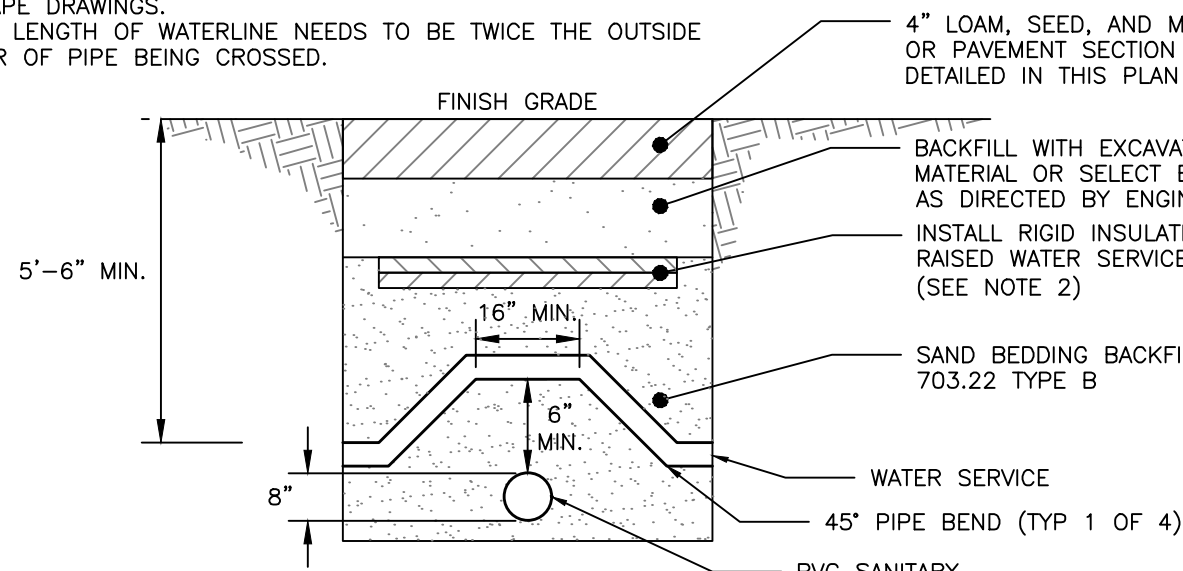
- ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
- ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II-2.
- BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF. SD) SHALL BE ORIENTED UP.
- ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS-46 RATING OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 - SANITARY SEWER AND STORM DRAIN - PART 2.5.2
- IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
- THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND R.O.W.
- 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.
- DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.
- DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE, BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9".
- DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE TABLE BELOW.



CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL WITHIN RIGHT-OF-WAY
NOT TO SCALE

NOTES:

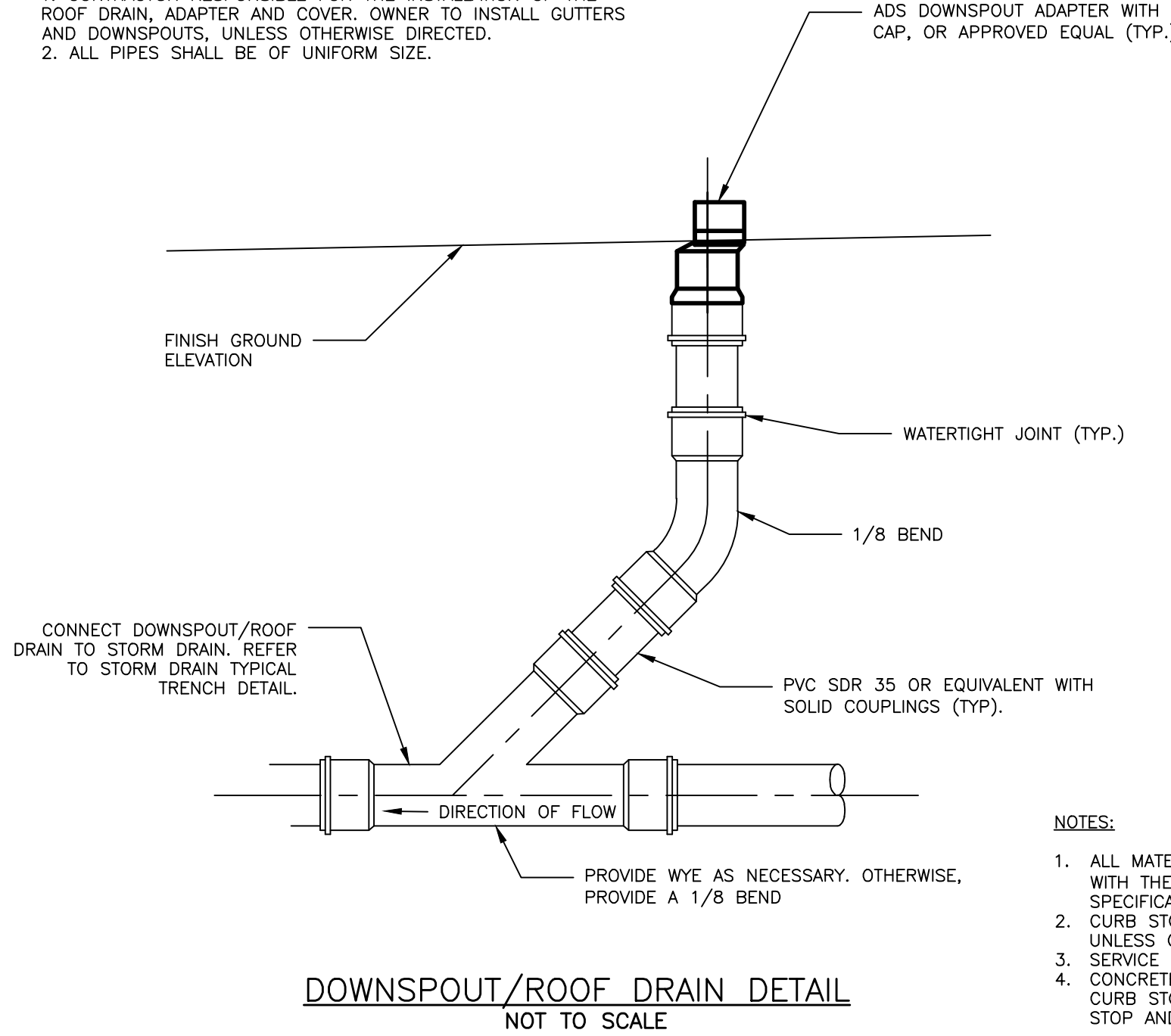
- THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
- IF LESS THAN 5'-6" OF COVER IS POSSIBLE, ADD TWO, 2-INCH LAYERS OF "BLUE DOW" RIGID INSULATION.
- ALL PROPOSED TREES PLANTED LESS THAN 10 FEET FROM THE WATER PIPE SHALL BE PLANTED AT A DEPTH NO GREATER THAN 3' DEEP. PERMEABLE LANDSCAPE FABRIC SHALL CREATE A ROOT BARRIER AROUND THE WATER PIPES. CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE DRAWINGS.
- MINIMUM LENGTH OF WATERLINE NEEDS TO BE TWICE THE OUTSIDE DIAMETER OF PIPE BEING CROSSED.



SEWER & WATER CROSSING DETAIL
NOT TO SCALE

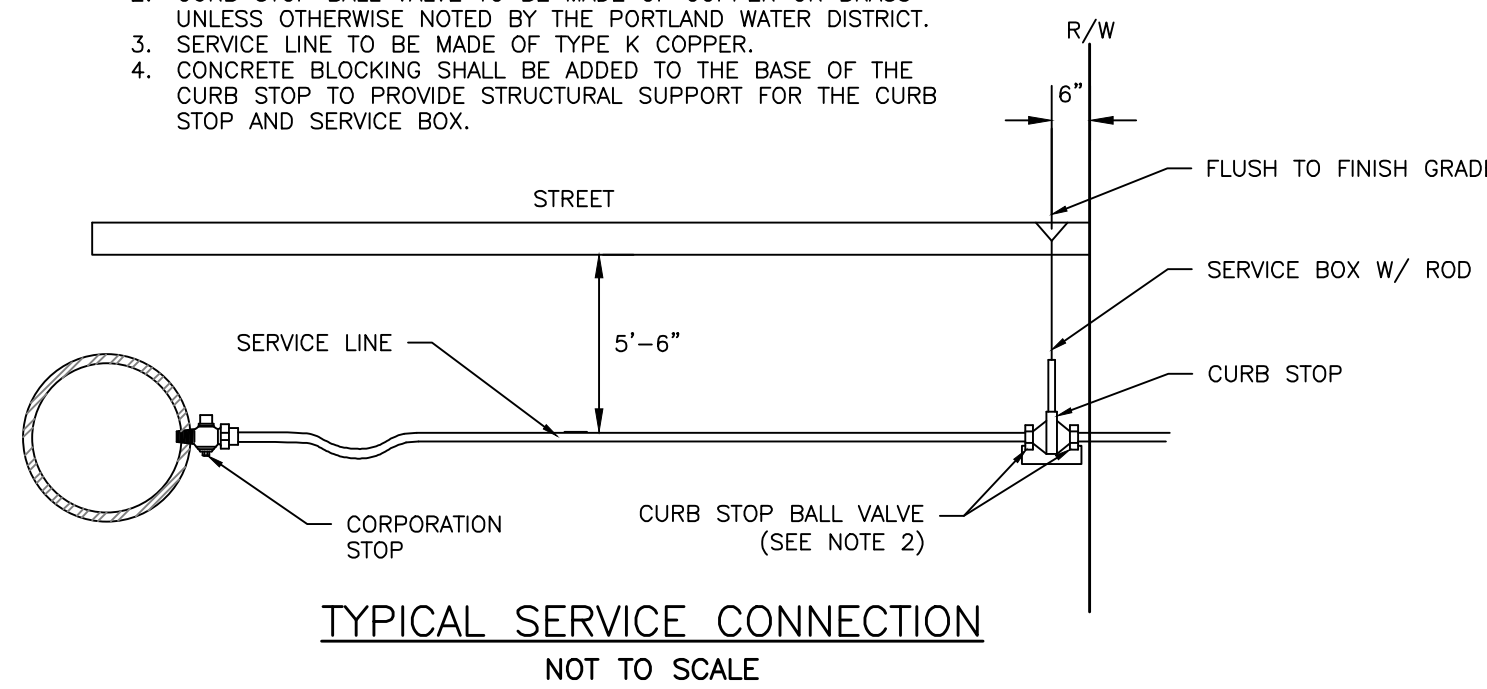
NOTES:

- CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE ROOF DRAIN, ADAPTER AND COVER, OWNER TO INSTALL GUTTERS AND DOWNSPOUTS, UNLESS OTHERWISE DIRECTED.
- ALL PIPES SHALL BE OF UNIFORM SIZE.



NOTES:

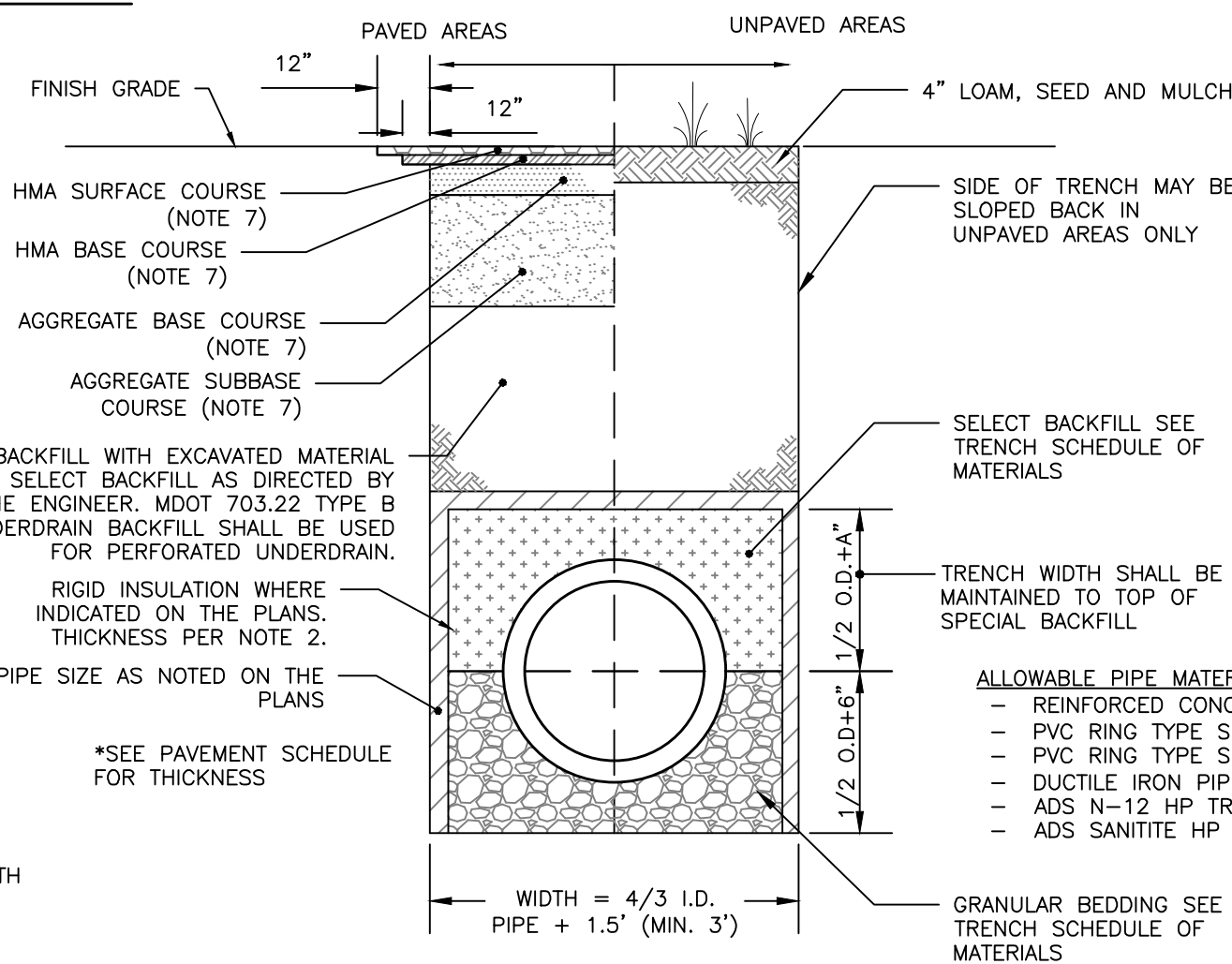
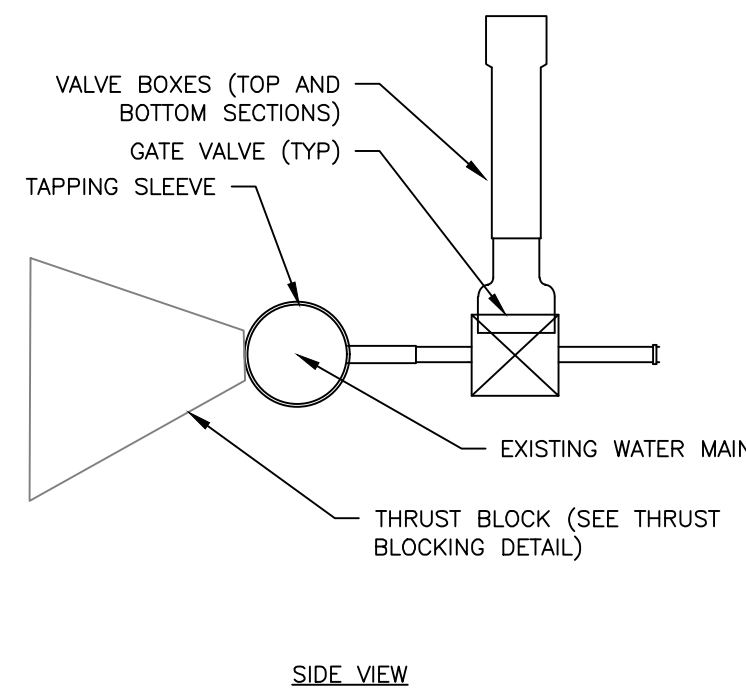
- ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH THE CITY OF PORTLAND WATER DISTRICT (PWD) SPECIFICATIONS.
- CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
- SERVICE LINE TO BE MADE OF TYPE K COPPER.
- CONCRETE BLOCKING SHALL BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.



NOTES:

- 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.
- 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.
- INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
- MINIMUM COVER:
 - 4.1. 2'-0" - STORM DRAIN
 - 4.2. 5'-0" - SEWER
- NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE.
- THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.
- THICKNESS AS NOTED BY SURFACE DETAILS.
- 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.

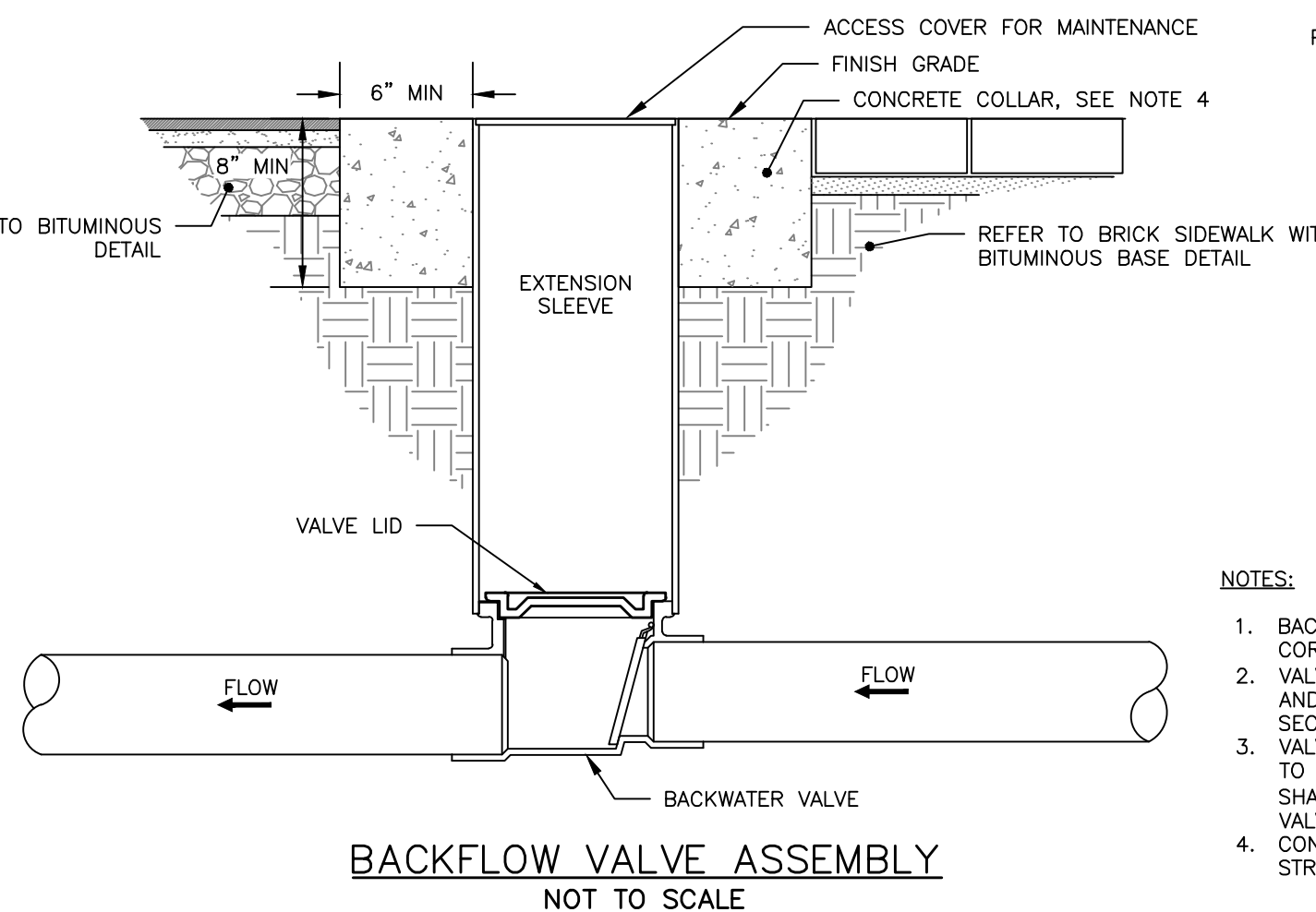
TAPPING SLEEVE AND VALVE
NOT TO SCALE



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:

- BACKFLOW VALVE TO BE PROVIDED BY AGRI DRAIN CORPORATION OR AN APPROVED EQUAL.
- 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.
- 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.
- CONCRETE COLLAR AT A MINIMUM 24-HOUR COMPRESSIVE STRENGTH OF 3,000 PSI.



BACKFLOW VALVE ASSEMBLY
NOT TO SCALE

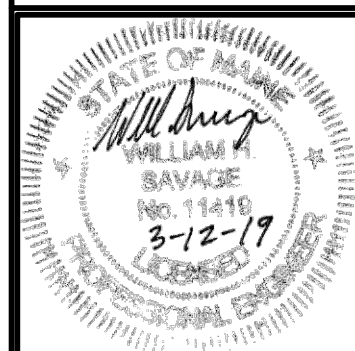
PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY
PWD ABILITY TO SERVE	FRT
PWD ABILITY TO SERVE	FRT
SEWER CROSSING DETAIL	FRT
LEVEL II SITE PLAN	WHS
LEVEL II SITE PLAN	WHS
COMMENT RESPONSE	WHS

UTILITY & DRAINAGE DETAILS	CASSIDY POINT REDEVELOPMENT
PROJECT NAME:	PROJECT MANAGEMENT, INC.
CLIENT:	225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

ACORN ENGINEERING, INC.	ENGINEERING, INC.
65 MANOVER ST. PORTLAND MAINE 04101	(207) 775-2655

FILE: 1113_DETAILS	JN: 1113
SCALE: NTS	DESIGNED BY: FRT
DRAWN BY: FRT	CHECKED BY: WHS



DRAWING NO.
C-41

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 ROADWAYS.
- 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 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.
- 1.1.5 OAK STREET AND SPRING STREET SHALL BE SWEEPED 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 1/2 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 TEMPORARY 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, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.1 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 DENUDDED 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. TWO (2) TONS/ACRE 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 SUNDERED HAY OR STRAW OR EROSION CONTROL MATTING 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.

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 SEED 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 PLASTIC 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% F 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 OF 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 SITE 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:

- o MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- o MAINE DEP - CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- o CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- o 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 SCHEDULE 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 OAK 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:

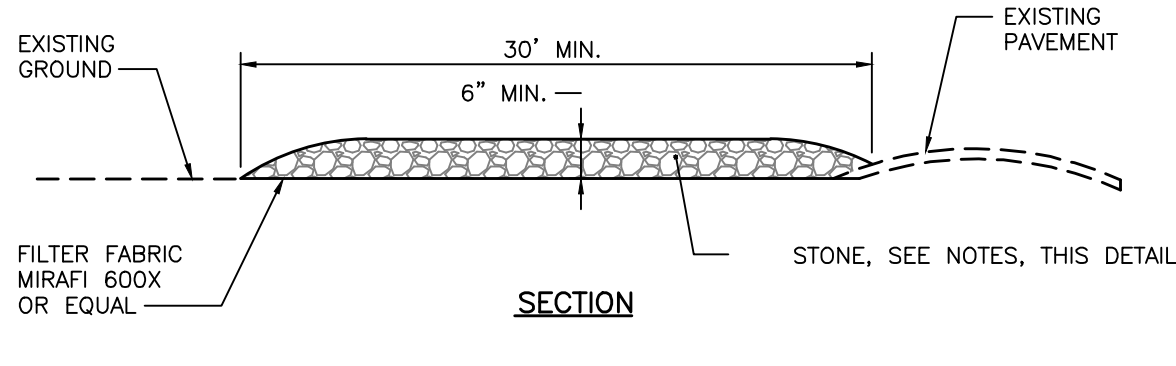
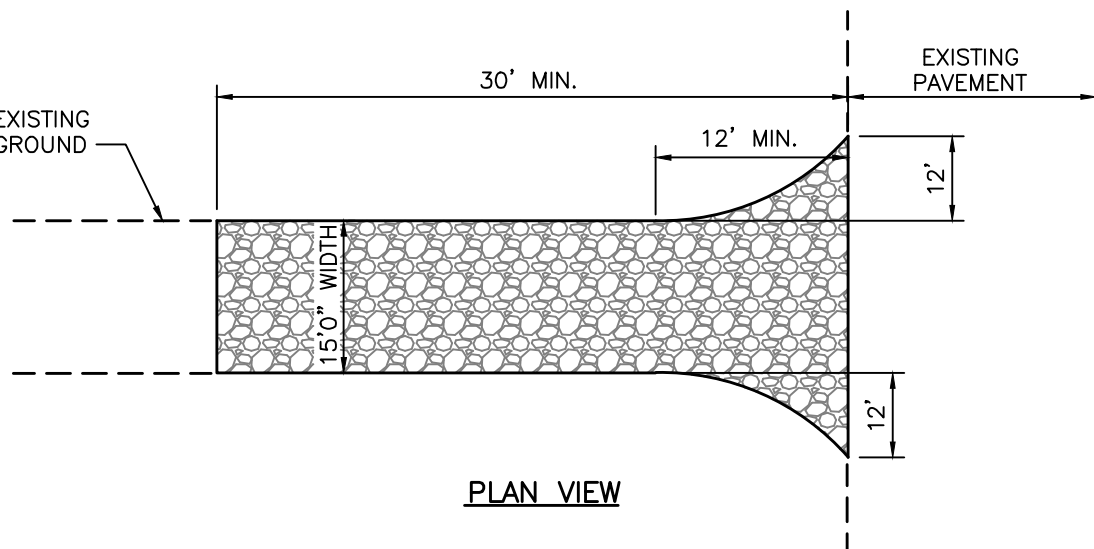
TEMPORARY SEED APPLICATION RATES			PERMANENT SEED APPLICATION RATES	
SEED	LBS / ACRE	RECOMMENDED SEEDING DATES	SEED	LBS / ACRE
WINTER RYE	2.57	8/15 TO 10/1	KENTUCKY BLUEGRASS	20.00
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15	CREeping RED FESCUE	20.00
ANNUAL RYGRASS	0.92	4/1 TO 7/1	PERENNIAL RYGRASS	4.80
SUDANGRASS	0.92	5/15 TO 8/15	TOTAL	44.8 LBS/ACRE
PERENNIAL	0.92	8/15 TO 9/15		
TOTAL	7.17 LBS/ACRE			

7.4 MULCHING

MULCH SHALL BE HARDWOOD AND APPLIED AT A RATE OF 70 LBS - 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT. REFER TO DETAIL FOR MORE INFORMATION.

8.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

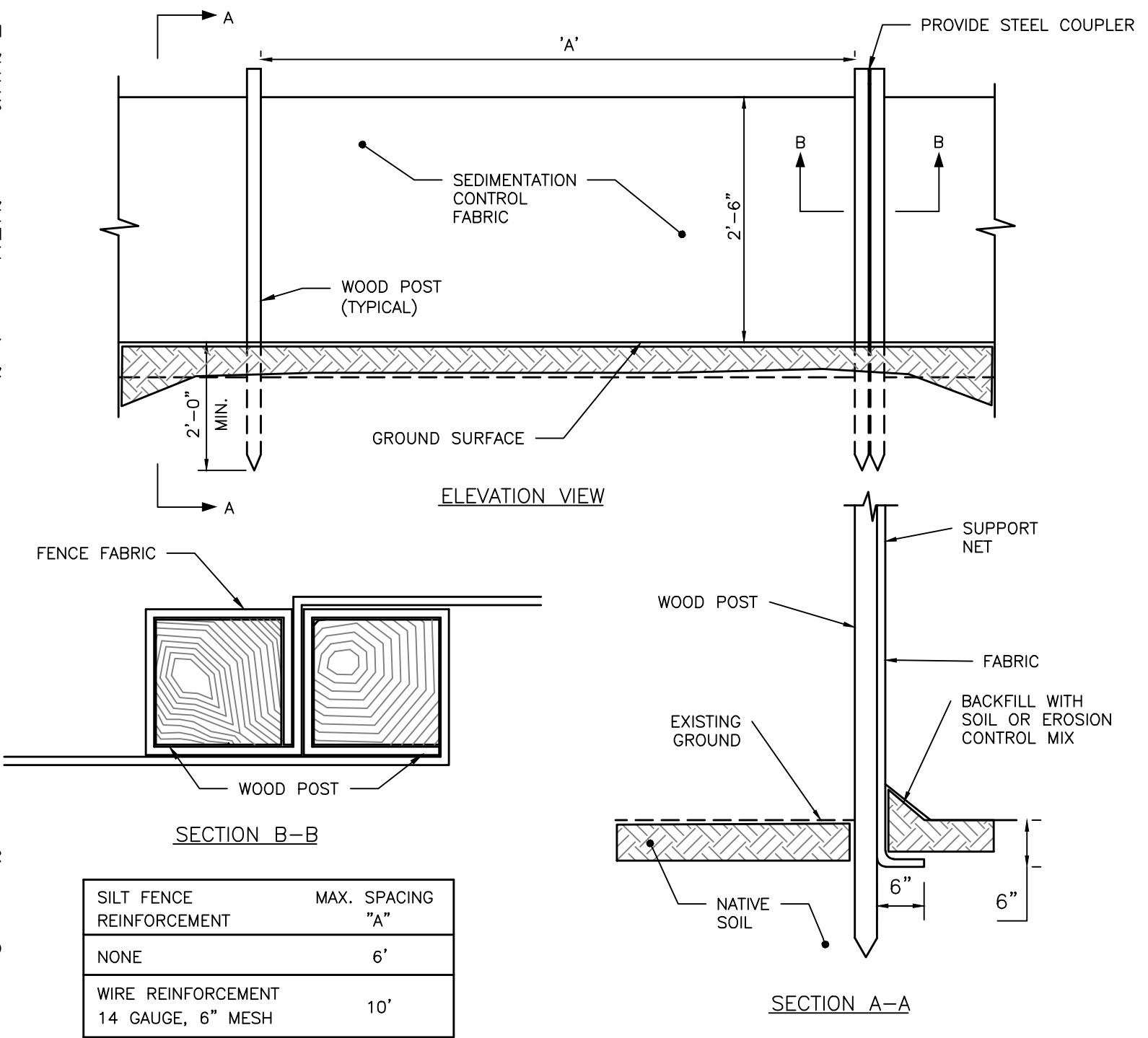


NOTES:

1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"-3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.
4. WHEN NECESSARY, ON-SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.
5. CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT-OF-WAY

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



SILTATION FENCE DETAIL

NOT TO SCALE

NOTES:

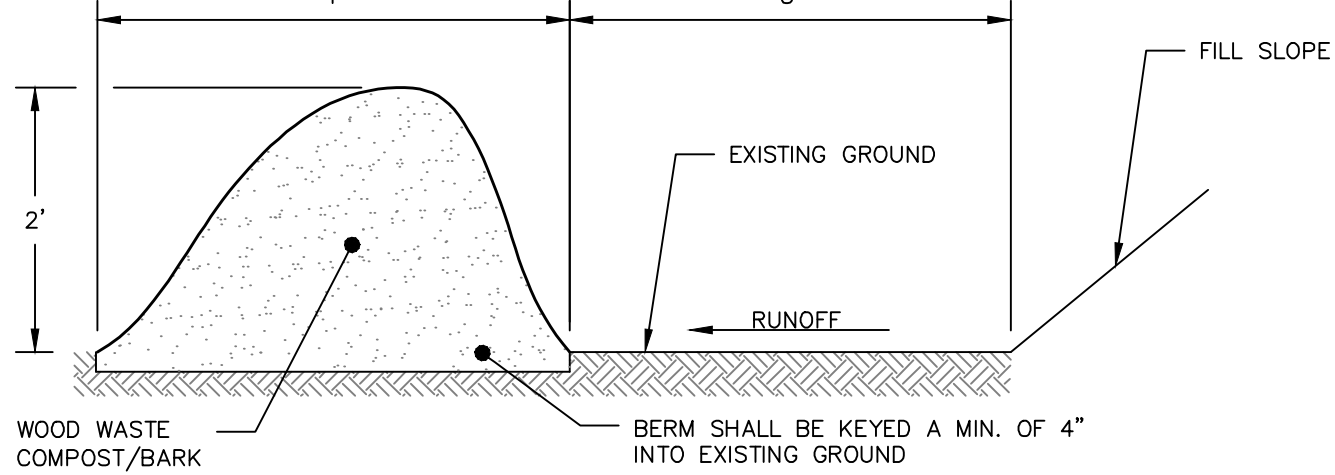
1. THE EROSION CONTROL MIX SHALL CONFORM TO THE FOLLOWING STANDARDS AND IN ACCORDANCE WITH THE MAINE DOT CHAPTER 700, SECTION 717.04(D):

- 1.1. pH BETWEEN 5.0 - 8.0
- 1.2. PARTICLE SIZE (BY WEIGHT):
 - 1.2.1. 100% PASSING A 150 MM (6 IN) SCREEN
 - 1.2.2. 75 TO 85% PASSING A 19 MM (3/4 IN) SCREEN
- 1.3. SOLUBLE SALTS CONTENT < 4.0 MMHOS/CM
- 1.4. ORGANIC MATTER 20 TO 100% , DRY WEIGHT BASIS

2. THE BERM SHOULD BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR, WHEN NECESSARY THE BERM MAY BE PLACED PERPENDICULAR TO THE SLOPE ALONG THE PROPERTY LINE TO CONTAIN THE SEDIMENT PROVIDED A BERM IS LOCATED AT THE BASE OF THE SLOPE.

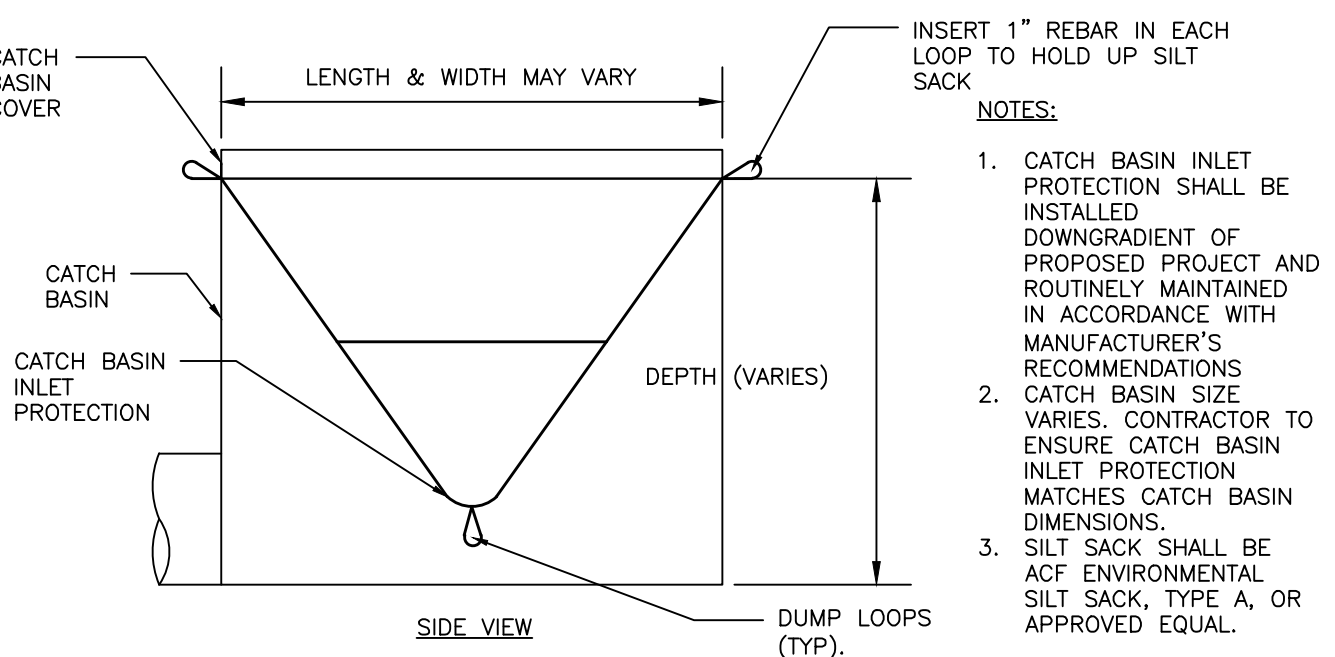
3. THE BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.

4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS STABILIZED OR 90% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED OFFSITE OR BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.



EROSION CONTROL MIX BERM DETAIL

NOT TO SCALE



CATCH BASIN INLET PROTECTION

NOT TO SCALE

NOTES:

1. CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS
3. SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR: PRELIMINARY PLAN
BY: FRT
DATE: 11/13/19

LEVEL II SITE PLAN
WHS
12/16/19

LEVEL II SITE PLAN
WHS
1/2/20

COMMENT RESPONSE
WHS
2/12/19

EROSION & SEDIMENTATION CONTROL DETAILS

CASSIDY POINT REDEVELOPMENT

PROJECT NAME: PROJECT MANAGEMENT, INC.
CLIENT: 225 COMMERCIAL STREET, SUITE 502 PORTLAND, ME 04101

ACORN ENGINEERING, INC.
65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

THE PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS AUTHORIZED BY ACORN ENGINEERING, INC. SHALL BE INDICATED BY A RED LINE AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE: 1113_DETAILS

JN: 1113

SCALE: NTS

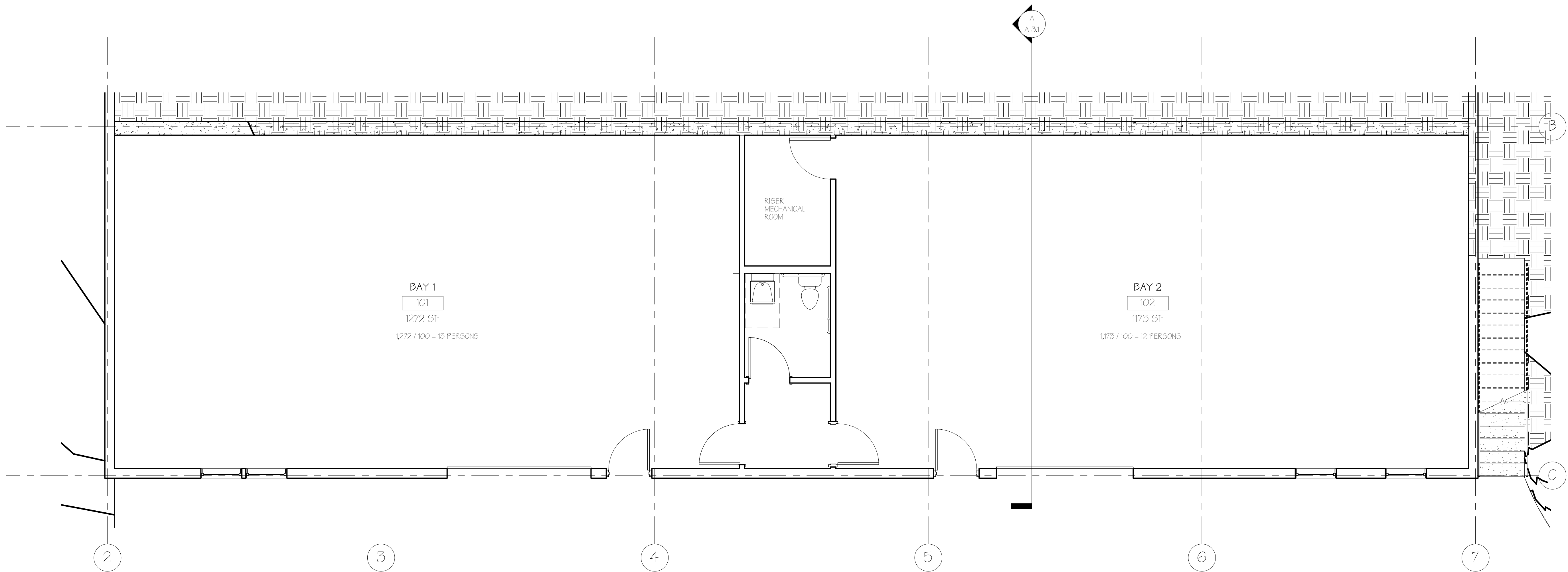
DESIGNED BY: FRT

DRAWN BY: FRT

CHECKED BY: WHS

STATE OF MAINE
WILL SAVAGE
11419
3-12-19
P.E.

DRAWING NO. C-42



Ⓐ Lower Cassidy
1/4" = 1'-0"

Cassidy Point
Road
New Construction

OWNER
534 DANFORTH LLC
225 COMMERCIAL ST STE 502
PORTLAND ME 04101



PORTLAND, ME 04102
TRACIE REED, ARCHITECT
NCARB, AIA, LEED AP BD+C
traciereed@dextrouscreative.com
207.403.0459 (cell)

PROJECT TEAM

SURVEYOR
OWEN & HASKELL
390 US-1 Suite 10
Falmouth, ME 04105

GEOLOGIST
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STRUCTURAL ENGINEER
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46 Forest Ave
Portland, ME 04101

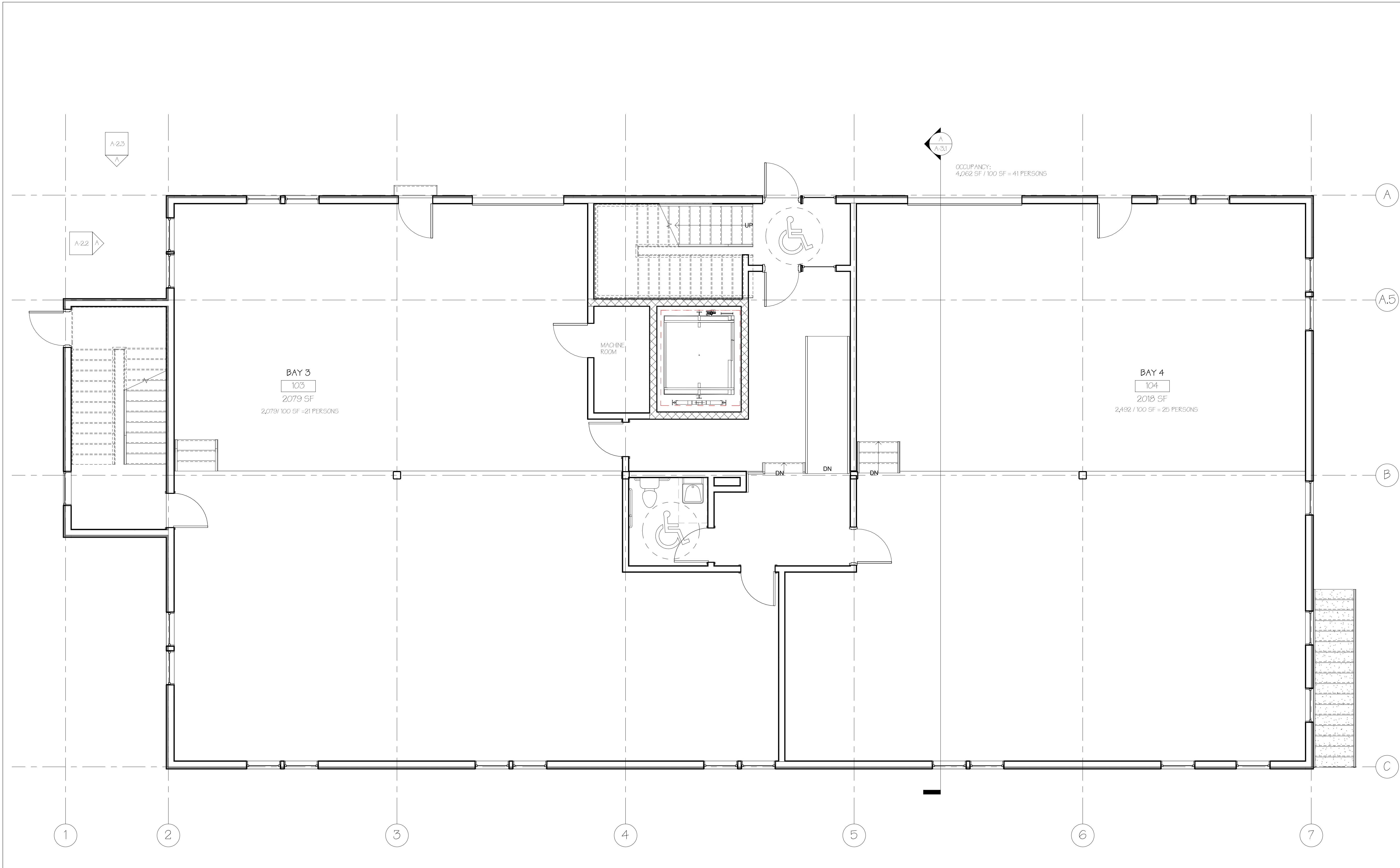
GENERAL CONTRACTOR
WEIGHT RYAN CONSTRUCTION
10 Danforth St.
Portland, ME 04101

No.	Description	Date

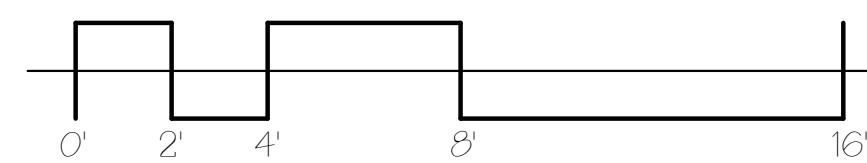
FIRST FLOOR
PLAN

Project number	18-08_Cassidy Point
Date	12.23.18
Drawn by	TJR
Checked by	TJR

A-1.1	
Scale	1/4" = 1'-0"



(A) Second Floor
1/4" = 1'-0"



Cassidy Point Road

New Construction

OWNER
534 DANFORTH LLC
225 COMMERCIAL ST STE 502
PORTLAND ME 04101



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46 Forest Ave
Portland, ME 04101

GENERAL CONTRACTOR
WEIGHT RYAN CONSTRUCTION
10 Danforth St.
Portland, ME 04101

No.	Description	Date

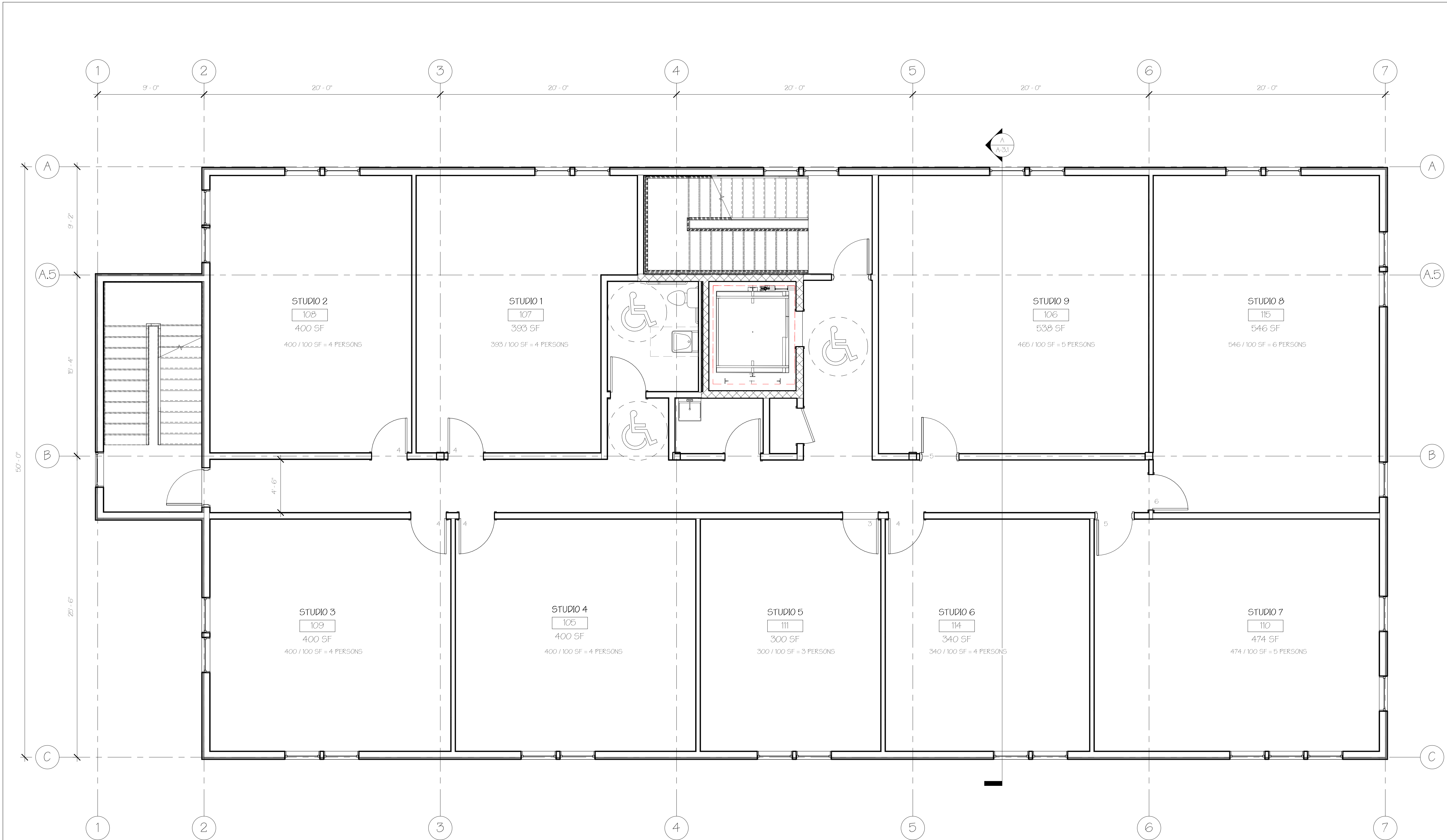
SECOND FLOOR PLAN

Project number	18-08_Cassidy Point
Date	12.23.18
Drawn by	TJR
Checked by	TJR

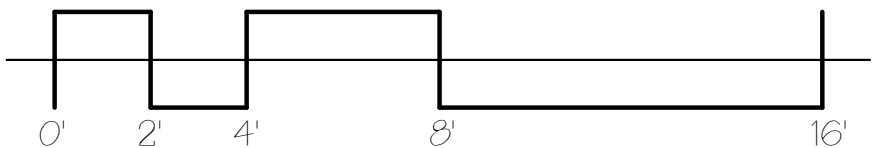
A-1.2

Scale: 1/4" = 1'-0"

12/23/2018 7:55:23 PM



A Third Floor
1/4" = 1'-0"



Cassidy Point Road

New Construction

OWNER
534 DANFORTH LLC
225 COMMERCIAL ST STE 502
PORTLAND ME 04101



**DEXTROUS
CREATIVE**

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GENERAL CONTRACTOR
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10 Danforth St.
Portland, ME 04101

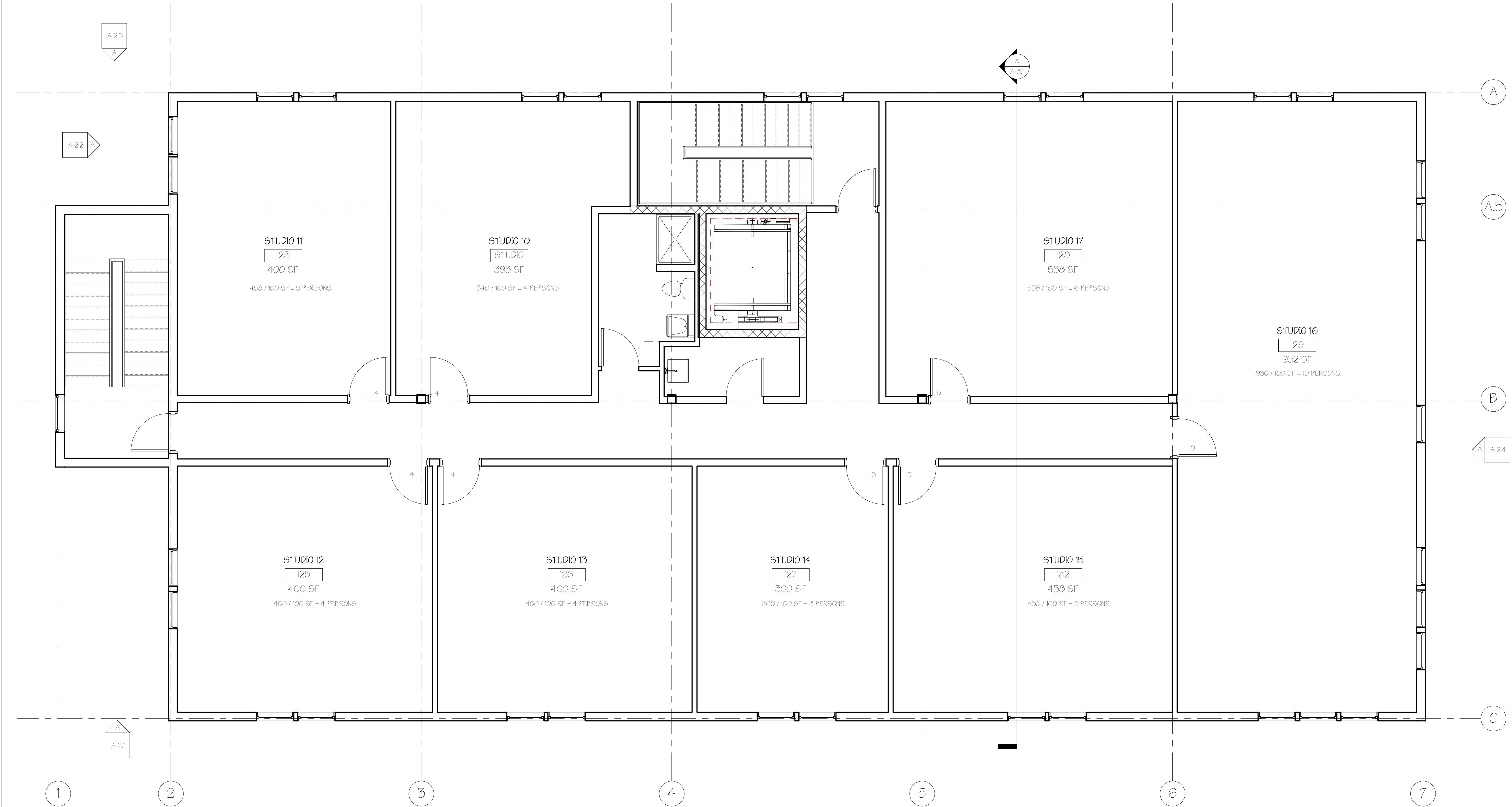
No.	Description	Date

THIRD FLOOR PLAN

Project number	18-08_Cassidy Point
Date	12.23.18
Drawn by	TJR
Checked by	TJR

A-1.3

Scale: 1/4" = 1'-0"



(A) Fourth Floor
1/4" = 1'-0"

Cassidy Point Road

New Construction

OWNER
534 DANFORTH LLC
225 COMMERCIAL ST STE 502
PORTLAND ME 04101



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Portland, ME 04101

GENERAL CONTRACTOR
WEIGHT RYAN CONSTRUCTION
10 Danforth St.
Portland, ME 04101

No.	Description	Date

FOURTH FLOOR

Project number	18-08_Cassidy Point
Date	12.23.18
Drawn by	Author
Checked by	Checker

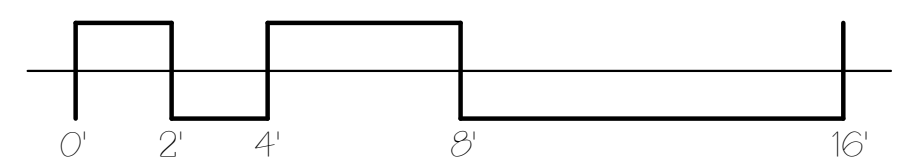
A-1.4

Scale: 1/4" = 1'-0"

12/23/2018 7:55:25 PM



South
1/4" = 1'-0"



Cassidy Point Road
New Construction

OWNER
534 DANFORTH LLC
225 COMMERCIAL ST STE 502
PORTLAND ME 04101


DEXTRIOUS CREATIVE
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Portland, ME 04101

GENERAL CONTRACTOR
WEIGHT RYAN CONSTRUCTION
10 Danforth St.
Portland, ME 04101

No.	Description	Date

SOUTH ELEVATION

Project number 18-08_Cassidy Point

Date 12.23.18

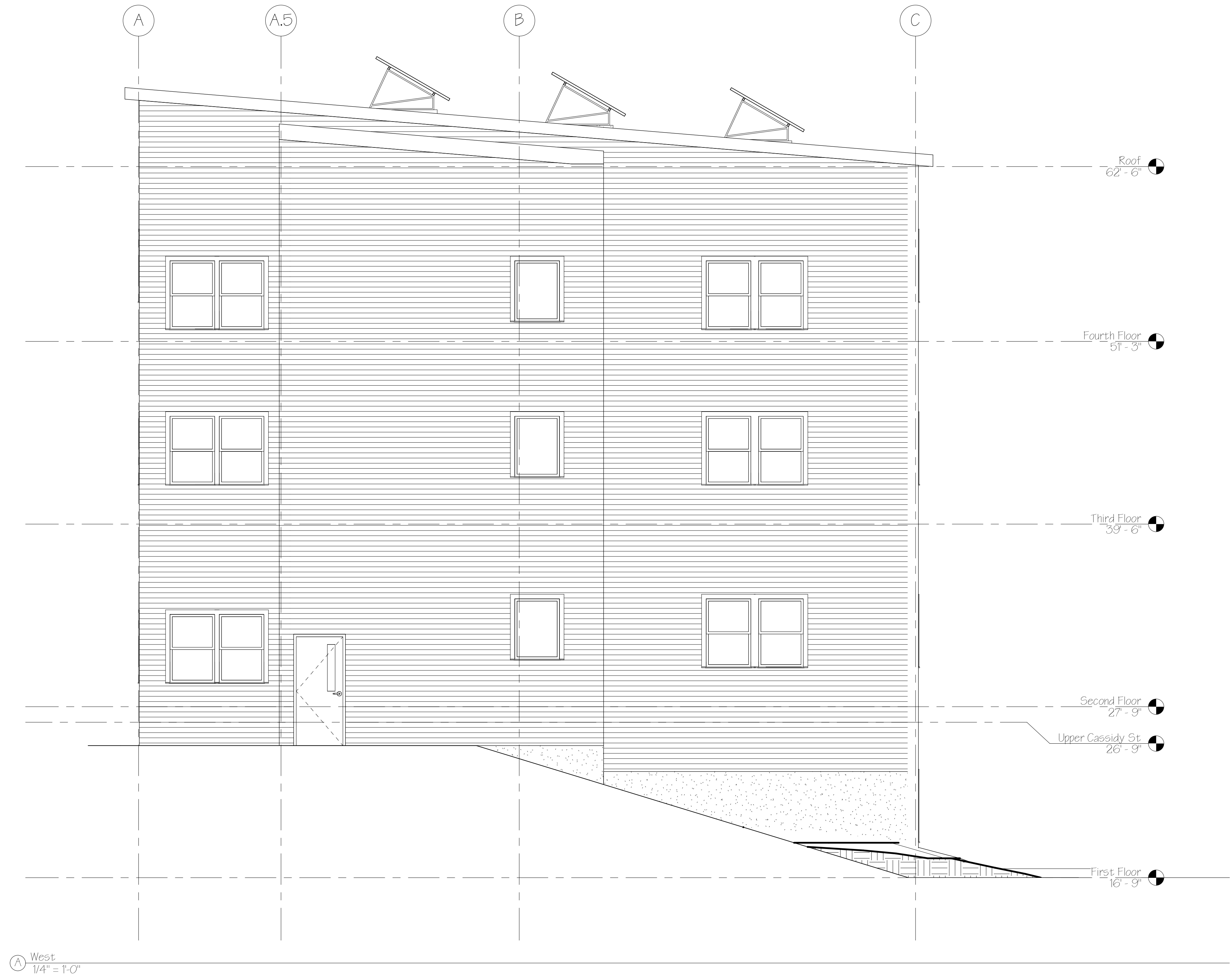
Drawn by Author

Checked by Checker

A-2.1

Scale 1/4" = 1'-0"

12/23/2018 7:55:27 PM



Cassidy Point Road

New Construction

OWNER
534 DANFORTH LLC
225 COMMERCIAL ST STE 502
PORTLAND ME 04101



**DEXTROUS
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GENERAL CONTRACTOR
WEIGHT RYAN CONSTRUCTION
10 Danforth St.
Portland, ME 04101

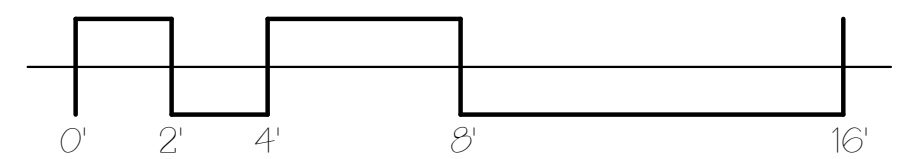
No.	Description	Date

WEST ELEVATION

Project number	18-08_Cassidy Point
Date	12.23.18
Drawn by	TJR
Checked by	TJR

A-2.2

Scale: 1/4" = 1'-0"





North
1/4" = 1'-0"

Cassidy Point Road

New Construction

OWNER
534 DANFORTH LLC
225 COMMERCIAL ST STE 502
PORTLAND ME 04101



**DEXTRIOUS
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Portland, ME 04101

GENERAL CONTRACTOR
WEIGHT RYAN CONSTRUCTION
10 Danforth St.
Portland, ME 04101

No.	Description	Date

NORTH ELEVATION

Project number 18-08_Cassidy Point

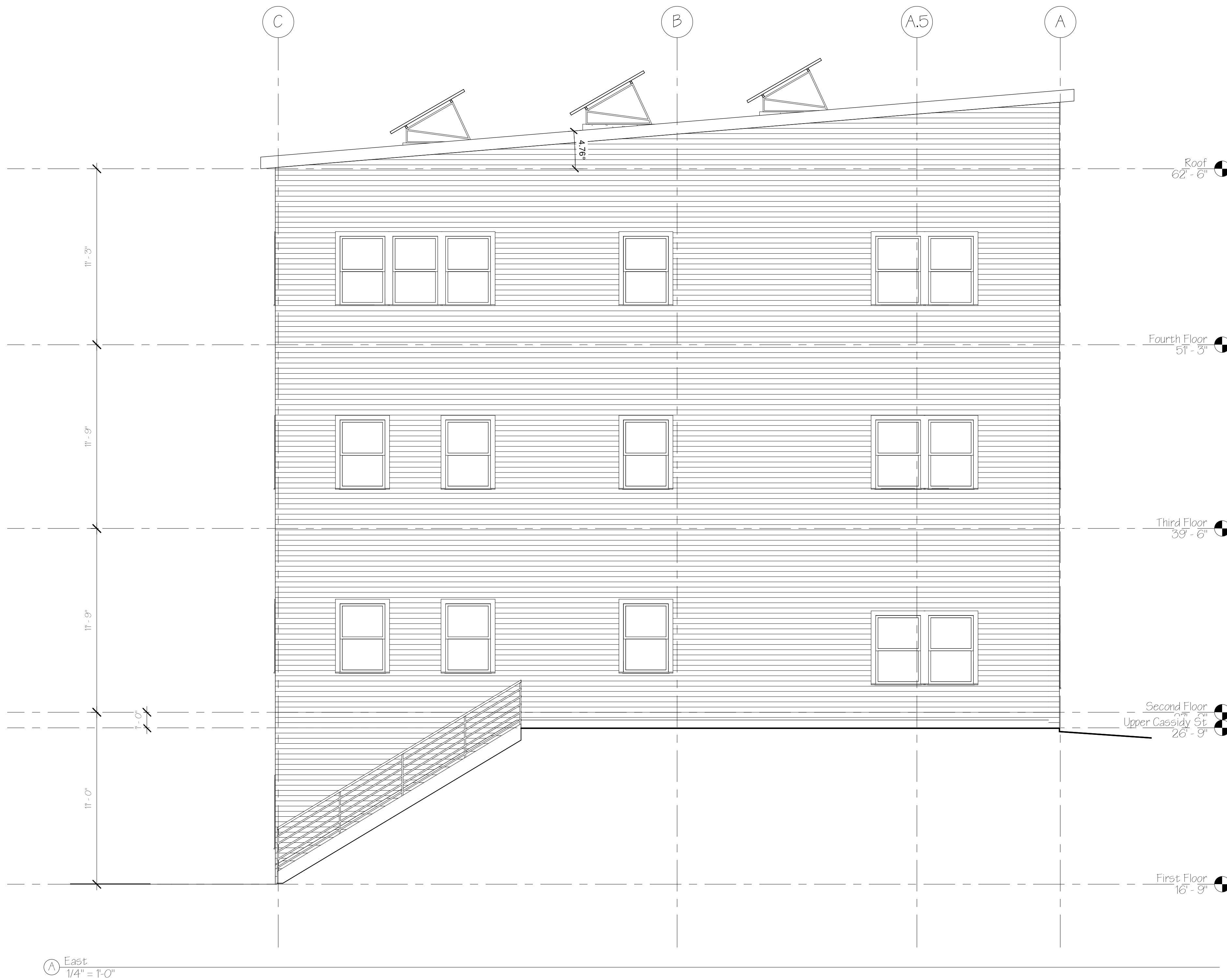
Date 12.23.18

Drawn by Author

Checked by Checker

A-2.3

Scale 1/4" = 1'-0"



Cassidy Point
Road
New Construction

OWNER
534 DANFORTH LLC
225 COMMERCIAL ST STE 502
PORTLAND ME 04101



DEXTROUS
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Portland, ME 04101

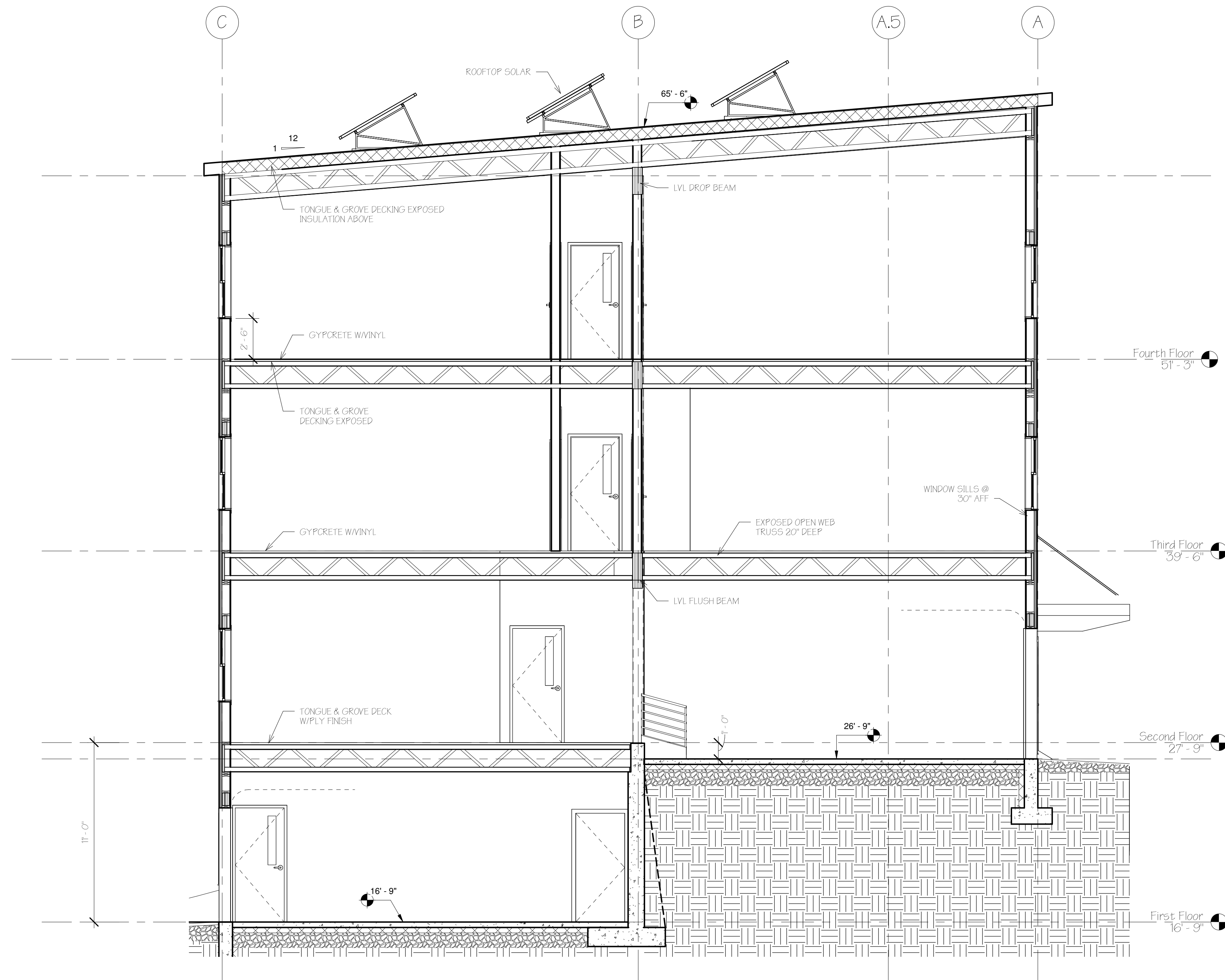
No.	Description	Date

EAST
ELEVATION

Project number	18-08_Cassidy Point
Date	12.23.18
Drawn by	Author
Checked by	Checker

A-2.4

Scale: 1/4" = 1'-0"



Ⓐ BUILDING SECTION
1/4" = 1'-0"

Cassidy Point
Road
New Construction

OWNER
534 DANFORTH LLC
225 COMMERCIAL ST STE 502
PORTLAND ME 04101



PORTLAND, ME 04102
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GENERAL CONTRACTOR
WEIGHT RYAN CONSTRUCTION
10 Danforth St.
Portland, ME 04101

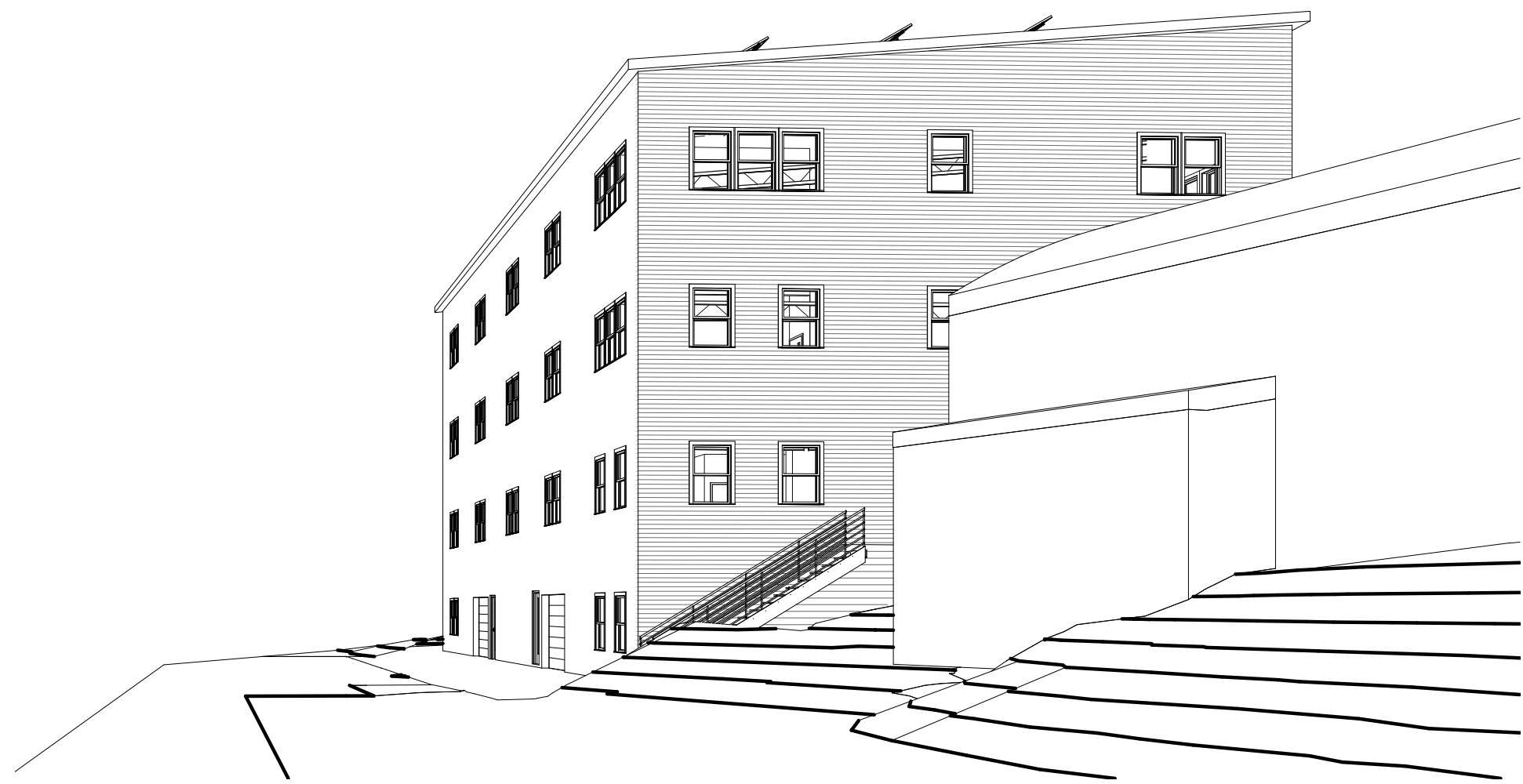
No.	Description	Date

SECTION & DETAILS	
Project number	18-08_Cassidy Point
Date	12.23.18
Drawn by	Author
Checked by	Checker
A-3.1	
Scale	1/4" = 1'-0"

12/23/2018 7:55:30 PM



A UPPER CASSIDY PERSPECTIVE



B LOWER CASSIDY



C UPPER CASSIDY

Cassidy Point Road New Construction

OWNER
534 DANFORTH LLC
225 COMMERCIAL ST STE 502
PORTLAND ME 04101



**DEXTROUS
CREATIVE**

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TRACIE REED, ARCHITECT
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PROJECT TEAM

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Portland, ME 04101

GENERAL CONTRACTOR
WRIGHT RYAN CONSTRUCTION
10 Danforth St.
Portland, ME 04101

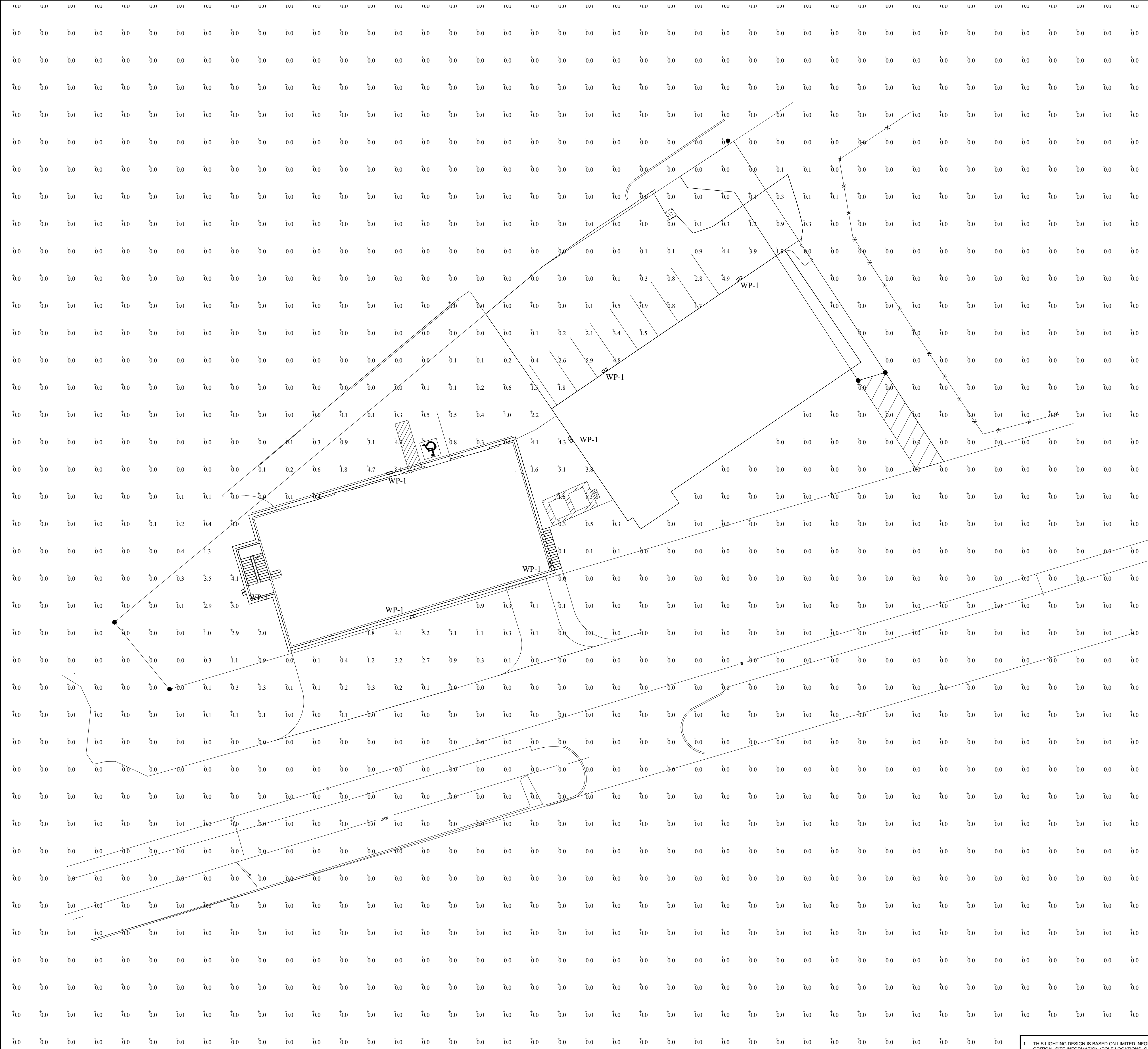
No.	Description	Date

PERSPECTIVES

Project number	18-08_Cassidy Point
Date	12.23.18
Drawn by	Author
Checked by	Checker

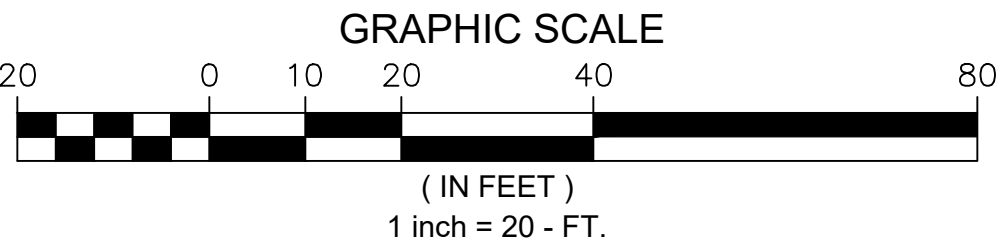
A-5.1

Scale:



Luminaire Schedule							
Symbol	Qty	Label	Mounting Height	LLF	Lum. Lumens	Lum. Watts	Description
	7	WP-1	9' - 0" AFG	0.900	3806	45	LNC2-18LU-4K-3

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Overall Area	Illuminance	Fc	0.08	5.9	0.0	N.A.	N.A.



1. THIS LIGHTING DESIGN IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO HUBBELL LIGHTING. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.

2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.

3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

TITLE:

CASSIDY POINT DEVELOPMENT
PORTLAND, ME
SITE PHOTOMETRIC PLAN

REVISED FROM DRAWING NUMBER(S):

Hubbell Lighting, Inc.
701 MILLENNIUM BLVD.
GREENVILLE, SC 29607

DN BY:
DHK

REV BY:

QUOTE:
N/A

DATE:
12/06/18

DATE:

DRAWING / DESIGN NO.:
1823212

CHK BY:
N/A

SCALE:
AS NOTED