

1. Legal Ad

Documents:

[PB LEGAL AD 7-11-17.PDF](#)

2. Agenda

Documents:

[PB AGENDA 7-11-17.PDF](#)

3. 155 Sheridan Street

3.I. 155 Sheridan Street Memo And Attachments

Documents:

[SHERIDAN - 155 \(MEMO\).PDF](#)  
[SHERIDAN - 155 \(STAFF COMMENTS\).PDF](#)  
[SHERIDAN - 155 \(APPLICANT SUBMITTAL - DOCUMENTS\).PDF](#)  
[SHERIDAN -155 \(APPLICANT SUBMITTAL - DRAWINGS\).PDF](#)

4. One Joy Place

4.I. One Joy Place Memo And Attachments

Documents:

[ONE JOY PLACE \(MEMO AND ATTACHMENTS\).PDF](#)  
[JOY PLACE - 1 \(UPDATED PUBLIC COMMENT\).PDF](#)  
[ONE JOY PLACE \(APPLICANT SUBMISSION\).PDF](#)  
[ONE JOY PLACE \(PLANS\).PDF](#)

5. Proposed Amendments To Chapter 30, Affordable Housing

5.I. Division 30 Affordable Housing Text Amendments Memo And Attachments

Documents:

[AFFORDABLE HOUSING \(REPORT\).PDF](#)  
[AFFORDABLE HOUSING \(REPORT ATTACHMENTS\).PDF](#)  
[AFFORDABLE HOUSING \(UPDATED PUBLIC COMMENTS\).PDF](#)

6. 218 Washington Ave.

6.I. 218 Washington Ave. Memo And Attachments

Documents:

[WASHINGTON AVE - 218 \(MEMO AND ATTACHMENTS\).PDF](#)  
[WASHINGTON AVE. - 218 \(REVISED PUBLIC COMMENT\).PDF](#)  
[WASHINGTON AVE - 218 \(APPLICANT SUBMITTAL\).PDF](#)  
[WASHINGTON AVE - 218 \(PLANS\).PDF](#)





**LEGAL ADVERTISEMENT  
PORTLAND PLANNING BOARD MEETING**

The Portland Planning Board will meet on Tuesday, July 11, 2017, Council Chambers, 2<sup>nd</sup> 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](mailto:planningboard@portlandmaine.gov)**

**Workshop: 4:30 p.m.**

- i. Level III Subdivision and Site Plan; 19 Residential Units; 155 Sheridan Street, BD Sheridan, LLC., Applicant. (4:30 – 5:30 estimated time) The Board will hold a workshop on a proposal for a four (4) story building with 14 one-bedroom units and 5 two-bedroom units. Parking for 19 vehicles is also proposed. The site is in the R-6 zone and is subject to the Fort Sumner Park Overlay zone. The project will also be reviewed for conformance with the inclusionary zoning requirements, subdivision and site plan ordinances.
- ii. Level II Subdivision and Site Plan, 12 Residential Units; 1 Joy Place, Onejoy Place, LLC., Applicant. (5:30-6:30 estimated time) The Planning Board will hold a workshop on a proposal for a three-story a new residential building at 1 Joy Place. The proposal is for 12 one-bedroom units in a building with a total floor area of 3591 sq ft. Parking for 4 vehicles is proposed on-site. One unit is proposed as an affordable unit to meet Portland's inclusionary zoning requirements. The site is in the B-1 zone.

**Break for Dinner**

**Public Hearing – 7:00 p.m.**

- i. Proposed Amendments to Chapter 30, Affordable Housing; City of Portland, Applicant. (7:00 – 8:00 p.m. estimated time) The Board will hold a public hearing on proposed amendments to Chapter 30, Affordable Housing, which have been proposed by the Housing Committee. The potential amendments, include but are not limited to, allowing increased housing density and flexible dimensional standards for affordable housing projects in the B-1, B-1b, B-2, B-2b, B-2c, B-3, B-3b, B-3c, B-5, and RP zones, and for affordable Planned Residential Unit Developments in the R-3, R-, and R-5A zones.

**Evening Workshop – following public hearing**

- i. Level III Subdivision and Site Plan; 218 Washington Avenue; 218-220 Washington Ave., LLC., Applicant. (following public hearing- 8:00 p.m. estimated time) The Board will hold a workshop on a proposed 45 unit condominium project with 22 one-bedroom and 23 two-bedroom units. On-site parking will be provided for 45 vehicles under the building. The site is in the B-1b zone and units on-site are proposed to meet the inclusionary zoning requirements.

**ELIZABETH BOEPPLE, CHAIR – PORTLAND PLANNING BOARD**

# CITY OF PORTLAND, MAINE

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## PLANNING BOARD

Elizabeth Boepple, Chair  
Sean Dundon, Vice Chair  
Carol Morrisette  
David Eaton  
Brandon Mazer  
Maggie Stanley  
Lisa Whited

### AGENDA PORTLAND PLANNING BOARD MEETING

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#### **WORKSHOP - 4:30 p.m.**

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- ii. Level II Subdivision and Site Plan, 12 Residential Units; 1 Joy Place, Onejoy Place, LLC., Applicant. (5:30-6:30 estimated time) The Planning Board will hold a workshop on a proposal for a three-story a new residential building at 1 Joy Place. The proposal is for 12 one-bedroom units in a building with a total floor area of 3591 sq ft. Parking for 4 vehicles is proposed on-site. One unit is proposed as an affordable unit to meet Portland's inclusionary zoning requirements. The site is in the B-1 zone.

#### **BREAK FOR DINNER**

#### **PUBLIC HEARING – 7:00 p.m.**

1. **ROLL CALL AND DECLARATION OF QUORUM**
2. **COMMUNICATIONS AND REPORTS**
3. **REPORT OF ATTENDANCE AT THE MEETINGS HELD ON:**

##### **June 22, 2017:**

Afternoon Workshop: Boepple, Dundon, Morrisette, Stanley, and Whited. Eaton and Mazer, absent

Evening Workshop: Boepple, Dundon, Morrisette, Stanley, and Whited. Eaton and Mazer, absent

Public Hearing: Boepple, Dundon, Morrisette, Stanley, and Whited. Eaton and Mazer, absent

##### **June 27, 2017:**

Workshop:

Public Hearing: [no public hearing on that agenda].

**4. REPORT OF DECISIONS AT THE MEETINGS HELD ON:**

**JUNE 22, 2017**

- i. Subdivision Review on Amended Subdivision Plat; 101 York Street; JB Brown, Applicant. Dundon moved and Morrisette seconded a motion to approved the amended subdivision plat with five (5) conditions of approval. Vote: 5-0, Eaton and Mazer absent.
- i. Level III Site Plan and Subdivision Review; 20 Thames Street; Essexnorth Portland, LLC., Applicant. Dundon moved and Morrisette, seconded a motion to approved the subdivision plan with five (5) conditions of approval. Vote: 5-0, Eaton and Mazer absent. Dundon moved and Morrisette, seconded a motion to approved the conditional use application for ensuring workforce housing with one (1) condition of approval. Vote: 5-0, Eaton and Mazer absent.

**JUNE 27, 2017**

**There were no public hearing items to report on for this meeting.**

**5. NEW BUSINESS**

- i. Proposed Amendments to Chapter 30, Affordable Housing; City of Portland, Applicant. (7:00 – 8:00 p.m. estimated time) The Board will hold a public hearing on proposed amendments to Chapter 30, Affordable Housing, which have been proposed by the Housing Committee. The potential amendments, include but are not limited to, allowing increased housing density and flexible dimensional standards for affordable housing projects in the B-1, B-1b, B-2, B-2b, B-2c, B-3, B-3b, B-3c, B-5, and RP zones, and for affordable Planned Residential Unit Developments in the R-3, R-, and R-5A zones.

**6. EVENING WORKSHOP – FOLLOWING THE PUBLIC HEARING**

- i. Level III Subdivision and Site Plan; 218 Washington Avenue; 218-220 Washington Ave., LLC., Applicant. (following public hearing- 8:00 p.m. estimated time) The Board will hold a workshop on a proposed 45 unit condominium project with 22 one-bedroom and 23 two-bedroom units. On-site parking will be provided for 45 vehicles under the building. The site is in the B-1b zone and units on-site are proposed to meet the inclusionary zoning requirements.



# Memorandum

## Planning and Urban Development Department

### Planning Division

**To:** Carol Morrisette, Chair, and Members of the Portland Planning Board  
**From:** Matthew Grooms, Planner  
**Date:** July 7, 2017  
**Re:** 155 Sheridan Street  
**Project #:** 2017-073 **CBL:** 012-Q-010, 012-Q-012  
**Meeting Date:** July 11, 2017

#### I. INTRODUCTION

BD Sheridan, LLC requests a Level III site plan, subdivision and conditional use review for a four-story, 34,555 SF housing development on Sheridan Street in the East End. The proposed development consists of nineteen residential units with ground-floor structured parking for nineteen vehicles on a property located immediately north of Fort Sumner Park. The site is currently occupied by a one and a half story single-family home.



**Figure 1: Project Site (Note: Existing Single-Family House to be Demolished)**

This development is being referred to the Planning Board for compliance with the site plan and subdivision standards of the land use code. The applicant has submitted preliminary plans for review prior to submitting a final site plan. As this project is located within the Fort Sumner Park Overlay Zone, an advisory review is required by the Parks Commission.

A total of 374 notices were sent to property owners within 500 feet of the site and a legal ad ran on July 3, and 4 2017.

**Applicant:** BD Sheridan, LLC

**Consultants:** Will Savage, Acorn Engineering, INC; Rex Croteau, Titcomb Associates; Ryan Senatore, Ryan Senatore Architecture; Tom Jewell; Olivia Dawson; Patrick Venne

#### II. REQUIRED REVIEWS

| <i>Review</i> | <i>Applicable Standards</i> |
|---------------|-----------------------------|
| Subdivision   | Section 14-497              |
| Site Plan     | Section 14-526              |

#### III. PROJECT DATA

|                              |                               |
|------------------------------|-------------------------------|
| Existing Zoning              | R-6, Fort Sumner Park Overlay |
| Existing Use                 | Single-Family Home            |
| Proposed Use                 | Residential                   |
| Proposed Development Program | 19 units, 19 parking spaces   |
| Parcel Size                  | 18,140 SF                     |

|                    | <i>Existing</i> | <i>Proposed</i> | <i>Net Change</i> |
|--------------------|-----------------|-----------------|-------------------|
| Building Footprint | 640 SF          | 9,708 SF        | 9,068 SF          |

|                           |             |           |           |
|---------------------------|-------------|-----------|-----------|
| Building Floor Area       | 1,280 SF    | 34,555 SF | 33,275 SF |
| Impervious Surface Area   | 1,287 SF    | 11,070 SF | 9,783 SF  |
| Parking Spaces (on site)  | 1           | 19        | 18        |
| Bicycle Parking Spaces    | 0           | 8         | 8         |
| Estimated Cost of Project | \$5,000,000 |           |           |

#### IV. EXISTING CONDITIONS

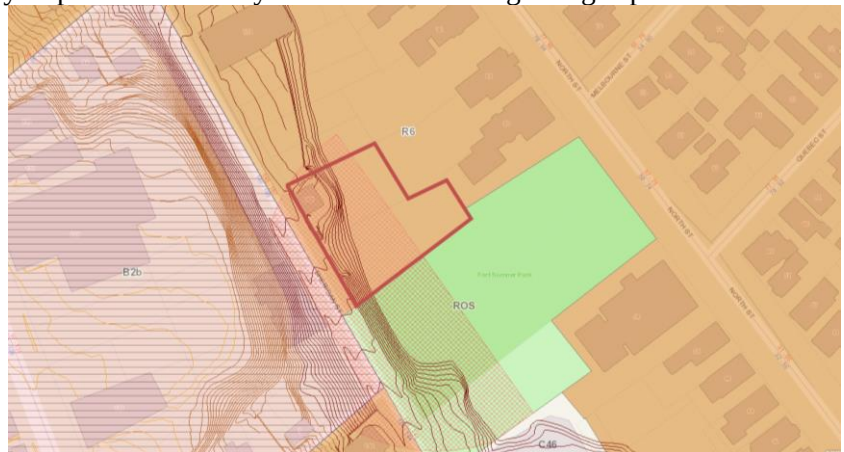
The applicant proposes to develop on a 18,140 SF site on the east side of Sheridan Street immediately north of Fort Sumner Park. The site is steeply sloped, with a maximum grade differential of 43 feet from west to east along the southerly property line. Surrounding uses include both single-family homes and multi-family developments, with several nearby projects having been completed in recent years; 152-156 Sheridan Street (2014) located immediately across the street and 135 Sheridan Street (2006) located just to the south. Fort Sumner Park, located immediately to the south, is accessible via footpath from Sheridan Street. The city has recently completed work to stabilize the toe of this slope.

The site lies in the R-6 zone within the Fort Sumner Park Overlay Zone, intended to protect the panorama from Fort Sumner Park. The properties across Sheridan Street are zoned B-2b.

#### V. PROPOSED DEVELOPMENT

The applicant proposes to develop nineteen residential units on the site, including five two-bedroom units and fourteen one-bedroom units on the second through fourth floor. Further information is required as to whether these units would be condominiums or rental units. As currently depicted, the units would range in size from 836 SF to 1,438 SF, and all would have either a balcony or patio with small yard. Extensive site grading is planned.

The proposed building is set back five feet from Sheridan Street and is four stories tall with its northern most extent being reduced to three stories in order to satisfy the requirements of the Fort Sumner Park Overlay Zone. The exterior façade consists of a mixture of composite lap siding with a cedar shingle appearance and composite siding panel. Building articulation and massing is further managed by means of projecting bays, street-facing balconies, an entrance canopy and a ranged color palette. Three pedestrian entrances are proposed along the west (street-facing) façade with a further 18' foot wide vehicular entrance and associated new curb cut also being provided off Sheridan Street. The first and primary entrance is located in the center of the west façade and provides access to the mail room, parking area and one of two building stairwells. The two secondary entrances are located at either end of the building's west façade, with one entrance adjacent to the proposed garage entrance, and the other at the southwest corner of the building which provides direct pedestrian access to the building's elevator and second stairwell.



**Figure 2: Proposed Site with Zoning Information with Topography**

Given the extensive grade differential, the applicant is proposing to regrade large portions of the site and has submitted a geotechnical report in support of the necessary site work. In accordance with the Fort Sumner Park Overlay Zone, the applicant has provided a fifteen-foot setback along the southerly property line adjacent with the park property and building elevations demonstrating that all portions of the proposed roof structure including appurtenances falls within the limits set by the overlay zone. In order to further mitigate the impacts of a building in this location as it relates to the panorama from Fort Sumner Park, the applicant is proposing to construct a green (vegetated) roof in order to soften the visual impact.

The first floor of the proposed building will consist of structured parking for nineteen vehicles including one compact parking space as well as a resident lobby, mail room, solid waste storage, mechanical closets and elevator. The upper



floors will consist of nineteen one and two bedroom residential units, ranging from 836 SF to 1,438 SF. Each unit is provided with either a patio or a balcony. There is an additional common roof deck available to residents located on the fourth floor and similarly residents have private access to Fort Sumner Park via a proposed pathway accessible by an entrance located on the fourth floor.

Additional site improvements include the reconstruction of the sidewalk along Sheridan Street and the installation of landscaping along both the property's street frontage and along the rear property line. A total of seven Autumn Gold Ginkgo are proposed as street trees. The applicant has requested that the installation of nine Eastern Juniper within the front setback be counted towards the required number of street trees. Twenty-eight compact mugo pine shrubs are proposed along the rear property line to provide additional site buffering. Elsewhere on site, the applicant proposes a mixture of perennials and ornamental grasses. The perimeter of the site will feature a stone retaining wall with chain link fence mounted above. No street lights are proposed.



Figure 3: West Elevation Demonstrating Compliance with Fort Sumner Park Overlay



Figure 4: Building Rendering Looking South



Figure 5: Building Rendering Looking North

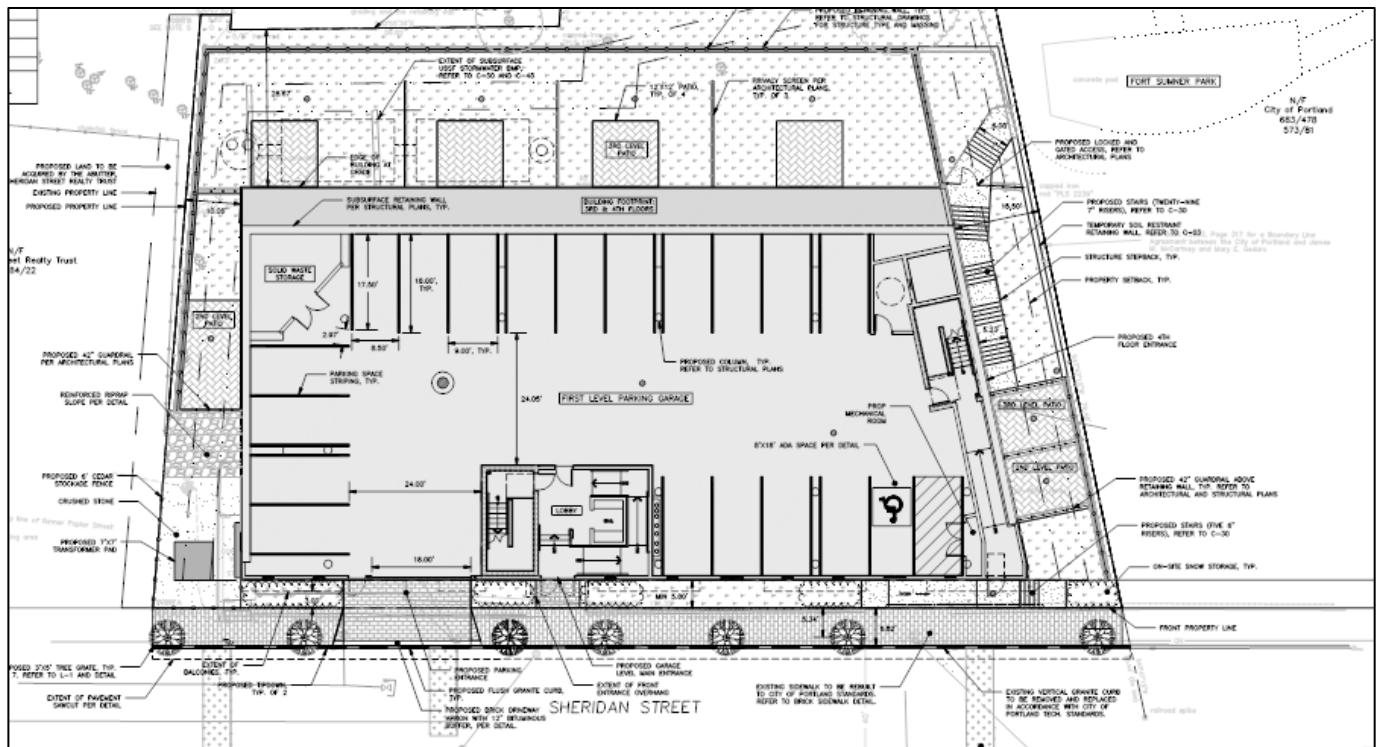


Figure 6: Proposed Site Plan

## VI. PUBLIC COMMENT

The Planning Division has received no written comments in regards to this project. The applicant did hold a neighborhood meeting on June 21<sup>st</sup> at the East End School, attended by 12 individuals. Questions asked at this meeting were in regards to the parking, the proposed market rate housing unit, the construction management process, site stabilization, view impacts from Fort Sumner Park, the proposed green roof and project timeline. Comments are discussed below where relevant (*Attachment X*).

## VII. RIGHT, TITLE, & INTEREST

The applicant has provided a deed demonstrating ownership of the subject property, which, as described above, consists of two separate parcels. (*Attachment C*).

## VIII. FINANCIAL & TECHNICAL CAPACITY

The estimated cost of the development is \$5 million. The applicant has submitted a letter from Northern Bank & Trust Company indicating that BD Sheridan, LLC has the financial capacity to fund the project (*Attachment G*).

## IX. ZONING ANALYSIS

BD Sheridan, LLC is proposing a nineteen-unit multi-family development located entirely within the R-6 Residential zoning district and within the Fort Sumner Park Overlay District. This structure meets the maximum and minimum setback requirements, including the required fifteen-foot setback from Fort Sumner Park. Building height within the R-6 is limited to 45' feet above average grade with further limitations imposed by the Fort Sumner Park Overlay Zone, which limits the absolute height of the building, including roof forms and rooftop mechanical equipment, to 160.27' feet above mean sea level, with a further reduction of one vertical foot for each 25' feet radially away from the identified apex point within Fort Sumner Park. The average building height is approximately 43.75' feet above grade, with the proposed elevator override being located just under the maximum allowable height under the Fort Sumner Park Overlay Zone. Proposed landscaped open space exceeds 20% of the property as is required, and the lot contains a total of 954 square feet per unit, whereas the requirements is for a minimum of 750 square feet.

In order to meet the standards of the Fort Sumner Park Overlay Zone, the project must go before the Parks Commission for an advisory review and recommendation to the Planning Board. A preliminary presentation was



made to the Parks Commission on July 6, 2017, with a follow-up meeting and vote to occur at a later date. The applicant has asked that the Planning Board consider final recommendation from the Parks Commission as a condition for approval in the event that the meeting cannot be held prior to the Planning Board Public Hearing.

The project as proposed meets the standards of both the R-6 Residential district and the Fort Sumner Park Overlay Zone.

**X. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527) and SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS (Section 14-496)**

Per the city's land use ordinance, the following materials should be submitted at the time of final review:

- Final plan submittal requirements as noted in 14-527(e) and (f), including a detailed construction management plan describing how and when work is to be performed both in the right-of-way and on private property; and
- A subdivision plat meeting all plat requirements as noted in 14-496.
- Information regarding site lighting including a photometric plan.

**XI. SUBDIVISION REVIEW (14-497(a). Review Criteria; 14-198. Technical and Design Standards; & 14-499. Required Improvements)**

The preliminary plans have been reviewed by staff for conformance with the relevant review standards of the City of Portland's subdivision ordinance. Staff comments are below.

**1. Water, Air Pollution**

The site is currently occupied by a single-family structure and is largely vegetated, and steeply sloped to the east. An impervious area of 11,070 square feet is proposed. The applicant has not submitted stormwater management plans at this time. These will be required at the time of final review. No detrimental air quality impacts are anticipated.

**2 & 3. Adequacy of Water Supply**

The applicant will be required to provide evidence of capacity from the Portland Water District at the time of final review.

**4. Soil Erosion**

As noted above, the site is sloped such that the grade changes by approximately 43 feet from west to east. There will be a retaining wall around the exterior of the property, where the site abuts residential buildings on the west side of North Street. Vegetation currently covers most of the slope. The submittal includes an initial geotechnical exploration which found that no blasting would be required as part of this development. Piles will be driven into the ground for support of the pile and lag retaining wall. The applicant states that the building will be constructed as a slab-on-grade with development with a soldier pile and lagging wall retaining the cut slope along the easterly property line (*Attachment Q*). A final geotechnical report should be submitted at the time of final review.

**5. Impacts on Existing or Proposed Highways and Public Roads**

The applicant has supplied a Traffic Impact Study which projects that this development would result in fewer than 10 new peak hour trips, and further states that Sheridan Street currently has the capacity to handle this traffic. The project has been reviewed by Mr. Thomas Errico, consulting traffic engineer, who has indicated that he generally finds it acceptable (*Attachment 1*).

**6. Sanitary Sewer/Stormwater**

The applicant has submitted a wastewater capacity application to the Department of Public Works (*Attachment M*). Verification of capacity will be required at the time of final plan.

An underdrained subsurface sand filter (USSF) is proposed as a stormwater mitigation measure. Catch basins are to be installed around the exterior of the property with stormdrains directing discharge to the northwest corner of the site where it will connect with a storm sewer in Sheridan Street. Lauren Swett, the city's consulting stormwater engineer has asked that a stormwater management plan be submitted with the final submittal. Please see VII(2)(c) of this report for more information.

**7. Solid Waste**

The applicant states that a private contractor would be used for waste management purposes. Temporary storage of trash and recyclables in an interior trash room is proposed.

**8. Scenic Beauty**

The applicant proposes to remove existing vegetation on the site and replace it with a three-story structure. As with many projects in this area, the proposal takes advantage of existing views from Sheridan Street looking westward over Back Cove and the city skyline. It should be noted that the view from Fort Sumner Park, which sits uphill from the site with a grade change of approximately 40 feet, should remain relatively unchanged. A rendering of the development as seen from Fort Sumner Park has been provided. (*Attachment Plan 28*)

**9. Comprehensive Plan**

The project is highly compatible with Comprehensive Plan goals and policies, specifically the city's identified local goals as stated:

1. Increase, preserve and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households;
2. Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods;
3. Pursue policies to enable people who work in Portland to have the option to live in Portland;
4. Encourage quality, sustainable design in new housing development.

This project provides significant additional housing in a location that is readily accessible and nearby to a variety of services, amenities and public transit. Additionally, this project is contextually sensitive in its construction, specifically as it related to nearby Fort Sumner Park, and meets the city's standards for workforce housing.

**10. Financial and Technical Capacity**

As noted above, the applicant has submitted a letter from Northern Bank & Trust Company indicating that BD Sheridan, LLC has the financial capacity to fund the project (*Attachment G*).

**11. Wetland Impacts**

There are no anticipated impacts to wetlands.

**12. Groundwater Impacts**

There are no anticipated impacts to groundwater supplies.

**13. Flood-Prone Area**

The project is not located in a flood-prone area.

**Technical and Design Standards and Required Improvements**

Generally, many of the technical and design standards of *Section 14-498* do not apply in this case. The application incorporates most of the required improvements outlined in *Section 14-499*. A subdivision plan and recording plat will be required demonstrating compliance with these standards. Street trees are required per both the subdivision ordinance (*Section 14-499(f)*) and the site plan ordinance (*Section 14-526.2.b(iii)*), both of which refer to the city's Technical Manual, which sets a standard of one street tree/unit for multi-family developments. Based on this standard, nineteen street trees are required and seven street trees are proposed. It has been requested that the additional nine junipers be counted against this requirement as well. Jeff Tarling, the City Arborist, is reviewing the plans and will provide a recommendation for the final plan submittal.

**XII. SITE PLAN REVIEW**

The preliminary plans for the Sheridan Street Apartments have been reviewed by staff for conformance with the relevant review standards of the City of Portland's site plan ordinance. Staff comments are below.

**1. Transportation Standards**

a. *Impact on Surrounding Street Systems*

The applicant has stated that less than 10 peak hour trips will be generated by the proposed development. Mr. Errico has reviewed the submittal and reports that he finds it generally acceptable (*Attachment 7*).

b. *Access and Circulation*

The preliminary plans include a new curb cut on Sheridan Street, with a garage door providing access to an interior parking area. Pedestrian access is proposed via two doors on the Sheridan Street frontage, one at each end of the building. The applicant proposes to reconstruct the existing sidewalk and replace concrete with brick pavers. Tom Errico, the city's consulting traffic engineer, has reviewed the plans and offers the following comments:

1. *I have reviewed the construction management plan and greater detail is required as it relates to temporary sidewalk provisions. This should include resultant width of roadway and ADA compliant temporary ramps. Additionally, the applicant should specifically note if on-street parking is to be eliminated (with detailed limits) during construction and how contractor parking be managed.*

c. *Public Transit Access*

The proposed development is not located along a public transit route and is not of sufficient size to require transit access.

d. *Parking*

Division 20 of the land use ordinance requires one parking space/unit for residential development located on the peninsula (*Section 14-332(a)3*) with the requirement for the first three spaces within the R-6 zone being waived. At this ratio, the project requires a minimum of sixteen parking spaces. As noted above, these are proposed in an interior parking area, with door-controlled access from Sheridan Street.

Per the preliminary submittal, bike parking is proposed for eight bicycles. While this meets the city's standard of two spaces for every five dwelling units per *Section 14-526(a)4.b*), staff has asked that the location of the proposed bicycle rack be shown on applicable plan sheets.

e. *Transportation Demand Management*

A transportation demand management plan is not required.

## 2. *Environmental Quality Standards*

a. *Preservation of Significant Natural Features*

There are no known significant natural features on the site.

b. *Landscaping and Landscape Preservation*

The preliminary plans show eastern juniper along the property's frontage, set amongst ornamental grasses and perennial planting beds. Along Sheridan Street, the applicant is proposing seven Autumn Gold Ginkgo street trees. Creeping junipers are proposed towards the rear of the property atop the proposed retaining wall, intended to visually buffer the site from adjacent residential properties.

Jeff Tarling, the City Arborist, has stated that plantings along the property frontage should be placed in raised granite boxes, and has indicated that the narrow width of the sidewalk may warrant removal of the proposed street trees.

c. *Water Quality/Storm Water Management/Erosion Control*

Of the preliminary grading and drainage plans, Lauren Swett, consulting civil engineer, writes,

*In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:*

1. *Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.*
2. *General Standard: The project will result in an increase in impervious area of approximately 9,783 square feet. As such, the project is required to include stormwater management features for stormwater quality control. We have the following comments on the proposed treatment system.*
  - a. *The Applicant has indicated in the Stormwater Management Report that the subsurface sand filter was sized only to treat runoff generated from the roof of the proposed building and that landscaped areas will not be directed into the system. Table 2: Developed Area Treatment and Table 4: Water Quality Volume Table, both depict landscaped areas being treated by the subsurface sand filter. Please clarify if the proposed subsurface sand filter will treat the proposed landscaped areas. Additionally, if landscaped area is to be directed towards the subsurface sand filter, the filter surface area provided in Table 3 should be revised accordingly.*
3. *Flooding Standard: The project will result in an increase in impervious area of approximately 9,783 square feet. As such, the project is required to include any specific stormwater management features to control the rate or quantity of stormwater runoff from the site. We have the following comments on the associated stormwater model.*
  - a. *Table 4 in the Stormwater Management Report specifies a provided storage volume for the subsurface sand filter of 1,086 cubic feet, however, the modeled storage for pond 1P is approximately 2,222 cubic feet. Please clarify the intended subsurface filter size.*
  - b. *The Time of Concentration flow path for Pre-Development does not appear to represent the most hydrologically remote point.*
  - c. *It appears that a portion of subcatchment 3 shown on the Post-Development watershed, is directed towards the subsurface sand filters and a portion flows directly onto Sheridan Street. Please clarify how flow from the rear of the lot is directed way from the proposed subsurface sand filters.*

### **3. Public Infrastructure and Community Safety Standards**

#### **a. Consistency with Related Master Plans**

As noted above, the project is generally consistent with related master plans.

#### **b. Public Safety and Fire Prevention**

Keith Gautreau, Deputy Fire Chief, has reviewed the preliminary plans submitted for this project and has asked that the applicant conform to the standards for premises identification, confirm with the Portland Water District that the two fire hydrants on location will have sufficient capacity and finally, to place power lines underground as these would preclude access to the roof and roof decks (*Attachment 1*)

#### **c. Availability and Capacity of Public Utilities**

The applicant proposes to extend an existing 6" water line across Sheridan Street that would divert into a 4" domestic line and 6" fire line and connect at the southwest corner of the proposed building. A connection to an existing 12" sanitary sewer line, which flows north towards Walnut Street, is proposed from the northwest corner of the building. The applicant proposes underground electric from a new pole to be located at the northwest corner of the building. Keith Gautreau, Deputy Fire Chief, has asked that the new pole be removed and that power be brought onsite underground so as not to interfere with fire access.

As noted above, for the final site plan review, the applicant will need to present evidence that there are sufficient utilities, in particular, sewer and water capacity, to service the residential units on the site.

### **4. Site Design Standards**

#### **a. Massing, Ventilation, and Wind Impact**

The maximum building height in the R-6 zone is 45 feet. The preliminary elevations show a building height of 43.75' feet from the Sheridan Street grade. The proposed building is similar in massing to other recently approved multi-family developments along Sheridan Street, including the property immediately across the street.

b. *Shadows*

No shadow impacts on publicly accessible open spaces are anticipated.

c. *Snow and Ice Loading*

There are no anticipated detrimental snow or ice loading impacts.

d. *View Corridors*

The site is located within the Fort Sumner Park Overlay Zone, and as such must conform with standards intended to protect the vista from Fort Sumner Park. This proposal meets those standards and shall not obstruct the existing panorama.

e. *Historic Resources*

Fort Sumner Park is adjacent to this site; however this site as well as the park are not a designated historic district or landmark. Similarly, the project site is not a known archaeological site.

f. *Exterior Lighting*

Details regarding exterior lighting have not been provided at this time. A photometric plan and cut sheets will be required at the time of final review.

g. *Noise and Vibration*

Information on the HVAC and mechanical equipment should be provided with the final plans.

h. *Signage and Wayfinding*

No signage or wayfinding is proposed at this time.

i. *Zoning-Related Design Standards*

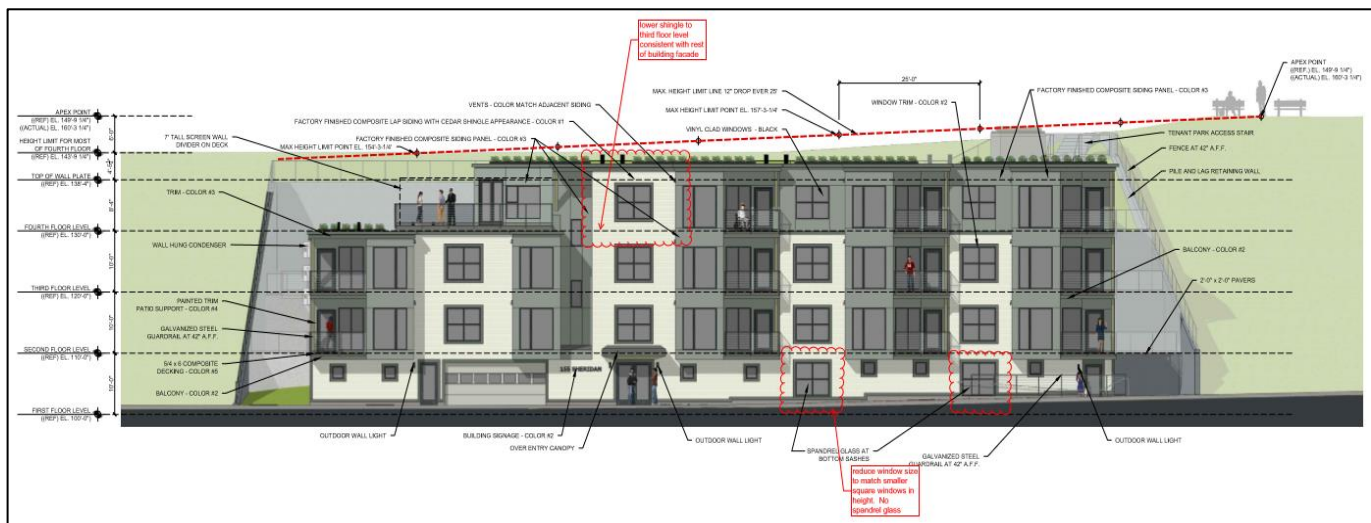
The city's site plan ordinance states that "residential developments...shall integrate with and respect the character of surrounding residential development in terms of architectural form, landscaping and open space, façade materials, roof pitch, massing and height as demonstrated by compliance with all applicable design standards as listed in the Design Manual" (*Section 14-526(d)9.a(v)*). The Design Manual includes standards and guidelines for the R-6 zone, however it was decided to apply the standards for multiple family developments as the standards of the R-6 zone specifically apply to small developments on lots of less than 10,000 square feet. This section of the Design Manual provides standards related to site context, interface with the public realm, building orientation, building articulation, garages and building materials.

The applicant has provided preliminary building elevations and renderings, which were reviewed by city staff during a design review attended by Caitlin Cameron, Urban Designer; Christine Grimando, Senior Planner; Matthew Grooms, Planner (*Attachment 1*). These renderings show a façade constructed with a mixture of composite siding panel and composite lap siding with cedar shingle appearance. In order to provide building articulation, the applicant has proposed regularly spaced projecting bays, material and color changes, and other elements to break up the façade such as balconies and projecting canopies. The building possesses extensive fenestration, including at the ground level. Given that this building will be highly proximate to Fort Sumner Park, the applicant has proposed the installation of a green roof to soften the visual impact. The city's urban designer offers the following comments based upon the design review process:

*(i) Multiple-family: Standard (1) Design Compatibility – Sheridan Street has a mix of building scales and types. Immediately adjacent to this proposal are several multi-family residential projects of similar scale and character. The project provides visual interest and scale through the bays, materials, and articulation elements such as balconies, cornice overhangs, and brackets. The façade material selection is appropriate*

to the building scale, type, and context. Staff requests that the material placement be revised slightly – in order to establish a building rhythm and rationale, and emphasize the third floor delineation/scale, the shingles should consistently be placed to end at the third story with panel on the fourth across the street facade (see attached). In addition, the ground floor windows at the structured parking should be more consistent and without spandrel glass – revise the two large windows at the ground floor to be transparent and of the same height as the smaller square windows, the width could remain as is (see attached).

**Standard (2) Relationship of building to the street** – The project is setback five feet from the sidewalk according to zoning dimensional requirements and also consistent with the building placement of nearby buildings. However, the landscaping between the sidewalk and the building face should be better defined with a raised edge such as a curb or a seating wall – this better establishes the line between public and private as well as holding the sidewalk edge. Plant viability will also be improved. The main entry is directly oriented to the street and is emphasized with a canopy, lighting, and building address. The mechanicals are very visible from the public right-of-way – more integrated design or screening is needed.



**Figure 7: Requested Changes Based on Design Review**

### XIII. INCLUSIONARY ZONING CONDITIONAL USE

Director of Planning and Urban Development, Jeffrey Levine, reviewed the Conditional Use for Affordable Housing application at 155 Sheridan Street. Conditional Use is authorized by Division 30, Section 14-487, Ensuring Workforce Housing, to secure the creation of Workforce Housing Units as part of new residential projects that propose 10 or more units. The ordinance requires a minimum of 10% of the project to be restricted for Workforce Households and that the number of bedrooms required under Section 14-487(e)3 be at least 10% of the total number of bedrooms made available as part of the project. The project located at 155 Sheridan Street proposes the creation of 19 condominium units with one unit being set aside as workforce housing in order to satisfy the standards of Division 30.

### XIII. 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(a) and (b) and 14-527(e) and (f) for review by the Planning Authority and Planning Board; and
4. Hold final Planning Board Hearing.

### XIV. ATTACHMENTS

#### PLANNING BOARD REPORT ATTACHMENTS

1. Staff Review Memo (06/30/2017)

**APPLICANT'S SUBMITTALS**

- A. Cover Letter
- B. Level III Site Plan Application
- C. Right Title and Interest
- D. Conformity with Applicable Zoning Standards
- E. Summary of Easements
- F. Written Request for Waivers
- G. Evidence of Financial Capacity
- H. Stormwater Report
- I. Stormwater Maintenance Agreement
- J. Erosion Control Report
- K. Fire Department Letter
- L. Solid Waste
- M. Utility Cover
- N. Construction Management Plan
- O. Tree Report
- P. Traffic Impact Study
- Q. Geotechnical Report
- R. Architectural Design Narrative
- S. Lighting Cut Sheets
- T. Structural Design Concept
- U. Inclusionary Zoning Cover Letter
- V. Inclusionary Zoning Application
- W. Conformity with Applicable Conditional Use Standards
- X. Neighborhood Meeting

**C. PLANS**

- Plan 1 Cover Sheet & Legend
- Plan 2 General Notes
- Plan 3 Existing Conditions Plan
- Plan 4 Demolition, Construction Management Plan & Erosion Control Plan
- Plan 5 Site Plan
- Plan 6 Landscape Plan
- Plan 7 Utility Plan
- Plan 8 Grading & Drainage Plan
- Plan 9 Site Details I
- Plan 10 Site Details II
- Plan 11 Utility Details
- Plan 12 Drainage Details
- Plan 13 Stormwater Details
- Plan 14 Erosion Control Notes
- Plan 15 Erosion Control Details
- Plan 16 First Floor Plan
- Plan 17 Second Floor Plan
- Plan 18 Third Floor Plan
- Plan 19 Fourth Floor Plan
- Plan 20 Section View
- Plan 21 West Elevation
- Plan 22 South Elevation
- Plan 23 East Elevation
- Plan 24 North Elevation
- Plan 25 Rendering – View Looking South
- Plan 26 Rendering – View Looking North
- Plan 27 Rendeirng – View from Washington Ave



Plan 28 Rendering – View from Fort Sumner Park Apex

# Planning and Urban Development Department

## Planning Division



June 30, 2017

Bernie Saulnier  
BD Sheridan, LLC  
1266 Furnace Brook Parkway  
Quincy, MA 02169

Will Savage, P.E.  
Acorn Engineering, INC  
158 Danforth Street  
Portland, ME 04102

RE: Staff Review Comments for 155 Sheridan Street (2017-073) – Planning Board Review

|                  |                     |             |            |
|------------------|---------------------|-------------|------------|
| Project Name:    | 155 Sheridan Street | Project ID: | (2017-073) |
| Project Address: | 155 Sheridan Street | CBL:        | 012-Q-012  |
| Applicant:       | Will Savage         |             |            |
| Planner:         | Matthew Grooms      |             |            |

Dear Mr. Saulnier and Mr. Savage,

Thank you for submitting a preliminary Level III Site Plan, Subdivision, Stormwater Quality and Conditional Use application for Ensuring Workforce Housing for a four-story, 19-unit residential development at 155 Sheridan Street in the R-6 District, subject further to the Fort Sumner Park Overlay Zone. This property is being reviewed as a preliminary plan subject to the following applicable Land Use Code provisions:

- Subdivision Ordinance, Article IV
- Site Plan Ordinance, Article V
- Division 7, R-6 and R-6A Residential Zones
- Division 20, Off-Street Parking Standards
- Neighborhood Meeting Regulations, Section 14-32

## Final Plan for Planning Board Review: Staff Review Comments

### I. Stormwater and Civil Engineering Review

#### Documents Reviewed by Woodard & Curran

- Level III Site Plan Application and attachments, dated May 11, 2017, prepared by Acorn Engineering, INC, on behalf of BD Sheridan LLC.
- Engineering Plans, Sheets C-01, C-02, C-03, C-10, C-20, C-30, C-40, C-41, C-42, C-43, C-44, C-45, C-46, & L-1, , dated March 28, 2017 prepared by Acorn Engineering, INC, on behalf of BD Sheridan LLC.

- Architectural Plans, 13 sheets dated March 9, 2017, prepared by Ryan Senator Architecture, on behalf of BD Sheridan LLC.
- Existing Conditions Survey, dated March 4, 2016, prepared by Titcomb Associates, on behalf of BD Sheridan, LLC

### **Comments**

1. Per Section 12 of the City's Technical Manual, the Applicant is required to submit a photometric plan demonstrating minimal light trespass from the site.
2. In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
  - a. Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500.
  - b. General Standard: The project will result in an increase in impervious area of approximately 9,783 square feet. As such, the project is required to include stormwater management features for stormwater quality control. We have the following comments on the proposed treatment system.
    - i. The Applicant has indicated in the Stormwater Management Report that the subsurface sand filter was sized only to treat runoff generated from the roof of the proposed building and that landscaped areas will not be directed into the system. Table 2: Developed Area Treatment and Table 4: Water Quality Volume Table, both depict landscaped areas being treated by the subsurface sand filter. Please clarify if the proposed subsurface sand filter will treat the proposed landscaped areas. Additionally, if landscaped area is to be directed towards the subsurface sand filter, the filter surface area provided in Table 3 should be revised accordingly.
  - c. Flooding Standard: The project will result in an increase in impervious area of approximately 9,783 square feet. As such, the project is required to include any specific stormwater management features to control the rate or quantity of stormwater runoff from the site. We have the following comments on the associated stormwater model.
    - i. Table 4 in the Stormwater Management Report specifies a provided storage volume for the subsurface sand filter of 1,086 cubic feet, however, the modeled storage for pond 1P is approximately 2,222 cubic feet. Please clarify the intended subsurface filter size.
    - ii. The Time of Concentration flow path for Pre-Development does not appear to represent the most hydrologically remote point.
    - iii. It appears that a portion of subcatchment 3 shown on the Post-Development watershed, is directed towards the subsurface sand filters and a portion flows directly onto Sheridan Street. Please clarify how flow from the rear of the lot is directed away from the proposed subsurface sand filters.
3. The provided bituminous pavement detail references both 9.5 and 12.5 mm HMA as the surface course. City of Portland Technical Standards require the use of 12.5 mm HMA.

## **II. Traffic and Construction Management Review**

1. The applicant has prepared a traffic impact study and I find the methods and conclusions to be reasonable. The project is not be expected to create any mobility or safety deficiencies. Trip generation levels do not require a Traffic Movement Permit. The Washington Avenue/Walnut Street/Fox Street intersection is a High Crash Location, but the proposed project is not expected to add a significant amount of traffic to the intersection.
2. I have reviewed the parking layout and I find it to be acceptable.
3. The proposed driveway opening at the garage is 18-feet wide. Technically this width does not require a waiver from City standards given that the width increases at the property line (the minimum width permitted by the City is 20 feet). I find the driveway configuration to be acceptable. I would note that the driveway apron shall provide for a maximum 2% cross slope along the sidewalk or pedestrian route.
4. I have reviewed the construction management plan and greater detail is required as it relates to temporary sidewalk provisions. This should include resultant width of roadway and ADA compliant temporary ramps. Additionally, the applicant should specifically note if on-street parking is to be eliminated (with detailed limits) during construction and how contractor parking be managed.

## **5. Public Infrastructure and Community Safety Standards**

### **A. Fire Department Comments (Keith Gautreau)**

1. Premises Identification
  - a. The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.
  - b. Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.
  - c. If the building entry faces a different street, both the street name and number should be large enough to read from the street.
  - d. Address numbers must be a minimum of 6 inches high.
  - e. The number should be in Arabic numerals rather than spelled out (for example, “130” instead of “One Hundred and Thirty”).
  - f. Color: Addresses should be in a color that contrasts with the background.
  - g. Whenever possible, should be illuminated.
  - h. Provide additional address signs at entrances to the property when the building address is not legible from the public street.
  - i. Buildings set back in groups that share common entrances can make quickly locating a specific building and the shortest route difficult. On such sites, additional signs with directional arrows and/or diagrams of the buildings and access layout should be posted.
2. There appears to be hydrants located at Walnut and Sheridan and at 135 Sheridan Street. According to GIS they are on dead end mains. Please confirm with PWD that this is the case and that they will provide a capacity to serve letter for domestic and fire protection for this proposed project.
3. Essentially there is only access to one side of the building for Emergency Vehicles on Sheridan Street. Because of this Fire Dept. would like to see underground power rather than the proposed overhead lines. This will make access to the roof and roof top decks difficult or impossible.

### **I. Site Design Standards**

#### **A. Site Plan, Subdivision Review Comments (Matthew Grooms)**

6. Will the elevator be ADA accessible from the proposed southerly most pedestrian entrance? If not, would the applicant consider making this a fully ADA accessible pedestrian entrance.
7. Indicate on the proposed site plan where the required bicycle parking shall be located.
8. Façade mounted mechanical equipment is clearly visible from the public right-of-way. This equipment shall be screened in conformance with the City's site plan ordinance, Section 14-526(b)(2)(b).
9. A copy of the finalized Geotechnical report will be required prior to the issuance of any building permit.
10. In line with the Fort Sumner Park Overlay Zone, this item is required to go before the Parks Commission for an advisory review and Planning Board recommendation.
11. Site lighting details and associated photometric plan shall be provided with the final submittal package.
12. A subdivision plan and recording plat shall be required as part of the final submittal package.
13. It is recommended that plantings along Sheridan Street be located within vertical granite planters, so as to protect vegetation from road salts and define private space.
14. Given the narrow sidewalk width along Sheridan Street, street tree placement is still under consideration. Further direction regarding street tree placement shall be provided.

#### **B. Design Review (Caitlin Cameron)**

The project at 155 Sheridan Street was reviewed according to the *Multiple-family Standards of Review* in the *City of Portland Design Manual* by Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Christine Grimando, Senior Planner.

##### **Design Review Comments:**

##### **(i) Multiple-family:**

*Standard (1) Design Compatibility* – Sheridan Street has a mix of building scales and types. Immediately adjacent to this proposal are several multi-family residential projects of similar scale and character. The project provides visual interest and scale through the bays, materials, and articulation elements such as balconies, cornice overhangs, and brackets. The façade material selection is appropriate to the building scale, type, and context. Staff requests that the **material placement be revised slightly – in order to establish a building rhythm and rationale, and emphasize the third floor delineation/scale, the shingles should consistently be placed to end at the third story with panel on the fourth across the street facade (see attached). In addition, the ground floor windows at the structured parking should be more consistent and without spandrel glass – revise the two large windows at the ground floor to be transparent and of the same height as the smaller square windows, the width could remain as is (see attached).**

*Standard (2) Relationship of building to the street* – The project is setback five feet from the sidewalk according to zoning dimensional requirements and also consistent with the building placement of nearby buildings. **However, the landscaping between the sidewalk and the building face should be better defined with a raised edge such as a curb or a seating wall –this better establishes the line between public and private as well as holding the sidewalk edge. Plant viability will also be improved.** The main entry is directly oriented to the street and is emphasized with a canopy, lighting, and building address. **The mechanicals are very visible from the public right-of-way – more integrated design or screening is needed.**

*Standard (3) Open Space* – Project includes balcony and roof spaces for tenants.

*Standard (4) Light and Air* – Project includes ample windows for light and air.

*Standard (5) Surface Parking* – Not applicable

*Standard (6) Lodging Conversion* – Not applicable

**Additional Submittals Required:**

Please upload the digital plans and documents to address staff comments. Upon receipt of the revised material, the City of Portland will review the additional plans and information for conformance with applicable ordinances. Please be aware that an application expires within 120 days of the date upon which this written request for additional information was made and only one set of revised plans may be submitted for review. This item is scheduled to go before the Planning Board as a workshop item on July 11, 2017. Following the workshop process, this item will be scheduled for a public hearing at the Planning Board's next available meeting and the staff will provide the Planning Board with a recommendation to approve, approve with conditions, or deny the final site plan.

If you have any questions, feel free to contact me at (207) 874-8725 or by email at [mgrooms@portlandmaine.gov](mailto:mgrooms@portlandmaine.gov).

Sincerely,

Matthew Grooms  
Planner

**Electronic Distribution:**

Tuck O'Brien, Planning Division Director  
Barbara Barhydt, Development Review Services  
Manager  
Victoria Morales, Associate Corporation  
Counsel

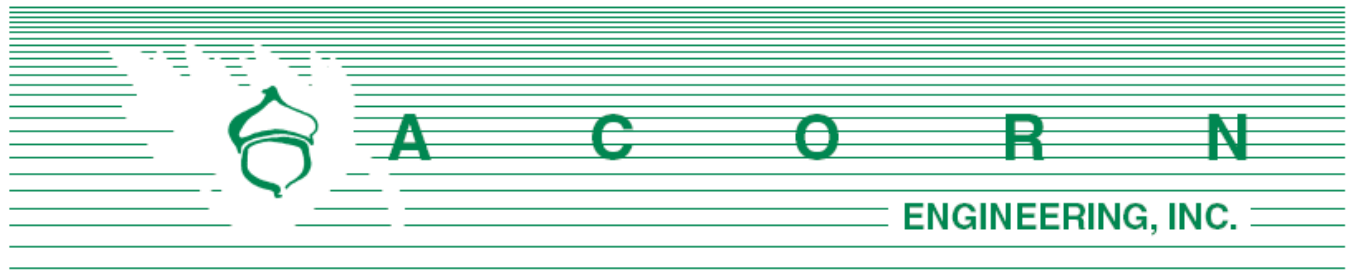
Anne Machado, Zoning Administrator  
Captain Keith Gautreau, Fire  
Jeff Tarling, City Arborist  
Tom Errico, P.E., TY Lin Associates  
Lauren Swett, P.E., Woodard & Curran





WEST ELEVATION

1/8" = 1'-0" (WHEN PRINTED AT 24" X 36")



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

May 11, 2017

Subject: Level III Site Plan & Subdivision Application  
155 Sheridan Street – Portland, ME

To Whom It May Concern,

BD Sheridan LLC is pleased to submit the accompanying package of submission materials related to the proposed nineteen-unit urban infill project at 155 Sheridan Street. The site is located at Chart, Block, Lot 12-Q-10 & 12-Q-12 spanning from 153 – 165 Sheridan Street. The development will include one workforce housing unit for sale within the proposed building in accordance with Division 30, Affordable Housing of the Land Use Ordinance. This application is intended to comply with the Fort Sumner Park Height Overlay (14-139(d)).

The project site is located within the East End neighborhood and is currently occupied by a single-family, 1.5 story home. It is proposed that the site be redeveloped into a high-density, multi-unit building with nineteen internal parking spaces on the first level and three upper floors of residential units. Select units on the second and third floors will have access to outdoor patios. Due to the existing steep grades, portions of the site will be supported by retaining walls to provide additional, open-air access to the second and third floor apartments. There is also a proposed fourth floor stair access to the adjacent Fort Sumner Park.

New impervious surfaces established by the building footprint is proposed to be treated via a subsurface detention system under the third-floor patios to the rear of the property. Runoff from the roof is to be redirected into the stormwater treatment system before entering the existing municipal stormwater infrastructure within Sheridan Street. The new rooftop is also to be outfitted with a series of modular green roof trays.

This submission package is intended to meet the City's Preliminary Submission Requirements as outlined in the Level III Application procedures. The development site is located within the City's R-6 Zoning District, and complies with the permitted uses within the zone.

For information regarding the boundary agreement, please refer to Section C.



Accompanying this cover letter are the following materials:

Documents:

- A. Cover Letter
- B. Level III Site Plan Application
- C. Evidence of Right, Title, and Interest
- D. Conformity with Applicable Zoning Standards
- E. Summary of Easements
- F. Written Request for Waivers
- G. Evidence of Financial Capacity
- H. Stormwater Report
- I. Stormwater Maintenance Agreement
- J. Erosion and Sedimentation Control Report
- K. Fire Department Letter
- L. Solid Waste
- M. Utility Cover
- N. Construction Management Plan
- O. Tree Report
- P. Traffic Impact Study
- Q. Geotechnical Report
- R. Architectural Design Narrative
- S. Lighting Cut Sheets
- T. Structural Design Concept

Drawings:

- Preliminary Civil Site Plan Set, Dated 3/28/2017
- Preliminary Architectural Plan Set, Dated 3/9/2017

BD Sheridan LLC and the design team look forward to your review of this project and are requesting to be placed on the next available workshop meeting with the Planning Board. 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.  
Principal - Project Manager  
Acorn Engineering, Inc.





## **Level III – Preliminary and Final Site Plans Development Review Application Portland, Maine**

Planning and Urban Development Department  
Planning Division

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Level III: Preliminary or Final Site Plan. Please note that Portland has delegated review from the State of Maine for reviews under the Site Location of Development Act, Chapter 500 Stormwater Permits, and Traffic Movement Permits.

### **Level III: Site Plan Development includes:**

- New structures with a total floor area of 10,000 sq. ft. or more except in Industrial Zones.
- New structures with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- New temporary or permanent parking area(s) or paving of existing unpaved parking areas for more than 75 vehicles.
- Building addition(s) with a total floor area of 10,000 sq. ft. or more (cumulatively within a 3 year period) except in Industrial Zones.
- Building addition(s) with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- A change in the use of a total floor area of 20,000 sq. ft. or more in any existing building (cumulatively within a 3 year period).
- Multiple family development (3 or more dwelling units) or the addition of any additional dwelling unit if subject to subdivision review.
- Any new major or minor auto business in the B-2 or B-5 Zone, or the construction of any new major or minor auto business greater than 10,000 sq. ft. of building area in any other permitted zone.
- Correctional prerelease facilities.
- Park improvements: New structures greater than 10,000 sq. ft. and/or facilities encompassing 20,000 sq. ft. or more (excludes rehabilitation or replacement of existing facilities); new nighttime outdoor lighting of sports, athletic or recreation facilities not previously illuminated.
- Land disturbance of 3 acres or more (includes stripping, grading, grubbing, filling or excavation).

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: <http://me-portland.civicplus.com/DocumentCenter/Home/View/1080>

Design Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2355>

Technical Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2356>

#### **Planning Division**

Fourth Floor, City Hall  
389 Congress Street  
p.m. (207) 874-8719

[planning@portlandmaine.gov](mailto:planning@portlandmaine.gov)

#### **Office Hours**

Monday thru Friday  
8:00 a.m. – 4:30

**PROJECT NAME:**

155 Sheridan Street

---

**PROPOSED DEVELOPMENT ADDRESS:**

155 Sheridan Street Portland, Maine 04101

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**PROJECT DESCRIPTION:**

Redevelopment of an existing lot with a 1.5 story home into a 19 units 4-story building with green roof and first floor parking garage.

---

**CHART/BLOCK/LOT:** 012-Q-010 & 012-Q-012

**PRELIMINARY PLAN**

3/28/17(date)

**FINAL PLAN**

\_\_\_\_\_(date)

**CONTACT INFORMATION:**

|                                                                                                                                                                                                                   |                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant – must be owner, Lessee or Buyer</b><br>Name: Bernie Saulnier<br>Business Name, if applicable: BD Sheridan, LLC<br>Address: 1266 Furnace Brook Parkway<br>City/State : Qunicy, MA 02169<br>Zip Code: | <b>Applicant Contact Information</b><br>Work #: (207) 571-4166<br>Home #:<br>Cell #: Fax#:<br>e-mail: saulnier04@yahoo.com                                    |
| <b>Owner – (if different from Applicant)</b><br>Name:<br>Address:<br>City/State : Zip Code:                                                                                                                       | <b>Owner Contact Information</b><br>Work #:<br>Home #:<br>Cell #: Fax#:<br>e-mail:                                                                            |
| <b>Agent/ Representative</b><br>Name: Acorn Engineering, Inc.<br>Will Savage, P.E.<br>Address: 158 Danforth Street<br>City/State : Portland, ME Zip Code: 04102                                                   | <b>Agent/Representative Contact information</b><br>Work #: (207) 775-2655<br>Home #: (207) 317-1884<br>Cell #: Fax#:<br>e-mail: wsavage@acorn-engineering.com |
| <b>Billing Information</b><br>Name: (See Applicant Information)<br>Address:<br>City/State : Zip Code:                                                                                                             | <b>Billing Contact Information</b><br>Work #:<br>Home #:<br>Cell #: Fax#:<br>e-mail:                                                                          |

|                                                                                                                                                                                                                                                                                                       |                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineer</b><br>Name: Acorn Engineering, Inc.<br>Will Savage, P.E.<br>Address: 158 Danforth Street<br>City/State: Portland, ME Zip Code: 04012                                                                                                                                                     | <b>Engineer Contact Information</b><br>Work #: (207) 775-2655<br>Home #:<br>Cell #: Fax#:<br>e-mail: wsavage@acorn-engineering.com  |
| <b>Surveyor</b><br>Name: Titcomb Associates<br>Address: Rex Croteau, PLS<br>133 Gray Road<br>City/State: Falmouth, ME Zip Code: 04105                                                                                                                                                                 | <b>Surveyor Contact Information</b><br>Home #: (207) 797-9199<br>Work #:<br>Cell #: Fax#:<br>e-mail: RCroteau@titcombsurvey.com     |
| <b>Architect</b><br>Name: Ryan Senatore Architecture<br>Address: Ryan Senatore, AIA<br>565 Congress St, Suite 304<br>City/State: Portland, ME Zip Code: 04101                                                                                                                                         | <b>Architect Contact Information</b><br>Work #: (207) 747-5159<br>Home #:<br>Cell #: Fax#:<br>e-mail: ryan@senatorearchitecture.com |
| <b>Attorney</b><br>Name: Tom Jewell<br>Address: 477 Congress St<br>Suite 1104<br>City/State: Portland, ME Zip Code: 04101                                                                                                                                                                             | <b>Attorney Contact Information</b><br>Work #: (207) 774-6665<br>Home #:<br>Cell #: Fax#:<br>e-mail: tjewell@jewellandbulger.com    |
| <b>Designated person/person(s) for uploading to e-Plan:</b><br>Name: Olivia Dawson<br>e-mail: odawson@acorn-engineering.com<br><br>Name: William Savage<br>e-mail: wsavage@acorn-engineering.com<br><br>Name: Patrick Venne & Bernie Saulnier<br>e-mail: patrickjvenne@gmail.com saulnier04@yahoo.com |                                                                                                                                     |

**APPLICATION FEES:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Level III Development (check applicable reviews)</b></p> <p><input checked="" type="checkbox"/> Less than 50,000 sq. ft. (\$750.00)</p> <p><input type="checkbox"/> 50,000 - 100,000 sq. ft. (\$1,000)</p> <p><input type="checkbox"/> 100,000 – 200,000 sq. ft. (\$2,000)</p> <p><input type="checkbox"/> 200,000 – 300,000 sq. ft. (\$3,000)</p> <p><input type="checkbox"/> over 300,00 sq. ft. (\$5,000)</p> <p><input type="checkbox"/> Parking lots over 11 spaces (\$1,000)</p> <p><input type="checkbox"/> After-the-fact Review (\$1,000.00 plus applicable application fee)</p> <p><b>Plan Amendments (check applicable reviews)</b></p> <p><input type="checkbox"/> Planning Staff Review (\$250)</p> <p><input type="checkbox"/> Planning Board Review (\$500)</p> <hr/> <p>The City invoices separately for the following:</p> <ul style="list-style-type: none"><li>• Notices (\$.75 each)</li><li>• Legal Ad (% of total Ad)</li><li>• Planning Review (\$50.00 hour)</li><li>• Legal Review (\$75.00 hour)</li></ul> <p>Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.</p> | <p><b>Other Reviews (check applicable reviews)</b></p> <p><input type="checkbox"/> Traffic Movement (\$1,500)</p> <p><input checked="" type="checkbox"/> Stormwater Quality (\$250)</p> <p><input checked="" type="checkbox"/> Subdivisions (\$500 + \$25/lot)</p> <p># of Lots <u>19</u> x \$25/lot = <u>475</u> (\$925 TOTAL)</p> <p><input type="checkbox"/> Site Location (\$3,500, except for residential projects which shall be \$200/lot)</p> <p># of Lots <u>    </u> x \$200/lot = <u>    </u></p> <p><input type="checkbox"/> Other <u>    </u></p> <p><input type="checkbox"/> Change of Use</p> <p><input type="checkbox"/> Flood Plain</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Design Review</p> <p><input type="checkbox"/> Housing Replacement</p> <p><input type="checkbox"/> Historic Preservation</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**INSTRUCTIONS FOR ELECTRONIC SUBMISSION:**

**Please refer to the application checklist (attached) for a detailed list of submission requirements.**

1. Fill out the application completely and e-mail the **application only** to [planning@portlandmaine.gov](mailto:planning@portlandmaine.gov) (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.
2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at [Pay Your Invoice](#) , by mail or in person at City Hall, 4<sup>th</sup> Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.
3. The designated person responsible for uploading documents and drawings will receive an email from [eplan@portlandmaine.gov](mailto:eplan@portlandmaine.gov) with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

**Reminder: Before the project can move forward, the application fee shall be paid in full and all required documents and drawings shall be uploaded into e-plan correctly.**

4. Follow the link below (Applying Online Instructions) for step by step instructions on how to do the following:  
Tab 1 - Setting up the appropriate compatibility settings for your PC and getting started in e-plan.  
Tab 2 - Preparing your drawings, documents and photos for uploading using the correct naming conventions  
Tab 3 - Preparing and uploading revised drawings and documents

[Applying Online Instructions](#)

5. When ready, upload your files and documents into the following folders:  
"Application Submittal – Drawings"  
"Application Submittal – Documents"

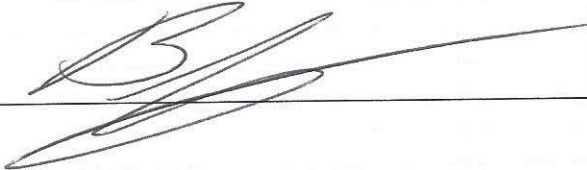
6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

**APPLICANT SIGNATURE:**

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a **legal signature** per Maine state law.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

**This application is for a Level III Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.**

|                                                                                                              |                  |
|--------------------------------------------------------------------------------------------------------------|------------------|
| Signature of Applicant:<br> | Date:<br>3-27-17 |
|--------------------------------------------------------------------------------------------------------------|------------------|

## PROJECT DATA

The following information is required where applicable, in order to complete the application.

|                                                                                                                                                                                                                          |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Total Area of Site</b>                                                                                                                                                                                                | 18,140 sq. ft. |
| <b>Proposed Total Disturbed Area of the Site</b>                                                                                                                                                                         | 18,140 sq. ft. |
| If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland. |                |
|                                                                                                                                                                                                                          |                |
| <b>Impervious Surface Area</b>                                                                                                                                                                                           |                |
| Impervious Area (Total Existing)                                                                                                                                                                                         | 1,287 sq. ft.  |
| Impervious Area (Total Proposed)                                                                                                                                                                                         | 11,070 sq. ft. |
|                                                                                                                                                                                                                          |                |
| <b>Building Ground Floor Area and Total Floor Area</b>                                                                                                                                                                   |                |
| Building Footprint (Total Existing)                                                                                                                                                                                      | 640 sq. ft.    |
| Building Footprint (Total Proposed)                                                                                                                                                                                      | 9,708 sq. ft.  |
| Building Floor Area (Total Existing)                                                                                                                                                                                     | 1,280 sq. ft.  |
| Building Floor Area (Total Proposed)                                                                                                                                                                                     | 34,555 sq. ft. |
|                                                                                                                                                                                                                          |                |
| <b>Zoning</b>                                                                                                                                                                                                            |                |
| Existing                                                                                                                                                                                                                 | R-6            |
| Proposed, if applicable                                                                                                                                                                                                  | R-6            |
|                                                                                                                                                                                                                          |                |
| <b>Land Use</b>                                                                                                                                                                                                          |                |
| Existing                                                                                                                                                                                                                 | RESIDENTIAL    |
| Proposed                                                                                                                                                                                                                 | RESIDENTIAL    |
|                                                                                                                                                                                                                          |                |
| <b>Residential, If applicable</b>                                                                                                                                                                                        |                |
| # of Residential Units (Total Existing)                                                                                                                                                                                  | 1              |
| # of Residential Units (Total Proposed)                                                                                                                                                                                  | 19             |
| # of Lots (Total Proposed)                                                                                                                                                                                               | 19             |
| # of Affordable Housing Units (Total Proposed)                                                                                                                                                                           | 1              |
|                                                                                                                                                                                                                          |                |
| <b>Proposed Bedroom Mix</b>                                                                                                                                                                                              |                |
| # of Efficiency Units (Total Proposed)                                                                                                                                                                                   | 0              |
| # of One-Bedroom Units (Total Proposed)                                                                                                                                                                                  | 14             |
| # of Two-Bedroom Units (Total Proposed)                                                                                                                                                                                  | 5              |
| # of Three-Bedroom Units (Total Proposed)                                                                                                                                                                                | 0              |
|                                                                                                                                                                                                                          |                |
| <b>Parking Spaces</b>                                                                                                                                                                                                    |                |
| # of Parking Spaces (Total Existing)                                                                                                                                                                                     | 1              |
| # of Parking Spaces (Total Proposed)                                                                                                                                                                                     | 19             |
| # of Handicapped Spaces (Total Proposed)                                                                                                                                                                                 | 1              |
|                                                                                                                                                                                                                          |                |
| <b>Bicycle Parking Spaces</b>                                                                                                                                                                                            |                |
| # of Bicycle Spaces (Total Existing)                                                                                                                                                                                     | 0              |
| # of Bicycle Spaces (Total Proposed)                                                                                                                                                                                     | 8              |
|                                                                                                                                                                                                                          |                |
| <b>Estimated Cost of Project</b>                                                                                                                                                                                         | \$ 5,000,000   |



| PRELIMINARY PLAN (Optional) - Level III Site Plan |                   |             |                                                                                                                                                                                                                                            |
|---------------------------------------------------|-------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant Checklist                               | Planner Checklist | # of Copies | GENERAL WRITTEN SUBMISSIONS CHECKLIST                                                                                                                                                                                                      |
| X                                                 |                   | 1           | Completed Application form                                                                                                                                                                                                                 |
| X                                                 |                   | 1           | Application fees                                                                                                                                                                                                                           |
| X                                                 |                   | 1           | Written description of project                                                                                                                                                                                                             |
| X                                                 |                   | 1           | Evidence of right, title and interest                                                                                                                                                                                                      |
| N/A                                               |                   | 1           | Evidence of state and/or federal approvals, if applicable                                                                                                                                                                                  |
| X                                                 |                   | 1           | Written assessment of proposed project's compliance with applicable zoning requirements                                                                                                                                                    |
| X                                                 |                   | 1           | Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site                                                                                                                     |
| X                                                 |                   | 1           | Written requests for waivers from site plan or technical standards, if applicable.                                                                                                                                                         |
| X                                                 |                   | 1           | Evidence of financial and technical capacity                                                                                                                                                                                               |
| X                                                 |                   | 1           | Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)                                                                                                                                                        |
| Applicant Checklist                               | Planner Checklist | # of Copies | SITE PLAN SUBMISSIONS CHECKLIST                                                                                                                                                                                                            |
| X                                                 |                   | 1           | Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual                                                                                                                                          |
| X                                                 |                   | 1           | <b>Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)</b>                                                                                                    |
| X                                                 |                   |             | Proposed grading and contours;                                                                                                                                                                                                             |
| X                                                 |                   |             | Existing structures with distances from property line;                                                                                                                                                                                     |
| X                                                 |                   |             | Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;                                                                |
| X                                                 |                   |             | Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);                                                                |
| X                                                 |                   |             | Preliminary infrastructure improvements;                                                                                                                                                                                                   |
| X                                                 |                   |             | Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;                                                                                                                                                           |
| N/A                                               |                   |             | Location of significant natural features (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features) located on the site as defined in Section 14-526 (b) (1); |
| N/A                                               |                   |             | Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);                                                                                                                         |
| X                                                 |                   |             | Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed;                                                                                                                              |
| X                                                 |                   |             | Exterior building elevations.                                                                                                                                                                                                              |

| <b>FINAL PLAN - Level III Site Plan</b> |                          |                    |                                                                                                                                                                                      |
|-----------------------------------------|--------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant Checklist</b>              | <b>Planner Checklist</b> | <b># of Copies</b> | <b>GENERAL WRITTEN SUBMISSIONS CHECKLIST<br/>(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)</b> |
|                                         |                          | 1                  | * Completed Application form                                                                                                                                                         |
|                                         |                          | 1                  | * Application fees                                                                                                                                                                   |
|                                         |                          | 1                  | * Written description of project                                                                                                                                                     |
|                                         |                          | 1                  | * Evidence of right, title and interest                                                                                                                                              |
|                                         |                          | 1                  | * Evidence of state and/or federal permits                                                                                                                                           |
|                                         |                          | 1                  | * Written assessment of proposed project's specific compliance with applicable Zoning requirements                                                                                   |
|                                         |                          | 1                  | * Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site                                                            |
|                                         |                          | 1                  | * Evidence of financial and technical capacity                                                                                                                                       |
|                                         |                          | 1                  | Construction Management Plan                                                                                                                                                         |
|                                         |                          | 1                  | A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.                                                    |
|                                         |                          | 1                  | Written summary of significant natural features located on the site (Section 14-526 (b) (a))                                                                                         |
|                                         |                          | 1                  | Stormwater management plan and stormwater calculations                                                                                                                               |
|                                         |                          | 1                  | Written summary of project's consistency with related city master plans                                                                                                              |
|                                         |                          | 1                  | Evidence of utility capacity to serve                                                                                                                                                |
|                                         |                          | 1                  | Written summary of solid waste generation and proposed management of solid waste                                                                                                     |
|                                         |                          | 1                  | A code summary referencing NFPA 1 and all Fire Department technical standards                                                                                                        |
|                                         |                          | 1                  | Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14-526 and in City of Portland Design Manual              |
|                                         |                          | 1                  | Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.                                            |

| Applicant Checklist | Planner Checklist | # of Copies | <b>SITE PLAN SUBMISSIONS CHECKLIST</b><br>(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required) |
|---------------------|-------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     |                   | 1           | * Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual                                                                           |
|                     |                   | 1           | <b>Final Site Plans including the following:</b>                                                                                                                              |
|                     |                   |             | Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);               |
|                     |                   |             | Existing and proposed structures on parcels abutting site;                                                                                                                    |
|                     |                   |             | All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;                                                |
|                     |                   |             | Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;        |
|                     |                   |             | Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;                                                       |
|                     |                   |             | Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;                                                    |
|                     |                   |             | Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;                                                                |
|                     |                   |             | Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;                                                 |
|                     |                   |             | Location of all snow storage areas and/or a snow removal plan;                                                                                                                |
|                     |                   |             | A traffic control plan as detailed in Section 1 of the Technical Manual;                                                                                                      |
|                     |                   |             | Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);                                            |
|                     |                   |             | Location and proposed alteration to any watercourse;                                                                                                                          |
|                     |                   |             | A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;                                                   |
|                     |                   |             | Proposed buffers and preservation measures for wetlands;                                                                                                                      |
|                     |                   |             | Existing soil conditions and location of test pits and test borings;                                                                                                          |
|                     |                   |             | Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;                                                           |
|                     |                   |             | A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;                                                                              |
|                     |                   |             | Grading plan;                                                                                                                                                                 |
|                     |                   |             | Ground water protection measures;                                                                                                                                             |
|                     |                   |             | Existing and proposed sewer mains and connections;                                                                                                                            |

- Continued on next page -

|  |  |                                                                                                                                                                                                                                |
|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |  | Location of all existing and proposed fire hydrants and a life safety plan in accordance with Section 3 of the Technical Manual;                                                                                               |
|  |  | Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;                                                                                            |
|  |  | Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;                                                                                                         |
|  |  | Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;                                                             |
|  |  | Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;                                                                                                                             |
|  |  | A shadow analysis as described in Section 11 of the Technical Manual, if applicable;                                                                                                                                           |
|  |  | A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance; |
|  |  | Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;                                                                                               |
|  |  | An exterior lighting plan in accordance with Section 12 of the Technical Manual;                                                                                                                                               |
|  |  | A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;                                                                                                                        |
|  |  | Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.                                                                                                                  |

# CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,  
55 Portland Street,  
Portland, Maine 04101-2991



Bradley Roland, P.E.  
Water Resources Division

Date: MARCH 28, 2017

## 1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 155 SHERIDAN STREET, PORTLAND ME 04101

Chart Block Lot Number: 12-Q-10, 12-Q-12

Proposed Use: RESIDENTIAL

Previous Use: RESIDENTIAL

Existing Sanitary Flows: 180 GPD

Existing Process Flows: 0 GPD

Description and location of City sewer that is to receive the proposed building sewer lateral.

NO EXISTING SEWER SERVICE WAS IDENTIFIED BY THE SURVEY OR DEPT OF PUBLIC WORKS ARCHIVES

|               |                                             |                                     |
|---------------|---------------------------------------------|-------------------------------------|
| Site Category | Commercial ( <i>see part 4 below</i> )      | <input type="checkbox"/>            |
|               | Industrial ( <i>complete part 5 below</i> ) | <input type="checkbox"/>            |
|               | Governmental                                | <input type="checkbox"/>            |
|               | Residential                                 | <input checked="" type="checkbox"/> |
|               | Other ( <i>specify</i> )                    | <input type="checkbox"/>            |

*Clearly, indicate the proposed connections, on the submitted plans.*

## 2. Please, Submit Contact Information.

City Planner's Name: (not yet assigned) Phone:

Owner/Developer Name: BD SHERIDAN, LLC - BERNIE SAULNIER

Owner/Developer Address: 1266 FURNACE BROOK PARKWAY QUINCY, MA 02169

Phone: (207) 571-4166 Fax:  E-mail: BERNIE@SAULNIERDEVELOPMENT.COM

Engineering Consultant Name: ACORN ENGINEERING, INC. - WILLIAM H. SAVAGE

Engineering Consultant Address: 158 DANFORTH STREET PORTLAND, ME 04102

Phone: (207) 775-2655 Fax:  E-mail: WSAVAGE@ACORN-ENGINEERING.COM

*Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.*

## 3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 3,420 GPD

Peaking Factor/ Peak Times: DIURNAL RESIDENTIAL FLOW PATTERN

Specify the source of design guidelines: (*i.e.* "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (*specify*) STATE OF MAINE SUBSURFACE WASTEWATER DISPOSAL RULES, EFFECTIVE 8/3/15

*Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.*

#### 4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A  
Size of External Grease Interceptor: \_\_\_\_\_  
Retention Time: \_\_\_\_\_  
Peaking Factor/ Peak Times: \_\_\_\_\_

*Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.*

#### 5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: N/A GPD  
Do you currently hold Federal or State discharge permits? Yes \_\_\_\_\_ No \_\_\_\_\_  
Is the process wastewater termed categorical under CFR 40? Yes \_\_\_\_\_ No \_\_\_\_\_  
OSHA Standard Industrial Code (SIC): (http://www.osha.gov/oshstats/sicser.html)  
Peaking Factor/Peak Process Times: \_\_\_\_\_

*Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.*

*Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.*

| Estimate of Anticipated Design Flows                                                       |           |                 |                          |                       |
|--------------------------------------------------------------------------------------------|-----------|-----------------|--------------------------|-----------------------|
| Development                                                                                | Unit Size | Number of Units | Gallons per Day per Unit | Total Gallons per Day |
| <b>Existing flow to be removed</b>                                                         |           |                 |                          |                       |
| Single Family Residential Units                                                            | 1 Bedroom | 0               | 180                      | 0                     |
|                                                                                            | 2 Bedroom | 1               | 180                      | 180                   |
|                                                                                            |           |                 |                          | 180                   |
| <b>Proposed flow</b>                                                                       |           |                 |                          |                       |
| Attached Single Family Residential Units                                                   | 1 Bedroom | 14              | 180                      | 2,520                 |
|                                                                                            | 2 Bedroom | 5               | 180                      | 900                   |
|                                                                                            |           |                 |                          | 3,420                 |
| <b>Net Change</b>                                                                          |           |                 |                          | <b>3,240</b>          |
| *Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition |           |                 |                          |                       |

**ATTACHMENT C**

Cumberland County Register of Deeds

Current datetime: 6/23/2016 8:39:53 AM

**DETAILS REPORT****\*\*Note:** Report is Sorted in Ascending Order by Office, Recorded Date, Document Number

| Doc#              | File Date            | Rec Time           | Type Desc.           |
|-------------------|----------------------|--------------------|----------------------|
| 37775             | 07/30/2015           | 1:40PM             | DEED                 |
| # of Pgs.         | Book/Page            | Doc. Status        |                      |
| 2                 | 32471/220            | Verified/Certified |                      |
| Town              |                      |                    |                      |
| PORTLAND          |                      |                    |                      |
| Grantor           | Grantee              | Street             | Property Description |
| MCCARTNEY JAMES J | MCCARTNEY FAMILY LLC |                    |                      |
| References        |                      |                    |                      |
| Book/Vlm/Page     | Description          | Recorded year      |                      |

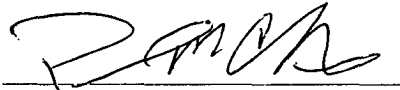


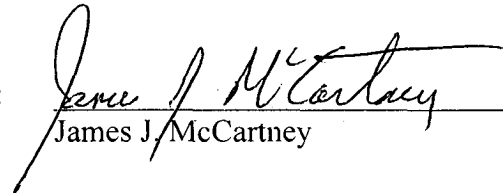
**QUITCLAIM DEED WITH COVENANT**  
(Maine Statutory Short Form)

KNOW ALL BY THESE PRESENTS, that I, **James J. McCartney**, of Windham, County of Cumberland, and State of Maine, for no consideration and as a distribution of trust property, GRANT to **McCartney Family, LLC**, an LLC organized and existing under the laws of the State of Maine, the mailing address of which is 72 Stroudwater Place, Westbrook, Maine, with QUITCLAIM COVENANT, all of James J. McCartney's right, title and interest in, the real property located in Portland, County of Cumberland and State of Maine, more particularly described in Exhibit A attached hereto and made a part hereof.

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

WITNESS my hand and seal this 30 day of JUNE, 2015.

  
Witness  
Paul M Cobb

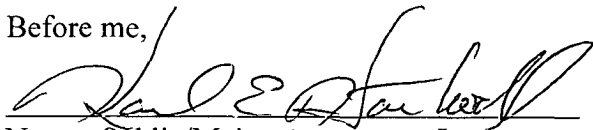
By:   
James J. McCartney

STATE OF MAINE  
County of Cumberland, SS.

June 30, 2015

Then personally appeared the above-named James J. McCartney and acknowledged the foregoing instrument to be his free act and deed

SEAL

Before me,   
Notary Public/Maine Attorney-at-Law  
Printed Name: \_\_\_\_\_

KARL E. HARTWELL  
Notary Public, Maine  
My Commission Expires 12/12/2019

## EXHIBIT A

A certain lot or parcel of land with the buildings thereon situated on the easterly side of Sheridan Street in said Portland, being numbered 161, 163, and 165 on said Sheridan Street and containing 9,146 square feet of land, as shown on Revaluation Plan of the City of Portland, recorded in Cumberland County Registry of Deeds, Plan Book 5, Page 12.

Being the same premises conveyed to James J. McCartney by Annie P. Siteman by deed dated August 28, 1919 recorded in Cumberland County Registry of Deeds Book 1031, Page 111 and being a part of the premises conveyed by James J. McCartney to the Maine Savings Bank by mortgage deed dated October 2, 1924, recorded in said Registry of Deeds in Book 1166, page 230, which mortgage was foreclosed by said Maine Savings Bank by Notice, certificate of which is recorded in said Registry of Deeds Book 1525, page 474, and same to grantor from said Bank in Book 1554, Page 98.

Also another certain lot or parcel of land in said Portland on the Northeasterly side of Sheridan Street, formerly Poplar Street, being lot numbered eighteen (18) as delineated on the plan of lots of Simonton, Hatch, Washburn, Cook and Chase recorded in Cumberland County Registry of Deeds, Book 551, page 297, said lot being about eighty-five feet front of said Sheridan Street and running back to lot numbered twenty-five (25) as marked on said plan about one hundred and forty feet, being the same lot that Horatio N. Jose conveyed to Thomas Shanahan by deed dated seventh day of January 1867.

Lot 18 Reference: See Portland, Maine Plan Book 551, Page 297.

Lots 161, 163 and 165 Reference: Deed to Mary F. McCartney dated August 15, 1938, recorded in the Cumberland County Registry of Deeds in Book 1554, Page 198.

Being the same property conveyed to James M. McCartney and Mary E. Gedaro by Deed from Mary F. McCartney dated January 24, 1972 and recorded in the Cumberland County Registry of Deeds in Book 3355, Page 239.

Being the same property conveyed to the Mary E. Gedaro Trust from Mary E. Gedaro by Deed dated April 13, 2012 and recorded in the Cumberland County Registry of Deeds in Book 29,552, Page 95.

Being the same property conveyed to Susanne E. Gedaro from Susanne E. Gedaro as Trustee of the Mary E. Gedaro by Deed dated June 19, 2015 and recorded in the Cumberland County Registry of Deeds in Book 32416, Page 53.

Further reference is also made to the Boundary Line Agreement between the City of Portland and James M. McCartney and Mary E. Gedaro, dated January 19, 1996 and recorded in the Cumberland County Registry of Deeds in Book 12,323, Page 317.

## BOUNDARY LINE AGREEMENT

WHEREAS, McCartney Family, LLC, a Maine limited liability company, is the owner of the land and buildings situated at 165 Sheridan Street, Portland, Maine, as more particularly described in a deeds recorded in Cumberland County Registry of Deeds in Book 32471, Pages 220, 222, 224, 226 and 228; and

WHEREAS, Anthony Mancini, as Trustee of Sheridan Street Realty Trust under a Declaration of Trust, dated October 26, 1995, is the owner of the land and buildings situated at 179 Sheridan Street, Portland, Maine, as more particularly described in a deed recorded in said Registry of Deeds at Book 12184, Page 22; and

WHEREAS, the boundary line between the said two properties is uncertain and the owners wish to acknowledge the location of the boundary line, and to provide for these matters to run with the land;

NOW, THEREFORE, in consideration of the foregoing and of the mutual agreements set forth in this Agreement, the parties do hereby agree to a common boundary line as follows:

A certain line being located adjacent to the northeasterly side of Sheridan Street, in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows.

Beginning at a point on the northeasterly sideline of Sheridan Street said point being located S 30°18'44" W by said Sheridan Street a distance of Two Hundred Seventy-Three and 50/100 (273.50) feet from the intersection of the northeasterly sideline of said Sheridan Street with the southeasterly sideline of Walnut Street. Thence:

N 64°17'41" E a distance of One Hundred Eight and 33/100 (108.33) feet to a point on the southwesterly line of land now or formerly of Anthony Mancini as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7754, Page 185.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

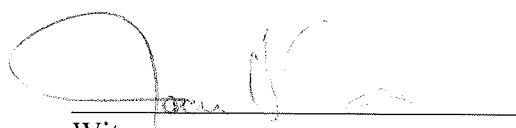
Reference is herein made to a plan entitled "Plan of Existing Conditions Survey "made for Vazza Real Estate Group BD Sheridan, LLC by Titcomb Associates dated March 4, 2016.

1. The McCartney Family, LLC hereby remises, releases, bargains, sells and conveys and forever quit-claims unto Sheridan Street Realty Trust, its successors and assigns forever, any right, title or interest it may have in any land which adjoins and is northwesterly of the boundary line described above.

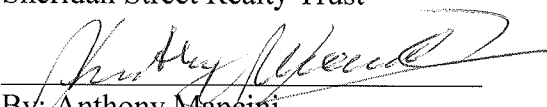
2. The Sheridan Street Realty Trust hereby remises, releases, bargains, sells and conveys and forever quit-claims unto McCartney Family, LLC, its successors and assigns

forever, any right, title or interest it may have in any land which adjoins and is southeasterly of the boundary line described above.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal as of the dates set forth below.

  
\_\_\_\_\_  
Witness

Sheridan Street Realty Trust

  
\_\_\_\_\_  
By: Anthony Mancini  
Its: Trustee

McCartney Family, LLC

\_\_\_\_\_  
Witness

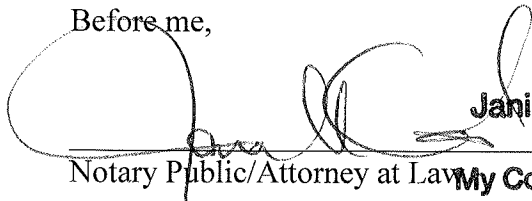
\_\_\_\_\_  
By:  
Its:

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss

May  
February 1, 2017

Personally appeared the above-named Anthony Mancini, Trustee of Sheridan Street Realty Trust, and acknowledged the foregoing to be his free act and deed in his said capacity and the free act and deed of the Trust.

Before me,

  
\_\_\_\_\_  
Notary Public/Attorney at Law

**Janine M. Galli, Notary Public  
State of Maine**

**My Commission Expires 7/19/2019**

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss

February \_\_\_, 2017

Personally appeared the above-named \_\_\_\_\_, Member/Manager of McCartney Family, LLC, and acknowledged the foregoing to be his/her free act and deed in his /her capacity and the free act and deed of the limited liability company.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

forever, any right, title or interest it may have in any land which adjoins and is southeasterly of the boundary line described above.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal as of the dates set forth below.

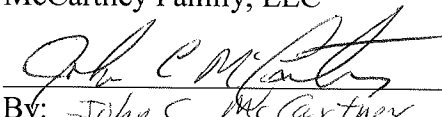
Sheridan Street Realty Trust

\_\_\_\_\_  
Witness

\_\_\_\_\_  
By: Anthony Mancini  
Its: Trustee

  
Witness

McCartney Family, LLC

  
\_\_\_\_\_  
By: John C. McCartney  
Its: Manager

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss

March \_\_\_\_, 2017

Personally appeared the above-named Anthony Mancini, Trustee of Sheridan Street Realty Trust, and acknowledged the foregoing to be his free act and deed in his said capacity and the free act and deed of the Trust.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss

March 22, 2017

Personally appeared the above-named John C. McCartney ~~Member~~ Manager of McCartney Family, LLC, and acknowledged the foregoing to be his/~~her~~ free act and deed in his/~~her~~ capacity and the free act and deed of the limited liability company.

Before me,

  
\_\_\_\_\_  
Notary Public/Attorney at Law

The undersigned mortgagee of Sheridan Street Realty Trust (if any) joins in this instrument to evidence its consent thereto, subjecting its mortgage lien to the provisions hereof, but assumes no personal liability hereunder.

5/1/17  
Date

Camden National Bank<sup>^</sup>, Mortgagee

By: [Signature]  
Name: Elliott Berry  
Title: SVP

The undersigned mortgagee of McCartney Family, LLC, (if any) joins in this instrument to evidence its consent thereto, subjecting its mortgage lien to the provisions hereof, but assumes no personal liability hereunder.

\_\_\_\_\_  
Date

^, Mortgagee

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

## BOUNDARY LINE AGREEMENT

WHEREAS, McCartney Family, LLC, a Maine limited liability company, is the owner of the land and buildings situated at 165 Sheridan Street, Portland, Maine, as more particularly described in a deeds recorded in Cumberland County Registry of Deeds in Book 32471, Pages 220, 222, 224, 226 and 228; and

WHEREAS, Anthony Mancini, as Trustee of Alpine Realty Trust, is owner of land and buildings, as more particularly described in a deed recorded in said Registry of Deeds at Book 7691, Page 331 and Book 7856, Page 32, by virtue of the deed from Anthony Mancini and Phyliss Mancini, dated June 26, 1991 and recorded in said Registry, Book 9611, Page 304; and

WHEREAS, the boundary line between the said two properties is uncertain and the owners wish to acknowledge the location of the boundary line, and to provide for these matters to run with the land;

NOW, THEREFORE, in consideration of the foregoing and of the mutual agreements set forth in this Agreement, the parties do hereby agree to a common boundary line as follows:

A certain line being located northeasterly of, but not adjacent to, the northeasterly side of Sheridan Street, in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows.

Beginning at a point on the southerly line of land now or formerly of Anthony Mancini as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7691, Page 331, said point being located N 64°17'43" E by said land of Mancini a distance of Five and 23/100 (5.23) feet from a capped iron rod ("PLS 1252") at the southwesterly corner of said land of Mancini. Thence:

S 43°38'21" E a distance of Seventy-Six and 93/100 (76.93) feet to a point on the northwesterly line now or formerly of the City of Portland as described in a boundary line agreement deed recorded in said Registry in Book 12323, Page 317, said point being located S 47°47'13" W by said land of the City of Portland a distance of Thirty-One and 35/100 (31.35) feet from a capped iron rod ("PLS 2239").

Meaning and intending to describe an agreement line between land now or formerly of Anthony Mancini as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7856, Page 32 and land now or formerly of McCartney Family, LLC as described in deeds recorded in said Registry in Book 32471, Pages 220, 222, 224, 226, and 228.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

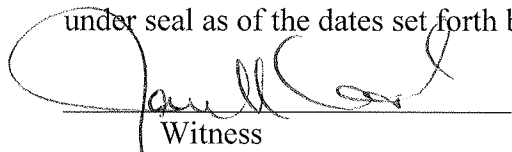
Reference is herein made to a plan entitled "Plan of Existing Conditions Survey "made

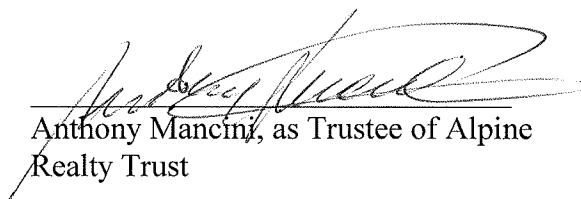
for Vazza Real Estate Group BD Sheridan, LLC by Titcomb Associates dated March 4, 2016. The above description runs from "POINT D" to "POINT C" on said Plan.

1. The McCartney Family, LLC hereby remises, releases, bargains, sells and conveys and forever quit-claims unto Anthony Mancini, his heirs and assigns forever, any right, title or interest it may have in any land which adjoins and is northeasterly of the boundary line described above.

2. Anthony Mancini, as Trustee of Alpine Realty Trust, hereby remises, releases, bargains, sells and conveys and forever quit-claims unto McCartney Family, LLC, its successors and assigns forever, any right, title or interest he may have in any land which adjoins and is southwesterly of the boundary line described above.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal as of the dates set forth below.

  
Witness

  
Anthony Mancini, as Trustee of Alpine Realty Trust

McCartney Family, LLC

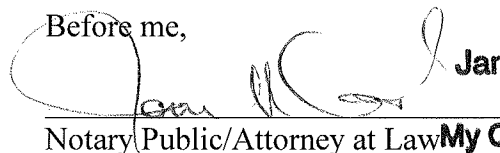
\_\_\_\_\_  
Witness

\_\_\_\_\_  
By:  
Its:

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss

  
February 1, 2017

Personally appeared the above-named Anthony Mancini, as Trustee of Alpine Realty Trsut and acknowledged the foregoing to be his free act and deed.

Before me,  
  
Janine M. Galli, Notary Public  
State of Maine  
Notary Public/Attorney at Law My Commission Expires 7/19/2019

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss

February \_\_, 2017

Personally appeared the above-named \_\_\_\_\_, Member/Manager of McCartney Family, LLC, and acknowledged the foregoing to be his/her free act and deed in his /her capacity and the free act and deed of the limited liability company.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law



for Vazza Real Estate Group BD Sheridan, LLC by Titcomb Associates dated March 4, 2016. The above description runs from "POINT D" to "POINT C" on said Plan.

1. The McCartney Family, LLC hereby remises, releases, bargains, sells and conveys and forever quit-claims unto Anthony Mancini, his heirs and assigns forever, any right, title or interest it may have in any land which adjoins and is northeasterly of the boundary line described above.

2. Anthony Mancini, as Trustee of Alpine Realty Trust, hereby remises, releases, bargains, sells and conveys and forever quit-claims unto McCartney Family, LLC, its successors and assigns forever, any right, title or interest he may have in any land which adjoins and is southwesterly of the boundary line described above.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed under seal as of the dates set forth below.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Anthony Mancini, as Trustee of Alpine Realty Trust

\_\_\_\_\_  
McCartney Family, LLC

\_\_\_\_\_  
Witness

\_\_\_\_\_  
By: John C. McCartney  
Its: Manager

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss

March 22, 2017

Personally appeared the above-named Anthony Mancini, as Trustee of Alpine Realty Trsut and acknowledged the foregoing to be his free act and deed.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss

March 22, 2017

Personally appeared the above-named John C. McCartney, Member of McCartney Family, LLC, and acknowledged the foregoing to be his/~~her~~ free act and deed in his/~~her~~ capacity and the free act and deed of the limited liability company.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

The undersigned mortgagee of Anthony Mancini (if any) joins in this instrument to evidence its consent thereto, subjecting its mortgage lien to the provisions hereof, but assumes no personal liability hereunder.

5/1/17  
Date

Camden National Bank, Mortgagee

By: [Signature]  
Name: Eliah Barry  
Title: SVP

The undersigned mortgagee of McCartney Family, LLC, (if any) joins in this instrument to evidence its consent thereto, subjecting its mortgage lien to the provisions hereof, but assumes no personal liability hereunder.

\_\_\_\_\_  
Date

~~\_\_\_\_\_  
Mortgagee  
By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_~~

**PURCHASE AND SALE AGREEMENT**

("days" means business days unless otherwise noted, see paragraph 23)

December 22, 2015  
Offer DateEffective Date  
Effective Date is defined in Paragraph 23 of this Agreement.1. PARTIES: This Agreement is made between Saulnier Development

("Buyer") and

Mccartney Family LLC

("Seller").

2. DESCRIPTION: Subject to the terms and conditions hereinafter set forth, Seller agrees to sell and Buyer agrees to buy (☒ all ☐ part of ; If "part of" see para. 26 for explanation) the property situated in municipality of Portland, County of Cumberland, State of Maine, located at 153 & 165 Sheridan St and described in deed(s) recorded at said County's Registry of Deeds Book(s) 32471, Page(s) 220-229.

3. FIXTURES: The Buyer and Seller agree that all fixtures, including but not limited to existing storm and screen windows, shades and/or blinds, shutters, curtain rods, built-in appliances, heating sources/systems including gas and/or kerosene-fired heaters and wood/pellet stoves, sump pump, electrical fixtures, and N/A are included with the sale except for the following: N/A

Seller represents that all mechanical components of fixtures will be operational at the time of closing except: N/A

4. PERSONAL PROPERTY: The following items of personal property as viewed on N/A are included with the sale at no additional cost, in "as is" condition with no warranties: N/A

5. PURCHASE PRICE/EARNEST MONEY: For such Deed and conveyance Buyer agrees to pay the total purchase price of [REDACTED] Buyer ☐ has delivered; or ☒ will deliver to the Agency within 10 days of the Effective Date, a deposit of earnest money in the amount [REDACTED] Buyer agrees that an additional deposit of earnest money in the amount of [REDACTED] will be delivered upon permitting approval. If Buyer fails to deliver the initial or additional deposit in compliance with the above terms Seller may terminate this Agreement. This right to terminate ends once Buyer has delivered said deposit(s). The remainder of the purchase price shall be paid by wire, certified, cashier's or trust account check upon delivery of the Deed.

This Purchase and Sale Agreement is subject to the following conditions:

6. ESCROW AGENT/ACCEPTANCE: The Maine Real Estate Network ("Agency") shall hold said earnest money and act as escrow agent until closing; this offer shall be valid until December 22, 2015 (date) 5 ☐ AM ☒ PM; and, in the event of non-acceptance, this earnest money shall be returned promptly to Buyer.

7. TITLE AND CLOSING: A deed, conveying good and merchantable title in accordance with the Standards of Title adopted by the Maine Bar Association shall be delivered to Buyer and this transaction shall be closed and Buyer shall pay the balance due and execute all necessary papers on See #26 (closing date) or before, if agreed in writing by both parties. If Seller is unable to convey in accordance with the provisions of this paragraph, then Seller shall have a reasonable time period, not to exceed 30 calendar days, from the time Seller is notified of the defect, unless otherwise agreed to in writing by both Buyer and Seller, to remedy the title. Seller hereby agrees to make a good-faith effort to cure any title defect during such period. If, at the later of the closing date set forth above or the expiration of such reasonable time period, Seller is unable to remedy the title, Buyer may close and accept the deed with the title defect or this Agreement shall become null and void in which case the parties shall be relieved of any further obligations hereunder and any earnest money shall be returned to the Buyer.

8. DEED: The property shall be conveyed by a Warranty deed, and shall be free and clear of all encumbrances except covenants, conditions, easements and restrictions of record which do not materially and adversely affect the continued current use of the property.

9. POSSESSION, OCCUPANCY, AND CONDITION: Unless otherwise agreed in writing, possession and occupancy of premises, free of tenants and occupants, shall be given to Buyer immediately at closing. Said premises shall then be broom clean, free of all possessions and debris, and in substantially the same condition as at present, excepting reasonable use and wear. Buyer shall have the right to view the property within 24 hours prior to closing.

10. RISK OF LOSS, DAMAGE, DESTRUCTION AND INSURANCE: Prior to closing, risk of loss, damage, or destruction of premises shall be assumed solely by the Seller. Seller shall keep the premises insured against fire and other extended casualty risks prior to closing. If the premises are damaged or destroyed prior to closing, Buyer may either terminate this Agreement and be refunded the earnest money, or close this transaction and accept the premises "as-is" together with an assignment of the insurance proceeds relating thereto.

Revised September 2015

Page 1 of 4 - P&amp;S

Buyer(s) Initial

DS

Seller(s) Initial

The Maine Real Estate Network, 970 Baxter Blvd Portland, ME 04103  
Jeffrey Clark

Produced with zipForm® by zipLogix 18070 Fifteen Mile Road, Fraser, Michigan 48026 [www.zipLogix.com](http://www.zipLogix.com)

Phone: (207)595-0260

Fax:

Saulnier, Bernier



11. **FUEL/UTILITIES/PRORATIONS:** Buyer shall pay Seller at closing for all fuel in any tanks remaining on the property calculated as of the closing date or such earlier date as required to comply with lender requirements, if any. The amount owed shall be determined using the most recently available cash price of the company that last delivered the fuel. Metered utilities such as electricity, water and sewer will be paid through the date of closing by Seller. The following items, where applicable, shall be prorated as of the date of closing: collected rent, association fees, (other) N/A. The day of closing is counted as a Seller day. Real estate taxes shall be prorated as of the date of closing (based on municipality's fiscal year). Seller is responsible for any unpaid taxes for prior years. If the amount of said taxes is not known at the time of closing, they shall be apportioned on the basis of the taxes assessed for the preceding year with a reapportionment as soon as the new tax rate and valuation can be ascertained, which latter provision shall survive closing. Buyer and Seller will each pay their transfer tax as required by State of Maine.

12. **DUE DILIGENCE:** Neither Seller nor Licensee makes any warranties regarding the condition, permitted use or value of Sellers' real or personal property, or any representations as to compliance with any federal, state or municipal codes, including, but not limited to, fire, life safety, electrical and plumbing. Buyer is encouraged to seek information from professionals regarding any specific issue or concern. This Agreement is subject to the following investigations, with results being satisfactory to Buyer:

| TYPE OF INVESTIGATION                     | YES                                 | NO                                  | FULL RESOLUTION       | TYPE OF INVESTIGATION       | YES                                 | NO                                  | FULL RESOLUTION            |
|-------------------------------------------|-------------------------------------|-------------------------------------|-----------------------|-----------------------------|-------------------------------------|-------------------------------------|----------------------------|
| a. General Building (may include any a-z) | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | n. Arsenic Treated Wood     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| b. Sewage Disposal                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Within <u>14</u> days | o. Pests                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| c. Coastal shoreland septic               | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | p. Code Conformance         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| d. Water Quality                          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Within <u>14</u> days | q. Insurance                | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| e. Water Quantity                         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | r. Environmental Scan       | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| f. Air Quality                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | s. Lot size/acreage         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| g. Square Footage                         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | t. Survey/MLI               | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| h. Pool                                   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | u. Zoning                   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| i. Energy Audit                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | v. Registered Farmland      | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| j. Chimney                                | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | w. Habitat Review/Waterfowl | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| k. Smoke/CO detectors                     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | x. Flood Plain              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| l. Mold                                   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | y. Tax Status               | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days          |
| m. Lead Paint                             | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within _____ days     | z. Other <u>Permits</u>     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Within <u>SeeAdd1</u> days |

All investigations will be done by persons chosen and paid for by Buyer in Buyer's sole discretion. If the result of any investigation or other condition specified herein is unsatisfactory to Buyer, Buyer will declare the Agreement null and void by notifying Seller in writing within the specified number of days, and any earnest money shall be returned to Buyer. If the result of any investigation or other condition specified herein is unsatisfactory to Buyer in Buyer's sole discretion, and Buyer wishes to pursue remedies other than voiding the Agreement, Buyer must do so to full resolution within the time period set forth above; otherwise this contingency is waived. If Buyer does not notify Seller that an investigation is unsatisfactory within the time period set forth above, this contingency is waived by Buyer. In the absence of investigation(s) mentioned above, Buyer is relying completely upon Buyer's own opinion as to the condition of the property.

13. **PROPERTY DISCLOSURE FORM:** Buyer acknowledges receipt of Seller's Property Disclosure Form and the information developed by the Maine Center for Disease Control and Prevention regarding arsenic in private water supplies and arsenic in treated wood.

14. **FINANCING:** This Agreement ☒ is ☐ is not subject to Financing. If subject to Financing:

- This Agreement is subject to Buyer obtaining a Private Capital loan of N/A % of the purchase price, at an interest rate not to exceed N/A % and amortized over a period of N/A years. Buyer is under a good faith obligation to seek and obtain financing on these terms.
- Buyer to provide Seller with letter from lender showing that Buyer has made application for loan specified in (a) and, subject to verification of information, is qualified for the loan requested within N/A days from the Effective Date of the Agreement. If Buyer fails to provide Seller with such letter within said time period, Seller may terminate this Agreement and the earnest money shall be returned to Buyer. This right to terminate ends once Buyer's letter is received.
- Buyer hereby authorizes, instructs and directs its lender to communicate the status of the Buyer's loan application to Seller, Seller's licensee and Buyer's licensee.
- After (b) is met, if the lender notifies Buyer that it is unable or unwilling to provide said financing, Buyer is obligated to provide Seller with written documentation of the loan denial. Any failure by Buyer to provide Seller with the loan denial within two days of receipt by Buyer of such notice from lender shall be a default under this Agreement. After notifying Seller, Buyer shall have N/A days to provide Seller with a letter from another lender showing that Buyer has made application for loan specified in (a) and, subject to verification of information, is qualified for the loan requested. If Buyer fails to provide Seller with such letter within said time period, Seller may terminate this Agreement and the earnest money shall be returned to Buyer. This right to terminate ends once Buyer's letter is received.
- Buyer agrees to pay no more than N/A points. Seller agrees to pay up to \$ N/A toward Buyer's actual pre-pays, points and/or closing costs, but no more than allowable by Buyer's lender.
- Buyer's ability to obtain financing ☐ is ☒ is not subject to the sale of another property. See addendum ☐ Yes ☒ No.
- Buyer may choose to pay cash instead of obtaining financing. If so, Buyer shall notify Seller in writing including providing proof of funds and the Agreement shall no longer be subject to financing, and Seller's right to terminate pursuant to the provisions of this paragraph shall be void.



## 15. BROKERAGE DISCLOSURE: Buyer and Seller acknowledge they have been advised of the following relationships:

Jeffrey Clark/Mindy Sanderson ( 016705 ) of The Maine Real Estate Network ( 2874 )  
 Licensee MLS ID Agency MLS ID  
 is a ☐ Seller Agent ☒ Buyer Agent ☐ Disc Dual Agent ☐ Transaction Broker

Jeffrey Clark/Mindy Sanderson ( 016705 ) of The Maine Real Estate Network ( 2874 )  
 Licensee MLS ID Agency MLS ID  
 is a ☐ Seller Agent ☐ Buyer Agent ☐ Disc Dual Agent ☐ Transaction Broker

If this transaction involves Disclosed Dual Agency, the Buyer and Seller acknowledge the limited fiduciary duties of the agents and hereby consent to this arrangement. In addition, the Buyer and Seller acknowledge prior receipt and signing of a Disclosed Dual Agency Consent Agreement.

16. DEFAULT/RETURN OF EARNEST MONEY: In the event of default by the Buyer, Seller may employ all legal and equitable remedies, including without limitation, termination of this Agreement and forfeiture by Buyer of the earnest money. In the event of a default by Seller, Buyer may employ all legal and equitable remedies, including without limitation, termination of this Agreement and return to Buyer of the earnest money. Agency acting as escrow agent has the option to require written releases from both parties prior to disbursing the earnest money to either Buyer or Seller. In the event that the Agency is made a party to any lawsuit by virtue of acting as escrow agent, Agency shall be entitled to recover reasonable attorney's fees and costs which shall be assessed as court costs in favor of the prevailing party.

17. MEDIATION: Earnest money disputes within the jurisdictional limit of small claims court will be handled in that forum. All other disputes or claims arising out of or relating to this Agreement or the property addressed in this Agreement (other than requests for injunctive relief) shall be submitted to mediation in accordance with generally accepted mediation practices. Buyer and Seller are bound to mediate in good faith and to each pay half of the mediation fees. If a party fails to submit a dispute or claim to mediation prior to initiating litigation (other than requests for injunctive relief), then that party will be liable for the other party's legal fees in any subsequent litigation regarding that same matter in which the party who failed to first submit the dispute or claim to mediation loses in that subsequent litigation. This clause shall survive the closing of the transaction.

18. PRIOR STATEMENTS: Any representations, statements and agreements are not valid unless contained herein. This Agreement completely expresses the obligations of the parties.

19. HEIRS/ASSIGNS: This Agreement shall extend to and be obligatory upon heirs, personal representatives, successors, and assigns of the Seller and the assigns of the Buyer.

20. COUNTERPARTS: This Agreement may be signed on any number of identical counterparts with the same binding effect as if the signatures were on one instrument. Original or faxed or other electronically transmitted signatures are binding.

21. SHORELAND ZONE SEPTIC SYSTEM: Seller represents that the property ☐ does ☒ does not contain a septic system within the Shoreland Zone. If the property does contain a septic system located in the Shoreland Zone, Seller agrees to provide certification at closing indicating whether the system has/has not malfunctioned within 180 calendar days prior to closing.

22. NOTICE: Any notice, communication or document delivery requirements hereunder may be satisfied by providing the required notice, communication or documentation to or from the parties or their licensee. Only withdrawals of offers and counteroffers will be effective upon communication, verbally or in writing.

23. EFFECTIVE DATE/BUSINESS DAYS: This Agreement is a binding contract when the last party signing has caused a paper or electronic copy of the fully executed agreement to be delivered to the other party which shall be the Effective Date. Licensee is authorized to fill in the Effective Date on Page 1 hereof. Except as expressly set forth to the contrary, the use of the term "days" in this Agreement, including all addenda made a part hereof, shall mean business days defined as excluding Saturdays, Sundays and any observed Maine State/Federal holidays. Deadlines in this Agreement, including all addenda, expressed as "within x days" shall be counted from the Effective Date, unless another starting date is expressly set forth, beginning with the first day after the Effective Date, or such other established starting date, and ending at 5:00 p.m. Eastern Time on the last day counted. Unless expressly stated to the contrary, deadlines in this Agreement, including all addenda, expressed as a specific date shall end at 5:00 p.m. Eastern Time on such date.

24. CONFIDENTIALITY: Buyer and Seller authorize the disclosure of the information herein to the real estate licensees, attorneys, lenders, appraisers, inspectors, investigators and others involved in the transaction necessary for the purpose of closing this transaction. Buyer and Seller authorize the lender and/or closing agent preparing the closing disclosure and/or settlement statement to release a copy of the closing disclosure and/or settlement statement to the parties and their licensees prior to, at and after the closing.

25. ADDENDA: Lead Paint - ☐ Yes ☒ No ; Other - ☒ Yes ☐ No Explain: Addendum 1

The Property Disclosure Form is not an addendum and not part of this Agreement.

26. OTHER CONDITIONS: Closing date shall take place with 30 days of buyer obtaining approvals for permitting as set forth in Addendum 1.



## 27. GENERAL PROVISIONS:

- A copy of this Agreement is to be received by all parties and, by signature, receipt of a copy is hereby acknowledged. If not fully understood, contact an attorney. This is a Maine contract and shall be construed according to the laws of Maine.
- Seller acknowledges that State of Maine law requires buyers of property owned by non-resident sellers to withhold a prepayment of capital gains tax unless a waiver has been obtained by Seller from the State of Maine Revenue Services.
- Buyer and Seller acknowledge that under Maine law payment of property taxes is the legal responsibility of the person who owns the property on April 1, even if the property is sold before payment is due. If any part of the taxes is not paid when due, the lien will be filed in the name of the owner as of April 1 which could have a negative impact on their credit rating. Buyer and Seller shall agree at closing on their respective obligations regarding actual payment of taxes after closing. Buyer and Seller should make sure they understand their obligations agreed to at closing and what may happen if taxes are not paid as agreed.
- Buyer acknowledges that Maine law requires continuing interest in the property and any back up offers to be communicated by the listing agent to the Seller.
- Whenever this Agreement provides for earnest money to be returned or released, agency acting as escrow agent must comply with the Maine Real Estate Commission rules which may require written notices or obtaining written releases from both parties.

Buyer's Mailing address is 22 West Ave, Saco, ME 04072

DocuSigned by:

12/22/2015

2957DDD0CC734F3...

Saulnier Development

DATE

BUYER

DATE

Seller accepts the offer and agrees to deliver the above-described property at the price and upon the terms and conditions set forth and agrees to pay agency a commission for services as specified in the listing agreement.

Seller's Mailing address is \_\_\_\_\_

John P. McCartney  
SELLER McCartney Family LLC12/22/15  
DATE

SELLER

DATE

## COUNTER-OFFER

Seller agrees to sell on the terms and conditions as detailed herein with the following changes and/or conditions:

The parties acknowledge that until signed by Buyer, Seller's signature constitutes only an offer to sell on the above terms and the offer will expire unless accepted by Buyer's signature with communication of such signature to Seller by (date) \_\_\_\_\_ (time) \_\_\_\_\_ AM \_\_\_\_\_ PM.

SELLER

DATE

SELLER

DATE

The Buyer hereby accepts the counter offer set forth above.

BUYER

DATE

BUYER

DATE

## EXTENSION

The closing date of this Agreement is extended until \_\_\_\_\_ DATE

SELLER

DATE

SELLER

DATE

BUYER

DATE

BUYER

DATE



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## **D. Conformity with Applicable Design Standards**

The following statement is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-526.

### **9.1 OVERVIEW**

This project conforms with all the applicable design standards of Section 14-526 as demonstrated in the following narrative.

#### **(a) Transportation Standards**

##### **1. Impact on Surrounding Street Systems:**

The site is located on Sheridan Street, a low volume, residential public road that is used primarily by local traffic; there is limited cut-through traffic in the area from either Cumberland Ave or Walnut Street. It is predicted that the incremental increase in traffic volume will not create or aggravate any hazards and thus not impact overall safety. Please refer to the Traffic Impact Study included in this application for more information.

##### **2. Access and Circulation:**

###### **a. Site Access and Circulation.**

- (i) The development will provide safe access and internal circulation for both pedestrians and vehicles.
- (ii) The proposed two points of site access and egress are located on the lot as such as to not conflict with existing traffic movements from the residential property across the street at 156 Sheridan Street.
- (iii) The site does not feature drive up services as mentioned in this requirement.

###### **b. Loading and Servicing.**

- (i) Not required. There will be adequate area along adjacent streets and within the proposed drive aisle for infrequent periods of tenants moving in/out of the building.

###### **c. Sidewalks.**

- (i) The existing sidewalk along both street frontages are bituminous or made of concrete will be reconstructed to City Standards as part of the project.
- (ii) Due to the substandard condition of the existing sidewalks and likelihood that the proposed construction will impact the sidewalk integrity, it is proposed that the sidewalks be rebuilt to the City standard brick sidewalk. Curb is to be replaced as noted on the Site Plan, C-10.
- (iii) Internal sidewalks will be provided to facilitate the movement of pedestrians to the City ROW and to and from internal garage parking spaces.



3. Public Transit Access:

- a. Non-Applicable.
- b. A new transit stop is not proposed as part of the project.
- c. A new transit stop is not proposed as part of the project.

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

- (i) The proposed parking lot meets the one space per unit after three units parking requirement. With the proposed nineteen units, nineteen parking spaces meets this minimum.
- (ii) A parking study is not required.
- (iii) The amount of parking exceeds 10% by one parking space. However, allocating space for nineteen spaces, one per unit, is more appropriate than proposing eighteen spaces by allowing for equal parking access for both the non-workforce and workforce units and reducing the demand for on-street parking along Sheridan Street.
- (iv) The proposed parking garage layout incorporates the design standards as set in the Technical Manual including one compact sized parking space (8.5' X 17.5') to increase accessibility to the solid waste storage room.
- (v) The parking lot will be constructed of a permanent and durable concrete surface that is not subject to ponding or erosion.

b. Location and Required Number of Bicycle Parking Spaces:

- (i) Per Technical Manual requirement, a minimum of eight (8) bike storage spaces will be provided within the second-floor storage area meeting the required two (2) spaces per five (5) units.

c. Motorcycles and Scooter Parking:

- (i) The project does not provide designated motorcycle/scooter parking but on-street opportunities exist within Sheridan Street.

d. Snow Storage:

- (i) Snow storage space will be provided in the landscaped areas surrounding the driveway aprons and front walkway entrances.
- (ii) Snow storage shall not be located where it will adversely impact the functionality of the stormwater management system nor the structural integrity of the proposed landscaping of the storage area.

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. The existing site contains no prominent significant natural features therefore no issue related to the preservation of these features applies.
- b. Not applicable.

2. Landscaping and Landscaping Preservation:

a. Landscape Preservation.

- (i) The existing site is made up primarily of untamed and unmaintained overgrowth with a high density of invasive Norway Maple trees; refer to the Tree Report by Rene Noel, Jr. for a tree count and approximate location and size of identified trees. It is proposed that the contractor make efforts to preserve the existing Apple (non-native) and Linden trees to the rear of the property outside of the retaining wall to the greatest degree feasible without impacting construction activities.
- (ii) There are three (3) existing trees with a DBH of 10" or greater that are within the property setbacks, of which one (1) is proposed to be preserved during construction. Refer to the Landscape Plan for existing tree locations.
- (iii) Existing trees are to be preserved and protected during construction per standards detailed in the Technical Manual. Refer to the Site Details plan for additional information.
- (iv) Not applicable.
- (v) Not applicable.

b. Site Landscaping.

(i) Landscaped Buffers:

- (a) The proposed exterior transformer pad location is to be bordered by a six-foot cedar fence and will not be visible from the public sidewalks, street, and adjacent properties.
- (b) The project has 176 linear feet of frontage along Sheridan Street; per requirement, it is proposed that a minimum of twenty-four (24) shrubs or shrub alternatives are planted within this setback as noted in greater detail in the Landscape Plan.
- (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) Seven (7) new street trees are proposed to be planted within the City ROW along Sheridan Street. Trees are to be a fruitless gingko variety as to minimize potential impacts with overhead services while maintaining a bright yellow tree presence in the fall.

(b) An additional nine (9) evergreen trees are proposed to front the property within twenty (20) feet of the building surrounded by native grass features and perennial planting beds. This additional landscaping is proposed to meet the requirement for the nineteen (19) total street trees per Technical Manual requirement.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) Stormwater runoff produced by the roof area is to be conveyed into an underdrained subsurface sand filter (USSF) designed to the MDEP Stormwater Best Practices design standards; all remaining site stormwater is to be directed offsite and into the existing municipal stormwater system within Sheridan Street. There is no anticipated ponding or flooding using this design nor runoff redirected onto the abutting properties.

(ii) The roof runoff from the site is proposed to be treated using filtration via the USSF system. All remaining runoff will be redirected into the stormdrain line within Sheridan Street. The redirected runoff is less than what is currently produced within the site. Therefore, the project will not increase the net rate of runoff nor adversely impact adjacent lots.

(iii) The project will not increase the stormwater flows directly within the Sheridan Street separated sewer system nor create adverse impacts to the Munjoy Hill neighborhood or wastewater treatment plant when compared to existing conditions.

(iv) The City's separated storm sewer system is anticipated to accommodate the increase in stormwater flow; any increase will not exceed the capacity of the existing system within Sheridan Street.

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, general, and flooding standards of MeDEP Chapter 500. Please refer to the Stormwater Management plan for more information.

c. The project is not located in a watershed of an urban impaired stream as listed by the MaineDEP.

d. Not applicable.



- e. The development is not anticipated to pose a risk to groundwater contamination either during or post-construction. The project is serviced by a public wastewater system.
- f. The development will provide for adequate and sanitary disposal or 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 and residential access.
- b. The proposed emergency vehicle access to the site is designed to City Technical Standards.
- c. Fire hydrants are located within the Sheridan Street system as noted on the Utility Plan. The new building will have fire suppression.

3. Availability and Adequate Capacity of Public Utilities:

- a. Public utilities near the site have been contacted to confirm the capacity to serve the proposed project. More information on utilities is included within the ability to serve letters to the respective utility companies.
- b. All electrical service lines will be underground.
- c. All new utility infrastructures will meet the provisions of the Technical Manual.
- d. The project will be served by connection to the public sewer system within Sheridan Street
- e. The sanitary sewer collection system meets all applicable sections of the Technical Manual. The stormwater management system is designed to meet the standards of Chapter 500.
- f. The proposed building includes provisions for on-site storage of trash and recyclables temporarily until waste is removed from the site via a private hauler.

**(d) Site Design Standards**

1. Massing, Ventilation and Wind Impact:

- a. The bulk, location and height of the existing building does not result in adverse impacts to abutting properties. This design and application has been developed in compliance with the



Fort Sumner Park Height Overlay (14-139(d)).

- b. The proposed building is designed to minimize bulk and height and is positioned as such to affect abutting properties as little as possible.
  - c. Proposed HVAC venting will be designed to direct all exhaust away from the abutting public park and residential properties.
- 2. Shadows:
  - a. Not applicable.
- 3. Snow and Ice Loading:
  - a. The proposed building will have a flat roof thus eliminating the risk of accumulated snow and ice unloading onto adjacent properties or City right-of-way.
- 4. View Corridors:
  - a. The project site is located outside the Downtown Vision View Corridor Protection Plan.
  - b. The project has also been designed to be compliant with the Fort Sumner Park Height Overlay (14-139(d)). The building will not interfere with the view from the Park as outlined in the ordinance.
- 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 landmark, 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. Cut sheets may be provided for the lighting typical of residential lights. Please let us know if a photometric plan is required for a project of this scale.
    - (ii) All proposed exterior lighting will employ house-side shielding per requirement.
  - 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. All HVAC and Mechanical equipment shall be accordance with the applicable zoning requirements.

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) Not applicable.

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

9. Zoning Related Design Standards:

- a. The project will be designed to meet the design standards within the R6 Zone.



## **E. Summary of Written Easements**

- **Existing Easements** – The Existing Conditions Plan developed by Titcomb Associates identified an existing easement regarding the site; details outlining the rights are recorded within Book 314, Page 544. Refer to the Existing Conditions Plan.
- **Proposed Easements** – There are no proposed easements at this time.

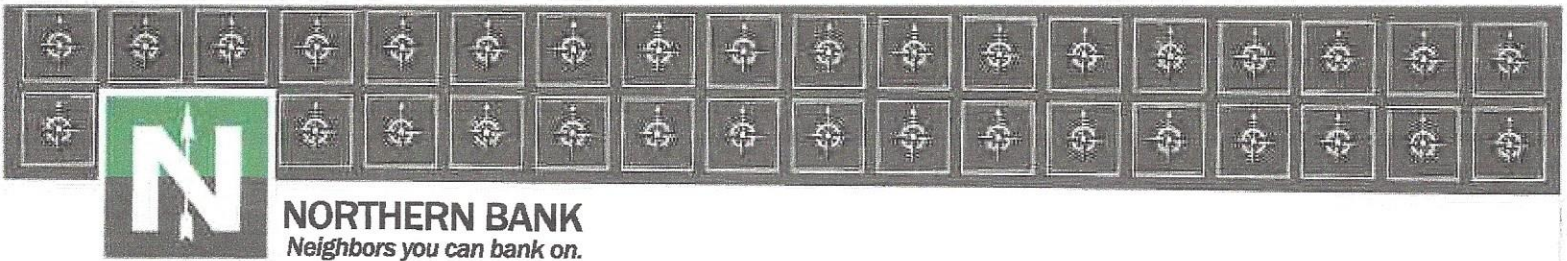




## **F. Written Request for Waivers**

There are no waivers requested at this time.





April 13, 2017

Mr. Bernie Saulnier  
BD Sheridan, LLC  
1266 Furnace Brook Parkway  
Quincy, MA 02169

Dear Mr. Saulnier,

This letter is to inform you that Northern Bank & Trust Company has reviewed your initial credit request associated with the redevelopment of 155 Sheridan Street located in Portland, ME. Based on our previous experience with you and your partners, Northern Bank & Trust Company believes that the project applicant has the financial capacity and development expertise to successfully execute the project.

Northern Bank and Trust Company looks forward to providing terms and conditions of said approval upon completion of your permitting process.

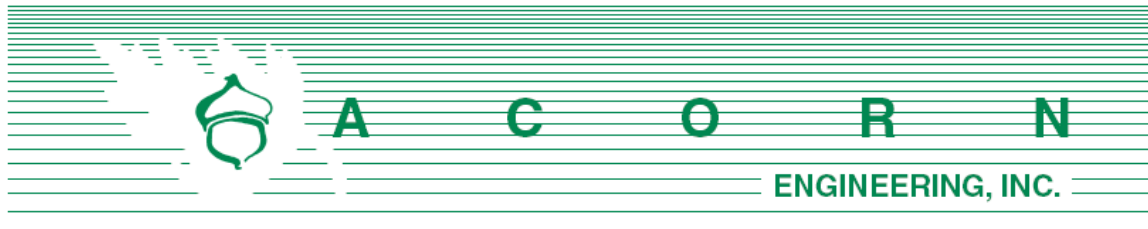
Please note that this is not a legally binding commitment to lend as any extension of credit is subject to satisfactory completion of underwriting due diligence, credit committee approval and satisfactory review of documentation and such other terms and conditions as determined by the Bank and its counsel in their sole discretion.

Should you have any questions, please call me at 617 835 1419.

Very truly yours,

A handwritten signature in blue ink, appearing to read 'Justin Thomas', is written over a horizontal line.

Justin Thomas  
Commercial Loan Officer



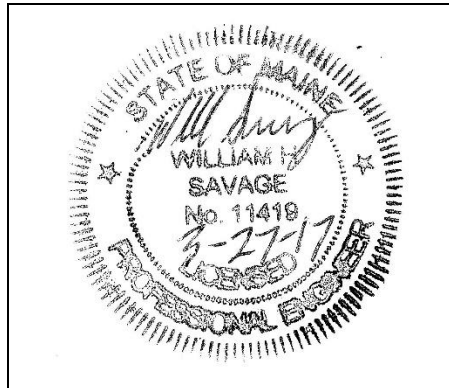
# **FINAL STORMWATER MANAGEMENT REPORT**

**Prepared For:**

**BD Sheridan LLC  
Vazza Real Estate Group  
1266 Furnace Brook Parkway Suite 300  
Quincy, Massachusetts 02169**

**Prepared By:**

**Acorn Engineering, Inc.  
158 Danforth Street  
Portland, Maine 04102**



**March 2017**

## **INTRODUCTION**

Acorn Engineering, Inc. has been retained by BD Sheridan LLC to provide civil engineering services for the proposed urban infill project at 155 Sheridan Street. The proposed project is to develop an existing single family, 1.5-story residence into a high-density, 19-unit apartment building.

A stormwater analysis will be 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 (F) Level III Site Plan Review.
- City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management.

The proposed project will include the redevelopment of existing, impervious area including a rooftop, and concrete steps and walkways. The project will result in a net increase of impervious area above 1,000 sf, and, as such, is required to include stormwater management features for stormwater quality & quantity control. The stormwater analysis is documented with supporting calculations and reports attached to this narrative.

The current course of action is to provide primary water quality treatment to the stormwater via filtration utilizing a subsurface chamber sand filter, or underdrain subsurface sand filter (USSF) designed per Chapter 7.3 of Volume III of the Maine Stormwater Management BMP manual. The implemented BMP system is to provide water quality treatment for no less than 95% of the new impervious area and 80% of the developed area. At this time, water quality and quantity benefits as a result from the proposed green roof have not been taken into consideration during the modeling of rain events. The green roof will cover approximately 50% of the building.

## **EXISTING CONDITIONS**

The proposed project site is located on Sheridan Street between Cumberland Ave and Walnut Street within the East End neighborhood on Munjoy Hill. A boundary plan has been prepared by Titcomb Associates of Falmouth, Maine dated March 4, 2016 and revised January 30, 2017.

Abutting Uses:

- |   |       |           |                          |
|---|-------|-----------|--------------------------|
| ➤ | North | R-6 Zone  | Multi-Family Residential |
| ➤ | West  | R-6 Zone  | Multi-Family Residential |
| ➤ | South | B-2b Zone | Community Business       |
| ➤ | East  | R-6 Zone  | Multi-Family Residential |

Fort Sumner Park directly abuts the property to the east.



Most of the site is pervious with dense overgrowth and limited mature tree growth. The average grade is relatively steep. The existing dwelling is sided by a concrete walk and stairway with the steps continuing into the property. There are also two retaining walls further into the site, potentially continuing into the northernmost abutting property.

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 free-draining soils, a field inventory of significant natural features was not undertaken. The project is not located within a watershed classified as an Urban Impaired Stream.

## **PROPOSED DEVELOPMENT**

The proposed project is a 19-unit redevelopment of an existing single-family lot. Covered, garage parking will be provided on-site on the first floor of the building, below the residential units. Select residential units on the second and third floors will have access to outdoor patios which will drain to the filter BMP. Due to the existing steep conditions, portions of the site will have greater slopes that will require structural retaining walls and riprap support. The remainder of the property will be landscaped.

Most of the added impervious surface will be generated by the new roof surface from the building footprint. The new runoff will be collected and piped from the rooftop to a subsurface, detention system below the patios outside the third-floor apartments. The roof is to also be composed of a series of green roof trays.

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

## **GENERAL STANDARDS - WATER QUALITY**

The Underdrained Subsurface Sand Filtration system (USSF) is sized to meet or exceed to the requirements set forth within the MDEP Volume III BMPs Technical Design Manual, Chapter 7.3. Filter BMP systems have shown to be effective at filtering out and removing a wide range of pollutants from stormwater runoff.

### *Treatment Area*

Runoff generated from the new building roof is to be redirected and conveyed into the USSF system set below the third-floor patios. The runoff is to be treated in a series of two StormTech Isolator Rows. These structures will be outfitted with at least one access point provided by either the outlet control structure or the drainage manhole and additional access via an inspection port per Isolator Row for the removal of any accumulated sediment or debris. The runoff will enter the sand filter structure and be detained for a minimum of 24 hours and a maximum of 48 hours. The sand filter will then outlet into a control structure. This structure will serve to attenuate flows into the existing municipal stormwater system within Sheridan Street and prevent flooding.



The treatment of the impervious surface by the BMPs are as follows:

| <b>Table 1 - Impervious Treatment Area Table</b> |                               |                                     |                                    |                                              |                                 |
|--------------------------------------------------|-------------------------------|-------------------------------------|------------------------------------|----------------------------------------------|---------------------------------|
|                                                  | Existing Impervious Area (SF) | Proposed Total Impervious Area (SF) | Net change in Impervious Area (SF) | Proposed Impervious Area with Treatment (SF) | % Overall New Imp. Area Treated |
| Subsurface Sand Filter                           | 1,287                         | 11,070                              | 9,783                              | 9,708                                        | 99%                             |

As shown above, the project anticipates meeting the required treatment for new impervious surfaces utilizing solely the filter BMP and not taking into account to green roof.

Furthermore, the MDEP defines developed area as “Disturbed area” excluding area that within one calendar year of being disturbed is returned to a condition with the same drainage pattern that existed prior to the disturbance and is revegetated, provided the area is not mowed more than once per year.

Based upon this definition, Table 2 summarizes the proposed disturbance and treatment areas.

| <b>Table 2: Developed Area Treatment</b> |                                    |                                             |                                  |
|------------------------------------------|------------------------------------|---------------------------------------------|----------------------------------|
|                                          | Proposed Total Developed Area (SF) | Proposed Developed Area with Treatment (SF) | % Overall Developed Area Treated |
| Subsurface Sand Filter                   | 15,670                             | 12,960                                      | 83%                              |

As shown in Table 2, the project anticipates exceeding the required treatment for the total developed area through the utilization of the porous pavement filter media BMP.

### *Filter Area Size*

Per the requirements for an underdrained subsurface sand filter as defined in Volume III BMPs Technical Design Manual, Chapter 7.3, the surface area of the filter shall be no less than the sum of 5% of the tributary impervious area and 2% of the tributary landscaped area. The filter area is calculated by the following formula:

$$\text{Filter Area (sf)} = (\text{Impervious Area} \times 0.05) + (\text{Landscaped Area} \times 0.02)$$

It should be noted that no runoff from landscaped area is tributary to the system and the USSF is to treat only roof runoff.





Table 3 – Total Filter Surface Area, displays the proposed sand filter sizing requirements, actual size, and the percentage of required area.

| <b>Table 3 –Total Filter Surface Area</b> |                           |                         |                                 |
|-------------------------------------------|---------------------------|-------------------------|---------------------------------|
|                                           | Required Filter Area (SF) | Actual Filter Area (SF) | Percentage of Required Area (%) |
| Subsurface Sand Filter                    | 521                       | 531                     | 102%                            |

The outflow from the sand filter structure is then tributary to the outlet control structure before entering the municipal stormwater system. As shown, the size of the soil filter area will meet the surface area requirements.

### *Isolator Row Sizing*

The isolator row was sized by referencing a letter from Mark Bergeron, Director of the MDEP Bureau of Land Resources, to StormTech dated July 29, 2016. Mr. Bergeron recommends determining the minimum number of stormwater chambers per isolator row by dividing the one-year peak flow rate by the specific flow rate of the chamber. However, no flow rate was designated for StormTech's MC-4500 chamber system. Working back from the proposed project design and assuming a one-year, 24-hour peak flow rate of 2.61 inches with three chambers per Isolator Row, each MC-4500 chamber would have a specific flow rate of 0.9 cfs, well above the designated specific flow rate for the next largest model, MC-3500, at 0.3 cfs.

### *Water Quality Volume*

In accordance with the Volume III: BMPs Technical Design Manual, a water quality volume of 1.0 inch times the tributary impervious area plus 0.4 inch times the tributary landscaped developed area is required to be treated by the Underdrained Subsurface Sand Filter. The water quality volume is calculated by the following formula:

$$Treatment\ Volume\ (cf) = \frac{((Impervious\ Area \times 1.0") + (Disturbed\ Area \times 0.4"))}{(12"/1')}$$

Within the USSF system, the water quality volume is defined by the depth and surface area of the sand layer. For this project, the total water quality volume is the sum of the two Isolator Row sand filter layers. Again, no landscaped area is to be treated by the system.

The system treatment volume was calculated using StormTech's storage volume for the MC-4500 chamber and end cap as provided in the MC-4500 Design Manual and the available stone storage surrounding the system assuming a 40% porosity. The calculations are as follows:

$$Water\ Quality\ Volume = \left(109.9 \frac{cf}{chamber}\right) * (6\ chambers) + \left(35.7 \frac{cf}{end\ cap}\right) * (4\ end\ caps)$$





A summary of the proposed water quality volume is as follows:

Table 4 – Water Quality Volume Table, displays the tributary landscaped area, tributary impervious area, treatment volume required, and treatment volume provided.

| <b>Table 4 - Water Quality Volume Table</b> |                                      |                                      |                                      |                                 |
|---------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------|
|                                             | Tributary<br>Landscaped<br>Area (SF) | Tributary<br>Impervious<br>Area (SF) | Treatment<br>Volume<br>Required (CF) | Treatment<br>Volume<br>Provided |
| Subsurface<br>Sand Filter                   | 2,559                                | 10,401                               | <b>868</b>                           | <b>1,086</b>                    |

As shown, the size of the combined water quality volume will meet and exceed the treatment volume requirements. Values from the HydroCAD calculations are attached to this report.

### *HydroCAD Adjustments*

Given that the water quality volumetric infiltration rates through the soil filter vary, a water quality outlet is modeled to provide the required minimum 24-hour release time. This is completed by adjusting the rainfall amount in HydroCAD until the inflow volume is equal to or greater than the calculated treatment volume. The storm events are modeled as type III, 24-hour storm events in HydroCAD.

A vertical orifice is modeled in HydroCAD at the outlet structures of the USSF BMP. The orifice diameter is sized to detain the stormwater for an approximate period of 24 hours. The orifice is intended to be a PVC cap placed on the outfall pipe (no glue) with the orifice drilled into the cap eccentrically and is to be fitted at the end of the outfall pipe on the outlet control structure baffle to be inspected or replaced if necessary. The PVC cap can be inspected, removed or replaced if necessary. The orifice for the water quantity volume is then set above the peak elevation determined for the water quality volume.

### *Additional Quality Provided by the Green Roof*

The above calculations do not consider the additional water quality treatment provided by the modular green roof trays covering 50% of the building rooftop. Per the Stormwater BMP Manual, Chapter 7.6 on Vegetated Roofs, rooftop vegetation can contribute to the General Standards requirement for Water Quality via filtration and water quality volume within the filter layer of the trays.

Therefore, the proposed USSF system is oversized and could potentially be reduced to a lesser footprint if the vegetated roof is considered in future Water Quality calculations.



## **FLOODING STANDARD – WATER QUANTITY**

The proposed project was modeled using HydroCAD to verify that the post-development conditions do not exceed the pre-development conditions. The model applied a 24-hour SCS Type III storm distribution for the 2, 10, and 25-year storm events with the corresponding rainfall amounts 3.1”, 4.6”, and 5.8” respectively. Rainfall amounts are from Appendix H of the Chapter 500 for Cumberland SE.

Both the pre- and post-development conditions were developed to model all runoff to enter the Sheridan Street municipal stormwater system. This assumption is based on the existing grades sloping downward from the property.

Due to the numerous variables and inherent inaccuracies with the modeling program used to calculate stormwater runoff, it is custom at Acorn Engineering, Inc. to round to the nearest whole number or to the nearest tenth for urban infill projects. Due to the relatively small size of the project footprint, the stormwater runoff shall be rounded to the nearest tenth of a cubic foot per second (cfs).

### *Time of Concentration ( $T_c$ )*

For the pre-development condition, a time of concentration ( $T_c$ ) of 5 minutes was used because the calculated  $T_c$  was below 5 minutes.

Given the urban environment and the short flow paths in the post condition, a  $T_c$  of 5 minutes was used for the post-development subcatchments.

### *Curve Number*

It was assumed that the existing, steep sloping condition of the site would be best represented by the following CN condition:

- Woods/Grass Combo – Good

Furthermore, Cumberland County describes the existing soil condition as a hydrologic soil group A, but the site no longer contains primarily native soils (Hinckley Gravelly Sandy Loam). This is based upon the urban fill and silts/clays that were discovered on site. Therefore, the soil is closer to a B or C soil. It was modeled as group B in this report. Refer to Appendix A, page 103 from the USDA Urban Hydrology for Small Watersheds TR-55 from HydroCAD.net as well as Summit Geoengineering’s Geotechnical Report for more information.

The existing stairways, building, and concrete structures were assumed to be classified as impervious. A more conservative CN value was designated to the existing riprap wall to more accurately represent the limited permeability of the compacted surface.



The post-development conditions for the proposed building roof was modelled assuming both a completely impervious section represented by the wooden decks and hardtop surface and a semi-pervious section formed by the modular green roof system; the green roof covers about 50% of the total rooftop area. Based on past research as published in the December 2015 edition of the Journal of Hydrologic Engineering, “Curve Number and Runoff Coefficients for Extensive Living Roofs”, extensive green roof systems can be modeled using a CN of 84.

It was also assumed that all newly proposed landscaped areas would be in good condition. The following curve numbers implemented in the post-development condition are as follows:

- > 75% Grass cover – Good

The remaining retaining walls, patios, and internal walkways were all classified as completely impervious.

#### *Pre-development Calculations*

The pre-development condition was modeled as one subcatchment to determine the net impact of the development.

- Subcatchment 1 –Rear property line to Sheridan Street

A Pre-Development Watershed Map developed for this project can be viewed in Attachment A, and a copy of the HydroCAD calculations is included within Attachment D of this report.

Peak flow rates for the storm events are as follows:

| <b>Table 5 – Pre-Development Peak Stormwater Flows</b> |                                   |                                    |                                    |
|--------------------------------------------------------|-----------------------------------|------------------------------------|------------------------------------|
| <b>Drainage Area</b>                                   | <b>2 – Year Storm Event (cfs)</b> | <b>10 – Year Storm Event (cfs)</b> | <b>25 – Year Storm Event (cfs)</b> |
| <b>Sheridan Street</b>                                 | 0.3                               | 0.8                                | 1.3                                |

#### *Post-development Calculations:*

The one pre-development subcatchment was broken into three separate subcatchments for the post-development condition.

- Subcatchment 1 – Rooftop of the proposed building
- Subcatchment 2 – Third floor patio area
- Subcatchment 3 – Front, side, and rear runoff into Sheridan Street

The post development calculations include changes to the land use and compensation provided by the subsurface BMP system. The following table represents comparison of predevelopment and post-development condition peak runoff rates for the proposed development and tributary area.



| Table 6 – Comparison of Peak Flows |                            |      |                             |      |                             |      |
|------------------------------------|----------------------------|------|-----------------------------|------|-----------------------------|------|
| Drainage Area                      | 2 – Year Storm Event (cfs) |      | 10 – Year Storm Event (cfs) |      | 25 – Year Storm Event (cfs) |      |
| Sheridan Street                    | Pre                        | Post | Pre                         | Post | Pre                         | Post |
|                                    | 0.3                        | 0.2  | 0.8                         | 0.5  | 1.3                         | 0.9  |

As shown in Table 6, the net impact of the post development peak flows shall remain at or below the predevelopment levels for the two, ten, and twenty-five-year storms.

A Post-Development Watershed Map created for this project can be viewed in Attachment B, and a copy of the HydroCAD calculations is included within Attachment D of this report.

There is also the potential for additional storage and ponding with the modular green roof trays that could contribute to the peak flows within the post-development condition that have not been considered within the abovementioned peak flow comparison.

A stormwater maintenance agreement in accordance with Chapter 7.3 has been established and is under separate cover. Maintenance activities may include inspections, vacuuming, and sediment measurements. Refer to the agreement for information.

#### *Additional Quantity Provided by the Green Roof*

It should be noted that the developed model and resulting peak flows do not take into consideration the additional storage as provided within the modular green roof system. The vegetation support course and drainage course within each tray will detain rainfall directly entering the system and further attenuate the site peak flows.



## **SOILS**

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County

The existing soils are exclusively Hinckley throughout the site. The Hinckley soil series consists of very deep, excessively drained soils formed in glaciofluvial materials. The permeability of the Hinckley soil is rapid in the surface layer and subsoil and very rapid in the substratum, typically with a low groundwater table. Soils also consist of silty clays and urban fill as outlined in the above sections. Refer to the Geotechnical Report for more information. Given the soils information as listed above, no onsite wastewater is proposed and the applicant does not intend to perform a more intense hydric soil boundary delineation or permeability test due to the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 have been met.

The area within and surrounding the project includes soils types listed in Table 7 below. The susceptibility of soils to erosion is indicated on a relative “K” scale of values over a range of 0.02 to 0.69. Higher “K” values indicate more erodible soils.

| <b>Table 7 - “K” Value</b> |                   |                   |
|----------------------------|-------------------|-------------------|
| <b>Soils Type</b>          | <b>Subsurface</b> | <b>Substratum</b> |
| Hinckley                   | 0.17              | 0.17              |

The soil “K” values for the soils, listed above, show a low susceptibility to erosion. The site’s susceptibility to erosion is from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although soil “K” values for the soils show a low susceptibility to erosion, implementation of the proposed Erosion & Sedimentation Measures by the contractor will still be of considerable importance.

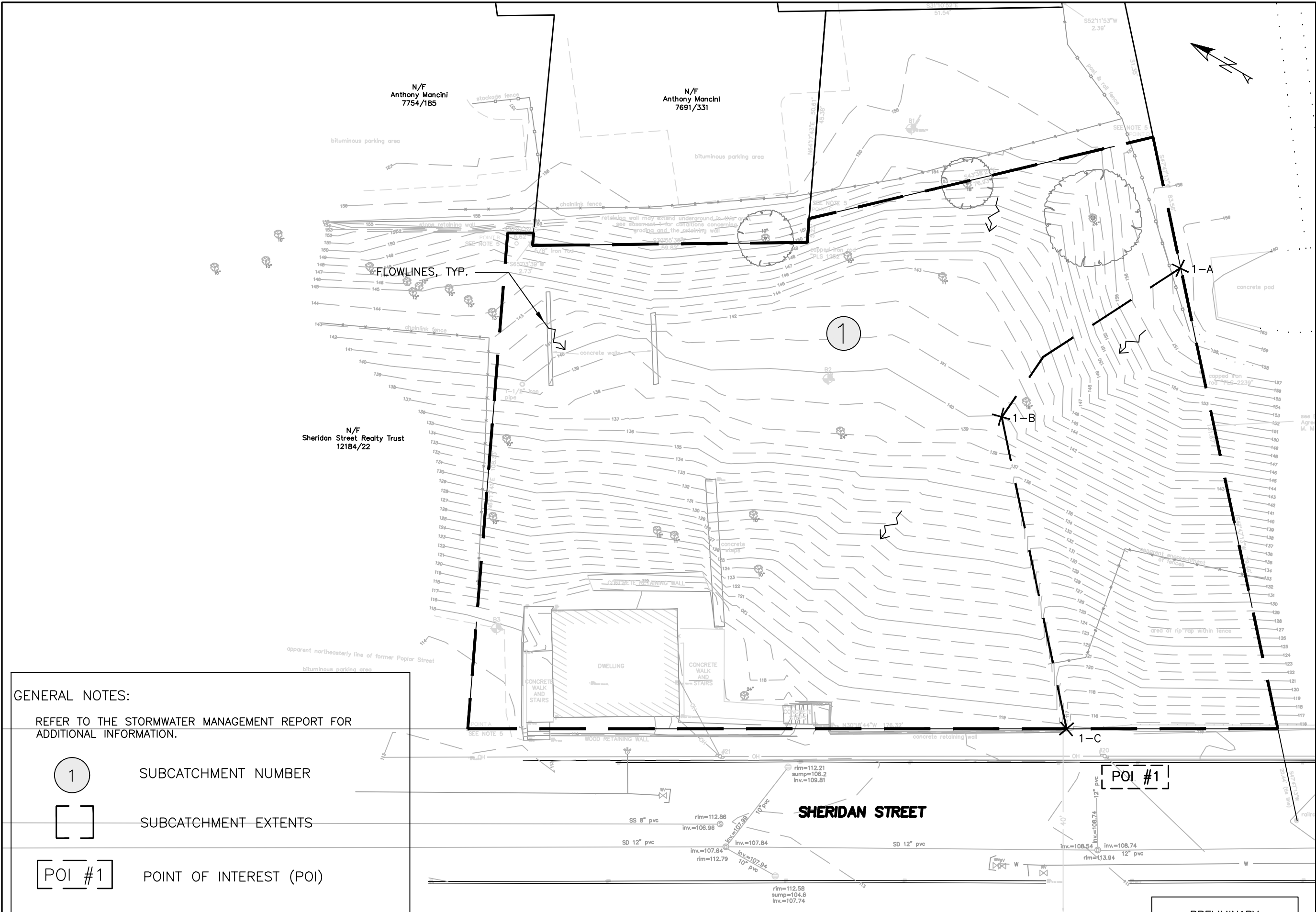
## **Conclusion**

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. Thus, the design of the proposed development and stormwater system does not anticipate creating erosion, drainage or runoff problems either in the development or with respect to adjoining properties.

## **Attachments**

Attachment A: Pre-Development Watershed Map  
 Attachment B: Post-Development Watershed Map  
 Attachment C: Soils Map  
 Attachment D: Green Roof Cut Sheets  
 Attachment E: HydroCAD Calculations





GENERAL NOTES:

REFER TO THE STORMWATER MANAGEMENT REPORT FOR ADDITIONAL INFORMATION.

1

SUBCATCHMENT NUMBER

[ ]

SUBCATCHMENT EXTENTS

[ POI #1 ]

POINT OF INTEREST (POI)

—x—x—

TIME OF CONCENTRATION PATH (T<sub>c</sub>)

|                                                                                                                                                                                                                     |                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| ISSUED FOR                                                                                                                                                                                                          | BY DATE                                  |
|                                                                                                                                                                                                                     | WHS 3/28/17                              |
| PRELIM. APP.                                                                                                                                                                                                        |                                          |
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|                                                                                                                                                                                                                     |                                          |
|                                                                                                                                                                                                                     |                                          |
| DRAWING NAME:                                                                                                                                                                                                       | PRE-DEVELOPMENT WATERSHED MAP            |
|                                                                                                                                                                                                                     |                                          |
| PROJECT NAME:                                                                                                                                                                                                       | 155 SHERIDAN STREET                      |
|                                                                                                                                                                                                                     |                                          |
| CLIENT:                                                                                                                                                                                                             | BD SHERIDAN, LLC                         |
|                                                                                                                                                                                                                     | VAZZA REAL ESTATE GROUP BD SHERIDAN, LLC |
| 1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169                                                                                                                                                               |                                          |
|                                                                                                                                |                                          |
| 158 DANFORTH ST<br>PORTLAND, MAINE 04104<br>(207) 775-2655                                                                                                                                                          |                                          |
| FILE:                                                                                                                                                                                                               | 1069_CIVIL                               |
| JN:                                                                                                                                                                                                                 | 1069                                     |
| SCALE:                                                                                                                                                                                                              | NTS                                      |
| DESIGN BY:                                                                                                                                                                                                          | OJD                                      |
| DRAWN BY:                                                                                                                                                                                                           | OJD                                      |
| CHECKED BY:                                                                                                                                                                                                         | WHS                                      |
| 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. |                                          |
| DRAWING NO.                                                                                                                                                                                                         |                                          |
| PRE                                                                                                                                                                                                                 |                                          |

PRELIMINARY  
SUBMISSION







PRELIMINARY

HINCKLEY  
GRAVELLY SANDY LOAM  
3 TO 8 PERCENT SLOPE  
0.033 ACRES WITHIN PROPERTY LINE

HINCKLEY  
GRAVELLY SANDY LOAM  
15 TO 25 PERCENT SLOPE  
0.383 ACRES WITHIN PROPERTY LINE

|                                                                                                                                                                                                                     |  |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------|
| ISSUED FOR                                                                                                                                                                                                          |  | BY         |
| PRELIM APP                                                                                                                                                                                                          |  | DATE       |
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|                                                                                                                                                                                                                     |  | 3/28/17    |
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| DRAWING NAME:                                                                                                                                                                                                       |  |            |
| PROJECT NAME:                                                                                                                                                                                                       |  |            |
| CLIENT:                                                                                                                                                                                                             |  |            |
| SOILS MAP                                                                                                                                                                                                           |  |            |
| 155 SHERIDAN STREET                                                                                                                                                                                                 |  |            |
| BD SHERIDAN, LLC                                                                                                                                                                                                    |  |            |
| VAZZA REAL ESTATE GROUP                                                                                                                                                                                             |  |            |
| ACORN ENGINEERING, INC.                                                                                                                                                                                             |  |            |
| ACORN ENGINEERING, INC. P.O. BOX 3372                                                                                                                                                                               |  |            |
| PORTLAND, MAINE 04104 (207) 775-2655                                                                                                                                                                                |  |            |
| FILE:                                                                                                                                                                                                               |  | CIVIL 1069 |
| JN:                                                                                                                                                                                                                 |  | 1069       |
| SCALE:                                                                                                                                                                                                              |  | 1"=30'     |
| DESIGN BY:                                                                                                                                                                                                          |  | OJD        |
| DRAWN BY:                                                                                                                                                                                                           |  | OJD        |
| CHECKED BY:                                                                                                                                                                                                         |  | WHS        |
| 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. |  |            |
| DRAWING NO.                                                                                                                                                                                                         |  |            |
| SOILS                                                                                                                                                                                                               |  |            |

## PRODUCT DATA SHEET

### Protection Mat SSM 45



Water and nutrient storage mat of synthetic fibres, for the application as a protection layer under green roofs, gravel fills, slab pavings, etc.

#### Features

- resistant to mechanical stress
- high quality protection layer
- water and nutrient storage
- non-rotting
- biologically neutral
- bitumen and polystyrene compatible
- made of recycled fibres
- quick and easy installation

#### Technical Data

Protection Mat SSM 45 / EDP No. 2045 / 2046

High-quality fibre mat made of polypropylene, with fleece backing.

|                                                             |                          |                             |
|-------------------------------------------------------------|--------------------------|-----------------------------|
| Colour:                                                     | brown (varies)           |                             |
| Thickness:                                                  | ca. 0.2 in               | (ca. 5 mm)                  |
| Weight:                                                     | ca. 0.1 lb/sq ft         | (ca. 470 g/m <sup>2</sup> ) |
| Water storage capacity:                                     | ca. 0.1 gal/sq ft        | (ca. 5 l/m <sup>2</sup> )   |
| Strength class:                                             | 3                        |                             |
| Tensile strength lengthwise:                                | > 570 lb/ft              | > 8.5 kN/m                  |
| Extension lengthwise:                                       | > 90 %                   |                             |
| Dimensions:                                                 |                          |                             |
| EDP No. 2045: rolls, ca. 1076 sqft (100 m <sup>2</sup> )    | 6.6 ft x 164.0 ft        | (2.0 m x 50.0 m)            |
| EDP No. 2046: ca. 215 sqft (ca. 20 m <sup>2</sup> ), folded | ca. 6.6 ft x ca. 32.8 ft | (ca. 2.0 m x 10.0 m)        |

#### Health and Safety

This product does not require a material safety data sheet (MSDS) according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). When used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, an MSDS can be provided as a courtesy in response to a customer request.

#### Installation Instructions

Install the Protection Mat SSM 45 above a waterproofing or root barrier with an overlap of 4 inch. The Protection Mat has to be taken above the growing medium along edges and at roof penetrations. Cut the Protection Mat in situ at roof penetrations. Consider an allowance for overlap and wastage of ca. 10 – 15 %.

ZinCo USA, Inc. • Paragon Towers • 233 Needham Street • Newton MA 02464-1502  
T 866 766 3155 • F 866 766 3955 • [www.zinco-usa.com](http://www.zinco-usa.com) • [info@zinco-usa.com](mailto:info@zinco-usa.com)

Subject to technical alterations and printing errors; First edition: 01/07, revised: 01/09  
Authorized by ZinCo GmbH

## 1.2

**Fixodrain XD-20** drainage layer by Zinco. The composite shall satisfy the following specifications:

**Material:** HD-PE (REC) (Polyethylene (REC))

**Color:** black / grey

**Height:** ca. 0.80 in (ca. 20 mm)

**Weight:** ca. 0.20 lb/sq ft (ca. 1.00 kg/m<sup>2</sup>)

**Water storage capacity:** ca. 0.07 gal/sq ft (ca. 3 l/m<sup>2</sup>)

**Max. compressive strength:** 7.25 psi (50 kN/m<sup>2</sup>)

**Waterflow rate in element level:** with 1 % slope: ca. 1.75 gpm/ft (ca. 0.36 l/(s•m))

with 2 % slope: ca. 2.50 gpm/ft (ca. 0.52 l/(s•m))

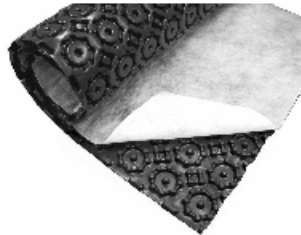
with 3 % slope ca. 3.15 gpm/ft (ca. 0.65 l/(s•m<sup>2</sup>))

**Dimensions:** rolls ca. 3.30 ft x 65.60 ft (1.00 m x 20.00 m)



## PRODUCT DATA SHEET

### Fixodrain® XD 20



Economic, multi-functional Drainage Mat for use as alternative to single layered extensive green roof build-ups.

#### Features

- no need for additional protection layer due to connectible interlocking studs
- tested and proven drainage capacity
- water retention within the element
- quick and easy installation
- 100 % Polypropylene

#### Technical Data

Fixodrain® XD 20 / EDP No. 3020

Drainage Mat with attached Filter Sheet, connecting lengthwise on interlocking studs.

|                                  |                    |                              |                    |
|----------------------------------|--------------------|------------------------------|--------------------|
| Material:                        | Polypropylene      |                              |                    |
| Color:                           | grey / white       |                              |                    |
| Height:                          | ca. 0.8 in         | (ca. 20 mm)                  |                    |
| Weight:                          | ca. 0.2 lb/sq ft   | (ca. 1.0 kg/m <sup>2</sup> ) |                    |
| Water storage capacity:          | ca. 0.07 gal/sq ft | (ca. 3 l/m <sup>2</sup> )    |                    |
| Max. compressive strength:       | > 7.25 psi         | (> 50 kN/m <sup>2</sup> )    |                    |
| Waterflow rate in element level: | with 1 % slope:    | ca. 1.75 gpm/ft              | (ca. 0.36 l/(s-m)) |
|                                  | with 2 % slope:    | ca. 2.50 gpm/ft              | (ca. 0.52 l/(s-m)) |
|                                  | with 3 % slope:    | ca. 3.15 gpm/ft              | (ca. 0.65 l/(s-m)) |
| Dimensions:                      | rolls              | ca. 3.3 ft x 65.6 ft         | (1.0 m x 20.0 m)   |

#### Health and Safety

This product does not require a material safety data sheet (MSDS) according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). When used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, an MSDS can be provided as a courtesy in response to a customer request.

#### Installation Instructions

Install the Drainage Mat Fixodrain®XD 20 on the root resistant and waterproof roof construction. The Fixodrain®XD 20 mats are to be connected by interlocking studs lengthwise. Cut the Fixodrain®XD 20 mat in situ at roof penetrations. Ensure that pre-attached filter sheet overlaps completely at joints. Consider ca. 3 % allowance for wastage.

Note: At roof edge and upstands the waterproofing has to be protected by a protection layer which has to be taken up above the finished surface in accordance with guidelines.

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T 866 766 3155 • F 866 766 3955 • [www.zinco-usa.com](http://www.zinco-usa.com) • [info@zinco-usa.com](mailto:info@zinco-usa.com)

Subject to technical alterations and printing errors; First edition: 02/10  
Authorized by ZinCo GmbH

## 2.0

**Aluminum GeoEdge:** Long Base aluminum restraint for media and vegetated assembly

**Height:** 3" x 3.25"

**Weight:** 4lbs (per 8' length)

**Thickness:** 0.210 inch thick exposed top lip

**Connection Method:** Spliced together with horizontal 0.060 inch thick x 1 inch wide x 2-3/4" aluminum sliding connector

**Anchors:** Anchor as specified

**Finish:** Natural Mill Aluminum

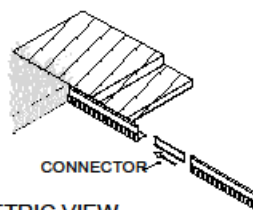
# geoedge™

PERMALOC CORPORATION, 13505 BARRY STREET HOLLAND, MI 49424  
(800) 356-9660 PHONE: (616) 399-9600 FAX: (616) 399-9770 WWW.PERMALOC.COM

ARCHITECT NOTE: CHECK OFF APPLICABLE SIZE & FINISH DESIRED

SIZE: ALL 8" (2.44M) LENGTHS w/ 0.250" (6.35MM)  
THICK EXPOSED TOP LIP

|                                                       |                                                         |
|-------------------------------------------------------|---------------------------------------------------------|
| <input type="checkbox"/> 3" x 3.25" (76MM x 83MM)     | <input type="checkbox"/> MF <input type="checkbox"/> BL |
| <input type="checkbox"/> 3.5" x 4.5" (89MM x 114MM)   | <input type="checkbox"/> MF <input type="checkbox"/> BL |
| <input type="checkbox"/> 4" x 3.25" (102MM x 83MM)    | <input type="checkbox"/> MF <input type="checkbox"/> BL |
| <input type="checkbox"/> 4.25" x 3.25" (108MM x 83MM) | <input type="checkbox"/> MF <input type="checkbox"/> BL |
| <input type="checkbox"/> 4.5" x 3.25" (114MM x 83MM)  | <input type="checkbox"/> MF <input type="checkbox"/> BL |
| <input type="checkbox"/> 4.5" x 4.5" (114MM x 114MM)  | <input type="checkbox"/> MF <input type="checkbox"/> BL |
| <input type="checkbox"/> 5.5" x 6.5" (140MM x 165MM)  | <input type="checkbox"/> MF <input type="checkbox"/> BL |
| <input type="checkbox"/> 6.5" x 5.5" (165MM x 140MM)  | <input type="checkbox"/> MF <input type="checkbox"/> BL |
| <input type="checkbox"/> 7.5" x 8.5" (191MM x 216MM)  | <input type="checkbox"/> MF <input type="checkbox"/> BL |
| <input type="checkbox"/> 8.5" x 7.5" (216MM x 191MM)  | <input type="checkbox"/> MF <input type="checkbox"/> BL |



ISOMETRIC VIEW  
NTS

## FINISH LEGEND:

(MF) MILL FINISH-NATURAL ALUMINUM  
(BL) BLACK DURAFLEX-ELECTROSTATICALLY  
APPLIED BAKED ON PAINT, MEETS AAMA 2603

## NOTES:

1. INSTALLATION PER MANUFACTURER'S RECOMMENDED "INSTALLATION GUIDELINES" IN ACCORDANCE WITH DESIGNER'S INSTRUCTIONS.\*
2. 8'-0" (2.44M) SECTIONS CONNECTED WITH 2 - 2.75" (70MM) SLIDING CONNECTORS.
3. CORNERS: REMOVE BASE TABS AND FORM A CONTINUOUS CORNER.
4. PERMALOC GEOEDGE AS MANUFACTURED BY PERMALOC CORPORATION, HOLLAND MI. (800) 356-9660 (616) 399-9800
5. CONTRACTOR'S NOTE: FOR PRODUCT AND PURCHASING INFORMATION VISIT: WWW.PERMALOC.COM

PERMALOC GEOEDGE  
ALUMINUM RESTRAINT

GROWING MEDIA ADJACENT  
TO RESTRAINT

AGGREGATE

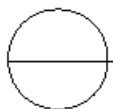
SLIP SHEET (OPTIONAL)

WATERPROOF LAYER

CONCRETE ROOF  
(NEW OR EXISTING)

\*DESIGNER MAINTAINS ULTIMATE  
RESPONSIBILITY FOR VALIDITY AND  
SAFETY OF THE INSTALLATION.

ALTERNATE INSTALLATION: GEOEDGE BASE MAY BE  
INSTALLED UNDER THE GROWING MEDIA



EDGING FOR GREENROOF WITH AGGREGATE

SCALE: 3"=1'-0"

GE2.dwg

3.0

**Stancils light-weight growth media.**

**Parameters Guiding Values \* Guiding Values (metric) \***

**Proportion of silting components:** ☐ 15 mass %

**Volume weight apparent density**

**max. water capacity:** 68.74 lb/cu ft

**Total pore volume:** approx. 60 Vol. %

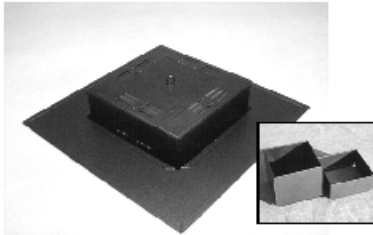
**Max. water capacity:** approx. 50 Vol. %

**Water permeability, mod Kf:** 0.024–2.40 in/min 0.001–0.10 cm/s

**pH-Value:** 6.50–8.00

## PRODUCT DATA SHEET

### Inspection Chamber KS 8



Inspection chambers for protection and inspection of roof outlets for extensive green roofs and gravel roofs.

#### Features

- fits all outlets,  $d < 10$  in
- frost proof due to insulated cover
- walkable
- corrosion-resistant
- overflow function via the cover, in case of flooding
- elevation with additional extension pieces KSA

#### Technical Data

Inspection Chamber KS 8 / EDP No. 4286

Made of galvanized, plastic-coated steel with lateral slots for water passage. Detachable and walkable cover, with thermally insulating expanded polystyrene inlay and drainage slots according to German FLL-Guidelines.

|             |                     |                    |
|-------------|---------------------|--------------------|
| Height:     | ca. 3.1 in          | (ca. 80 mm)        |
| Aperture:   | ca. 9.8 x 9.8 in    | (ca. 250 x 250 mm) |
| Flange:     | ca. 19.7 x 19.7 in  | (ca. 500 x 500 mm) |
| Slot width: | ca. 0.1 in          | (ca. 3 mm)         |
| Weight:     | ca. 7.05 lb         | (ca. 3.20 kg)      |
| Colour:     | "oldsilver-antique" |                    |

#### Accessories:

|                                       |            |            |
|---------------------------------------|------------|------------|
| Extension Piece KSA 10 / EDP No. 4249 | ca. 3.9 in | ca. 100 mm |
| Extension Piece KSA 20 / EDP No. 4250 | ca. 7.9 in | ca. 200 mm |

#### Health and Safety

This product does not require a material safety data sheet (MSDS) according to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

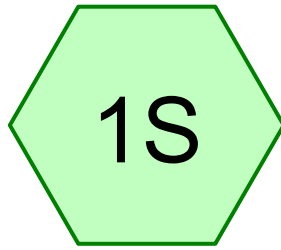
When used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, an MSDS can be provided as a courtesy in response to a customer request.

#### Installation Instructions

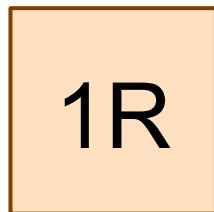
Install the Inspection Chamber KS 8 on the drainage element above the drain. Install the Filter Sheet on top of the flange of the Inspection Chamber.

ZinCo USA, Inc. • Paragon Towers • 233 Needham Street • Newton MA 02464-1502  
T 866 766 3155 • F 866 766 3955 • [www.zinco-usa.com](http://www.zinco-usa.com) • [info@zinco-usa.com](mailto:info@zinco-usa.com)

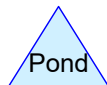
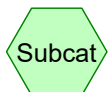
Subject to technical alterations and printing errors; First edition: 01/07  
Authorized by ZinCo GmbH



Pre 155 Sheridan St



POI#1



**1069\_Pre\_4-18-17**

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**Area Listing (all nodes)**

| Area<br>(acres) | CN        | Description<br>(subcatchment-numbers)     |
|-----------------|-----------|-------------------------------------------|
| 0.015           | 98        | Building (1S)                             |
| 0.015           | 98        | Concrete Stairs, Walkways, and walls (1S) |
| 0.020           | 96        | Riprap wall (1S)                          |
| 0.367           | 65        | Woods/grass comb., Fair, HSG B (1S)       |
| <b>0.416</b>    | <b>69</b> | <b>TOTAL AREA</b>                         |



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*Type III 24-hr 2-year Rainfall=3.10"*

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Time span=1.00-36.00 hrs, dt=0.02 hrs, 1751 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Pre 155 Sheridan St**

Runoff Area=18,140 sf 7.09% Impervious Runoff Depth=0.72"

Tc=5.0 min CN=69 Runoff=0.32 cfs 0.025 af

**Reach 1R: POI#1**

Inflow=0.32 cfs 0.025 af

Outflow=0.32 cfs 0.025 af

**Total Runoff Area = 0.416 ac Runoff Volume = 0.025 af Average Runoff Depth = 0.72"**  
**92.91% Pervious = 0.387 ac 7.09% Impervious = 0.030 ac**

**1069\_Pre\_4-18-17**

*Type III 24-hr 10-year Rainfall=4.60"*

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Time span=1.00-36.00 hrs, dt=0.02 hrs, 1751 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Pre 155 Sheridan St**

Runoff Area=18,140 sf 7.09% Impervious Runoff Depth=1.67"

Tc=5.0 min CN=69 Runoff=0.82 cfs 0.058 af

**Reach 1R: POI#1**

Inflow=0.82 cfs 0.058 af

Outflow=0.82 cfs 0.058 af

**Total Runoff Area = 0.416 ac Runoff Volume = 0.058 af Average Runoff Depth = 1.67"**  
**92.91% Pervious = 0.387 ac 7.09% Impervious = 0.030 ac**

**1069\_Pre\_4-18-17**

*Type III 24-hr 25-year Rainfall=5.80"*

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Time span=1.00-36.00 hrs, dt=0.02 hrs, 1751 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1S: Pre 155 Sheridan St**

Runoff Area=18,140 sf 7.09% Impervious Runoff Depth=2.56"

Tc=5.0 min CN=69 Runoff=1.28 cfs 0.089 af

**Reach 1R: POI#1**

Inflow=1.28 cfs 0.089 af

Outflow=1.28 cfs 0.089 af

**Total Runoff Area = 0.416 ac Runoff Volume = 0.089 af Average Runoff Depth = 2.56"**  
**92.91% Pervious = 0.387 ac 7.09% Impervious = 0.030 ac**

**1069\_Pre\_4-18-17**

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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Subcatchment 1S: Pre 155 Sheridan St**

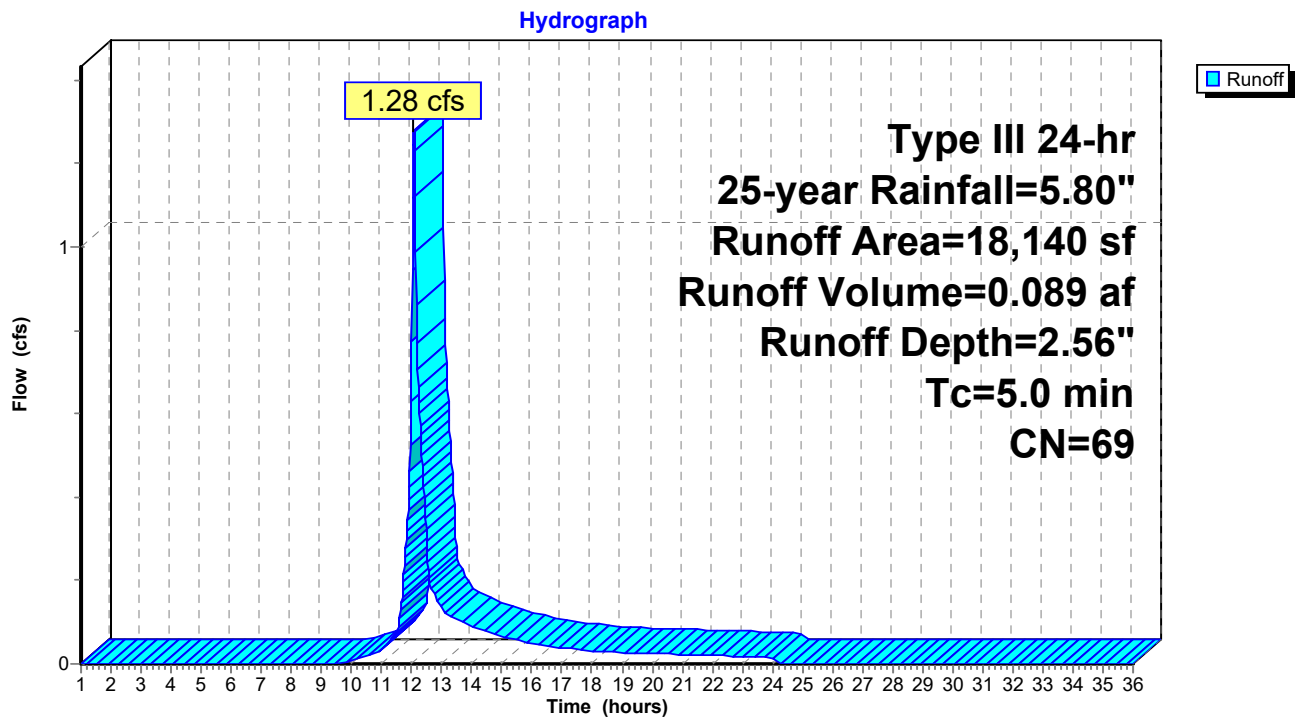
Manual Tc of 5 minutes applied once actual calculated dropped below 5 minutes.

Runoff = 1.28 cfs @ 12.08 hrs, Volume= 0.089 af, Depth= 2.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.02 hrs  
Type III 24-hr 25-year Rainfall=5.80"

|   | Area (sf) | CN | Description                          |
|---|-----------|----|--------------------------------------|
| * | 640       | 98 | Building                             |
| * | 647       | 98 | Concrete Stairs, Walkways, and walls |
|   | 15,992    | 65 | Woods/grass comb., Fair, HSG B       |
| * | 861       | 96 | Riprap wall                          |
|   | 18,140    | 69 | Weighted Average                     |
|   | 16,853    |    | 92.91% Pervious Area                 |
|   | 1,287     |    | 7.09% Impervious Area                |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 5.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 1S: Pre 155 Sheridan St**

1069\_Pre\_4-18-17

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Type III 24-hr 25-year Rainfall=5.80"

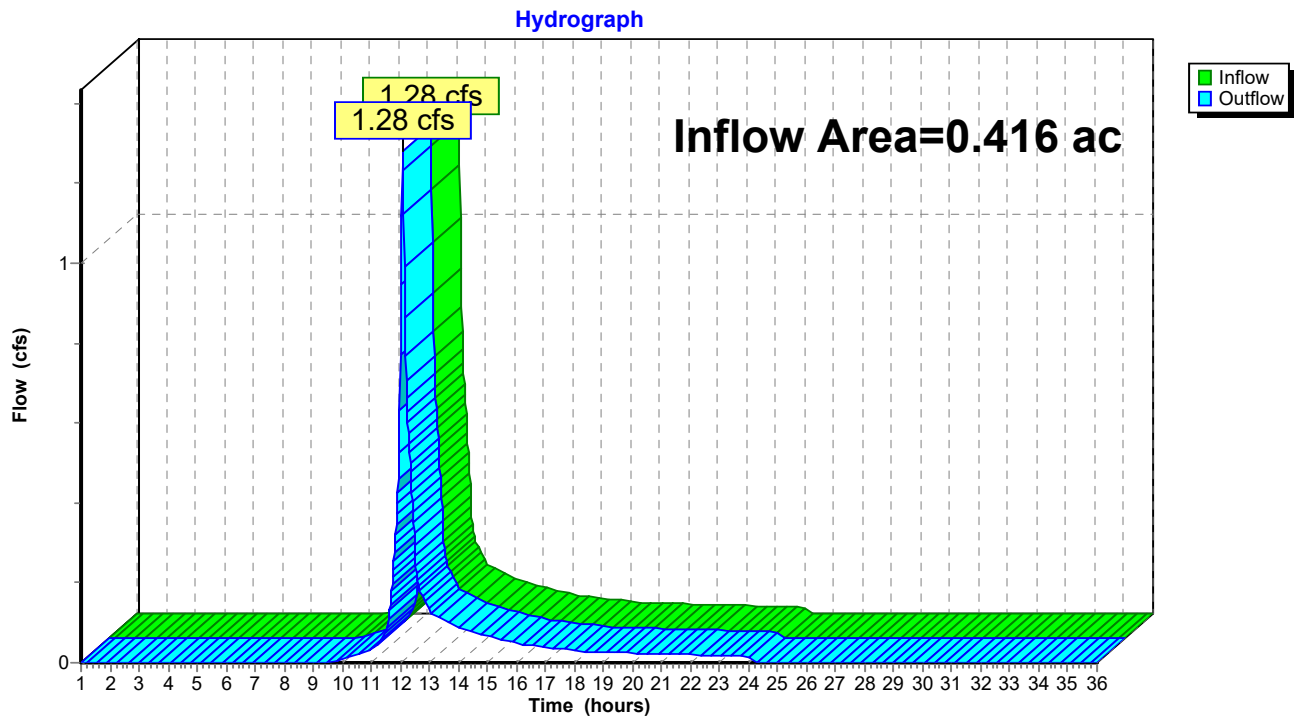
Printed 4/18/2017

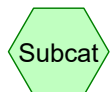
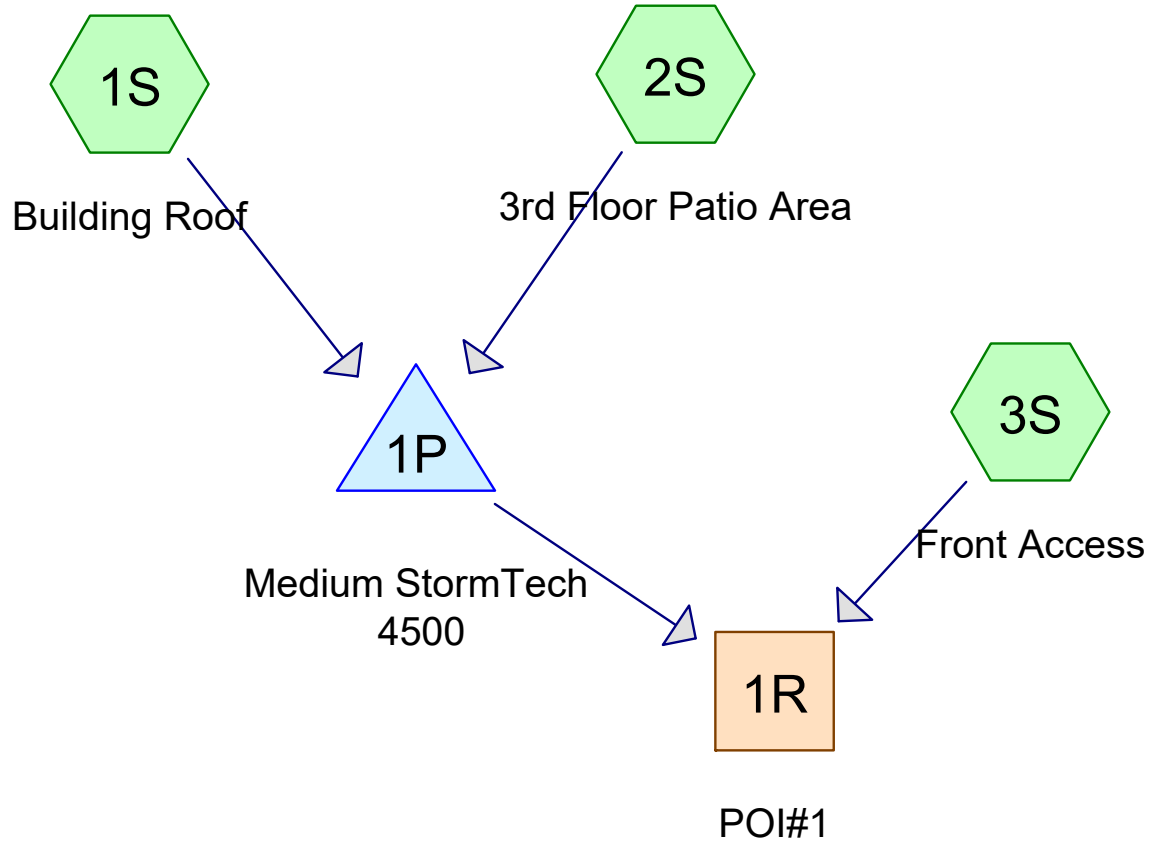
### Summary for Reach 1R: POI#1

Inflow Area = 0.416 ac, 7.09% Impervious, Inflow Depth = 2.56" for 25-year event  
Inflow = 1.28 cfs @ 12.08 hrs, Volume= 0.089 af  
Outflow = 1.28 cfs @ 12.08 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-36.00 hrs, dt= 0.02 hrs

### Reach 1R: POI#1

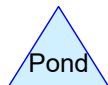




Subcat



Reach



Pond



Link

**Routing Diagram for 1069\_Post\_4-18-17**

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**1069\_Post\_4-18-17**

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**Area Listing (all nodes)**

| Area<br>(acres) | CN        | Description<br>(subcatchment-numbers)  |
|-----------------|-----------|----------------------------------------|
| 0.124           | 61        | >75% Grass cover, Good, HSG B (2S, 3S) |
| 0.120           | 84        | Green Roof, HSG B (1S)                 |
| 0.016           | 98        | Patio/Wall (2S)                        |
| 0.053           | 98        | Patio/Walls, Walkways (3S)             |
| 0.102           | 98        | Roofs, HSG B (1S)                      |
| <b>0.416</b>    | <b>83</b> | <b>TOTAL AREA</b>                      |

**1069\_Post\_4-18-17**

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Type III 24-hr 2-year Rainfall=3.10"

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Time span=0.00-48.00 hrs, dt=0.001 hrs, 48001 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1S: Building Roof**Runoff Area=9,708 sf 45.94% Impervious Runoff Depth=2.08"  
Tc=5.0 min CN=90 Runoff=0.56 cfs 0.039 af**Subcatchment2S: 3rd Floor Patio Area**Runoff Area=3,252 sf 21.31% Impervious Runoff Depth=0.72"  
Tc=5.0 min CN=69 Runoff=0.06 cfs 0.005 af**Subcatchment3S: Front Access**Runoff Area=5,180 sf 44.88% Impervious Runoff Depth=1.20"  
Tc=5.0 min CN=78 Runoff=0.17 cfs 0.012 af**Reach 1R: POI#1**

Inflow=0.22 cfs 0.054 af

Outflow=0.22 cfs 0.054 af

**Pond 1P: Medium StormTech 4500**Peak Elev=124.61' Storage=0.020 af Inflow=0.61 cfs 0.043 af  
Outflow=0.06 cfs 0.042 af**Total Runoff Area = 0.416 ac Runoff Volume = 0.055 af Average Runoff Depth = 1.58"**  
**58.78% Pervious = 0.245 ac 41.22% Impervious = 0.172 ac**

**1069\_Post\_4-18-17**

Type III 24-hr 10-year Rainfall=4.60"

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Time span=0.00-48.00 hrs, dt=0.001 hrs, 48001 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1S: Building Roof**Runoff Area=9,708 sf 45.94% Impervious Runoff Depth=3.49"  
Tc=5.0 min CN=90 Runoff=0.92 cfs 0.065 af**Subcatchment2S: 3rd Floor Patio Area**Runoff Area=3,252 sf 21.31% Impervious Runoff Depth=1.67"  
Tc=5.0 min CN=69 Runoff=0.15 cfs 0.010 af**Subcatchment3S: Front Access**Runoff Area=5,180 sf 44.88% Impervious Runoff Depth=2.38"  
Tc=5.0 min CN=78 Runoff=0.34 cfs 0.024 af**Reach 1R: POI#1**

Inflow=0.51 cfs 0.098 af

Outflow=0.51 cfs 0.098 af

**Pond 1P: Medium StormTech 4500**Peak Elev=125.69' Storage=0.028 af Inflow=1.06 cfs 0.075 af  
Outflow=0.37 cfs 0.075 af**Total Runoff Area = 0.416 ac Runoff Volume = 0.099 af Average Runoff Depth = 2.85"**  
**58.78% Pervious = 0.245 ac 41.22% Impervious = 0.172 ac**

**1069\_Post\_4-18-17**

Type III 24-hr 25-year Rainfall=5.80"

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Time span=0.00-48.00 hrs, dt=0.001 hrs, 48001 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1S: Building Roof**Runoff Area=9,708 sf 45.94% Impervious Runoff Depth=4.65"  
Tc=5.0 min CN=90 Runoff=1.21 cfs 0.086 af**Subcatchment2S: 3rd Floor Patio Area**Runoff Area=3,252 sf 21.31% Impervious Runoff Depth=2.56"  
Tc=5.0 min CN=69 Runoff=0.23 cfs 0.016 af**Subcatchment3S: Front Access**Runoff Area=5,180 sf 44.88% Impervious Runoff Depth=3.40"  
Tc=5.0 min CN=78 Runoff=0.49 cfs 0.034 af**Reach 1R: POI#1**

Inflow=0.92 cfs 0.135 af

Outflow=0.92 cfs 0.135 af

**Pond 1P: Medium StormTech 4500**Peak Elev=126.63' Storage=0.035 af Inflow=1.43 cfs 0.102 af  
Outflow=0.58 cfs 0.102 af**Total Runoff Area = 0.416 ac Runoff Volume = 0.136 af Average Runoff Depth = 3.92"**  
**58.78% Pervious = 0.245 ac 41.22% Impervious = 0.172 ac**

**1069\_Post\_4-18-17**

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Type III 24-hr 25-year Rainfall=5.80"

Printed 4/18/2017

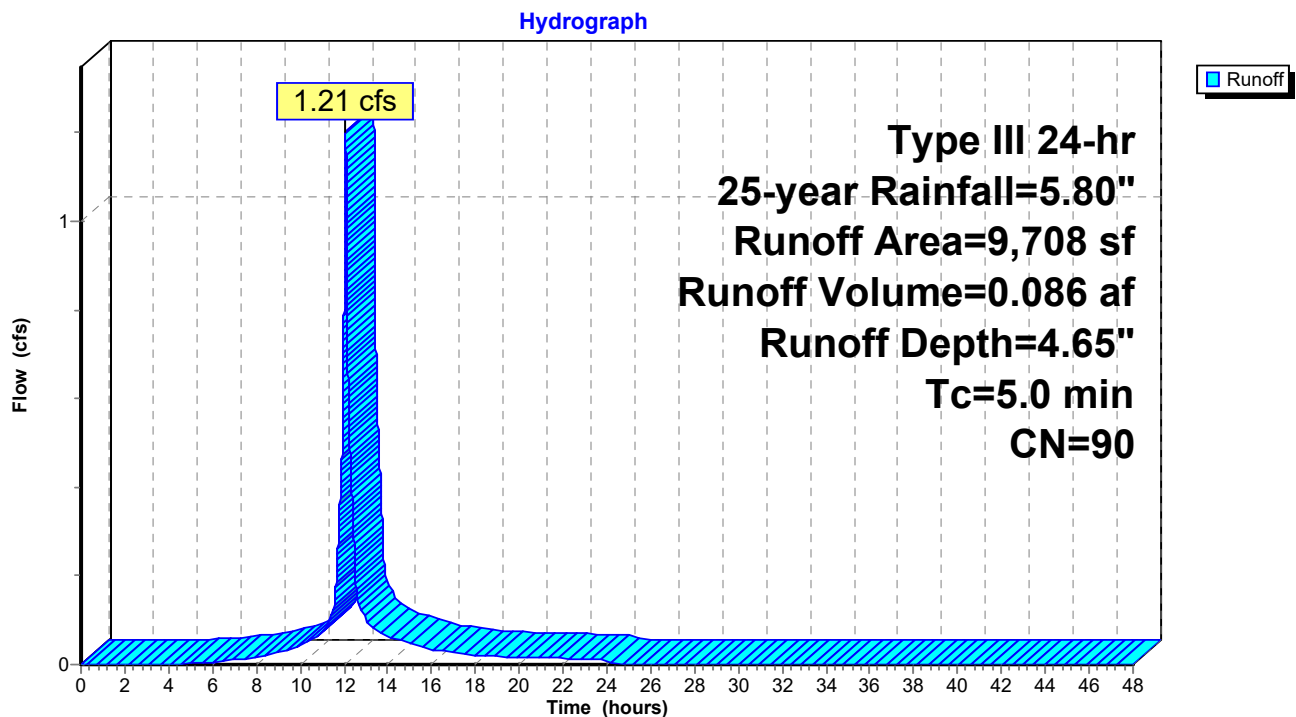
**Summary for Subcatchment 1S: Building Roof**

Runoff = 1.21 cfs @ 12.07 hrs, Volume= 0.086 af, Depth= 4.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.001 hrs  
Type III 24-hr 25-year Rainfall=5.80"

|   | Area (sf) | CN | Description            |
|---|-----------|----|------------------------|
| * | 4,460     | 98 | Roofs, HSG B           |
| * | 5,248     | 84 | Green Roof, HSG B      |
|   | 9,708     | 90 | Weighted Average       |
|   | 5,248     |    | 54.06% Pervious Area   |
|   | 4,460     |    | 45.94% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 5.0      |               |               |                   |                | Direct Entry, |

**Subcatchment 1S: Building Roof**

**1069\_Post\_4-18-17**

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Type III 24-hr 25-year Rainfall=5.80"

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**Summary for Subcatchment 2S: 3rd Floor Patio Area**

Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.016 af, Depth= 2.56"

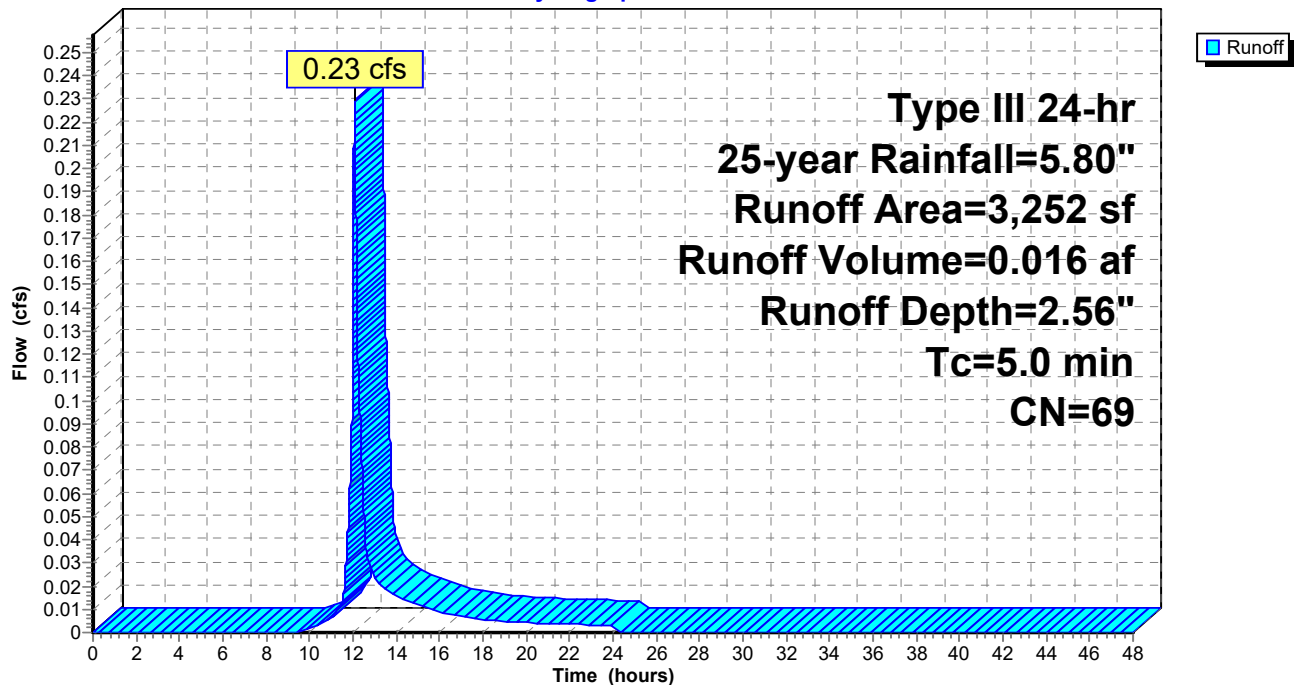
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.001 hrs  
Type III 24-hr 25-year Rainfall=5.80"

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 693       | 98 | Patio/Wall                    |
|   | 2,559     | 61 | >75% Grass cover, Good, HSG B |
|   | 3,252     | 69 | Weighted Average              |
|   | 2,559     |    | 78.69% Pervious Area          |
|   | 693       |    | 21.31% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 5.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 2S: 3rd Floor Patio Area**

Hydrograph



**Summary for Subcatchment 3S: Front Access**

Runoff = 0.49 cfs @ 12.07 hrs, Volume= 0.034 af, Depth= 3.40"

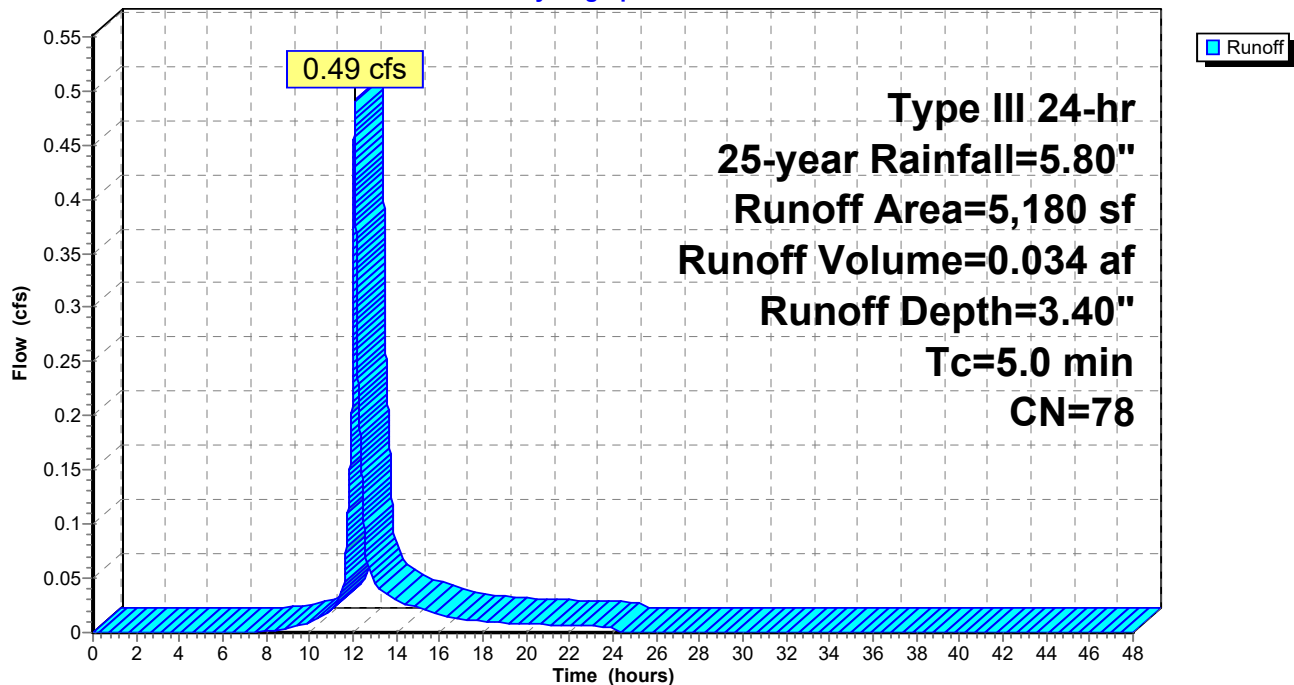
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.001 hrs  
Type III 24-hr 25-year Rainfall=5.80"

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 2,325     | 98 | Patio/Walls, Walkways         |
|   | 2,855     | 61 | >75% Grass cover, Good, HSG B |
|   | 5,180     | 78 | Weighted Average              |
|   | 2,855     |    | 55.12% Pervious Area          |
|   | 2,325     |    | 44.88% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 5.0         |                  |                  |                      |                   | Direct Entry, |

**Subcatchment 3S: Front Access**

Hydrograph





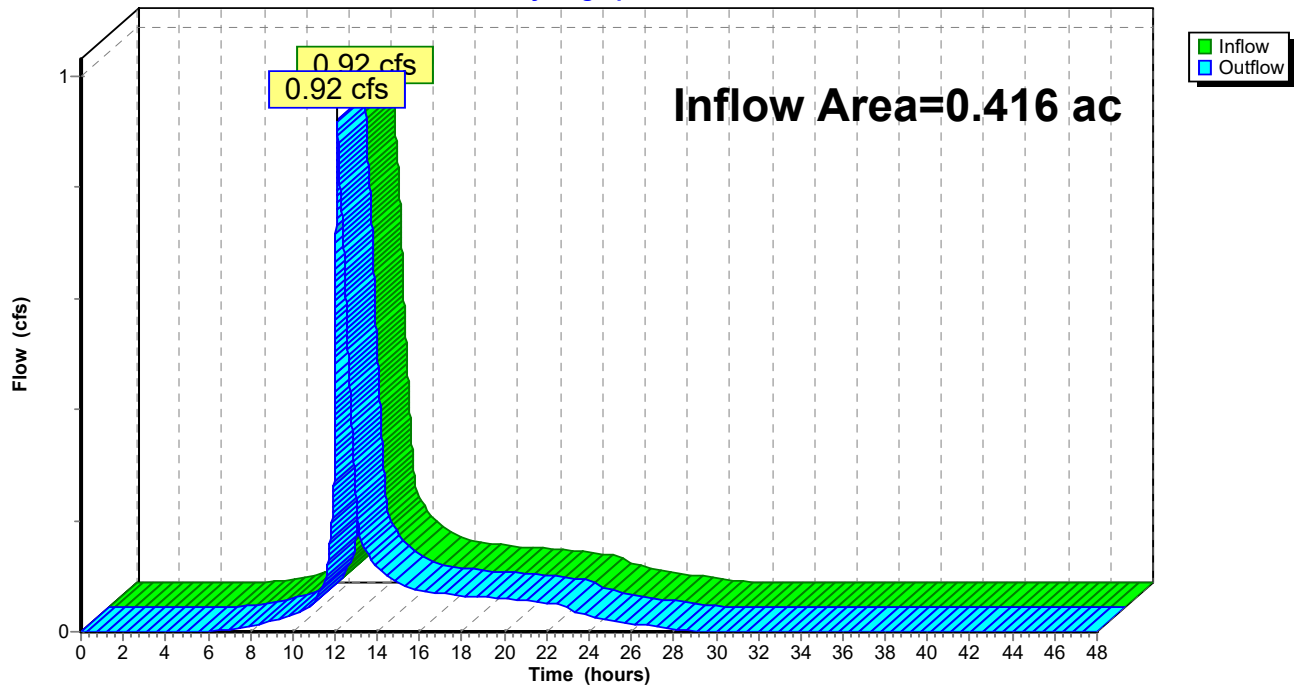
**Summary for Reach 1R: POI#1**

Inflow Area = 0.416 ac, 41.22% Impervious, Inflow Depth = 3.90" for 25-year event  
Inflow = 0.92 cfs @ 12.11 hrs, Volume= 0.135 af  
Outflow = 0.92 cfs @ 12.11 hrs, Volume= 0.135 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.001 hrs

**Reach 1R: POI#1**

Hydrograph



**1069\_Post\_4-18-17**

Type III 24-hr 25-year Rainfall=5.80"

Prepared by Acorn\_Trial

Printed 4/18/2017

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**Summary for Pond 1P: Medium StormTech 4500**

Inflow Area = 0.298 ac, 39.76% Impervious, Inflow Depth = 4.13" for 25-year event  
 Inflow = 1.43 cfs @ 12.07 hrs, Volume= 0.102 af  
 Outflow = 0.58 cfs @ 12.28 hrs, Volume= 0.102 af, Atten= 60%, Lag= 12.3 min  
 Primary = 0.58 cfs @ 12.28 hrs, Volume= 0.102 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.001 hrs

**Peak Elev= 126.63'** @ 12.28 hrs Surf.Area= 0.037 ac Storage= 0.035 af

Plug-Flow detention time= 144.5 min calculated for 0.102 af (99% of inflow)

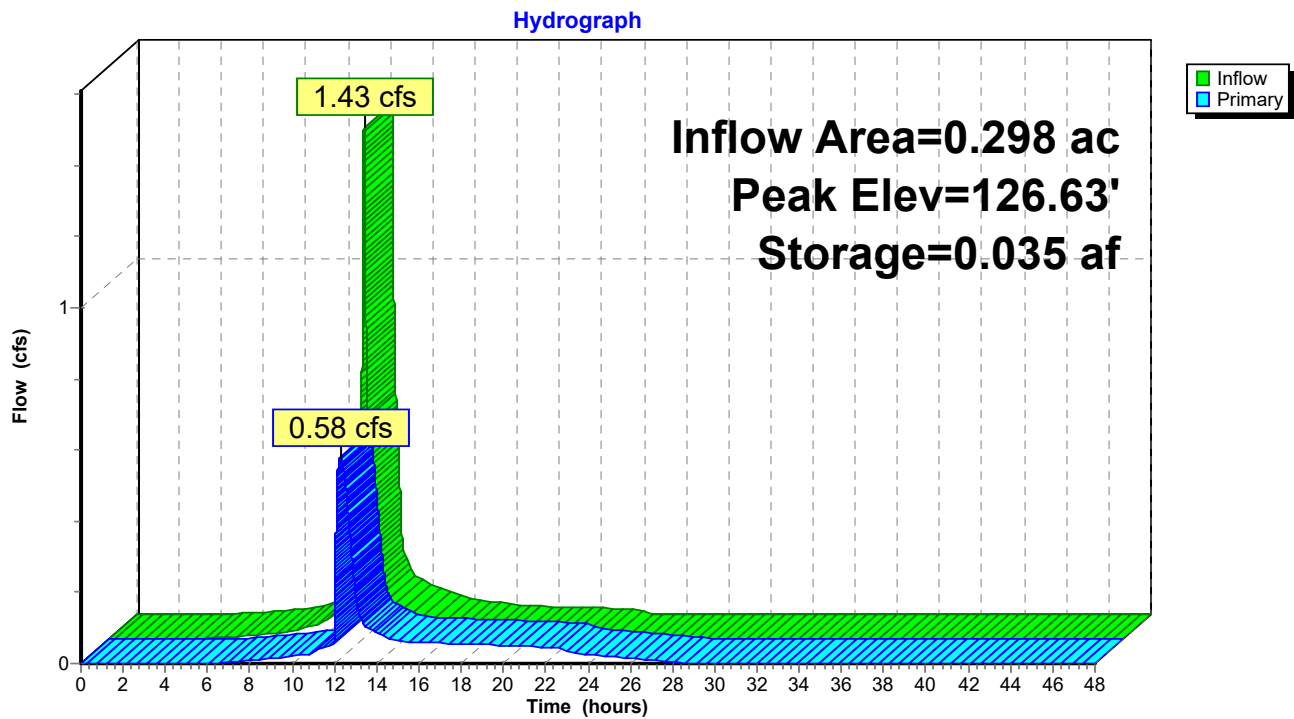
Center-of-Mass det. time= 140.9 min ( 934.5 - 793.7 )

| Volume | Invert  | Avail.Storage | Storage Description                                                                                                                                                                                                                                                 |
|--------|---------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | 122.72' | 0.026 af      | <b>12.33'W x 43.08'L x 6.75'H Stone</b><br>0.082 af Overall - 0.018 af Embedded = 0.064 af x 40.0% Voids                                                                                                                                                            |
| #2     | 123.47' | 0.018 af      | <b>ADS_StormTech MC-4500 +Cap @ 4.03' L x 6</b> Inside #1<br>Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.6 cf<br>Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap<br>2 Rows of 3 Chambers<br>Cap Storage= +35.7 cf x 2 x 2 rows = 142.8 cf |
| #3     | 121.22' | 0.001 af      | <b>12.33'W x 43.08'L x 1.50'H Sand</b><br>0.018 af Overall x 5.0% Voids                                                                                                                                                                                             |
| #4     | 119.88' | 0.006 af      | <b>12.33'W x 43.08'L x 1.33'H Crushed Stone</b><br>0.016 af Overall - 0.000 af Embedded = 0.016 af x 40.0% Voids                                                                                                                                                    |
| #5     | 120.21' | 0.000 af      | <b>4.0" Round Underdrain Storage</b> Inside #4<br>L= 42.0'                                                                                                                                                                                                          |
|        |         | 0.051 af      | Total Available Storage                                                                                                                                                                                                                                             |

| Device | Routing  | Invert  | Outlet Devices                                                                                                                                                                                                       |
|--------|----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary  | 119.90' | <b>8.0" Round Culvert</b><br>L= 107.0' CMP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 119.90' / 107.00' S= 0.1206 ' /' Cc= 0.900<br>n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf             |
| #2     | Device 1 | 120.00' | <b>1.0" Vert. Vert Water Quality</b> C= 0.600                                                                                                                                                                        |
| #3     | Device 1 | 125.00' | <b>4.0" Vert. Vert Quantity</b> C= 0.600                                                                                                                                                                             |
| #4     | Primary  | 128.00' | <b>6.0' long x 0.7' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00<br>2.50<br>Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32<br>3.31 3.32 |

**Primary OutFlow** Max=0.58 cfs @ 12.28 hrs HW=126.63' (Free Discharge)

- 1=Culvert (Passes 0.58 cfs of 3.36 cfs potential flow)  
 2=Vert Water Quality (Orifice Controls 0.07 cfs @ 12.36 fps)  
 3=Vert Quantity (Orifice Controls 0.51 cfs @ 5.83 fps)  
 4=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

**Pond 1P: Medium StormTech 4500**

**DRAFT OF STORMWATER DRAINAGE  
SYSTEM MAINTENANCE AGREEMENT**

**IN CONSIDERATION OF** the site plan approval granted by the Planning Board of the City of Portland to the proposed 155 Sheridan Street Redevelopment Project shown on the Site Plan recorded in the Cumberland County Registry of Deeds in Plan Book \_\_\_, Page \_\_\_ (the “Plan”) and associated Grading & Drainage Plan (Sheet C-30), dated \_\_\_\_\_ prepared by Acorn Engineering, Inc. of P.O. Box 3372, Portland, ME 04104 dated and pursuant to a condition thereof, BD Sheridan, LLC, a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of 1266 Furnace Brook Parkway Suite 300, Quincy, Massachusetts 02169, the owner of the subject premises, does hereby agree, for itself, its successors and assigns (the “Owner”), as follows:

Maintenance Agreement

That it, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the underdrained subsurface sand filter, drainage manholes, storm drain pipes, and underdrain pipes (hereinafter collectively referred to as the “stormwater system”) as shown on the Grading & Drainage Plan, C-30 attached hereto as **Exhibit B** and in strict compliance with the approved Stormwater Inspection & Maintenance Plan and Stormwater Maintenance and Inspection Log, dated 03/28/2017, copies attached as **Exhibit A and C** respectively and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance and Inspection Log in the forms attached as **Exhibit C**. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

Said agreement is for the benefit of the said City of Portland and all persons in lawful possession of the property and abutters thereto; further, that the said City of Portland or said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said premises to maintain, repair, or replace said stormwater system, including but not limited to the underdrained subsurface

sand filter, drainage manholes, storm drain pipes, underdrain pipes, and other drainage structures thereon in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall not confer upon the City of Portland or any other person the right to utilize said stormwater system for public use or for the development of any other property, and the Owner shall bear no financial responsibility by virtue of this Agreement for enlarging the capacity of said system for any reason whatsoever.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the subdivision and/or site plan most recently and formally approved by the Planning Board of the City of Portland.

This Agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon the Owner's successors and assigns as their interests may from time to time appear.

The Owner agrees to provide a copy of this Agreement to any successor or assign and to forward to the City an Addendum signed by any successor or assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Works and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this Agreement and release "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and lienied if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the Agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings or residential units and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax roles on file in the City Assessor's Office.

If the property has more than one owner on the tax rolls, service shall be complete by mailing it to only the first listed owner. The failure to receive any written notice required by this Agreement shall not prevent the City from entering the property and performing maintenance or repairs on the stormwater system, or any component thereof, or liening it or create a cause of action against the City.

Dated at Portland, Maine this \_\_\_\_\_ day of \_\_\_\_\_, 2017.

BD Sheridan, LLC  
A Maine limited liability company

\_\_\_\_\_  
Bernie Saulnier, Manager

STATE OF MAINE  
CUMBERLAND, ss.

Date: \_\_\_\_\_

Personally appeared the above-named Bernie Saulnier, Manager of BD Sheridan, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

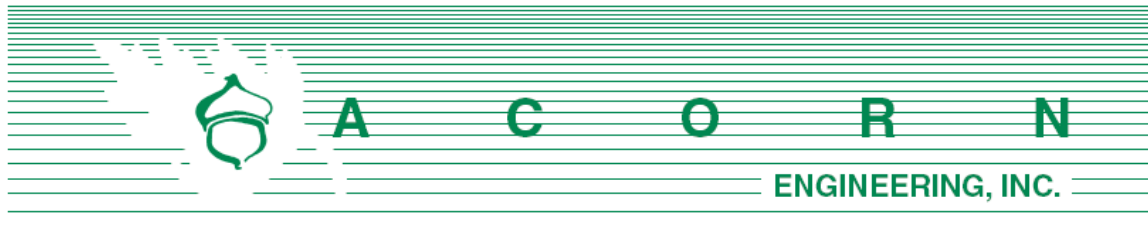
\_\_\_\_\_  
Notary Public/Attorney at Law

Print name: \_\_\_\_\_

Exhibit A: Stormwater Inspection & Maintenance Plan

Exhibit B: Grading & Drainage Plan

Exhibit C: Stormwater Maintenance and Inspection Log



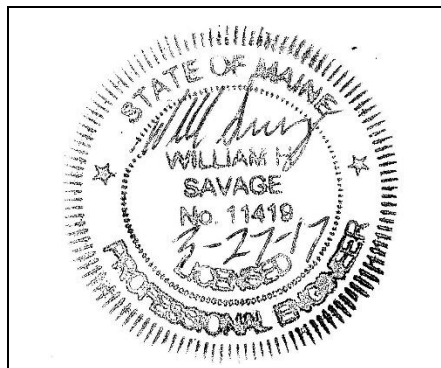
## **POST CONSTRUCTION - STORMWATER INSPECTION & MAINTENANCE PLAN**

**Prepared For:**

**BD Sheridan, LLC  
1266 Furnace Brook Parkway Suite 300  
Quincy, Massachusetts 02169**

**Prepared By:**

**Acorn Engineering, Inc.  
158 Danforth Street  
Portland, Maine 04102**



**March 2017**



## **RESPONSIBLE PARTY**

The owner, BD Sheridan, LLC, and/or their successor shall be responsible for contracting with a qualified stormwater professional to implement the Inspection and Maintenance Plan. The qualified stormwater professional shall maintain a stormwater log (report) summarizing inspections, maintenance, and corrective action taken. The Qualified Stormwater Professional shall annually submit the Stormwater Log to the Department of Public Works prior to June 30<sup>th</sup>.

The following is an example of a qualified stormwater professional that the association may contract through.

Organization: Will Savage, PE  
Acorn Engineering, Inc  
Portland, Maine

Phone: (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 inspection and maintenance criteria is based upon the Maine DEP - Stormwater Management for Maine, Volume III: BMPs Technical Design Manual. Refer to the Grading and Drainage Plan for the location of the BMPs

## **PURPOSE**

This Inspection and Maintenance Plan has been individually tailored to this parcel's stormwater infrastructure, site characteristics, and their respective opportunities and limitations related to reducing the pollutant load on the receiving watershed. The maintenance of a parcel's impervious surfaces and stormwater infrastructure is critical to extending the long-term performance and effectiveness of Best Management Practices (BMPs). The Inspection and Maintenance Plan represents the parcel's minimum activities to meet the permit requirements. The parcel shall still be subject to any applicable Civil Site Plans, Permit Applications, Erosion and Sedimentation Control Plans Reports, Stormwater Management Plans, Inspection and Maintenance Manuals, and all Municipal, State, and Federal rules.

## **OPERATION AND MAINTENANCE ACTIVITY**

### **Underdrained Subsurface Sand Filter (USSF):**

The maintenance of the underdrained subsurface sand filter shall be in accordance with the following activities identified below and the most recent version of the Maine DEP Volume III BMPs Technical Design Manual Chapter 7.3 Underdrained Subsurface Sand Filter. Refer the manufacturer's maintenance manual in Exhibit C for more information on maintenance activities.

- The system should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining within 24 hours to 36 hours.
- Inspect Outlet Control Structures (OCS) to ensure they are in good working order and that the orifice and trash racks are unobstructed from trash and debris.
- Inspect and maintain the StormTech Isolator Row in accordance with the attached proprietary Operation and Maintenance Plan.

### **Sweeping:**

Annual sweeping of the driveway and parking areas following the snow melt for accumulated winter sand, if necessary. Appropriately dispose of all collected material.

### **Storm Drains:**

The storm drain shall be annually inspected for the presence of accumulated sediment or debris. Any sediment shall be removed as required.

- The equipment shall meet the following minimum specifications; power jet and water source for washing down the storm drain, vacuum attachment for catch basin cleaning, and a liquid handling method to dewater the material.
- Inspect and legally dispose of accumulated sediment and debris within the storm drains between basins. Liquids must be decanted on-site and returned to the catch basin.

### **Drainage Manholes:**

Drainage manholes shall be inspected to confirm the structure is operating properly.

- Inspect the presence of accumulated sediment or debris any sediment shall be removed. The equipment shall meet the following minimum specifications; power jet and water source for washing down the storm drain, vacuum attachment for catch basin cleaning, and a liquid handling method to dewater the material.
- Sediment shall be removed when accumulation is within 6 inches of the outfall pipe invert. Legally dispose of accumulated sediment and debris from the bottom of the basin, inlet grates, and inflow channels to the basin.
- If the basin outlet is designed with a hood to trap floatable materials (e.g. Snout), check to ensure watertight seal is working.



### Landscaped, Vegetated and Areas Adjacent to Retaining Walls:

Inspect all landscaped and or vegetated slopes and embankments on an annual basis. Vegetated areas with bare areas or sparse growth (<90% coverage) shall be revegetated. Mulch shall be applied to landscaped areas, as necessary. Dead or decaying landscaping (ground cover, shrubs, trees etc.) shall be replanted in accordance with the approved Landscape Plan.

If signs of rill erosion or scour are present within areas tributary to the retaining walls, or stormwater flow is observed flowing over the wall, Acorn Engineering should be immediately contacted to perform an inspection and/or to contact the appropriate professional. Should concerns arise from the downhill abutters related to groundwater flow from the retaining wall weep hole outlets, Acorn Engineering should be contacted to perform a site inspection and to meet with the concerned abutter. Periodic inspections of the retaining walls shall be performed, under separate contract, by a Professional Geotechnical Engineer.

### INSPECTION AND MAINTENANCE TABLE

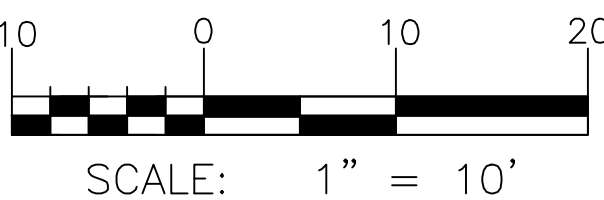
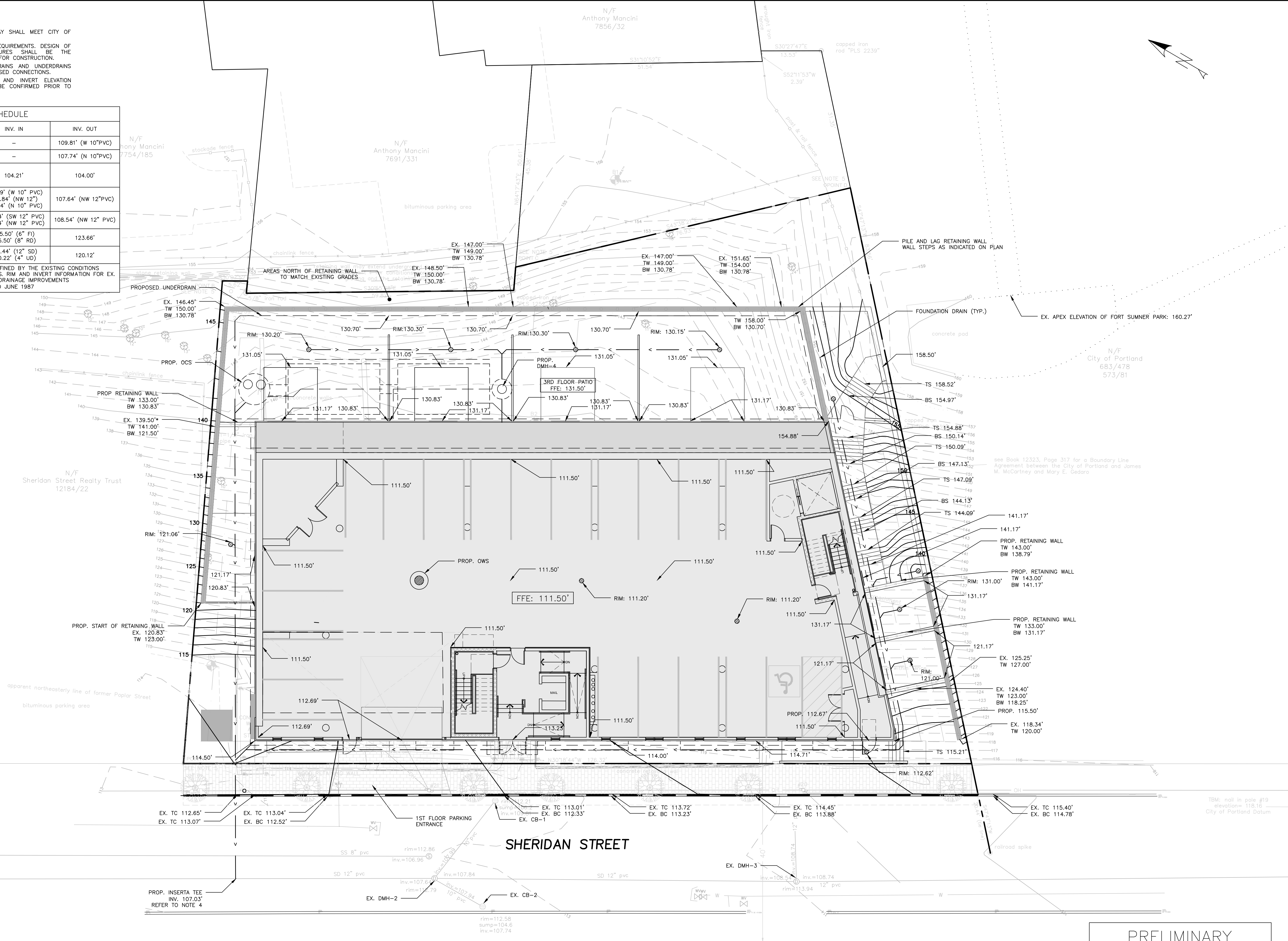
| <b>Inspection and Maintenance Frequency</b> | <b>Spring or Yearly</b> | <b>Summer</b> | <b>Fall</b> | <b>As Necessary</b> |
|---------------------------------------------|-------------------------|---------------|-------------|---------------------|
| Underdrained Subsurface Sand Filter         | X                       |               | X           | X                   |
| Sweeping                                    | X                       |               |             | X                   |
| Storm Drains                                |                         | X             |             | X                   |
| Drainage Manholes                           |                         | X             |             | X                   |
| Landscaped/Vegetated/Wall Areas             | X                       |               |             | X                   |



- GENERAL NOTES:
1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
  2. 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.
  3. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
  4. CONTRACTOR TO NOTE THAT THE EXISTING RIM AND INVERT ELEVATION INFORMATION PROVIDED FOR EX. DMH-1 ARE TO BE CONFIRMED PRIOR TO CONNECTING THE PROPOSED 8" SD OUTLET.

| STRUCTURE SCHEDULE |                   |         |                                                                |                      |
|--------------------|-------------------|---------|----------------------------------------------------------------|----------------------|
| STRUCTURE          | INTERIOR DIAMETER | RIM     | INV. IN                                                        | INV. OUT             |
| EX. CB-1           | -                 | 112.21' | -                                                              | 109.81' (W 10"PVC)   |
| EX. CB-2           | -                 | 112.58' | -                                                              | 107.74' (N 10"PVC)   |
| EX. DMH-1*         | -                 | 111.46' | 104.21'                                                        | 104.00'              |
| EX. DMH-2          | -                 | 112.79' | 107.99' (W 10" PVC)<br>107.84' (NW 12")<br>107.94' (N 10" PVC) | 107.64' (NW 12"PVC)  |
| EX. DMH-3          | -                 | 113.94' | 108.74' (SW 12" PVC)<br>108.74' (NW 12" PVC)                   | 108.54' (NW 12" PVC) |
| DMH-4              | 4'                | 130.80' | 125.30' (6" FI)<br>125.50' (8" RD)                             | 123.66'              |
| OCS                | 6'                | 130.80' | 126.44' (12" SD)<br>120.22' (4" UD)                            | 120.12'              |

\* EXISTING STRUCTURES EXCEPT FOR EX. DMH-1 AS DEFINED BY THE EXISTING CONDITIONS SURVEY DATED MARCH 6, 2016 BY TITOMB ASSOCIATES. RIM AND INVERT INFORMATION FOR EX. DMH-1 AS DEFINED BY SHEET 5 OF SHERIDAN STREET DRAINAGE IMPROVEMENTS (#86103-30-64-04) BY CITY OF PORTLAND DPW DATED JUNE 1987



PRELIMINARY  
NOT ISSUED FOR  
CONSTRUCTION

ISSUED FOR  
PRELIM. APP.

BY  
WHS  
3/28/17

GRADING & DRAINAGE PLAN

155 SHERIDAN STREET

VAZZA REAL ESTATE GROUP  
BD SHERIDAN, LLC

1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169

ENGINEERING, INC.

158 DANFORTH ST. PORTLAND, MAINE 04102  
(207) 775-2655

FILE: 1069\_CIVIL

JN: 1069

SCALE: 1"=10'

DESIGNED BY: WHS

DRAWN BY: OJD

CHECKED BY: WHS

DRAWING NO.  
C-30



# STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

| FILTRATION BMP:                                                                                          |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
|----------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------|------------------------------|------------------------------|---------------------------------|
| Location:<br>155 Sheridan Street, Portland, ME 04101                                                     |                                     |                                     |                                     | Latitude: 43.667553° N                                                                      |                              |                              |                                 |
|                                                                                                          |                                     |                                     |                                     | Longitude: -70.251461° W                                                                    |                              |                              |                                 |
| Description of Located Point:<br>Northeast to the rear of the property                                   |                                     |                                     |                                     | Inspector:                                                                                  |                              |                              |                                 |
|                                                                                                          |                                     |                                     |                                     | Date of Inspection:                                                                         |                              |                              |                                 |
|                                                                                                          |                                     |                                     |                                     | Weather Conditions:                                                                         |                              |                              |                                 |
| Days since last precipitation:                                                                           |                                     |                                     |                                     | MEDEP Permit #: N/A                                                                         |                              |                              |                                 |
| Quantity of last precipitation (in):                                                                     |                                     |                                     |                                     | Design Drawings: YES                                                                        |                              |                              |                                 |
|                                                                                                          |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
| Maintenance Items                                                                                        | Inspect In Spring                   | Inspect In Fall                     | Inspect As Necessary                |                                                                                             | Maintenance Requested (Date) | Maintenance Completed (Date) | Summary of Maintenance Required |
| <b>Underdrained Subsurface Sand Filter (USSF)</b>                                                        |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
| Sand filter retains the design volume for a drain down time greater than 24-hours and less than 36-hours | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| The outlet control structure is in good working condition.                                               | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Inlet and pre-treatment measures are free of sediment and floatables accumulation.                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Maintain in accordance with manufacturer's recommendations                                               | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Treatment device is working properly and is free of debris and sediment                                  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Sediment is less than 3 inches within the isolator row                                                   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Manhole is working properly and is free of debris and sediment                                           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Basin outlet hood (if any) is working properly.                                                          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |

|                                                           |                          |                                     |                          |                                                             |  |  |  |
|-----------------------------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------------------------------|--|--|--|
| The outlet control structure is in good working condition | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No |  |  |  |
|-----------------------------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------------------------------|--|--|--|

## STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

[illegible]

# STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

| DRAINAGE MANHOLE:                                                                |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
|----------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------|------------------------------|------------------------------|---------------------------------|
| <b>Location:</b><br>155 Sheridan Street, Portland, ME 04101                      |                                     |                                     |                                     | <b>Latitude:</b> 43.667553° N                                                               |                              |                              |                                 |
|                                                                                  |                                     |                                     |                                     | <b>Longitude:</b> -70.251461° W                                                             |                              |                              |                                 |
| <b>Description of Located Point:</b><br>Northeast to the rear of the property    |                                     |                                     |                                     | <b>Inspector:</b>                                                                           |                              |                              |                                 |
|                                                                                  |                                     |                                     |                                     | <b>Date of Inspection:</b>                                                                  |                              |                              |                                 |
|                                                                                  |                                     |                                     |                                     | <b>Weather Conditions:</b>                                                                  |                              |                              |                                 |
| <b>Days since last precipitation:</b>                                            |                                     |                                     |                                     | <b>MEDEP Permit #</b> N/A                                                                   |                              |                              |                                 |
| <b>Quantity of last precipitation (in):</b>                                      |                                     |                                     |                                     | <b>Design Drawings:</b> YES                                                                 |                              |                              |                                 |
|                                                                                  |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
| Maintenance Items                                                                | Inspect In Spring                   | Inspect In Fall                     | Inspect As Necessary                |                                                                                             | Maintenance Requested (Date) | Maintenance Completed (Date) | Summary of Maintenance Required |
| <b>Drainage Manhole</b>                                                          |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
| Manhole is working properly and is free of debris and sediment                   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Inter-basin storm drain is functioning properly and free of sediment and debris. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Sediment sacks and hydrocarbon absorptive pads are working properly.             | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| <b>General</b>                                                                   |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
| Access to facility is adequate                                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Photographs of most recent site inspection are included                          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                                                                             |                              |                              | Photographs are attached.       |
| Additional Comments:                                                             |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |



# STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

| STORMWATER PIPE:                                                                                                      |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------|------------------------------|------------------------------|---------------------------------|
| <b>Location:</b><br><div style="text-align: center;">155 Sheridan Street, Portland, ME 04101</div>                    |                                     |                                     |                                     | <b>Latitude:</b> 43.667647°N                                                                |                              |                              |                                 |
|                                                                                                                       |                                     |                                     |                                     | <b>Longitude:</b> -70.251671° W                                                             |                              |                              |                                 |
| <b>Description of Located Point:</b><br><div style="text-align: center;">In between the OCS and Sheridan Street</div> |                                     |                                     |                                     | <b>Inspector:</b>                                                                           |                              |                              |                                 |
|                                                                                                                       |                                     |                                     |                                     | <b>Date of Inspection:</b>                                                                  |                              |                              |                                 |
|                                                                                                                       |                                     |                                     |                                     | <b>Weather Conditions:</b>                                                                  |                              |                              |                                 |
| <b>Days since last precipitation:</b>                                                                                 |                                     |                                     |                                     | <b>MEDEP Permit #</b> N/A                                                                   |                              |                              |                                 |
| <b>Quantity of last precipitation (in):</b>                                                                           |                                     |                                     |                                     | <b>Design Drawings:</b> YES                                                                 |                              |                              |                                 |
|                                                                                                                       |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
| Maintenance Items                                                                                                     | Inspect In Spring                   | Inspect In Fall                     | Inspect As Necessary                |                                                                                             | Maintenance Requested (Date) | Maintenance Completed (Date) | Summary of Maintenance Required |
| <b>Inlets, Outlets, Culverts &amp; Storm Drains</b>                                                                   |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
| Pipe/culvert is free of obstruction, accumulated sediment and debris                                                  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Pipe inlet and outlet is free of obstruction, accumulated sediment and debris                                         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Pipe/culvert, inlet and outlet is free of collapses and structural damage                                             | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Outlet and inlet are properly conveying stormwater and no erosion is visible                                          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| <b>General</b>                                                                                                        |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |
| Access to facility is adequate                                                                                        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Photographs of most recent site inspection are included                                                               | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                                                                             |                              |                              | Photographs are attached.       |
| Additional Comments:                                                                                                  |                                     |                                     |                                     |                                                                                             |                              |                              |                                 |

# STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

| VEGETATED AREAS:                                                            |                          |                                     |                                     |                                                                                             |                              |                              |                                 |
|-----------------------------------------------------------------------------|--------------------------|-------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------|------------------------------|------------------------------|---------------------------------|
| <b>Location:</b><br>155 Sheridan Street, Portland, ME 04101                 |                          |                                     |                                     | <b>Latitude:</b> 43.667440°N                                                                |                              |                              |                                 |
|                                                                             |                          |                                     |                                     | <b>Longitude:</b> -70.251540° W                                                             |                              |                              |                                 |
| <b>Description of Located Point:</b><br>Landscape Areas within the property |                          |                                     |                                     | <b>Inspector:</b>                                                                           |                              |                              |                                 |
|                                                                             |                          |                                     |                                     | <b>Date of Inspection:</b>                                                                  |                              |                              |                                 |
| <b>Days since last precipitation:</b>                                       |                          |                                     |                                     | <b>Weather Conditions:</b>                                                                  |                              |                              |                                 |
| <b>Quantity of last precipitation (in):</b>                                 |                          |                                     |                                     | <b>MEDEP Permit #</b> N/A                                                                   |                              |                              |                                 |
|                                                                             |                          |                                     |                                     | <b>Design Drawings:</b> YES                                                                 |                              |                              |                                 |
|                                                                             |                          |                                     |                                     |                                                                                             |                              |                              |                                 |
| Maintenance Items                                                           | Inspect In Spring        | Inspect In Fall                     | Inspect As Necessary                |                                                                                             | Maintenance Requested (Date) | Maintenance Completed (Date) | Summary of Maintenance Required |
| <b>Embankments</b>                                                          |                          |                                     |                                     |                                                                                             |                              |                              |                                 |
| Slopes and embankments are in good condition.                               | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Site is free of rill erosion                                                | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| <b>General</b>                                                              |                          |                                     |                                     |                                                                                             |                              |                              |                                 |
| Site is free of locations with less than 90% vegetative cover               | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Plantings are capable of withstanding concentrated flows                    | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Access to facility is adequate                                              | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |                              |                              |                                 |
| Photographs of most recent site inspection are included                     | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                                                                             |                              |                              | Photographs are attached.       |
| Additional Comments:                                                        |                          |                                     |                                     |                                                                                             |                              |                              |                                 |

**Save Valuable Land and  
Protect Water Resources**



**Isolator<sup>®</sup> Row O&M Manual**  
StormTech<sup>®</sup> Chamber System for Stormwater Management



# 1.0 The Isolator<sup>®</sup> Row

## 1.1 INTRODUCTION

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row is a patented technique to inexpensively enhance Total Suspended Solids (TSS) removal and provide easy access for inspection and maintenance.



*Looking down the Isolator Row from the manhole opening, woven geotextile is shown between the chamber and stone base.*

## 1.2 THE ISOLATOR ROW

The Isolator Row is a row of StormTech chambers, either SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-4500 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as storm water rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC-310-3 and SC-740 models) allow storm water to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

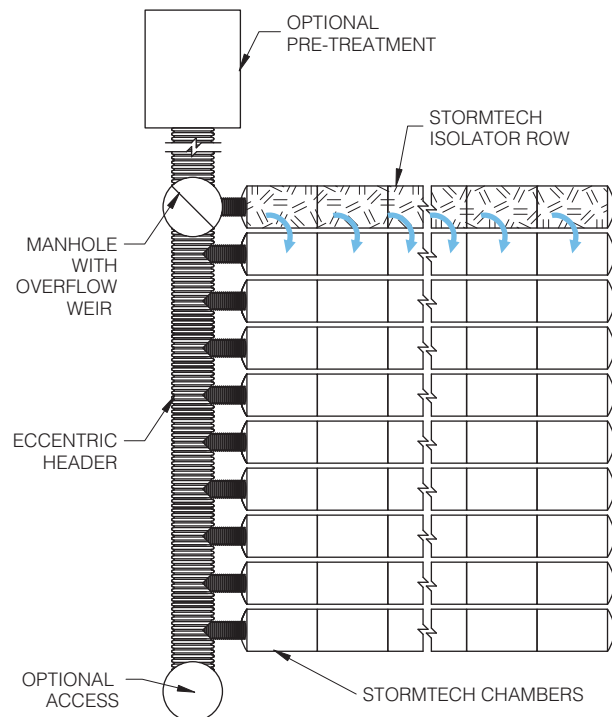
Two different fabrics are used for the Isolator Row. A woven geotextile fabric is placed between the stone and the Isolator Row chambers. The tough geotextile provides a media for storm water filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row is typically designed to capture the “first flush” and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but typically includes a high flow weir such that storm water flowrates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other chambers.

The Isolator Row may also be part of a treatment train. By treating storm water prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins, oil-water separators or can be innovative storm water treatment devices. The design of the treatment train and selection of pretreatment devices by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs.

*Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row.*

### StormTech Isolator Row with Overflow Spillway (not to scale)



## 2.0 Isolator Row Inspection/Maintenance



### 2.1 INSPECTION

The frequency of Inspection and Maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

### 2.2 MAINTENANCE

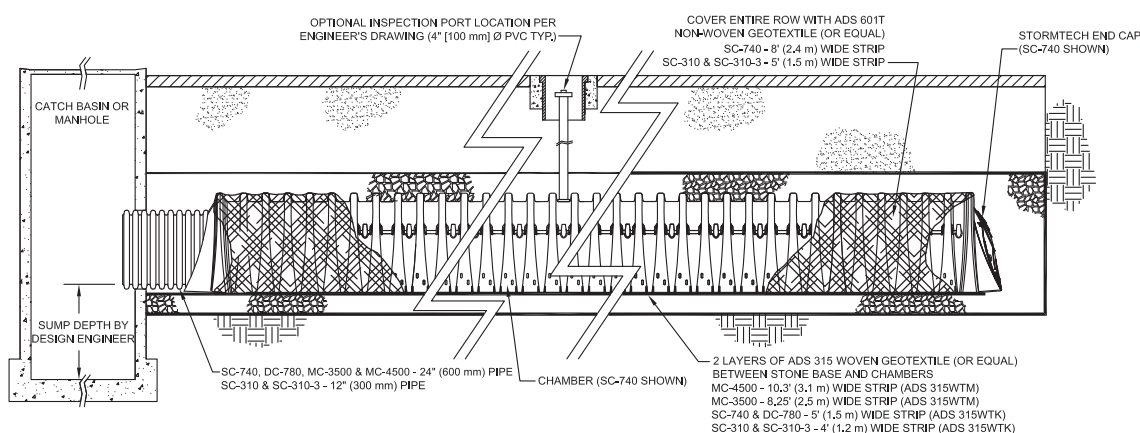
The Isolator Row was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.



*Examples of culvert cleaning nozzles appropriate for Isolator Row maintenance. (These are not StormTech products.)*

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45” are best. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row up to 50 chambers long. **The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.**

#### StormTech Isolator Row (not to scale)



**NOTE:** NON-WOVEN FABRIC IS ONLY REQUIRED OVER THE INLET PIPE CONNECTION INTO THE END CAP FOR DC-780, MC-3500 AND MC-4500 CHAMBER MODELS AND IS NOT REQUIRED OVER THE ENTIRE ISOLATOR ROW.

## 3.0 Isolator Row Step By Step Maintenance Procedures

### Step 1) Inspect Isolator Row for sediment

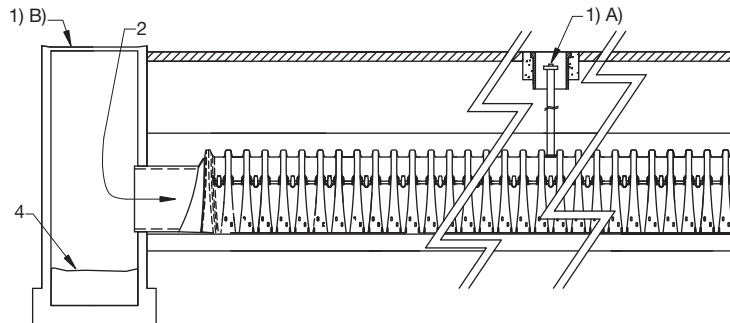
#### A) Inspection ports (if present)

- i. Remove lid from floor box frame
- ii. Remove cap from inspection riser
- iii. Using a flashlight and stadia rod, measure depth of sediment and record results on maintenance log.
- iv. If sediment is at, or above, 3 inch depth proceed to Step 2. If not proceed to step 3.

#### B) All Isolator Rows

- i. Remove cover from manhole at upstream end of Isolator Row
- ii. Using a flashlight, inspect down Isolator Row through outlet pipe
  1. Mirrors on poles or cameras may be used to avoid a confined space entry
  2. Follow OSHA regulations for confined space entry if entering manhole
- iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches) proceed to Step 2. If not proceed to Step 3.

StormTech Isolator Row (not to scale)



### Step 2) Clean out Isolator Row using the JetVac process

- A) A fixed culvert cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
- B) Apply multiple passes of JetVac until backflush water is clean
- C) Vacuum manhole sump as required

### Step 3) Replace all caps, lids and covers, record observations and actions

### Step 4) Inspect & clean catch basins and manholes upstream of the StormTech system

### Sample Maintenance Log

| Date    | Stadia Rod Readings               |                                    | Sediment Depth<br>(1) - (2) | Observations/Actions                                                       | Inspector |
|---------|-----------------------------------|------------------------------------|-----------------------------|----------------------------------------------------------------------------|-----------|
|         | Fixed point to chamber bottom (1) | Fixed point to top of sediment (2) |                             |                                                                            |           |
| 3/15/01 | 6.3 ft.                           | none                               |                             | New installation. Fixed point is CI frame at grade                         | djm       |
| 9/24/01 |                                   | 6.2                                | 0.1 ft.                     | Some grit felt                                                             | sm        |
| 6/20/03 |                                   | 5.8                                | 0.5 ft.                     | Mucky feel, debris visible in manhole and in Isolator row, maintenance due | rv        |
| 7/7/03  | 6.3 ft.                           |                                    | 0                           | System jetted and vacuumed                                                 | djm       |



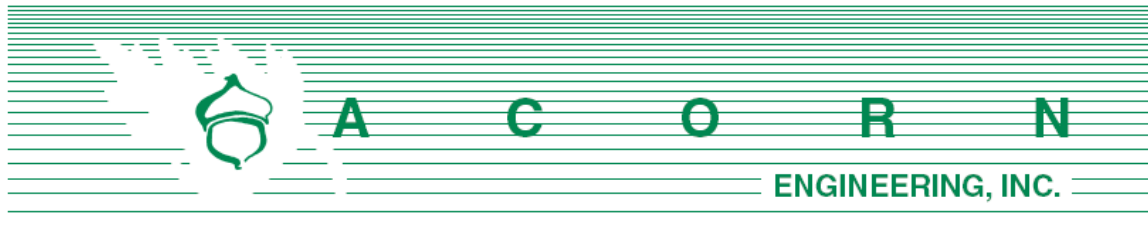
70 Inwood Road, Suite 3 | Rocky Hill | Connecticut | 06067  
 860.529.8188 | 888.892.2694 | fax 866.328.8401 | www.stormtech.com

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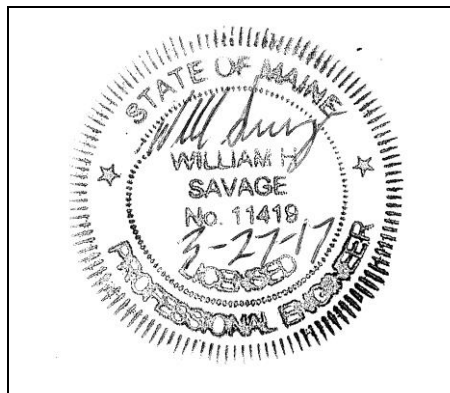
# **EROSION & SEDIMENTATION** **CONTROL REPORT**

Prepared For:

**BD Sheridan LLC  
Vazza Real Estate Group  
1266 Furnace Brook Parkway Suite 300  
Quincy, Massachusetts 02169**

Prepared By:

**Acorn Engineering, Inc.  
158 Danforth Street  
Portland, Maine 04102**



**March 2017**



## **INTRODUCTION**

Acorn Engineering, Inc. has been retained by BD Sheridan LLC to provide civil engineering services for the proposed urban infill project at 155 Sheridan Street. The proposed project is to develop an existing single family, 1.5-story residence into a high-density, 19-unit apartment building.

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 January 11, 2015. This narrative also meets the standards required in the Maine DEP's Erosion & Sediment Control BMP's Manual, revised in 2014.

### **1.0 EXISTING CONDITIONS**

The proposed project site is located on Sheridan Street between Cumberland Ave and Walnut Street within the East End neighborhood on Munjoy Hill. A boundary plan has been prepared by Titcomb Associates of Falmouth, Maine dated March 4, 2016 and revised January 30, 2017.

Abutting Uses:

- North R-6 Zone Multi-Family Residential
- West R-6 Zone Multi-Family Residential
- South B-2b Zone Community Business
- East R-6 Zone Multi-Family Residential

Fort Sumner Park directly abuts the property to the east.

The majority of the site is pervious with dense overgrowth and limited mature tree growth. The average grade is relatively steep. The existing dwelling is sided by a concrete walk and stairway with the steps continuing into the property. There are also two retaining walls further into the site, potentially continuing into the northernmost abutting property.

#### **1.1 Existing Soils**

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County

Given the soils information, listed above, no onsite wastewater is proposed, the applicant does not intend to perform a more intense hydric soil boundary delineation because the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 are met. Additionally, soil borings have been taken on site which are outlined in the Geotechnical Report (Section Q).

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



| Table 3 - "K" Value |            |            |
|---------------------|------------|------------|
| Soils Type          | Subsurface | Substratum |
| Hinckley            | 0.17       | 0.17       |

The soil "K" values for the soils, listed above, show a low susceptibility to erosion. The site's susceptibility to erosion is from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although soil "K" values for the soils show a low susceptibility to erosion, implementation of the proposed Erosion & Sedimentation Measures by the contractor will be of the utmost importance, given the long-sustained slopes.

#### 1.2 Existing Erosion Problems

There are no existing erosion control issues.

#### 1.3 Critical Areas

Critical areas that would require special attention during construction are the areas adjacent to the municipal stormwater system. This includes, but is not limited to, the two catch basins located directly in front of the property within Sheridan Street.

#### 1.4 Protected Natural Resource

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

#### 1.5 Previous Construction Activity (5 years)

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

#### 1.6 Timber Harvesting

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

## 2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

As part of the site development, the following temporary and permanent erosion and sedimentation control devices shall be implemented. Devices shall be installed as described in this report or within the plan set. See the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices for further reference.



## 2.1 Temporary Erosion Control Measures

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

- 2.1.1 Crushed stone stabilized construction entrances shall be placed at all access points to the project site where there are disturbed areas. The following specifications shall be followed at a minimum:
- Stone size shall be 2-3 inches, or reclaimed or recycled concrete equivalent.
  - The thickness of the entrance stone layer shall be no less than 6 inches.
  - The entrance shall not be less than 20 feet wide, however not less than the full width of points where ingress or egress occurs. The length shall not be less than 50 feet in length.
  - Geotextile fabric (woven or non-woven) shall be placed over the entire entrance area.
  - The entrance/exit shall be maintained to the extent that it will prevent the tracking of sediment onto public road ways.
- 2.1.2 Siltation fence or erosion control berm shall be installed down gradient of any disturbed areas to trap runoff borne sediments until permanent stabilization is achieved. The silt fence or erosion control berm shall be installed per the details provided in the plan set and inspected before and immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line or berm. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam.
- 2.1.3 Hay mulch including hydro seeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15<sup>th</sup> and November 1<sup>st</sup> 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 1<sup>st</sup> and April 15<sup>th</sup> on slopes equal to or steeper than 8 percent and equal to or flatter than 2:1 shall use mats or fabric netting and anchored with staples in accordance with the manufacturer's recommendation.
- 2.1.4 Sedimentation basin with a permanent outlet into Sheridan Street. Basin shall be installed before the ground is frozen and should be cleared of stumps, roots, brush, boulders, etc. Scarify the native soil and confirm that the soil has sufficient moisture for the first layer of fill. Contractor to construct overflow outlet or spillway (center minimum 6 inches lower than outer edges) within the embankment that is protected with geotextile fabric and riprap. Basin shall have a minimum depth of 2 feet. Stabilization of the embankments is critical and should be carried out through erosion control mix, riprap, or sand bags. The basin has been sized using the MDEP Erosion and Sediment Control BMP



Manual's procedures. A 10-year storm in the pre-development condition was modeled. As a result, the required volume for the basin is approximately 450 cubic feet. Refer to the MDEP's Erosion and Sediment Control BMP Field Guide for a complete list of construction specifications.

- 2.1.5 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.
- 2.1.6 Sheridan Street shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.
- 2.1.7 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.
- 2.1.8 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.
- 2.1.9 Stormdrain inlet protection shall be provided to stormdrains 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.
- 2.1.10 Dust control shall be accomplished using any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.
- 2.1.11 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.
- 2.1.12 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.



2.1.13 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.

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

## 2.2 Permanent Erosion Control Measures

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

2.2.1 All disturbed areas during construction, not subject to other proposed conditions, shall receive a minimum 4" of loam, limed, and mulched. Erosion control blankets or mats shall be placed over the mulch in areas noted in paragraph 4.1 of this report.

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

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

## 3.0 EROSION AND SEDIMENTATION CONTROL PLAN

3.1 The 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 work area to areas that work will occur in during the subsequent 15 days and so that it can be mulched one day prior to a snow event. The contractor shall stabilize work areas prior to opening additional work areas to minimize areas without erosion control measures.

The following measures shall be implemented during winter construction periods:



### 5.1 Sediment Barriers

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

### 5.2 Mulching

All areas shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4-inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible through the mulch. Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1<sup>st</sup>, 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 15<sup>th</sup> and April 1<sup>st</sup>, loam or seed shall not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until the final treatment can be applied. If the date is after November 1<sup>st</sup> 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 15<sup>th</sup>, 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 1<sup>st</sup>, 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 1<sup>st</sup>, then mulch the area for over-winter protection.
- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1<sup>st</sup>. 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 15<sup>th</sup>, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

### 5.6 Over winter stabilization of disturbed slopes

All stone-covered slopes shall be constructed and stabilized by November 15<sup>th</sup>. All slopes to be vegetated shall be seeded and mulched by September 1<sup>st</sup>. A slope is considered a grade greater than 15%. If a slope to be vegetated is not stabilized by September 1<sup>st</sup>, 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 1<sup>st</sup> 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 1<sup>st</sup>, 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 1<sup>st</sup>. 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 15<sup>th</sup>. 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 15<sup>th</sup>. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

## 6.0 INSPECTION AND MAINTENANCE

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

### 6.1 Sediment Barriers

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

### 6.2 Sedimentation Basin

The sedimentation basin and outlet culvert shall be inspected and maintained during construction. If embankments show signs of erosion or settlement, it will be necessary to repair or replace the erosion control device. Culvert should be checked for debris and other clogs. Inspect riprapped outlet for signs of erosion and increase the length of the outlet apron if signs of erosion are present. In the spring, basin should be monitored for high flows of runoff.

### 6.3 Stabilized Stone Construction Entrances

The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way. When the control pad becomes ineffective, the stone shall be removed along with the collected soil material and redistributed on site in a stable



manner. The entrance should then be reconstructed. The contractor shall sweep or wash pavement at exits, which have experienced mud-tracking on to the pavement or traveled way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or waterways.

### 6.3 Mulched Areas

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

### 6.4 Dust Control

When temporary dust control measures are used, repetitive treatment shall be applied as needed to accomplish control.

### 6.5 Stormwater Appurtenances

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

### 6.6 Erosion and Sedimentation Control Inspections:

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

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

Qualifications:

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

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



## 7.0 IMPLEMENTATION SCHEDULE

The following implementation sequence is intended to maximize the effectiveness of the above described erosion control measures. Contractors should avoid overexposing disturbed areas and limit the amount of stabilization area.

1. Install a stabilized construction entrance in all locations where construction traffic will enter and exit the site.
2. Install perimeter silt fence or erosion control berm.
3. Commence installation of drainage infrastructure within Sheridan Street into the site.
4. Install sedimentation basin.
5. Install all other erosion control devices as necessary throughout the remainder of this schedule.
6. Prioritize the downhill foundation walls to contain runoff within the site while providing an engineered outlet with siltation barrier to the municipal stormwater system within Sheridan Street.
7. Commence earthwork operations, wall and foundation installation.
8. Commence installation of utilities.
9. Continue earthwork and grading to subgrade as necessary for construction.
10. Complete installation of drainage infrastructure, as well as other utility work.
11. Complete remaining earthwork operations.
12. Install sub-base and base gravels in paved areas.
13. Install paving, curbing and brickwork.
14. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
15. 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.
16. Touch up areas without a vigorous catch of grass with loam and seed.
17. Complete site signage and striping.
18. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

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

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

## 8.0 CONCLUSION

The above erosion control narrative is intended to minimize the development impact by implementing temporary and permanent erosion control measures. The contractor shall also refer to the Maine Erosion and Sediment Control BMP manual for additional information.



## 9.0 ATTACHMENTS

- Temporary Seeding Plan
- Permanent Seeding Plan



## TEMPORARY SEEDING PLAN

### Site Preparation

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

### Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O) 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<br>Aug-15 to Sep-15 |
| Annual Ryegrass | 0.92                | Apr-1 to Jul-1                     |
| Sudangrass      | 0.92                | May-15 to Aug-15                   |
| Perennial       | 0.92                | Aug-15 to Sep-15                   |

### Mulching

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

### Conclusion

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



## PERMANENT SEEDING PLAN

### Site Preparation

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

### Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O) or equivalent.

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

### Seeding

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

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

### Mulching

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

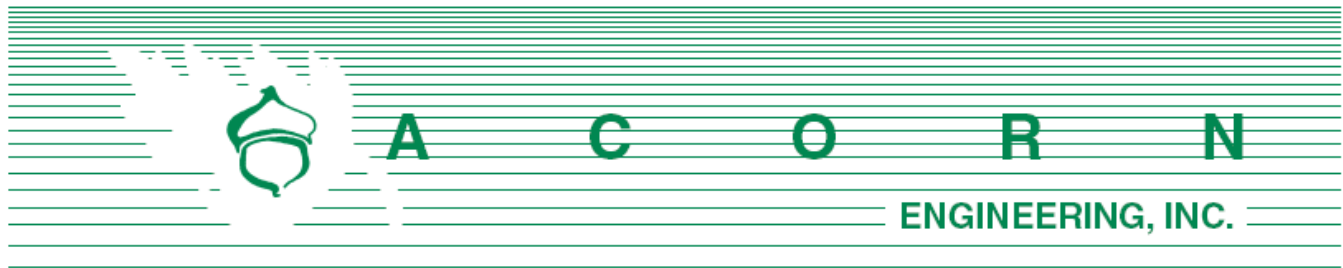
### Recommendations

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

### Conclusion

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





Assistant Chief Keith Gautreau  
380 Congress St.  
Portland, ME 04101

May 11, 2017

Subject: 153-165 Sheridan St. Site Review – Fire Department Checklist  
Section 8 of Application

On behalf of BD Sheridan, LLC the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

BD Sheridan, LLC  
Vassa Real Estate Development  
Quincy, Massachusetts  
(207) 571-4166

2. Name address, telephone number of architect

Ryan Senatore Architects  
565 Congress St., Suite 304  
Portland, Maine 04101

Proposed uses of any structures [NFPA and IBC classification]

The Code Analysis by Ryan Senatore Architecture is attached.

3. Square footage of all structures [total and per story]

|                       |               |           |
|-----------------------|---------------|-----------|
| 1 <sup>st</sup> Floor | 8,800         | sf        |
| 2 <sup>nd</sup> Floor | 8,912         | sf        |
| 3 <sup>rd</sup> Floor | 9,701         | sf        |
| 4 <sup>th</sup> Floor | 7,142         | sf        |
| <b>Total</b>          | <b>34,555</b> | <b>sf</b> |

4. Elevation of all structures

The total building height from base of the first-floor parking garage to top of truss, four total floors, is 41'-0". The average building height as calculated from the average grade is below the maximum allowable 42'-9 1/4" height limit per the latest Fort Sumner Park Overlay Zone standards and existing apex elevation of the park. See the attached elevations and section view provided by the Architect for additional information.



5. 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 the request for a building permit.

6. Hydrant locations

There is an existing fire hydrant approximately 250' from the proposed building edge along the Sheridan Street frontage. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

7. Water main size and location

The development will be serviced a 6" parent line that will split into a 2" domestic and 6" fire service. The fire service line will extend from the split to the building fire suppression system. The building is expected to have an internal sprinkler risers and a Fire Department pump connection on the building.

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

Front access to the structure is provided on Sheridan Street and rear access is provided from a private paved parking lot off of North Street.

9. The Architect will provide a code summary referencing NFPA 1 and all fire department technical standards.

### **NFPA 1 – Chapter 18 Fire Department Access and Water Supply**

#### **18.2 Fire Department Access:**

The project site is located in a densely developed area and is fronted by a public street. The following street widths are currently available:

- Sheridan Street: 26 ft.

Per NFPA 1 – Chapter 18.2.3.3.1, there will be public street access within 50 ft. 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 ft. 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 depicted on the site plan, the proposed building layout provides a minimum of two paved access points to the structure: one from Sheridan Street and one from North Street.

*3.4.3 Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:*

- *Building Height.*
- *Building Occupancy.*
- *Construction Type.*
- *Impediments to the Structures.*
- *Safety Features Provided.*

Response: The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access along 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 that will be within 50' of a Fire Department access route, namely Sheridan Street.

*3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.*

Response: Emergency access is provided on Sheridan Street with access to stairs and the elevator.

*3.4.6. Elevators shall be sized to accommodate an 80 x 24-inch stretcher.*

Response: The architect has sized the elevator to accommodate a stretcher of such size.

*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 architect will work with the City's Department of Public Works to assign street addresses and numbering to meet City Standards.

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

Sincerely,



William H. Savage, P.E.  
Principal  
Acorn Engineering, Inc.



## 155 Sheridan Residences

IBC 2009

NFPA 101 2009

4 floors above grade

502.1

Sprinklers

NFPA 13

NFPA 13

Fire Alarm

Monitored Fire Alarm Required

Monitored Fire Alarm Required

Smoke and CO Detectors

Smoke and CO detectors required

Smoke and CO detectors required

Occupant Load

T 1004.1.1

Floor 1 = 1500 sf Residential accessory (200 gsf/oc) = 8

7.3.1.2

Floor 1 = 1500 sf Residential accessory (200 gsf/oc) = 8

Floor 1 = 7,120 sf Parking (200 gsf/oc) = 36

Floor 1 = 7,120 sf Parking (200 gsf/oc) = 36

Floor 2 = 8,812 sf Residential (200 gsf/oc) = 45

Floor 2 = 8,812 sf Residential (200 gsf/oc) = 45

Floor 3 = 9,569 sf Residential (200 gsf/oc) = 48

Floor 3 = 9,569 sf Residential (200 gsf/oc) = 48

Floor 4 = 7,045 sf Residential (200 gsf/oc) = 36

Floor 4 = 7,045 sf Residential (200 gsf/oc) = 36

Floor 4 = Common Roof Deck 550 sf / 15 = 37

Floor 4 = Common Roof Deck 550 sf / 15 = 37

**Total Building Occupant Load = 210****Total Building Occupant Load = 210**

Use Group(s)

311.3

Floor 1 and 2 - Parking (S2)

6.1.13.1

Storage (Vehicles)

310.1

Floors 2, 3, 4 - Apartments (R2)

6.1.8.1.5

Apartment Building

Horizontal Separation

509.4

Parking Below R - maximum 1 story above grade plane S-2  
parking garage of type 1 construction, the number of stories  
shall be measured from the floor above such parking area

509.2

3 hr fire separation between 1A and 5B  
Building below the 3hr is of 1A construction  
Height measured from Grade Plane for 5B maximum

Floor 1 - Const. Type

T 503

1A - non-combustible protected

I (332) non-combustible protected

Building Area

T 503

Unlimited Area per floor

|                         |                 |                                                                   |            |                                                 |
|-------------------------|-----------------|-------------------------------------------------------------------|------------|-------------------------------------------------|
| Building Elements       | T 601           | 3 hr Structural Frame                                             | 30.1.6     | No Minimum Construction requirements            |
|                         | T 602           | 3 hr Bearing Walls Exterior                                       |            |                                                 |
|                         | T 601           | 3 hr Bearing Walls Interior                                       |            |                                                 |
|                         | T 601           | 0 hr Non-Bearing Walls Interior                                   |            |                                                 |
|                         | T 602           | 1 hr Non-Bearing Walls Exterior (sep. dist 10' <= 30')            |            |                                                 |
|                         | T602            | 2hr Non-Bearing Walls Exterior (sep. dist 0' < 10')               |            |                                                 |
|                         | T 602           | 0 hr Non-Bearing Walls Exterior (sep. dist >30')                  |            |                                                 |
|                         |                 |                                                                   |            |                                                 |
| Floor 2,3,4 Const. Type | T 503           | 5B - combustible unprotected                                      |            | V (000) combustible unprotected                 |
|                         |                 |                                                                   |            |                                                 |
| Building Height         | T 503 and 504.2 | Sprinkler increase = 3 stories and 60' max.                       |            |                                                 |
|                         |                 | The proposed building is 3 stories (on top of the 1 story podium) |            |                                                 |
| Building Area           | T 503           | 14,000 sf max with 503 sprinkler increase of 100%                 |            |                                                 |
|                         |                 | The proposed largest story is 9,569 sf                            |            |                                                 |
|                         |                 |                                                                   |            |                                                 |
|                         |                 |                                                                   |            |                                                 |
|                         |                 |                                                                   |            |                                                 |
| Building Elements       | T 601           | 0 hr Structural Frame                                             | 30.1.6     | No Minimum Construction requirements            |
|                         | T 602           | 0 hr Bearing Walls Exterior (sep. dist >= 10')                    |            |                                                 |
|                         | T 601           | 0 hr Bearing Walls Interior                                       |            |                                                 |
|                         | T 601           | 0 hr Non-Bearing Walls Interior                                   |            |                                                 |
|                         | T 601           | 0 hr Floor Construction ( 1hr between units )                     |            |                                                 |
|                         | T 601           | 0 hr Roof Construction                                            |            |                                                 |
|                         |                 |                                                                   |            |                                                 |
| Separations             |                 |                                                                   |            |                                                 |
|                         | 508.4           | S2 and R2 = 1 hr                                                  | 6.1.14.4.1 | Storage (ord.) and Apartment = 1hr with sprink. |
|                         |                 |                                                                   |            |                                                 |
|                         | 708.4           | 2 hr Elevator Shaft >= 4 stories                                  | 8.6.5      | 2 hr >= 4 stories                               |
|                         | 708.4           | 1 hr Elevator Shaft < 4 stories                                   | 8.6.5      | 1 hr < 4 stories                                |
|                         | 708             | 2 hr Mechanical Shaft >= 4 stories                                |            |                                                 |
|                         | 708             | 1 hr Mechanical Shaft < 4 stories                                 |            |                                                 |
|                         | 1022.1          | 2 hr Stair Shaft >= 4 stories                                     |            |                                                 |
|                         | 1022.1          | 1 hr Stair Shaft < 4 stories                                      |            |                                                 |
|                         | 709.1           | 1 hr Between Dwelling Units                                       |            |                                                 |
|                         | 1018.1          | 1/2 hr Corridor                                                   | 30.3.6.1.2 | 1/2 hr corridor                                 |
|                         | 508.2.5         | 1 hr Boiler Room                                                  | 30.3.2.1.1 | 1 hr Boiler Room                                |
|                         | 508.2.5         | 1 hr Trash Room                                                   | 30.3.2.1.1 | 1 hr Trash Room                                 |
|                         | 508.2.5         | 1 hr Storage Room                                                 | 30.3.2.1.1 | 1 hr Storage Room                               |

|                      |  |            |                                                                      |                |                                                  |
|----------------------|--|------------|----------------------------------------------------------------------|----------------|--------------------------------------------------|
|                      |  | 508.2.5    | 1 hr Laundry Room                                                    | 30.3.2.1.1     | 1 hr Laundry Room                                |
|                      |  | 3006.4     | 2 hr Elevator Machine Room                                           |                |                                                  |
|                      |  | 715.4      | 90 minute Stairwell Doors (2hr shaft)                                |                |                                                  |
|                      |  | 715.4      | 20 minute Apartment Entry Doors (1/2 hr corridor wall)               | 30.3.6.2.1     | 20 minute Apartment Entry Doors                  |
|                      |  |            |                                                                      |                |                                                  |
| Distances and Exits  |  | 1021.1     | 2 Exits required                                                     | 7.4.1.1        | 2 Means of Egress required                       |
|                      |  | 1016.1     | 250' Travel Distance to exits with Sprinklers                        | 30.2.6.3.2     | 200' Travel distance from apt. door to exit      |
|                      |  |            |                                                                      |                |                                                  |
|                      |  | 1014.3     | 125' Common Path of Travel                                           | 30.2.5.3.2     | 50' Common Path of Travel                        |
|                      |  |            |                                                                      |                |                                                  |
|                      |  | 1018.4     | 50' Dead End                                                         | 30.2.5.4.2     | 50' Dead End                                     |
|                      |  |            |                                                                      |                |                                                  |
|                      |  |            |                                                                      | 30.2.6.2       | 125' Travel Distance within Dwelling to Corridor |
|                      |  |            |                                                                      |                |                                                  |
| Unprotected Openings |  | T 705.8    | 15% when exterior wall sep. dist. is 3'>5'                           |                |                                                  |
|                      |  | T 705.8    | 25% when exterior wall sep. dist is 5'>10'                           |                |                                                  |
|                      |  | T 705.8    | 45% when exterior wall sep. dist. is 10'>15'                         |                |                                                  |
|                      |  |            |                                                                      |                |                                                  |
|                      |  | T 705.8    | 75% when exterior wall sep. dist. is 15'>20'                         |                |                                                  |
|                      |  | T 705.8    | Unlimited when exterior wall sep. dist. is 25'>30'                   |                |                                                  |
|                      |  |            |                                                                      |                |                                                  |
| Elevator Lobby       |  | 708.14.1.4 | Not required as Sprinkled with 13                                    |                |                                                  |
|                      |  |            |                                                                      |                |                                                  |
| Elevator as MoE      |  | 1007.2.1.1 | Not req. as bldg. is not 4 stories above the level of exit discharge |                |                                                  |
|                      |  |            |                                                                      |                |                                                  |
| Egress Windows       |  | 1029.1.1   | Not Required as Sprinkled with NFPA13                                |                |                                                  |
|                      |  |            |                                                                      |                |                                                  |
|                      |  |            |                                                                      |                |                                                  |
| Egress Stairs        |  | 1009.1     | Occ. Load >50 = 44" min width                                        | 24.2.5.4       | 36" min. stair width                             |
|                      |  | 1009.1     | Occ. Load <=50 = 36" min width                                       | 7.2.2.2.1.2(B) | 44" min. over 50 occ.                            |
|                      |  | 1003.3     | Handrails can protrude into stair 4.5" max                           | 7.2.2.2.1.2    | Handrails can protrude into stair 4.5" max       |
|                      |  | 1005.2     | Door Swings may not reduce egress width by > 1/2                     |                |                                                  |
|                      |  | 1009.2     | 80" min headroom                                                     | 7.2.2.2.1.1(a) | 6'-8" min. headroom                              |
|                      |  | 1009.3     | 7" max. riser                                                        | 7.2.2.2.1.1(a) | 7" max. riser                                    |
|                      |  | 1009.3     | 11" min Tread depth                                                  | 7.2.2.2.1.1(a) | 11" min. tread                                   |
|                      |  | 1009.6     | 12' max. total rise between floors or landings                       | 7.2.2.2.1.1(a) | 12' max. height between landings                 |
|                      |  |            |                                                                      |                |                                                  |
| Ramps                |  | 1010.2     | 1:12 (8%) Max slope                                                  | 7.2.5.2(a)     | 1:12 max. slope                                  |

|                  |  |                                                                                    |                                                       |            |                       |
|------------------|--|------------------------------------------------------------------------------------|-------------------------------------------------------|------------|-----------------------|
|                  |  | 1010.6                                                                             | 60" long landings at top and bottom                   |            |                       |
|                  |  | 1010.6                                                                             | 2% max slope of landings                              | 7.2.5.2(a) | 1:48 max. cross slope |
|                  |  | 1010.8                                                                             | >6" rise must have handrails on both sides of ramp    |            |                       |
|                  |  |                                                                                    |                                                       |            |                       |
| Egress Corridors |  | 1018.2                                                                             | 44" min. when Occ. > 50                               |            |                       |
|                  |  | 1018.2                                                                             | 36" min. when Occ. <= 50                              |            |                       |
|                  |  | 1018.2                                                                             | 24" min. at service corridors to mechanical equipment |            |                       |
|                  |  |                                                                                    |                                                       |            |                       |
| Sound            |  | 1207.2                                                                             | STC > 50 at walls and floors/ceilings                 |            |                       |
|                  |  | 1207.3                                                                             | IIC > 50 at walls and floors/ceilings                 |            |                       |
|                  |  |                                                                                    |                                                       |            |                       |
| Energy IECC 2006 |  | T 402.1.1                                                                          | 0.35 Fenestration U-Factor                            |            |                       |
| <b>Zone 6</b>    |  |                                                                                    | R-49 Ceiling                                          |            |                       |
|                  |  |                                                                                    |                                                       |            |                       |
| Residential      |  |                                                                                    | R-20 or 13+5c Framed wall                             |            |                       |
|                  |  |                                                                                    |                                                       |            |                       |
|                  |  |                                                                                    | R-30 Floor                                            |            |                       |
|                  |  |                                                                                    |                                                       |            |                       |
|                  |  |                                                                                    | R-19 or 15c Basement wall                             |            |                       |
|                  |  |                                                                                    |                                                       |            |                       |
|                  |  |                                                                                    | R-10 to 4ft Slab                                      |            |                       |
|                  |  |                                                                                    |                                                       |            |                       |
|                  |  |                                                                                    |                                                       |            |                       |
| Accessibility    |  | Fair Housing Act Applies                                                           |                                                       |            |                       |
|                  |  | All units are designed to meet the Fair Housing Act                                |                                                       |            |                       |
|                  |  | Ch 11 of IBC 2009 does not apply as State of ME did not adopt it as part of MUBEC  |                                                       |            |                       |
|                  |  | Maine Human Rights Act Applies                                                     |                                                       |            |                       |
|                  |  | All units are designed to meet the Maine Human Rights Act                          |                                                       |            |                       |
|                  |  | Retail Spaces must meet ADA 2010                                                   |                                                       |            |                       |
|                  |  | All common spaces and retail areas are designed to meet ADA 2010                   |                                                       |            |                       |
|                  |  | The residential units do not need to meet ADA as the project has no Public Funding |                                                       |            |                       |
|                  |  |                                                                                    |                                                       |            |                       |

## **L. Solid Waste Disposal**

The owner, BD Sheridan, LLC or their property management company shall be responsible for relocating the solid waste and recyclable material to the solid waste room as located on the Site Plan (C-10). The waste can then be removed via curbside pickup or a private hauler.

The solid waste containers will be fully enclosed within the first-floor garage and screened from the public view.





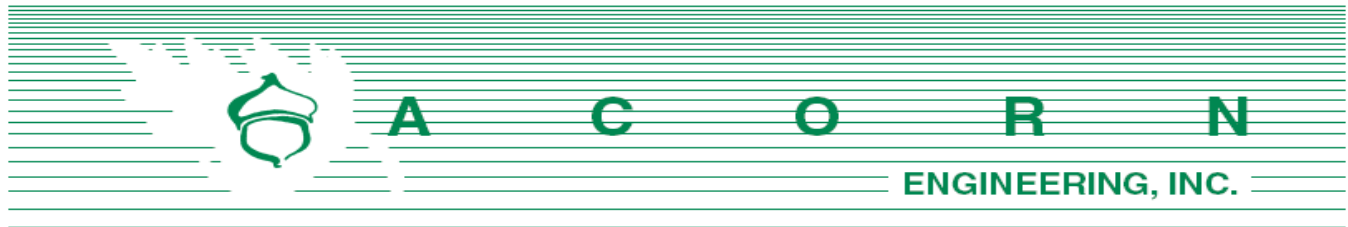
## **M. Utilities**

As identified in the Existing Conditions Plan, the site has existing overhead services (2) that connect to the existing building in front of the property; overhead utility is proposed to be rerouted underground to an on-site transformer; the cable/telephone service is to bypass the transformer. The existing overhead services along Sheridan Street and their corresponding utility poles directly abutting the property are to remain and be protected during construction. It is proposed, with coordination with Central Maine Power, that one utility pole along the front of the property be relocated to a point of non-conflict with the new driveway entrance.

There are no existing gas services or sewer service extending from the existing building as confirmed by Unitil Gas and the City of Portland Public Works; new services are proposed with connections into the existing systems in Sheridan Street.

Ability to serve letters, originally sent on June 7<sup>th</sup>, 2016 for a 34-unit project and since revised for a 19-unit project, have been sent out to the respective utility companies in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(7). Please refer to the attached letters. Pending responses will be forwarded to the planner once received.





Central Maine Power Company  
Attn: Paul DuPerre  
162 Canco Road  
Portland, Maine 04103

May 11, 2017

Subject: 155 Sheridan Street Redevelopment  
Re: Updated Ability to Serve

Paul DuPerre:

On behalf of BD Sheridan, LLC, we are pleased to submit the following request for CMP's ability to serve the proposed development; the site is located at 153-165 Sheridan Street (Map, Book, Lot 12-Q-12 & 12-Q-10), within the R-6 residential zoning district in Portland, Maine. The project was previously submitted to CMP on June 7<sup>th</sup>, 2016 as a 34-unit redevelopment project but has since evolved to be a four-level, 19-unit building with parking provided internally on the first floor. The existing 1.5-story building and existing overhead services are to be demolished.

It is still proposed that the main overhead lines servicing Sheridan Street remain as is and that the new, three-phase service be rerouted underground from a relocated utility pole to an on-site transformer. One of the existing utility poles needs to be relocated due to the proposed driveway entrance to the parking garage. The attached utility plan shows the preferred location for the relocated utility pole and transformer. The transformer pad has a five-foot side clearance from the building, a front clearance of approximately twelve feet as provided on the north side of the pad, and a rear clearance of five feet as provided on the south side of the pad. Due to site constraints, only three feet of clearance can be provided from the property line.

On behalf of the client, we are requesting the following information:

1. Any easements for overhead services currently crossing the proposed development.
2. Alternative connection and transformer pad locations from the development to the existing system.
3. Confirmation of the proposed location or recommendation or the final location for the relocated utility pole.
4. Confirm that the proposed transformer pad setbacks is acceptable or recommendations on a revised pad layout.
5. CMP's proposed infrastructure improvements within the project vicinity.
6. CMP's ability to serve the project.
7. Access requirements to the CMP meters.

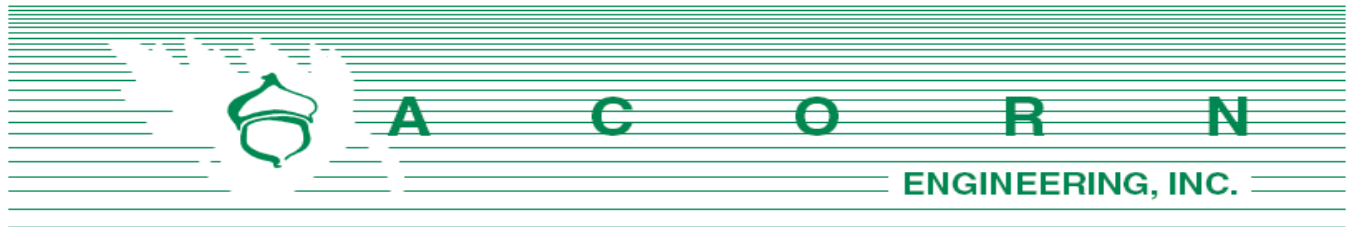
I have attached an existing conditions plan created by Titcomb Associates as well as a revised preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for questions or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Olivia Dawson". The signature is fluid and cursive, with the first name "Olivia" being more prominent than the last name "Dawson".

Olivia Dawson, E.I.  
Design Engineer  
Acorn Engineering, Inc.





Fairpoint Communications  
Attn: Brian Bouchard  
5 Davis Farm Road  
Portland, Maine 04103

May 11, 2017

Subject: 155 Sheridan Street Redevelopment  
Re: Updated Ability to Serve

Brian Bouchard:

On behalf of BD Sheridan, LLC, we are pleased to submit the following request for the Fairpoint's ability to serve the proposed development; the site is located at 153-165 Sheridan Street (Map, Book, Lot 12-Q-12 & 12-Q-10), within the R-6 residential zoning district in Portland, Maine. The project was previously submitted to Fairpoint on June 7<sup>th</sup>, 2016 as a 34-unit redevelopment project but has since evolved to be a four-level, 19-unit building with parking provided internally on the first floor. The existing 1.5-story building and existing overhead services are to be demolished.

It is still proposed that the main overhead lines servicing Sheridan Street remain as is and the new service be rerouted underground from a relocated utility pole as noted on the utility plan. The service is also to bypass the proposed transformer.

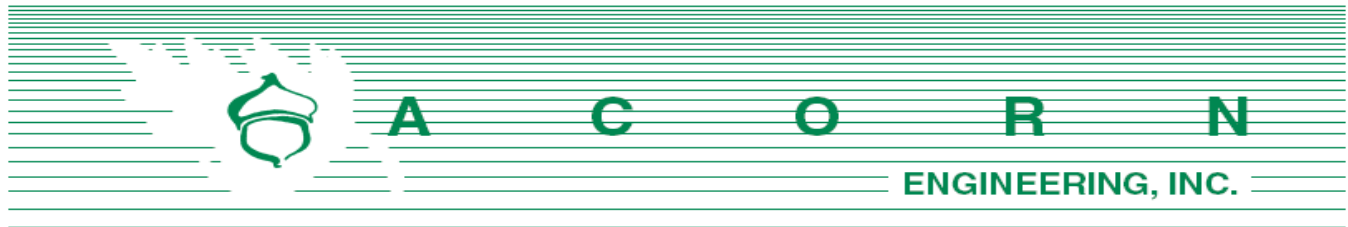
On behalf of the client, we are requesting an update, if any, for the following information:

1. Any additional information, such as utility mapping within Sheridan Street.
2. Any easements for overhead services currently crossing the proposed development.
3. Alternative connection locations from the development to the existing communication system.
4. Fairpoint's proposed infrastructure improvements within the project vicinity.
5. Confirmation that Fairpoint still has the ability to serve the project

I have attached an existing conditions plan created by Titcomb Associates as well as a revised preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for questions or clarifications.

Sincerely,

Olivia Dawson, E.I.  
Design Engineer  
Acorn Engineering, Inc.



Portland Water District  
Attn: MEANS Department  
225 Douglas Street  
Portland, Maine 04104

May 11, 2017

Subject: 155 Sheridan Street Redevelopment  
Re: Updated Ability to Serve

To Whom It May Concern:

On behalf of BD Sheridan, LLC, we are pleased to submit the following request for PWD's ability to serve the proposed development; the site is located at 153-165 Sheridan Street (Map, Book, Lot 12-Q-12 & 12-Q-10), within the R-6 residential zoning district in Portland, Maine. The project was previously submitted to PWD on June 7<sup>th</sup>, 2016 as a 34-unit redevelopment project but has since evolved to be a four-level, 19-unit building with parking provided internally on the first floor. The existing 1.5-story building and existing domestic water service are to be demolished.

Previous conversations with PWD included proposing a main line extension of the existing 8" DI water main within Sheridan Street. Due to the redesign of the building and relocation of the mechanical room, the water service can tap the existing water main and run perpendicular to the street. It is also proposed, to limit the amount of utility pavement cuts, that the building be service via a parent/child connection; an 8" parent is proposed to split into a 6" domestic and 2" fire service within the furnishing zone of the ROW.

Based upon the Section 4 of the Maine Subsurface Water Disposal Rules, the project anticipates the following design flows:

| Estimate of Anticipated Design Flows                                                       |           |                 |                          |                       |
|--------------------------------------------------------------------------------------------|-----------|-----------------|--------------------------|-----------------------|
| Development                                                                                | Unit Size | Number of Units | Gallons per Day per Unit | Total Gallons per Day |
| <b>Existing flow to be removed</b>                                                         |           |                 |                          |                       |
| Single Family Residential Units                                                            | 1 Bedroom | 0               | 180                      | 0                     |
|                                                                                            | 2 Bedroom | 1               | 180                      | 180                   |
|                                                                                            |           |                 |                          | <i>180</i>            |
| <b>Proposed flow</b>                                                                       |           |                 |                          |                       |
| Attached Single Family Residential Units                                                   | 1 Bedroom | 14              | 180                      | 2,520                 |
|                                                                                            | 2 Bedroom | 5               | 180                      | 900                   |
|                                                                                            |           |                 |                          | <i>3,420</i>          |
|                                                                                            |           |                 |                          |                       |
| <b>Net Change</b>                                                                          |           |                 |                          | <b>+ 3,240</b>        |
| *Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition |           |                 |                          |                       |

The proposed project is anticipated to add a net water usage from the development of approximately 3,240 gallons per day (GPD). It should be noted that these values were developed using conservative estimates from the State of Maine Subsurface Wastewater Disposal Rules and, considering the compact nature of the units, ranging from 834 to 1,438 square feet, the actual flows are anticipated to be lower.

On behalf of the client, we are requesting an update, if any, for the following information:

1. Any additional information, such as utility mapping within Sheridan Street; more specifically the location of the service to the existing building.
2. Alternative connection locations from the development to the existing system.
3. PWD's proposed infrastructure improvements within the project vicinity.
4. New flow data for adjacent hydrants.
5. PWD's ability to serve the project.

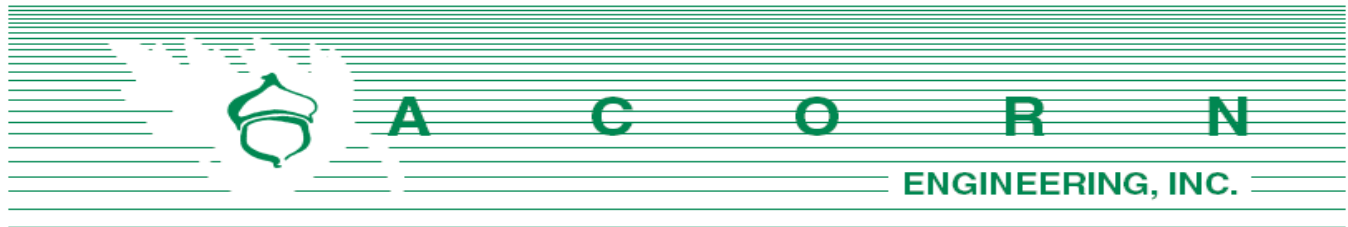
I have attached an existing conditions plan completed by Titcomb Associates, a revised preliminary utility plan, and an updated PWD fixture count spreadsheet from our office to facilitate your review. Please do not hesitate to contact me or the office for questions or clarifications.

Sincerely,



Olivia Dawson, E.I.  
Design Engineer  
Acorn Engineering, Inc.





Spectrum Cable  
Attn: Mark Pelletier  
118 Johnson Road  
Portland, Maine 04102

May 11, 2017

Subject: 155 Sheridan Street Redevelopment  
Re: Updated Ability to Serve

Mark Pelletier:

On behalf of BD Sheridan, LLC, we are pleased to submit the following request for the Spectrum's ability to serve the proposed development; the site is located at 153-165 Sheridan Street (Map, Book, Lot 12-Q-12 & 12-Q-10), within the R-6 residential zoning district in Portland, Maine. The project was previously submitted to Spectrum (formally Charter) on June 7<sup>th</sup>, 2016 as a 34-unit redevelopment project but has since evolved to be a four-level, 19-unit building with parking provided internally on the first floor. The existing 1.5-story building and existing overhead services are to be demolished.

It is still proposed that the main overhead lines servicing Sheridan Street remain as is and the new service be rerouted underground from a relocated utility pole as noted on the utility plan. The service is also to bypass the proposed transformer.

On behalf of the client, we are requesting an update, if any, for the following information:

1. Any additional information, such as utility mapping within Sheridan Street.
2. Any easements for overhead services currently crossing the proposed development.
3. Alternative connection locations from the development to the existing communication system.
4. Spectrum's proposed infrastructure improvements within the project vicinity.
5. Spectrum's ability to serve the project.

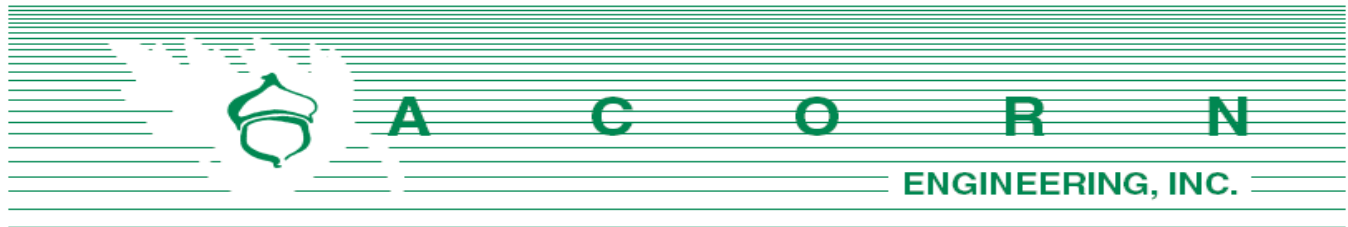
I have attached an existing conditions plan created by Titcomb Associates as well as an updated preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for questions or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Olivia Dawson'.

Olivia Dawson, E.I.  
Design Engineer  
Acorn Engineering, Inc.





Unitil Service Corp.  
Attn: Bridget Harmon  
376 Riverside Industrial Parkway  
Portland, Maine 04103

May 11, 2017

Subject: 155 Sheridan Street Redevelopment  
Re: Updated Ability to Serve

Bridget Harmon:

On behalf of BD Sheridan, LLC, we are pleased to submit the following request for Unitil's ability to serve the proposed development; the site is located at 153-165 Sheridan Street (Map, Book, Lot 12-Q-12 & 12-Q-10), within the R-6 residential zoning district in Portland, Maine. The project was previously submitted to Unitil on June 7<sup>th</sup>, 2016 as a 34-unit redevelopment project but has since evolved to be a four-level, 19-unit building with parking provided internally on the first floor. The existing 1.5-story building is to be demolished.

It has since been confirmed that a gas service will be required for the building. From our previous conversations, an existing gas main was identified within Sheridan Street. It is proposed that the new service connect to the main located within the City sidewalk.

On behalf of the client, we are requesting any updates, if any, for the following information:

1. Any additional utility mapping such as gas lines on Sheridan or North Street.
2. Unitil's proposed infrastructure improvements within the project vicinity.
3. Unitil's ability to serve the project.

I have attached an existing conditions plan created by Titcomb Associates as well as an updated preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact myself or the office for questions or clarifications.

Sincerely,

Olivia Dawson, E.I.  
Design Engineer  
Acorn Engineering, Inc.

# **N. Construction Management Plan**

**Project Address:**

155 Sheridan Street, Portland, Maine

**Project Description:**

The proposed project is the redevelopment of an existing 1.5-story dwelling into a four-story, 19-unit apartment building with a parking garage on the first floor. Access will be provided from Sheridan Street. The project also implements extensive use of retaining walls to accommodate the steep existing slopes.

**Project Team Summary:**

|                      |                                                 |
|----------------------|-------------------------------------------------|
| Owner:               | BD Sheridan, LLC                                |
| General Contractor:  | To Be Determined                                |
| Civil Engineer:      | Acorn Engineering, Inc.                         |
| Structural Engineer: | Structural Integrity Consulting Engineers, Inc. |
| Architect:           | Ryan Senatore Architecture                      |

**Timeline and Schedule:**

|                        |                                                                                                                                                                                                                |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Projected Start Date:  | Fall 2017                                                                                                                                                                                                      |
| Project Duration:      | Approximately one (1) year                                                                                                                                                                                     |
| Projected Completion:  | Fall 2018                                                                                                                                                                                                      |
| Street Interruption:   | During the installation of utilities within Sheridan Street. It is the sole responsibility of the contractor to manage traffic during the street interruption.                                                 |
| Sidewalk Interruption: | During the installation of utilities and foundation wall construction. The contractor shall maintain pedestrian access along Sheridan Street either through the existing sidewalk or through a temporary path. |

**Emergency Contact:**

Bernie Saulnier  
BD Sheridan, LLC  
(207) 571-4166

|                        |                    |
|------------------------|--------------------|
| Estimated Work Hours:  | 7:00 am to 5:00 pm |
| Delivery Truck Access: | Contact Owner      |
| Worker Parking:        | On the Street      |

BD Sheridan, LLC and their contractor will work with the City of Portland, and adjacent landowners to minimize any project impacts.

The General Contractor will remain solely and completely responsible for enforcement of and compliance with 1) all contract plans and specifications and 2) 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, local ordinance and any other applicable governmental regulations. The General Contractor will remain responsible for safeguarding the general public.

The General Contractor shall review all permits and reports associated with the project. The General Contractor is advised to visit the site prior to the start of work to confirm the site conditions. Refer to the Civil/Site Plan Set, Sheet C-03 Demolition & Construction Management Plan for visual representation of the measures be taken during demolition and construction.



## ATTACHMENT O

To: BD Sheridan, LLC  
Attn: Bernie Saulnier  
1266 Furnace Brook Parkway  
Suite 300  
Quincy, Mass 02169

From: Rene D. Noel, Jr. ACF Maine Licensed Forester # 325

Date: October 3, 2016

RE: Sheridan Street Forest

I have examined and inventoried the trees on the Sheridan Street property.

The site is a hillside with fairly steep slopes. A large part of the area has soil which has been disturbed in past or is fill dumped from above. From my observations there is little of the property where soils are not fill or have not been disturbed in the past. In other words there is little to no natural soil types on the property.

The overstory forest is composed primarily of Norway maple and apple. The understory plant community is composed almost entirely of invasive species. During my field work I saw and identified; Barberry, Bittersweet, Multiflora rose, and Honeysuckle. These undesirable plants occupy most or all or most of the growing space in the understory.

Shade from the overstory and dense plant community of invasive shrubs allows little light to reach the soil surface for the growth of low vegetation, such as grasses and forbs. Nor has a natural litter layer and humus developed under these conditions. This has left areas of the surface of the soil exposed. This combined with steep slope and unstable fill soils allows for a constant low level of soil erosion.

The community of overstory trees is largely composed of stems of an undesirable specie, Norway Maple. Norway Maple is an imported invasive tree species. By simple count it comprises 62% of the stems. However, foresters use basal area, the cross sectional area of trees as a better measure how trees occupy a forest. By this measure, basal area, Norway Maple is 77% of this forest. Apple trees which most would not consider undesirable but are not native account for 28% of the stems and 21% of the basal area.

A total of 81 tree stems were tallied on the property. Of these 16 were 10 inches or larger at Diameter Breast Height, 4.5 feet, from the ground. Of these 16, 6 are Norway Maple and 5 are apple. There may be a few desirable stems around the periphery of property that can be preserved. However, I advise caution. On this steep land any root disturbance or stem damage during construction will destabilize these stems making for high risk trees in a dense residential area.

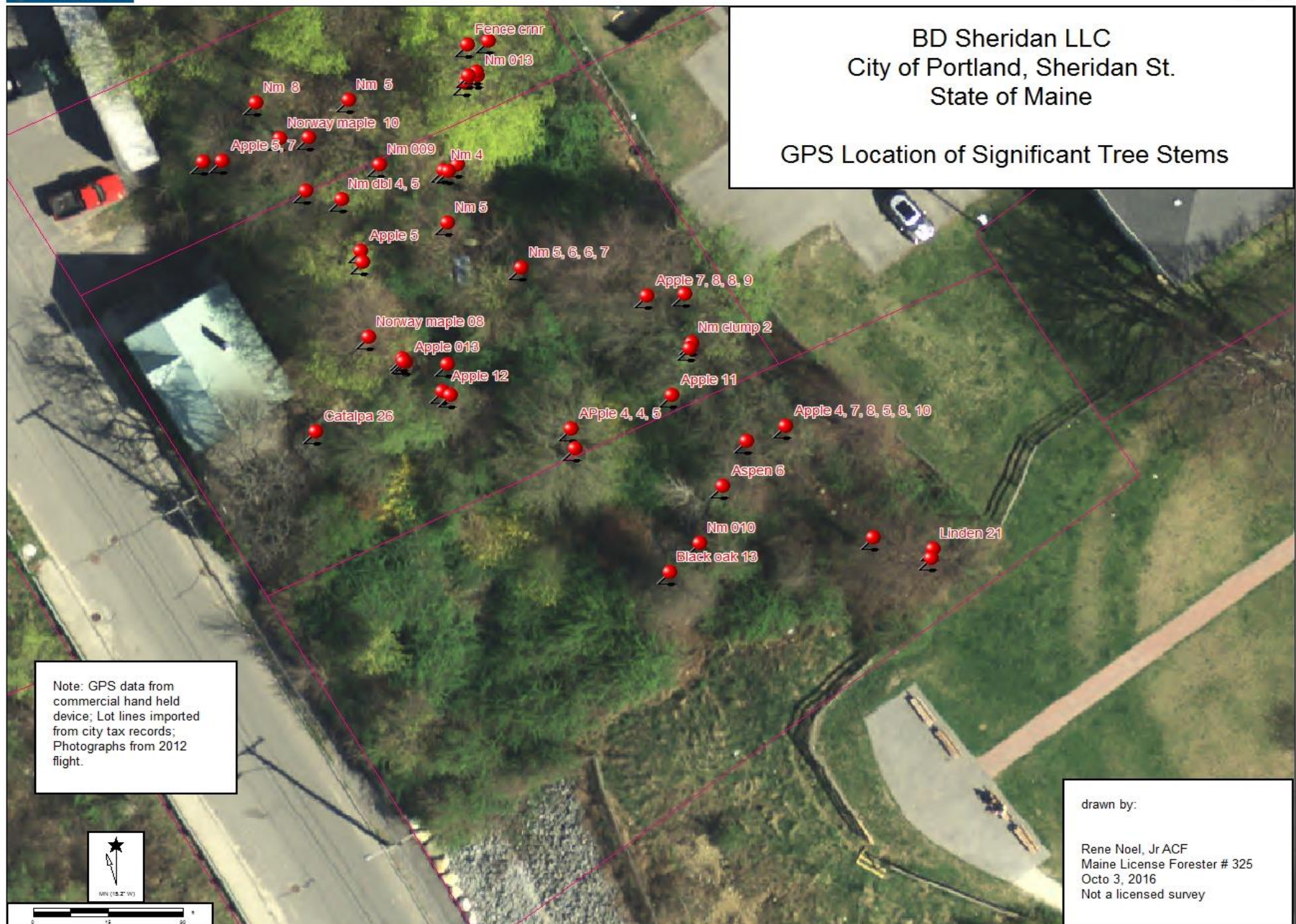
This property is slated for dense residential development. From a forest and ecological perspective there is not a lot to be lost in this development. The forest and understory is composed primarily of invasive undesirable or non native species. Soils are also unstable and eroding.

Removal of this forest and replacement with more suitable species in the landscaping and buffer areas could improve urban forest and plant community of this area.

Below is a table showing trees by species and diameter that are found on the property as well as map prepared from GPS data showing location of all stems and another showing location of trees over 10” in DBH.

Rene D. Noel, Jr. ACF  
Maine Licensed Forester #325









Data use subject to license.

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www.delorme.com



Table 1. Tree Count by Species and Diameter Breast Height (4.5 feet)

| DBH        | Species |         |            |              |        |           |       |
|------------|---------|---------|------------|--------------|--------|-----------|-------|
|            | N Maple | Catalpa | Apple Spc. | Black Cherry | Lindon | Black oak | Aspen |
| 1          | 2       |         |            |              |        |           |       |
| 2          | 8       |         |            |              |        |           |       |
| 3          | 5       |         |            |              |        |           |       |
| 4          | 4       |         | 3          |              |        |           |       |
| 5          | 8       |         | 3          |              | 1      |           |       |
| 6          | 5       |         | 2          |              |        |           | 1     |
| 7          | 4       |         | 3          |              |        |           |       |
| 8          | 6       |         | 5          |              |        |           |       |
| 9          | 4       |         | 2          |              | 1      |           |       |
| 10         | 3       |         | 3          | 1            |        |           |       |
| 11         | 1       |         | 2          |              |        |           |       |
| 12         | 1       |         |            |              |        |           |       |
| 13         | 1       |         |            |              |        | 1         |       |
| 14         |         |         |            |              |        |           |       |
| 15         |         |         |            |              | 1      |           |       |
| 16         |         |         |            |              |        |           |       |
| 17         |         |         |            |              |        |           |       |
| 18         |         |         |            |              |        |           |       |
| 19         |         |         |            |              |        |           |       |
| 20         |         |         |            |              |        |           |       |
| 21         |         |         |            |              | 1      |           |       |
| 22         |         |         |            |              |        |           |       |
| 23         |         |         |            |              |        |           |       |
| 24         |         |         |            |              |        |           |       |
| 25         |         |         |            |              |        |           |       |
| 26         |         | 1       |            |              |        |           |       |
| 27         |         |         |            |              |        |           |       |
| Total < 10 | 44      | 0       | 18         | 0            | 2      | 0         | 1     |
| Total >10  | 6       | 1       | 5          | 1            | 2      | 1         | 0     |
| Total      | 50      | 1       | 23         | 1            | 4      | 1         | 1     |

TRAFFIC IMPACT STUDY

FOR

PROPOSED

**155 Sheridan Street**

**Residential Condominium**

**Project**

Prepared For: Saulnier Development, LLC  
Prepared By: William J. Bray, P.E.



## **INTRODUCTION**

Saulnier Development, LLC is proposing to construct 19 residential condominiums on a parcel of property located at 155 Sheridan Street in the City of Portland. The proposed project provides a total of 19 covered parking spaces on-site.

Access to the proposed condominium units is provided through a single site driveway that exits directly onto Sheridan Street.

The purpose of this study is to examine existing traffic conditions in the general vicinity of the proposed project, estimate the total number of site trips generated by the project, and make a determination as to whether the existing transportation system can safely accommodate the added traffic demand generated by the project.

## **EXISTING CONDITIONS**

**Existing Traffic:** Manual turning movement counts were conducted at the following intersections on the dates noted during the summer of 2016:

- |                                                                  |                 |
|------------------------------------------------------------------|-----------------|
| 1. Washington Avenue, Fox Street and Walnut Street               | - July 13, 2016 |
| 2. Sheridan Street @ Cumberland Avenue                           | - July 20, 2016 |
| 3. Sheridan Street, Walnut Street and Munjoy Heights Condo Drive | - July 21, 2016 |

All vehicular traffic entering each intersection was recorded in 15-minute intervals between the hours of 7:00 to 9:00 AM and between 3:00 and 6:00 PM (Copies of the field data summary sheets are attached).

MaineDOT utilizes highway classifications of I, II, or III for all State and Local roadways. Group I roadways are defined as urban roadways or those roads that typically see commuter traffic and experience little fluctuation from week to week throughout the year. Group II roadways or arterial roads are those that see a combination of commuter and recreational traffic and; therefore, experience moderate fluctuations during the year. Group III roads or recreational roadways are typically used for recreational purposes and experience significant seasonal fluctuations. MaineDOT has classified each approach roadway as a Group I road. Based upon MaineDOT's seasonal adjustment factors; the traffic data was considered representative of "*peak*" summer travel conditions, with no further adjustment.

Figure 1 illustratively presents the estimated 2016 AM and PM design hour traffic conditions at each of the three study intersections.

## **TRAFFIC ACCIDENTS**

**Existing Safety Trends:** The Maine Department of Transportation's (MaineDOT) Accident Records Section provided three-year (2013 through 2015) safety records for the Washington Avenue, Walnut Street and Fox Street intersection; the section of Walnut Street between Washington Avenue and North Street and the section of Sheridan Street between Walnut Street and Cumberland Avenue. MaineDOT's report for the noted road sections is presented as follows:



**2013 - 2015 Accident Summary**  
**Sections of Washington Avenue, Sheridan Street and Walnut Street**

| <u>Location</u>                                             | <u>Number of<br/>Accidents</u> | <u>Critical Rate<br/>Factor</u> |
|-------------------------------------------------------------|--------------------------------|---------------------------------|
| 1. Washington Avenue, Fox Street and Walnut Street          | 11                             | 2.20                            |
| 2. Sheridan Street, Walnut Street and Munjoy Heights        | 3                              | 4.80                            |
| 3. Walnut Street @ Poplar Street                            | 1                              | 2.50                            |
| 4. Sheridan Street @ Cumberland Avenue                      | 1                              | 0.49                            |
| 5. Walnut Street btw. Sheridan Street and Washington Avenue | 4                              | 4.14                            |
| 6. Sheridan Street btw. Cumberland Avenue and Walnut Street | 1                              | 0.81                            |

The MaineDOT considers any roadway segment or intersection a high crash location if both of the following criteria are met:

- 8 or more accidents
- A Critical Rate Factor greater than 1.00

As the data presented in the table shows (location highlighted in yellow), the Washington Avenue/Walnut Street/Fox Street intersection meets MaineDOT's criteria for a high crash location. A total of 11 crashes and a Critical Rate Factor (CRF) of 2.20 were reported for the intersection. A more in-depth review (preparation of detailed vehicle collision diagrams) was prepared for the intersection to determine if a clear pattern of accident is occurring (Copies of the Collision Diagrams are attached as an appendix to the report). The remaining street segments and intersections within the study area experience very low numbers of traffic crashes during the three-year time period.

The detailed review of the vehicle crash reports for the intersection would suggest two clear patterns of concern: 1) A total of four collisions involved vehicles approaching Washington Avenue from the Walnut Street approach sliding through the intersection and striking a thru vehicle on Washington Avenue or other fixed object. 2) The second pattern, with two reported crashes, involved vehicles on the Fox Street approach turning left onto Washington Avenue being struck by thru vehicles traveling southbound on Washington Avenue.

Implementation of one or both of the following suggested remediation measures should help reduce the frequency of traffic crashes occurring at this "off-set" intersection:

- Utilization of an anti-icing agent during periods of inclement weather on the full length of Walnut Street would potentially reduce vehicle skidding problems on Walnut Street.
- Alternatively, or in conjunction with utilization of the anti-icing agent, the City may want to consider closure of Walnut Street at North Street during periods of severe winter road conditions using a remotely operated flashing "Street Closed" beacon placed at the top of the Walnut Street "hill".

In October of 2014 a detailed Traffic Signal Warrant Study was completed for the intersection to determine if prevailing traffic conditions warrant signalization of the intersection. That study concluded 2014 travel conditions do not meet the minimum requirements for traffic control signals.

#### **SITE TRAFFIC**

**Site Trip Generation:** The ninth edition of the Institute of Transportation Engineers (ITE) "TRIP GENERATION" manual was used to determine the volume of site traffic generated by the proposed 19-unit residential condominium project. The ITE publication provides numerous land-use categories and the average volume of trips that are generated by each category. The following trip rates were used to calculate the trip generation of the proposed project:

**Land Use #230 – Residential Condominium/Townhouse**

AM Peak Hour = 0.44 trips per occupied unit

PM Peak Hour = 0.52 trips per occupied unit.

Accordingly, the proposed 19 condominium units can be expected to generate a total of 8 trips in the morning peak hour and 10 trips during the afternoon peak hour.

**Site Trip Composition:** Trips generated by the proposed project are assumed to be “new” or “primary” trips.

**Site Trip Distribution:** The Institute of Transportation Engineers handbook provides the following directional distribution rates for a condominium unit during the AM and PM peak hours:

AM Peak Hour = 17% enter site and 83% exit site

PM Peak Hour = 67% enter site and 33% exit site

Based upon the noted directional distribution patterns; three (1) trip during the morning peak hour and 7 trips in the evening peak hour will enter the proposed site and the remaining trips (7 AM trips and 3 PM trips) during both peak time periods will exit the site.

**Site Trip Assignment:** Vehicle trips generated by the proposed project were assigned through the three study intersections based on existing travel patterns and the Consultants knowledge of travel patterns in the City of Portland. Figure 2 graphically depicts the assignment of the site traffic during both peak commuter time periods.

**FUTURE TRAFFIC**

**Annual Growth:** The Traffic Impact Study has been prepared based upon a projected build-out year of 2018. MaineDOT’s historical traffic data for the study area would suggest the appropriateness of zero growth in annual traffic for the corridor. However, to ensure a conservative assessment of traffic impact; the 2016 design hour traffic values, as highlighted on Figure 1, were increased by an annual growth rate of 1.5% per year to approximate future 2018 design hour traffic values for each study intersection. The estimated 2018 design hour traffic volumes for the study intersections are illustratively presented on Figure 3.

**Other Development Traffic:** Traffic generated by projects that have been approved by the local Planning Board and/or the Maine Department of Transportation, yet are not opened, must be included in the estimate of pre-development traffic. Peak hour trips generated by the following projects were appropriately assigned through the three study intersections:

- 180 Washington Avenue Condominiums
- 169 Newbury Street Apartments
- 121 Newbury Street – Mixed-Use Development
- 65 Munjoy Street Condominiums
- Midtown – Mixed-Use Development
- Merrill Street Condominiums
- 89 Anderson Apartments
- Chestnut Street Apartments
- Portland Gateway Hotel
- Ocean Gateway Retail
- 62 India Street

Figure 4 illustratively presents the Other Development traffic assignment for the study intersections.



**2018 Pre-Development Traffic:** 2018 Pre-Development traffic forecasts were prepared for the study intersections by combining the 2018 Design Hour traffic volumes shown on Figure 3 with the Other Development traffic values displayed on Figure 4. Figure 5 presents the 2018 Pre-Development traffic forecasts at each of the three study intersections.

**2018 Post-Development Traffic:** 2018 Post-Development traffic forecasts were prepared for each study intersection by combining the 2018 Pre-Development travel forecasts illustrated on Figure 5 with the estimated site generated trips highlighted on Figure 2. Figure 6 presents the estimated 2018 Post-Development Traffic forecasts for the study intersections.

### **MOBILITY ANALYSIS**

Capacity analyses of both 2018 Pre-and Post-Development traffic conditions were performed for each study intersection utilizing the Synchro and SimTraffic computer traffic models.

Levels of Service rankings are similar to the academic grading system, where an "A" is very good with little delay and "F" represents very poor conditions. The following table summarizes the relationship between delay and Level of Service for an unsignalized intersection:

**Level of Service Criteria for Unsignalized Intersections**

| <b><u>Level of Service</u></b> | <b><u>Total Control Delay<br/>(sec/veh)</u></b> |
|--------------------------------|-------------------------------------------------|
| A                              | Up to 10.0                                      |
| B                              | 10.1 to 15.0                                    |
| C                              | 15.1 to 25.0                                    |
| D                              | 25.1 to 35.0                                    |
| E                              | 35.1 to 50.0                                    |
| F                              | Greater than 50.0                               |

The results of the unsignalized intersection capacity analyses are presented in the following table:

**Unsignalized Intersection  
Level of Service Summary  
2018 Pre and Post-Development Conditions**

| <b><u>Intersection/Approach</u></b>                          | <b><u>2018 Pre-Development</u></b> |                   |                                |                   | <b><u>2018 Post-Development</u></b> |                   |                                |                   |
|--------------------------------------------------------------|------------------------------------|-------------------|--------------------------------|-------------------|-------------------------------------|-------------------|--------------------------------|-------------------|
|                                                              | <b><u>AM Peak Hour</u></b>         |                   | <b><u>PM Peak Hour</u></b>     |                   | <b><u>AM Peak Hour</u></b>          |                   | <b><u>PM Peak Hour</u></b>     |                   |
|                                                              | <b><u>Delay<br/>(sec.)</u></b>     | <b><u>LOS</u></b> | <b><u>Delay<br/>(sec.)</u></b> | <b><u>LOS</u></b> | <b><u>Delay<br/>(sec.)</u></b>      | <b><u>LOS</u></b> | <b><u>Delay<br/>(sec.)</u></b> | <b><u>LOS</u></b> |
| 1. Sheridan Street @ Cumberland Avenue                       |                                    |                   |                                |                   |                                     |                   |                                |                   |
| <u>Sheridan Street NB</u>                                    | 5 sec.                             | A                 | 6 sec.                         | A                 | 5 sec.                              | A                 | 6 sec.                         | A                 |
| <u>Sheridan Street SB</u>                                    | 4 sec.                             | A                 | 5 sec.                         | A                 | 4 sec.                              | A                 | 5 sec.                         | A                 |
| <u>Cumberland Avenue EB</u>                                  | 1 sec.                             | A                 | 1 sec.                         | A                 | 1 sec.                              | A                 | 1 sec.                         | A                 |
| <u>Cumberland Avenue WB</u>                                  | 1 sec.                             | A                 | 1 sec.                         | A                 | 1 sec.                              | A                 | 1 sec.                         | A                 |
| <b><u>Overall Intersection</u></b>                           | <b>1 sec.</b>                      | <b>A</b>          | <b>1 sec.</b>                  | <b>A</b>          | <b>1 sec.</b>                       | <b>A</b>          | <b>1 sec.</b>                  | <b>A</b>          |
| 2. Sheridan Street/Walnut Street/Munjoy Heights Condominiums |                                    |                   |                                |                   |                                     |                   |                                |                   |
| <u>Sheridan Street NB</u>                                    | 4 sec.                             | A                 | 5 sec.                         | A                 | 4 sec.                              | A                 | 5 sec.                         | A                 |

|                                      |               |          |               |          |               |          |                |          |
|--------------------------------------|---------------|----------|---------------|----------|---------------|----------|----------------|----------|
| Munjoy Heights Condos SB             | 3 sec.        | A        | 4 sec.        | A        | 3 sec.        | A        | 4 sec.         | A        |
| Walnut Street EB                     | 1 sec.        | A        | 1 sec.        | A        | 1 sec.        | A        | 1 sec.         | A        |
| Walnut Street WB                     | 1 sec.        | A        | 1 sec.        | A        | 1 sec.        | A        | 1 sec.         | A        |
| <b>Overall Intersection</b>          | <b>1 sec.</b> | <b>A</b> | <b>1 sec.</b> | <b>A</b> | <b>1 sec.</b> | <b>A</b> | <b>1 sec.</b>  | <b>A</b> |
| 3. Washington Avenue & Walnut Street |               |          |               |          |               |          |                |          |
| Washington Avenue NB                 | 1 sec.        | A        | 1 sec.        | A        | 1 sec.        | A        | 1 sec.         | A        |
| Washington Avenue SB                 | 2 sec.        | A        | 3 sec.        | A        | 3 sec.        | A        | 3 sec.         | A        |
| Walnut Street WB                     | 37 sec.       | E        | 25 sec.       | C        | 37 sec.       | E        | 28 sec.        | D        |
| <b>Overall Intersection</b>          | <b>6 sec.</b> | <b>A</b> | <b>3 sec.</b> | <b>A</b> | <b>6 sec.</b> | <b>A</b> | <b>3 sec.</b>  | <b>A</b> |
| 4. Washington Avenue @ Fox Street    |               |          |               |          |               |          |                |          |
| Fox Street EB                        | 27 sec.       | D        | 51 sec.       | F        | 29 sec.       | D        | 69 sec.        | F        |
| Washington Avenue NB                 | 6 sec.        | A        | 5 sec.        | A        | 7 sec.        | A        | 6 sec.         | A        |
| Washington Avenue SB                 | 1 sec.        | A        | 1 sec.        | A        | 1 sec.        | A        | 1 sec.         | A        |
| <b>Overall Intersection</b>          | <b>4 sec.</b> | <b>A</b> | <b>9 sec.</b> | <b>A</b> | <b>5 sec.</b> | <b>A</b> | <b>11 sec.</b> | <b>B</b> |

As presented in the preceding chart, each of the three unsignalized study intersections were determined to operate overall at acceptable levels of service (A or B) under both 2018 Pre- and Post-development travel conditions. Motorists approaching Washington Avenue on either the Walnut or Fox Street approaches experience considerable delay during the evening peak hour entering Washington Avenue under both the 2018 Pre- and Post-development travel conditions.

## **SUMMARY**

1. The proposed 19 residential condominiums will generate approximately 8 trips in the AM peak hour and an additional 10 trips during the PM peak hour. A single trip in the morning peak hour and 7 trips in the evening peak hour will enter the proposed site and the remaining trips (7 AM trips and 3 PM trips) during both peak time periods will exit the site.
2. The three-year roadway safety audit completed for the study area identified one intersection; the Washington Avenue/Fox Street/Walnut Street as a high crash location. MaineDOT's roadway safety report for the years 2013 through 2015 shows a total of 11 vehicle crashes occurred at the intersection with a Critical Rate Factor of 2.20. Both values meet and exceed MaineDOT's criteria for identification of a high crash location. The remaining roadway segments and intersections in the study area experienced a very low number of traffic crashes over the same time period.

A detailed review of the vehicle crash reports for the Washington Avenue/Walnut Street/Fox Street intersection identified two clear crash patterns: 1) four collisions involved vehicles approaching Washington Avenue from the Walnut Street approach sliding through the intersection and striking a thru vehicle on Washington Avenue and/or fixed object. 2) The second pattern, with two reported crashes, involved vehicles on the Fox Street approach turning left onto Washington Avenue being struck by thru vehicles traveling southbound on Washington Avenue.



Implementation of one or both following winter operational changes should effectively reduce the number of inclement weather related traffic crashes on the Walnut Street approach to Washington Avenue. Both suggested safety improvements are “low cost - high benefit” options.

- *Utilization of an anti-icing agent during periods of inclement weather on the full length of Walnut Street would potentially reduce vehicle skidding problems on Walnut Street.*
  - *Alternatively, or in conjunction with utilization of the anti-icing agent, the City may want to consider closure of Walnut Street at North Street during periods of severe winter road conditions using a remotely operated flashing “Street Closed” beacon placed at the top of the Walnut Street “hill”.*
3. The Mobility Analysis completed for the 2018 Pre- and Post-Development travel conditions at the three study intersections demonstrates the proposed project has no measurable impact on traffic operations at each of the three intersections. Both Sheridan Street intersections with Cumberland Avenue and at Walnut Street were found to operate at Level of Service A, the highest level of operation, under both 2018 travel conditions. The results of the analysis completed for the Washington Avenue/Walnut Street/Fox Street intersection, again, shows very little change in overall vehicle delay between 2018 Pre- and 2018 Post-development conditions. Both side street approaches at Washington Avenue were found to experience high levels of vehicle delay under both forecast future travel conditions. The high levels of vehicle delay are typically experienced on all minor street approaches to busy urban arterial roadways.
  4. A 2014 Traffic Signal Warrant Study was completed for the Washington Avenue/Walnut Street/Fox Street intersection to determine if sequenced traffic control signals were warranted at the intersection. That study concluded average 2014 traffic loadings measured at the intersection were less than the minimum requirements established in the 2009 Manual on Uniform Traffic Control Devices for signalization of an intersection.

### Summary of All Intervals

| Run Number              | 1    | 4    | 5    | 6    | 7    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 6:55 | 6:55 | 6:55 | 6:55 | 6:55 | 6:55 |
| End Time                | 8:00 | 8:00 | 8:00 | 8:00 | 8:00 | 8:00 |
| Total Time (min)        | 65   | 65   | 65   | 65   | 65   | 65   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 1879 | 1898 | 1878 | 1900 | 1933 | 1897 |
| Vehs Exited             | 1878 | 1884 | 1856 | 1886 | 1925 | 1886 |
| Starting Vehs           | 39   | 30   | 30   | 29   | 33   | 31   |
| Ending Vehs             | 40   | 44   | 52   | 43   | 41   | 42   |
| Travel Distance (mi)    | 884  | 889  | 878  | 898  | 907  | 891  |
| Travel Time (hr)        | 37.4 | 38.1 | 37.7 | 39.1 | 39.9 | 38.4 |
| Total Delay (hr)        | 4.0  | 4.6  | 4.6  | 5.2  | 5.6  | 4.8  |
| Total Stops             | 449  | 447  | 445  | 466  | 478  | 457  |
| Fuel Used (gal)         | 29.4 | 29.6 | 29.2 | 30.3 | 30.5 | 29.8 |

### Interval #0 Information Seeding

Start Time 6:55  
End Time 7:00  
Total Time (min) 5  
Volumes adjusted by Growth Factors.  
No data recorded this interval.

### Interval #1 Information Recording

Start Time 7:00  
End Time 8:00  
Total Time (min) 60  
Volumes adjusted by Growth Factors.

| Run Number           | 1    | 4    | 5    | 6    | 7    | Avg  |
|----------------------|------|------|------|------|------|------|
| Vehs Entered         | 1879 | 1898 | 1878 | 1900 | 1933 | 1897 |
| Vehs Exited          | 1878 | 1884 | 1856 | 1886 | 1925 | 1886 |
| Starting Vehs        | 39   | 30   | 30   | 29   | 33   | 31   |
| Ending Vehs          | 40   | 44   | 52   | 43   | 41   | 42   |
| Travel Distance (mi) | 884  | 889  | 878  | 898  | 907  | 891  |
| Travel Time (hr)     | 37.4 | 38.1 | 37.7 | 39.1 | 39.9 | 38.4 |
| Total Delay (hr)     | 4.0  | 4.6  | 4.6  | 5.2  | 5.6  | 4.8  |
| Total Stops          | 449  | 447  | 445  | 466  | 478  | 457  |
| Fuel Used (gal)      | 29.4 | 29.6 | 29.2 | 30.3 | 30.5 | 29.8 |



### 3: Sheridan Street & Cumberland Ave Performance by approach

| Approach           | EB  | WB  | NB  | SB  | All |
|--------------------|-----|-----|-----|-----|-----|
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 |
| Total Del/Veh (s)  | 0.3 | 0.2 | 4.7 | 4.3 | 1.1 |

### 8: Sheridan Street/Munjoy Heights Condos & Walnut Street Performance by approach

| Approach           | EB  | WB  | NB  | SB  | All |
|--------------------|-----|-----|-----|-----|-----|
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 |
| Total Del/Veh (s)  | 0.3 | 0.2 | 4.3 | 3.2 | 0.7 |

### 13: Washington Avenue & Walnut Street Performance by approach

| Approach           | WB   | NB  | SB  | All |
|--------------------|------|-----|-----|-----|
| Denied Del/Veh (s) | 0.2  | 0.0 | 0.7 | 0.5 |
| Total Del/Veh (s)  | 37.2 | 0.6 | 2.4 | 6.0 |

### 15: Washington Avenue & Fox Street Performance by approach

| Approach           | EB   | NB  | SB  | All |
|--------------------|------|-----|-----|-----|
| Denied Del/Veh (s) | 0.2  | 0.3 | 0.0 | 0.1 |
| Total Del/Veh (s)  | 26.7 | 5.6 | 0.7 | 4.1 |

### Total Network Performance

| Denied Del/Veh (s) |  | 0.4 |
|--------------------|--|-----|
| Total Del/Veh (s)  |  | 8.6 |

Intersection: 3: Sheridan Street & Cumberland Ave

| Movement              | EB  | NB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR |
| Maximum Queue (ft)    | 19  | 40  | 36  |
| Average Queue (ft)    | 1   | 21  | 18  |
| 95th Queue (ft)       | 11  | 46  | 44  |
| Link Distance (ft)    | 912 | 492 | 462 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

Intersection: 8: Sheridan Street/Munjoy Heights Condos & Walnut Street

| Movement              | EB  | NB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR |
| Maximum Queue (ft)    | 17  | 36  | 31  |
| Average Queue (ft)    | 1   | 14  | 8   |
| 95th Queue (ft)       | 10  | 39  | 31  |
| Link Distance (ft)    | 671 | 510 | 446 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

Intersection: 13: Washington Avenue & Walnut Street

| Movement              | WB   | NB | SB   |
|-----------------------|------|----|------|
| Directions Served     | LR   | TR | LT   |
| Maximum Queue (ft)    | 198  | 25 | 113  |
| Average Queue (ft)    | 83   | 1  | 13   |
| 95th Queue (ft)       | 164  | 11 | 67   |
| Link Distance (ft)    | 1019 | 32 | 1062 |
| Upstream Blk Time (%) |      | 0  |      |
| Queuing Penalty (veh) |      | 0  |      |
| Storage Bay Dist (ft) |      |    |      |
| Storage Blk Time (%)  |      |    |      |
| Queuing Penalty (veh) |      |    |      |



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Intersection: 15: Washington Avenue & Fox Street

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| Movement              | EB   | NB   | SB |
|-----------------------|------|------|----|
| Directions Served     | LR   | LT   | TR |
| Maximum Queue (ft)    | 146  | 180  | 36 |
| Average Queue (ft)    | 62   | 58   | 5  |
| 95th Queue (ft)       | 117  | 128  | 23 |
| Link Distance (ft)    | 1048 | 1764 | 32 |
| Upstream Blk Time (%) |      |      | 0  |
| Queuing Penalty (veh) |      |      | 2  |
| Storage Bay Dist (ft) |      |      |    |
| Storage Blk Time (%)  |      |      |    |
| Queuing Penalty (veh) |      |      |    |

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Network Summary

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Network wide Queuing Penalty: 2

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Summary of All Intervals

| Run Number              | 1    | 2    | 3    | 4    | 5    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 6:55 | 6:55 | 6:55 | 6:55 | 6:55 | 6:55 |
| End Time                | 8:00 | 8:00 | 8:00 | 8:00 | 8:00 | 8:00 |
| Total Time (min)        | 65   | 65   | 65   | 65   | 65   | 65   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 1868 | 1921 | 1908 | 1903 | 1892 | 1901 |
| Vehs Exited             | 1874 | 1922 | 1917 | 1891 | 1870 | 1895 |
| Starting Vehs           | 39   | 44   | 43   | 30   | 30   | 37   |
| Ending Vehs             | 33   | 43   | 34   | 42   | 52   | 40   |
| Travel Distance (mi)    | 876  | 906  | 909  | 892  | 878  | 892  |
| Travel Time (hr)        | 37.5 | 39.4 | 40.8 | 38.6 | 37.7 | 38.8 |
| Total Delay (hr)        | 4.4  | 5.2  | 6.6  | 4.9  | 4.5  | 5.1  |
| Total Stops             | 470  | 475  | 515  | 456  | 476  | 478  |
| Fuel Used (gal)         | 29.3 | 30.9 | 30.8 | 29.8 | 29.2 | 30.0 |

Interval #0 Information Seeding

Start Time 6:55  
End Time 7:00  
Total Time (min) 5  
Volumes adjusted by Growth Factors.  
No data recorded this interval.

Interval #1 Information Recording

Start Time 7:00  
End Time 8:00  
Total Time (min) 60  
Volumes adjusted by Growth Factors.

| Run Number           | 1    | 2    | 3    | 4    | 5    | Avg  |
|----------------------|------|------|------|------|------|------|
| Vehs Entered         | 1868 | 1921 | 1908 | 1903 | 1892 | 1901 |
| Vehs Exited          | 1874 | 1922 | 1917 | 1891 | 1870 | 1895 |
| Starting Vehs        | 39   | 44   | 43   | 30   | 30   | 37   |
| Ending Vehs          | 33   | 43   | 34   | 42   | 52   | 40   |
| Travel Distance (mi) | 876  | 906  | 909  | 892  | 878  | 892  |
| Travel Time (hr)     | 37.5 | 39.4 | 40.8 | 38.6 | 37.7 | 38.8 |
| Total Delay (hr)     | 4.4  | 5.2  | 6.6  | 4.9  | 4.5  | 5.1  |
| Total Stops          | 470  | 475  | 515  | 456  | 476  | 478  |
| Fuel Used (gal)      | 29.3 | 30.9 | 30.8 | 29.8 | 29.2 | 30.0 |



### 3: Sheridan Street & Cumberland Ave Performance by approach

| Approach           | EB  | WB  | NB  | SB  | All |
|--------------------|-----|-----|-----|-----|-----|
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Total Del/Veh (s)  | 0.4 | 0.2 | 4.7 | 4.3 | 1.2 |

### 8: Sheridan Street/Munjoy Heights Condos & Walnut Street Performance by approach

| Approach           | EB  | WB  | NB  | SB  | All |
|--------------------|-----|-----|-----|-----|-----|
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 |
| Total Del/Veh (s)  | 0.3 | 0.3 | 4.1 | 3.0 | 0.8 |

### 13: Washington Avenue & Walnut Street Performance by approach

| Approach           | WB   | NB  | SB  | All |
|--------------------|------|-----|-----|-----|
| Denied Del/Veh (s) | 0.2  | 0.0 | 0.8 | 0.5 |
| Total Del/Veh (s)  | 36.3 | 0.6 | 2.7 | 6.2 |

### 15: Washington Avenue & Fox Street Performance by approach

| Approach           | EB   | NB  | SB  | All |
|--------------------|------|-----|-----|-----|
| Denied Del/Veh (s) | 0.2  | 0.3 | 0.0 | 0.1 |
| Total Del/Veh (s)  | 29.0 | 7.0 | 0.8 | 4.7 |

### Total Network Performance

| Denied Del/Veh (s) |  |  | 0.4 |  |
|--------------------|--|--|-----|--|
| Total Del/Veh (s)  |  |  | 9.1 |  |



Intersection: 3: Sheridan Street & Cumberland Ave

| Movement              | EB  | NB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR |
| Maximum Queue (ft)    | 17  | 41  | 45  |
| Average Queue (ft)    | 1   | 22  | 22  |
| 95th Queue (ft)       | 11  | 46  | 47  |
| Link Distance (ft)    | 912 | 492 | 462 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

Intersection: 8: Sheridan Street/Munjoy Heights Condos & Walnut Street

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 6   | 6   | 31  | 31  |
| Average Queue (ft)    | 0   | 1   | 18  | 6   |
| 95th Queue (ft)       | 4   | 7   | 43  | 27  |
| Link Distance (ft)    | 671 | 784 | 510 | 446 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Intersection: 13: Washington Avenue & Walnut Street

| Movement              | WB   | NB | SB   |
|-----------------------|------|----|------|
| Directions Served     | LR   | TR | LT   |
| Maximum Queue (ft)    | 190  | 15 | 87   |
| Average Queue (ft)    | 83   | 0  | 15   |
| 95th Queue (ft)       | 162  | 8  | 59   |
| Link Distance (ft)    | 1019 | 32 | 1062 |
| Upstream Blk Time (%) |      | 0  |      |
| Queuing Penalty (veh) |      | 0  |      |
| Storage Bay Dist (ft) |      |    |      |
| Storage Blk Time (%)  |      |    |      |
| Queuing Penalty (veh) |      |    |      |

Intersection: 15: Washington Avenue & Fox Street

| Movement              | EB   | NB   | SB |
|-----------------------|------|------|----|
| Directions Served     | LR   | LT   | TR |
| Maximum Queue (ft)    | 169  | 206  | 43 |
| Average Queue (ft)    | 67   | 62   | 6  |
| 95th Queue (ft)       | 128  | 146  | 27 |
| Link Distance (ft)    | 1048 | 1764 | 32 |
| Upstream Blk Time (%) |      |      | 0  |
| Queuing Penalty (veh) |      |      | 2  |
| Storage Bay Dist (ft) |      |      |    |
| Storage Blk Time (%)  |      |      |    |
| Queuing Penalty (veh) |      |      |    |

Network Summary

Network wide Queuing Penalty: 2



### Summary of All Intervals

| Run Number              | 3    | 4    | 5    | 6    | 7    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 4:25 | 4:25 | 4:25 | 4:25 | 4:25 | 4:25 |
| End Time                | 5:30 | 5:30 | 5:30 | 5:30 | 5:30 | 5:30 |
| Total Time (min)        | 65   | 65   | 65   | 65   | 65   | 65   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 2151 | 2105 | 2150 | 2208 | 2135 | 2151 |
| Vehs Exited             | 2163 | 2121 | 2144 | 2210 | 2137 | 2156 |
| Starting Vehs           | 53   | 52   | 38   | 47   | 41   | 43   |
| Ending Vehs             | 41   | 36   | 44   | 45   | 39   | 40   |
| Travel Distance (mi)    | 994  | 973  | 1007 | 1028 | 983  | 997  |
| Travel Time (hr)        | 43.0 | 42.3 | 44.7 | 46.3 | 42.5 | 43.7 |
| Total Delay (hr)        | 5.2  | 5.3  | 6.3  | 7.3  | 5.0  | 5.8  |
| Total Stops             | 429  | 463  | 502  | 483  | 417  | 459  |
| Fuel Used (gal)         | 33.2 | 32.6 | 33.9 | 34.9 | 33.0 | 33.5 |

### Interval #0 Information Seeding

Start Time 4:25  
End Time 4:30  
Total Time (min) 5  
Volumes adjusted by Growth Factors.  
No data recorded this interval.

### Interval #1 Information Recording

Start Time 4:30  
End Time 5:30  
Total Time (min) 60  
Volumes adjusted by Growth Factors.

| Run Number           | 3    | 4    | 5    | 6    | 7    | Avg  |
|----------------------|------|------|------|------|------|------|
| Vehs Entered         | 2151 | 2105 | 2150 | 2208 | 2135 | 2151 |
| Vehs Exited          | 2163 | 2121 | 2144 | 2210 | 2137 | 2156 |
| Starting Vehs        | 53   | 52   | 38   | 47   | 41   | 43   |
| Ending Vehs          | 41   | 36   | 44   | 45   | 39   | 40   |
| Travel Distance (mi) | 994  | 973  | 1007 | 1028 | 983  | 997  |
| Travel Time (hr)     | 43.0 | 42.3 | 44.7 | 46.3 | 42.5 | 43.7 |
| Total Delay (hr)     | 5.2  | 5.3  | 6.3  | 7.3  | 5.0  | 5.8  |
| Total Stops          | 429  | 463  | 502  | 483  | 417  | 459  |
| Fuel Used (gal)      | 33.2 | 32.6 | 33.9 | 34.9 | 33.0 | 33.5 |

### 3: Sheridan Street & Cumberland Ave Performance by approach

| Approach           | EB  | WB  | NB  | SB  | All |
|--------------------|-----|-----|-----|-----|-----|
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 |
| Total Del/Veh (s)  | 0.6 | 0.3 | 6.2 | 4.9 | 1.1 |

### 8: Sheridan Street/Munjoy Heights Condos & Walnut Street Performance by approach

| Approach           | EB  | WB  | NB  | SB  | All |
|--------------------|-----|-----|-----|-----|-----|
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| Total Del/Veh (s)  | 0.4 | 0.1 | 4.9 | 4.1 | 0.9 |

### 13: Washington Avenue & Walnut Street Performance by approach

| Approach           | WB   | NB  | SB  | All |
|--------------------|------|-----|-----|-----|
| Denied Del/Veh (s) | 0.1  | 0.0 | 0.4 | 0.1 |
| Total Del/Veh (s)  | 25.2 | 0.7 | 3.2 | 3.0 |

### 15: Washington Avenue & Fox Street Performance by approach

| Approach           | EB   | NB  | SB  | All |
|--------------------|------|-----|-----|-----|
| Denied Del/Veh (s) | 0.2  | 0.8 | 0.0 | 0.5 |
| Total Del/Veh (s)  | 50.6 | 5.4 | 0.6 | 8.6 |

### Total Network Performance

|                    |     |
|--------------------|-----|
| Denied Del/Veh (s) | 0.5 |
| Total Del/Veh (s)  | 9.1 |



Intersection: 3: Sheridan Street & Cumberland Ave

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 40  | 19  | 40  | 54  |
| Average Queue (ft)    | 2   | 1   | 18  | 20  |
| 95th Queue (ft)       | 17  | 9   | 44  | 48  |
| Link Distance (ft)    | 912 | 914 | 492 | 462 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Intersection: 8: Sheridan Street/Munjoy Heights Condos & Walnut Street

| Movement              | EB  | NB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR |
| Maximum Queue (ft)    | 6   | 40  | 35  |
| Average Queue (ft)    | 0   | 18  | 14  |
| 95th Queue (ft)       | 6   | 44  | 40  |
| Link Distance (ft)    | 671 | 510 | 446 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

Intersection: 13: Washington Avenue & Walnut Street

| Movement              | WB   | NB | SB   |
|-----------------------|------|----|------|
| Directions Served     | LR   | TR | LT   |
| Maximum Queue (ft)    | 107  | 32 | 178  |
| Average Queue (ft)    | 51   | 3  | 41   |
| 95th Queue (ft)       | 93   | 17 | 124  |
| Link Distance (ft)    | 1019 | 32 | 1062 |
| Upstream Blk Time (%) |      | 0  |      |
| Queuing Penalty (veh) |      | 1  |      |
| Storage Bay Dist (ft) |      |    |      |
| Storage Blk Time (%)  |      |    |      |
| Queuing Penalty (veh) |      |    |      |

Intersection: 15: Washington Avenue & Fox Street

| Movement              | EB   | NB   | SB |
|-----------------------|------|------|----|
| Directions Served     | LR   | LT   | TR |
| Maximum Queue (ft)    | 232  | 246  | 26 |
| Average Queue (ft)    | 99   | 50   | 1  |
| 95th Queue (ft)       | 195  | 153  | 11 |
| Link Distance (ft)    | 1048 | 1764 | 32 |
| Upstream Blk Time (%) |      |      | 0  |
| Queuing Penalty (veh) |      |      | 0  |
| Storage Bay Dist (ft) |      |      |    |
| Storage Blk Time (%)  |      |      |    |
| Queuing Penalty (veh) |      |      |    |

Network Summary

Network wide Queuing Penalty: 1



### Summary of All Intervals

| Run Number              | 3    | 4    | 5    | 6    | 7    | Avg  |
|-------------------------|------|------|------|------|------|------|
| Start Time              | 4:25 | 4:25 | 4:25 | 4:25 | 4:25 | 4:25 |
| End Time                | 5:30 | 5:30 | 5:30 | 5:30 | 5:30 | 5:30 |
| Total Time (min)        | 65   | 65   | 65   | 65   | 65   | 65   |
| Time Recorded (min)     | 60   | 60   | 60   | 60   | 60   | 60   |
| # of Intervals          | 2    | 2    | 2    | 2    | 2    | 2    |
| # of Recorded Intervals | 1    | 1    | 1    | 1    | 1    | 1    |
| Vehs Entered            | 2184 | 2151 | 2168 | 2235 | 2160 | 2182 |
| Vehs Exited             | 2197 | 2167 | 2167 | 2237 | 2170 | 2186 |
| Starting Vehs           | 57   | 52   | 44   | 47   | 51   | 47   |
| Ending Vehs             | 44   | 36   | 45   | 45   | 41   | 41   |
| Travel Distance (mi)    | 1007 | 996  | 1014 | 1043 | 995  | 1011 |
| Travel Time (hr)        | 45.8 | 44.3 | 45.8 | 47.0 | 43.7 | 45.3 |
| Total Delay (hr)        | 7.5  | 6.4  | 7.1  | 7.4  | 5.7  | 6.8  |
| Total Stops             | 471  | 467  | 514  | 507  | 435  | 481  |
| Fuel Used (gal)         | 34.3 | 33.7 | 34.4 | 35.5 | 33.5 | 34.3 |

### Interval #0 Information Seeding

Start Time 4:25  
End Time 4:30  
Total Time (min) 5  
Volumes adjusted by Growth Factors.  
No data recorded this interval.

### Interval #1 Information Recording

Start Time 4:30  
End Time 5:30  
Total Time (min) 60  
Volumes adjusted by Growth Factors.

| Run Number           | 3    | 4    | 5    | 6    | 7    | Avg  |
|----------------------|------|------|------|------|------|------|
| Vehs Entered         | 2184 | 2151 | 2168 | 2235 | 2160 | 2182 |
| Vehs Exited          | 2197 | 2167 | 2167 | 2237 | 2170 | 2186 |
| Starting Vehs        | 57   | 52   | 44   | 47   | 51   | 47   |
| Ending Vehs          | 44   | 36   | 45   | 45   | 41   | 41   |
| Travel Distance (mi) | 1007 | 996  | 1014 | 1043 | 995  | 1011 |
| Travel Time (hr)     | 45.8 | 44.3 | 45.8 | 47.0 | 43.7 | 45.3 |
| Total Delay (hr)     | 7.5  | 6.4  | 7.1  | 7.4  | 5.7  | 6.8  |
| Total Stops          | 471  | 467  | 514  | 507  | 435  | 481  |
| Fuel Used (gal)      | 34.3 | 33.7 | 34.4 | 35.5 | 33.5 | 34.3 |

### 3: Sheridan Street & Cumberland Ave Performance by approach

| Approach           | EB  | WB  | NB  | SB  | All |
|--------------------|-----|-----|-----|-----|-----|
| Denied Del/Veh (s) | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 |
| Total Del/Veh (s)  | 0.7 | 0.3 | 6.3 | 4.9 | 1.2 |

### 8: Sheridan Street/Munjoy Heights Condos & Walnut Street Performance by approach

| Approach           | EB  | WB  | NB  | SB  | All |
|--------------------|-----|-----|-----|-----|-----|
| Denied Del/Veh (s) | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 |
| Total Del/Veh (s)  | 0.4 | 0.1 | 4.6 | 4.2 | 0.9 |

### 13: Washington Avenue & Walnut Street Performance by approach

| Approach           | WB   | NB  | SB  | All |
|--------------------|------|-----|-----|-----|
| Denied Del/Veh (s) | 0.2  | 0.0 | 0.4 | 0.1 |
| Total Del/Veh (s)  | 28.2 | 0.8 | 3.4 | 3.4 |

### 15: Washington Avenue & Fox Street Performance by approach

| Approach           | EB   | NB  | SB  | All  |
|--------------------|------|-----|-----|------|
| Denied Del/Veh (s) | 0.2  | 0.8 | 0.0 | 0.5  |
| Total Del/Veh (s)  | 68.7 | 5.5 | 0.6 | 10.5 |

### Total Network Performance

| Denied Del/Veh (s) |  |  | 0.5  |  |
|--------------------|--|--|------|--|
| Total Del/Veh (s)  |  |  | 10.6 |  |



Intersection: 3: Sheridan Street & Cumberland Ave

| Movement              | EB  | WB  | NB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR | LTR |
| Maximum Queue (ft)    | 45  | 19  | 40  | 62  |
| Average Queue (ft)    | 3   | 1   | 17  | 22  |
| 95th Queue (ft)       | 20  | 10  | 43  | 50  |
| Link Distance (ft)    | 912 | 914 | 492 | 462 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Intersection: 8: Sheridan Street/Munjoy Heights Condos & Walnut Street

| Movement              | EB  | NB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR |
| Maximum Queue (ft)    | 12  | 36  | 35  |
| Average Queue (ft)    | 1   | 18  | 13  |
| 95th Queue (ft)       | 8   | 44  | 39  |
| Link Distance (ft)    | 671 | 510 | 446 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

Intersection: 13: Washington Avenue & Walnut Street

| Movement              | WB   | NB | SB   |
|-----------------------|------|----|------|
| Directions Served     | LR   | TR | LT   |
| Maximum Queue (ft)    | 112  | 42 | 178  |
| Average Queue (ft)    | 55   | 2  | 43   |
| 95th Queue (ft)       | 95   | 18 | 129  |
| Link Distance (ft)    | 1019 | 32 | 1062 |
| Upstream Blk Time (%) |      | 0  |      |
| Queuing Penalty (veh) |      | 1  |      |
| Storage Bay Dist (ft) |      |    |      |
| Storage Blk Time (%)  |      |    |      |
| Queuing Penalty (veh) |      |    |      |

Intersection: 15: Washington Avenue & Fox Street

| Movement              | EB   | NB   | SB |
|-----------------------|------|------|----|
| Directions Served     | LR   | LT   | TR |
| Maximum Queue (ft)    | 316  | 188  | 30 |
| Average Queue (ft)    | 120  | 53   | 2  |
| 95th Queue (ft)       | 258  | 142  | 15 |
| Link Distance (ft)    | 1048 | 1764 | 32 |
| Upstream Blk Time (%) |      |      | 0  |
| Queuing Penalty (veh) |      |      | 1  |
| Storage Bay Dist (ft) |      |      |    |
| Storage Blk Time (%)  |      |      |    |
| Queuing Penalty (veh) |      |      |    |

Network Summary

Network wide Queuing Penalty: 1

March 27, 2017  
Summit #16030

BD Sheridan LLC  
1266 Furnace Brook Parkway  
Suite 300  
Quincy, MA 02169  
Attn: Rich and Bernie

Reference: Geotechnical Letter – Proposed Apartment Building  
155 Sheridan Street, Portland, Maine

Dear Sirs;

Summit Geoengineering Services (SGS) performed a geotechnical exploration at the above referenced site on March 10, 2016. The explorations consisted of 3 borings drilled at the top, mid-height, and toe of the existing slope. Laboratory testing was performed on soil samples collected during the exploration. Additionally, a monitoring well was installed in the boring at the top of the slope. Attached to this letter are the boring logs, the laboratory testing results, and a soil cross section.

We understand that the new apartment building will be constructed as a slab-on-grade with a finish floor elevation (FFE) of 111.50 feet and a soldier pile and lagging wall will be constructed on the north end of the site to retain the cut slope. Based on the proposed layout and the soil conditions encountered in our explorations, we do not anticipate any major geotechnical concerns with the new development. Further geotechnical analyses are required for us to provide final geotechnical recommendations for the design and construction of the building foundation and the retaining wall. We will submit the final geotechnical report within two weeks.

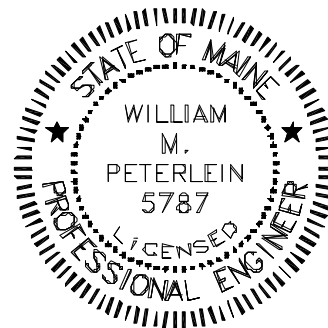
If there are any questions, please feel free to contact me.

Sincerely,

**Summit Geoengineering Services**



William M. Peterlein, P.E.  
President & Principal Engineer



Attachments:

*Boring Location Plan*

*Boring Logs*

*Soil Cross Section*

*Laboratory Test Results*



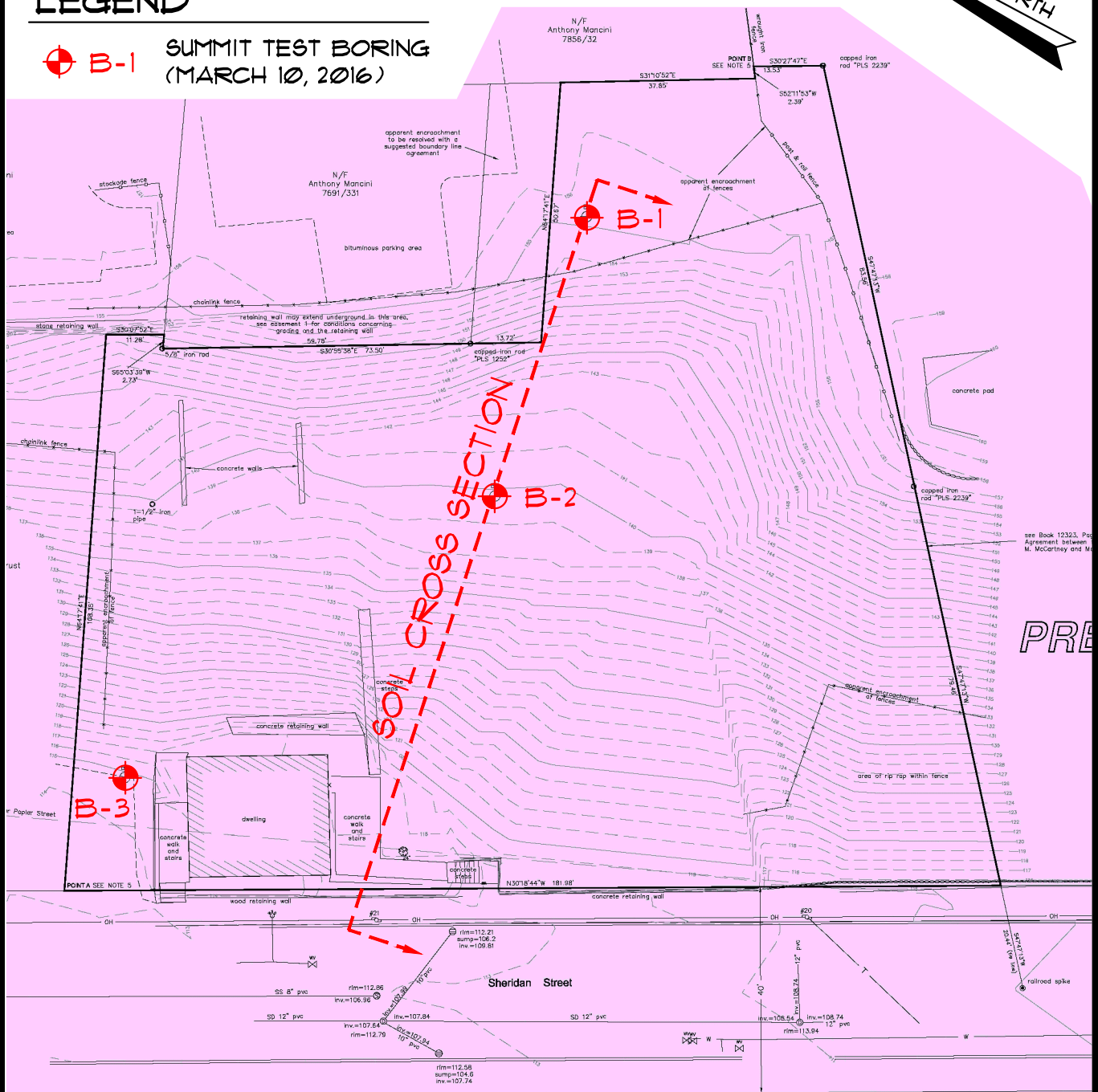
# PLAN REFERENCE

"PLAN OF EXISTING CONDITIONS SURVEY", DATED MARCH 4, 2016, PREPARED BY TITCOMB ASSOCIATES.

## LEGEND



**SUMMIT TEST BORING**  
(MARCH 10, 2016)



## TEST BORING LOCATION PLAN PROPOSED RESIDENTIAL BUILDING

153 - 165 SHERIDAN STREET - PORTLAND, MAINE

PREPARED FOR

**BD SHERIDAN LLC**

145 LISBON ST. - SUITE 601  
LEWISTON, ME 04240  
Tel.: (207) 576-3313

173 PLEASANT STREET  
ROCKLAND, ME 04841  
Tel.: (207) 318-1161

DATE: 3-18-2016

DRAWN BY: KRF

CHECKED BY: UMP

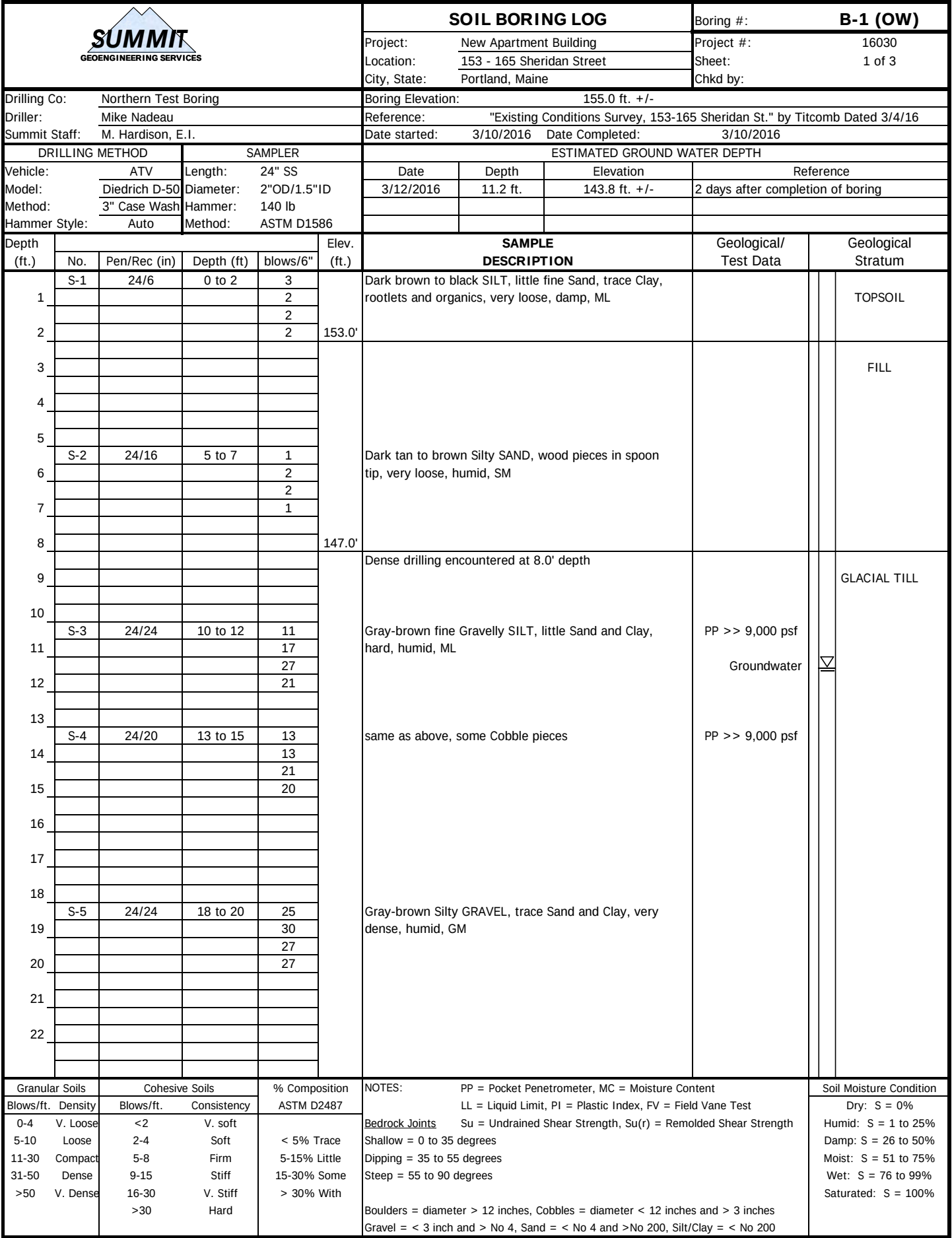
JOB: 16030

SCALE: 1" = 30'

FILE: 16030 BOR

# SUMMIT

GEOENGINEERING SERVICES  
www.summitgeoeng.com



|                       |          |                                                                                 |             |               | SOIL BORING LOG                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              | Boring #: <b>B-1 (OW)</b> |                                                                                                                                                           |  |
|--------------------------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------|-------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Project: New Apartment Building<br>Location: 153 - 165 Sheridan Street<br>City, State: Portland, Maine |          |                                                                                 |             |               | Project #: 16030<br>Sheet: 2 of 3<br>Chkd by:                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| Drilling Co: Northern Test Boring<br>Driller: Mike Nadeau<br>Summit Staff: M. Hardison, E.I.           |          |                                                                                 |             |               | Boring Elevation: 155.0 ft. +/-<br>Reference: "Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16<br>Date started: 3/10/2016 Date Completed: 3/10/2016 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| DRILLING METHOD                                                                                        |          | SAMPLER                                                                         |             |               | ESTIMATED GROUND WATER DEPTH                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| Vehicle: ATV<br>Model: Diedrich D-50<br>Method: 3" Case Wash<br>Hammer Style: Auto                     |          | Length: 24" SS<br>Diameter: 2"OD/1.5"ID<br>Hammer: 140 lb<br>Method: ASTM D1586 |             |               | Date: 3/12/2016<br>Depth: 11.2 ft.<br>Elevation: 143.8 ft. +/-                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Reference: 2 days after completion of boring |                           |                                                                                                                                                           |  |
| Depth (ft.)                                                                                            | No.      | Pen/Rec (in)                                                                    | Depth (ft)  | blows/6"      | Elev. (ft.)                                                                                                                                                                   | SAMPLE DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                              | Geological/ Test Data     | Geological Stratum                                                                                                                                        |  |
| 23                                                                                                     | S-6      | 24/28                                                                           | 23 to 25    | 13            |                                                                                                                                                                               | Gray Gravelly SAND, little Silt, trace Clay, very dense, humid to moist, SP-SM                                                                                                                                                                                                                                                                                                                                                                                          |                                              |                           | GLACIAL TILL                                                                                                                                              |  |
| 24                                                                                                     |          |                                                                                 |             | 22            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
|                                                                                                        |          |                                                                                 |             | 39            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 25                                                                                                     |          |                                                                                 |             | 29            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
|                                                                                                        |          |                                                                                 |             |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 26                                                                                                     |          |                                                                                 |             |               |                                                                                                                                                                               | same as above, little Clay, some Silt                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                              |                           |                                                                                                                                                           |  |
| 27                                                                                                     |          |                                                                                 |             |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 28                                                                                                     |          |                                                                                 |             |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 29                                                                                                     | S-7      | 24/20                                                                           | 29 to 31    | 40            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 30                                                                                                     |          |                                                                                 |             | 34            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
|                                                                                                        |          |                                                                                 |             | 48            |                                                                                                                                                                               | Gray SILT, little Sand and Clay, trace Gravel, very dense, humid to moist, ML                                                                                                                                                                                                                                                                                                                                                                                           |                                              |                           |                                                                                                                                                           |  |
| 31                                                                                                     |          |                                                                                 |             | 47            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 32                                                                                                     |          |                                                                                 |             |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 33                                                                                                     | S-8      | 24/20                                                                           | 33 to 35    | 33            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 34                                                                                                     |          |                                                                                 |             | 37            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
|                                                                                                        |          |                                                                                 |             | 50/4"         |                                                                                                                                                                               | same as above                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                              |                           |                                                                                                                                                           |  |
| 35                                                                                                     |          |                                                                                 |             |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 36                                                                                                     |          |                                                                                 |             |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 37                                                                                                     |          |                                                                                 |             |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 38                                                                                                     | S-9      | 24/18                                                                           | 38 to 40    | 27            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 39                                                                                                     |          |                                                                                 |             | 31            |                                                                                                                                                                               | same as above                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                              |                           |                                                                                                                                                           |  |
|                                                                                                        |          |                                                                                 |             | 42            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 40                                                                                                     |          |                                                                                 |             | 43            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 41                                                                                                     |          |                                                                                 |             |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 42                                                                                                     |          |                                                                                 |             |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 43                                                                                                     | S-10     | 24/24                                                                           | 43 to 45    | 15            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 44                                                                                                     |          |                                                                                 |             | 30            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
|                                                                                                        |          |                                                                                 |             | 32            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
|                                                                                                        |          |                                                                                 |             | 40            |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| Granular Soils                                                                                         |          | Cohesive Soils                                                                  |             | % Composition |                                                                                                                                                                               | NOTES: PP = Pocket Penetrometer, MC = Moisture Content<br>LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test<br><u>Bedrock Joints</u> Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength<br>Shallow = 0 to 35 degrees<br>Dipping = 35 to 55 degrees<br>Steep = 55 to 90 degrees<br>Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches<br>Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200 |                                              |                           | Soil Moisture Condition<br>Dry: S = 0%<br>Humid: S = 1 to 25%<br>Damp: S = 26 to 50%<br>Moist: S = 51 to 75%<br>Wet: S = 76 to 99%<br>Saturated: S = 100% |  |
| Blows/ft.                                                                                              | Density  | Blows/ft.                                                                       | Consistency | ASTM D2487    |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 0-4                                                                                                    | V. Loose | <2                                                                              | V. soft     | < 5% Trace    |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 5-10                                                                                                   | Loose    | 2-4                                                                             | Soft        | 5-15% Little  |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 11-30                                                                                                  | Compact  | 5-8                                                                             | Firm        | 15-30% Some   |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| 31-50                                                                                                  | Dense    | 9-15                                                                            | Stiff       | > 30% With    |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
| >50                                                                                                    | V. Dense | 16-30                                                                           | V. Stiff    |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |
|                                                                                                        |          | >30                                                                             | Hard        |               |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                              |                           |                                                                                                                                                           |  |



# SOIL BORING LOG

Boring #: **B-1 (OW)**

Project: New Apartment Building  
 Location: 153 - 165 Sheridan Street  
 City, State: Portland, Maine

Project #: 16030  
 Sheet: 3 of 3  
 Chkd by:

Drilling Co: Northern Test Boring  
 Driller: Mike Nadeau  
 Summit Staff: M. Hardison, E.I.

Boring Elevation: 155.0 ft. +/-  
 Reference: "Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16  
 Date started: 3/10/2016 Date Completed: 3/10/2016

| DRILLING METHOD |               | SAMPLER   |             | ESTIMATED GROUND WATER DEPTH |          |               |                                   |
|-----------------|---------------|-----------|-------------|------------------------------|----------|---------------|-----------------------------------|
| Vehicle:        | ATV           | Length:   | 24" SS      | Date                         | Depth    | Elevation     | Reference                         |
| Model:          | Diedrich D-50 | Diameter: | 2"OD/1.5"ID | 3/12/2016                    | 11.2 ft. | 143.8 ft. +/- | 2 days after completion of boring |
| Method:         | 3" Case Wash  | Hammer:   | 140 lb      |                              |          |               |                                   |
| Hammer Style:   | Auto          | Method:   | ASTM D1586  |                              |          |               |                                   |

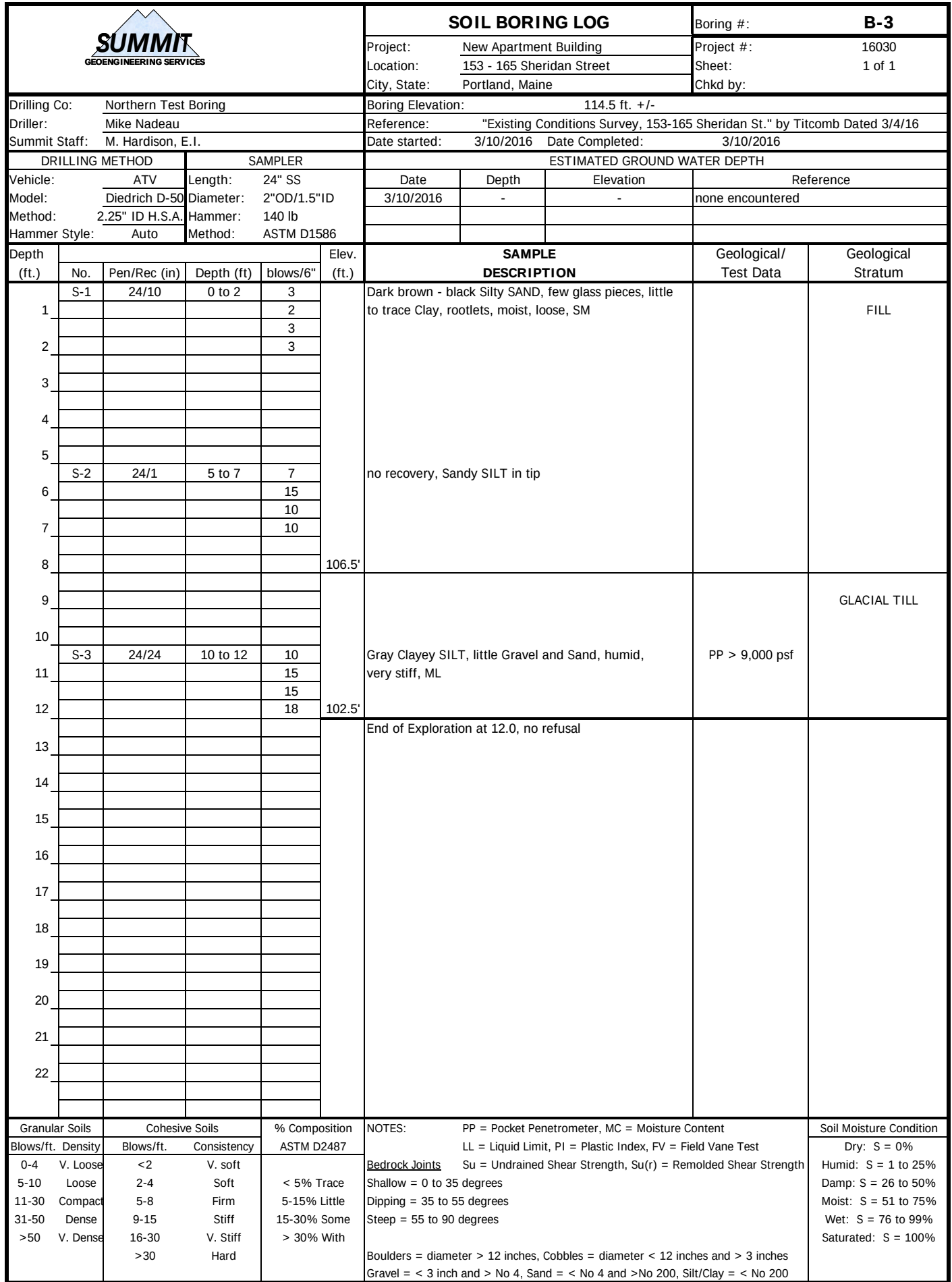
| Depth (ft.) | No.  | Pen/Rec (in) | Depth (ft) | blows/6" | Elev. (ft.) | SAMPLE DESCRIPTION                                                                                                                                               | Geological/ Test Data | Geological Stratum |
|-------------|------|--------------|------------|----------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|
| 46          |      |              |            |          |             | Gray SILT, little Sand and Clay, trace Gravel, very dense, humid to moist, ML                                                                                    |                       | GLACIAL TILL       |
| 47          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 48          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 49          | S-11 | 24/24        | 48 to 50   | 56       |             |                                                                                                                                                                  |                       |                    |
| 50          |      |              |            | 38       |             |                                                                                                                                                                  |                       |                    |
|             |      |              |            | 34       |             | End of Boring at 50.0', no refusal<br><br>Monitoring Well Installed:<br>2" PVC Well Screen from 41.5' to 31.5'<br>2" PVC Riser Pipe from 31.5' to ground surface |                       |                    |
|             |      |              |            | 44       | 105.0'      |                                                                                                                                                                  |                       |                    |
| 51          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 52          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 53          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 54          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 55          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 56          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 57          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 58          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 59          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 60          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 61          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 62          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 63          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 64          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 65          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 66          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
| 67          |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
|             |      |              |            |          |             |                                                                                                                                                                  |                       |                    |
|             |      |              |            |          |             |                                                                                                                                                                  |                       |                    |

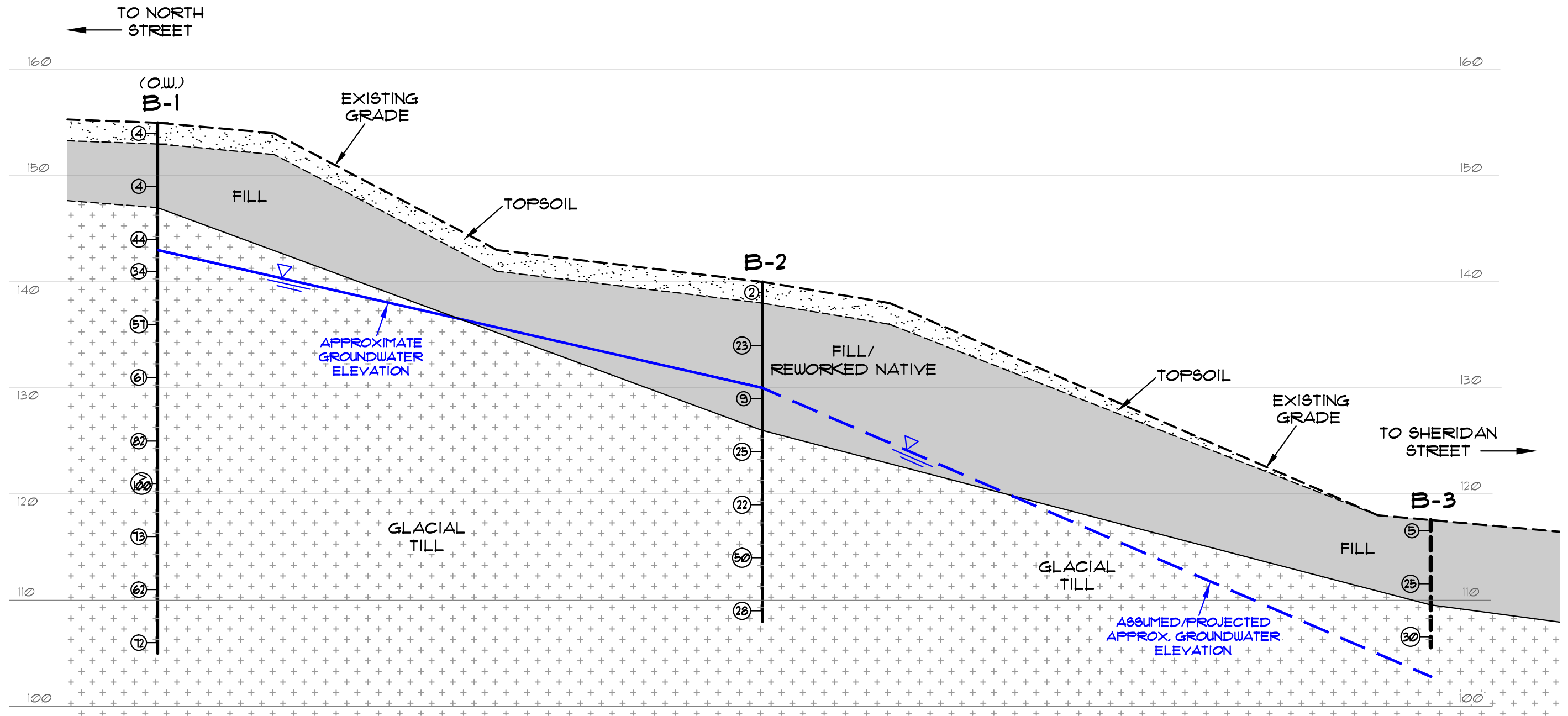
| Granular Soils |          | Cohesive Soils |             | % Composition<br>ASTM D2487 | NOTES:<br>PP = Pocket Penetrometer, MC = Moisture Content<br>LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test<br><u>Bedrock Joints</u> Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength<br>Shallow = 0 to 35 degrees<br>Dipping = 35 to 55 degrees<br>Steep = 55 to 90 degrees<br><br>Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches<br>Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200 | Soil Moisture Condition<br><br>Dry: S = 0%<br>Humid: S = 1 to 25%<br>Damp: S = 26 to 50%<br>Moist: S = 51 to 75%<br>Wet: S = 76 to 99%<br>Saturated: S = 100% |
|----------------|----------|----------------|-------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Blows/ft.      | Density  | Blows/ft.      | Consistency |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                               |
| 0-4            | V. Loose | <2             | V. soft     |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                               |
| 5-10           | Loose    | 2-4            | Soft        | < 5% Trace                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                               |
| 11-30          | Compact  | 5-8            | Firm        | 5-15% Little                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                               |
| 31-50          | Dense    | 9-15           | Stiff       | 15-30% Some                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                               |
| >50            | V. Dense | 16-30          | V. Stiff    | > 30% With                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                               |
|                |          | >30            | Hard        |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                               |

|  |          |                       |             |               | SOIL BORING LOG                                                                       |                                                                                                                                                                                  |               | Boring #: <b>B-2</b>        |                         |
|-----------------------------------------------------------------------------------|----------|-----------------------|-------------|---------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------|-------------------------|
| Project: New Apartment Building                                                   |          |                       |             |               | Project #:                                                                            |                                                                                                                                                                                  |               | 16030                       |                         |
| Location: 153 - 165 Sheridan Street                                               |          |                       |             |               | Sheet:                                                                                |                                                                                                                                                                                  |               | 1 of 2                      |                         |
| City, State: Portland, Maine                                                      |          |                       |             |               | Chkd by:                                                                              |                                                                                                                                                                                  |               |                             |                         |
| Drilling Co: Northern Test Boring                                                 |          |                       |             |               | Boring Elevation: 139.5 ft. +/-                                                       |                                                                                                                                                                                  |               |                             |                         |
| Driller: Mike Nadeau                                                              |          |                       |             |               | Reference: "Existing Conditions Survey, 153-165 Sheridan St." by Titcomb Dated 3/4/16 |                                                                                                                                                                                  |               |                             |                         |
| Summit Staff: M. Hardison, E.I.                                                   |          |                       |             |               | Date started: 3/10/2016 Date Completed: 3/10/2016                                     |                                                                                                                                                                                  |               |                             |                         |
| DRILLING METHOD                                                                   |          | SAMPLER               |             |               | ESTIMATED GROUND WATER DEPTH                                                          |                                                                                                                                                                                  |               |                             |                         |
| Vehicle: ATV                                                                      |          | Length: 24" SS        |             |               | Date                                                                                  | Depth                                                                                                                                                                            | Elevation     | Reference                   |                         |
| Model: Diedrich D-50                                                              |          | Diameter: 2"OD/1.5"ID |             |               | 3/10/2016                                                                             | 20.0 ft.                                                                                                                                                                         | 119.5 ft. +/- | observed on samples         |                         |
| Method: 2.25" ID H.S.A.                                                           |          | Hammer: 140 lb        |             |               |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| Hammer Style: Auto                                                                |          | Method: ASTM D1586    |             |               |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| Depth (ft.)                                                                       | No.      | Pen/Rec (in)          | Depth (ft)  | blows/6"      | Elev. (ft.)                                                                           | SAMPLE DESCRIPTION                                                                                                                                                               |               | Geological/ Test Data       | Geological Stratum      |
| 1                                                                                 | S-1      | 24/20                 | 0 to 2      | 2             | 137.5'                                                                                | Black SILT, frequent roots, rootlets, and organics, soft, damp, ML                                                                                                               |               |                             | TOPSOIL                 |
| 2                                                                                 |          |                       |             | 1             |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 3                                                                                 |          |                       |             | 1             |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 4                                                                                 |          |                       |             |               |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 5                                                                                 |          |                       |             |               |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 6                                                                                 | S-2      | 24/10                 | 5 to 7      | 9             |                                                                                       | Olive gray Clayey SILT, little Sand and fine to medium Gravel, humid, stiff, ML                                                                                                  |               | PP = 4,000 psf to 6,000 psf | FILL/REWORKED NATIVE    |
| 7                                                                                 |          |                       |             | 12            |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 8                                                                                 |          |                       |             | 11            |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 9                                                                                 |          |                       |             | 10            |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 10                                                                                |          |                       |             |               |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 11                                                                                | S-3      | 26/16                 | 10 to 12    | 3             |                                                                                       | same as above                                                                                                                                                                    |               | PP = 3,000 psf              |                         |
| 12                                                                                |          |                       |             | 5             |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 13                                                                                |          |                       |             | 4             |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 14                                                                                |          |                       |             | 5             |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 15                                                                                |          |                       |             |               | 125.5'                                                                                |                                                                                                                                                                                  |               |                             |                         |
| 16                                                                                | S-4      | 24/12                 | 15 to 17    | 8             |                                                                                       | Gray SILT, little Sand and Clay, trace Gravel, very dense, humid to moist, ML                                                                                                    |               |                             | GLACIAL TILL            |
| 17                                                                                |          |                       |             | 13            |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 18                                                                                |          |                       |             | 12            |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 19                                                                                |          |                       |             | 9             |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 20                                                                                |          |                       |             |               |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| 21                                                                                | S-5      | 24/24                 | 20 to 22    | 8             |                                                                                       | same as above, wet                                                                                                                                                               |               | ∇ Groundwater               |                         |
| 22                                                                                |          |                       |             | 11            |                                                                                       |                                                                                                                                                                                  |               | PP = 5,000 psf to 9,000 psf |                         |
|                                                                                   |          |                       |             | 11            |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
|                                                                                   |          |                       |             | 13            |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
|                                                                                   |          |                       |             |               |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
|                                                                                   |          |                       |             |               |                                                                                       |                                                                                                                                                                                  |               |                             |                         |
| Granular Soils                                                                    |          | Cohesive Soils        |             | % Composition |                                                                                       | NOTES:                                                                                                                                                                           |               |                             | Soil Moisture Condition |
| Blows/ft.                                                                         | Density  | Blows/ft.             | Consistency | ASTM D2487    |                                                                                       | PP = Pocket Penetrometer, MC = Moisture Content<br>LL = Liquid Limit, PI = Plastic Index, FV = Field Vane Test<br>Su = Undrained Shear Strength, Su(r) = Remolded Shear Strength |               |                             | Dry: S = 0%             |
| 0-4                                                                               | V. Loose | <2                    | V. soft     | < 5% Trace    |                                                                                       | Bedrock Joints Shallow = 0 to 35 degrees                                                                                                                                         |               |                             | Humid: S = 1 to 25%     |
| 5-10                                                                              | Loose    | 2-4                   | Soft        | 5-15% Little  |                                                                                       | Dipping = 35 to 55 degrees                                                                                                                                                       |               |                             | Damp: S = 26 to 50%     |
| 11-30                                                                             | Compact  | 5-8                   | Firm        | 15-30% Some   |                                                                                       | Steep = 55 to 90 degrees                                                                                                                                                         |               |                             | Moist: S = 51 to 75%    |
| 31-50                                                                             | Dense    | 9-15                  | Stiff       | > 30% With    |                                                                                       | Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches                                                                                                   |               |                             | Wet: S = 76 to 99%      |
| >50                                                                               | V. Dense | 16-30                 | V. Stiff    |               |                                                                                       | Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200                                                                                                    |               |                             | Saturated: S = 100%     |
|                                                                                   |          | >30                   | Hard        |               |                                                                                       |                                                                                                                                                                                  |               |                             |                         |









## SOIL DESCRIPTION & OSHA SLOPE CLASSIFICATION

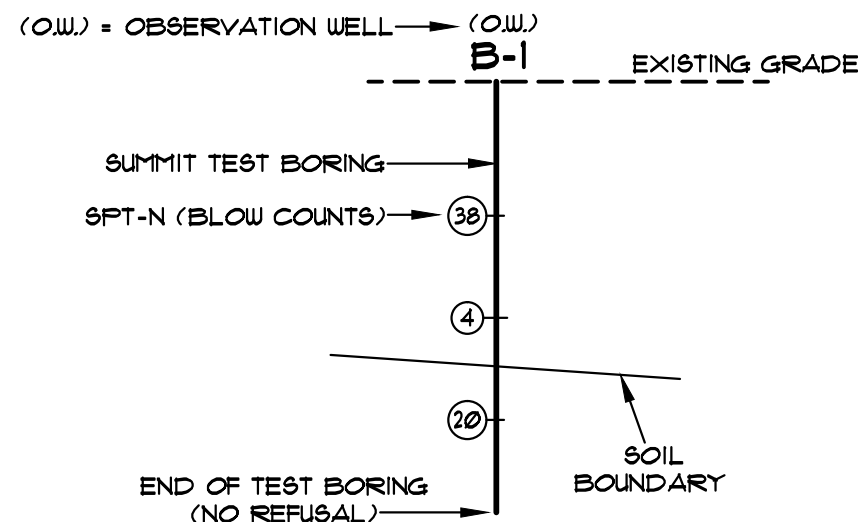
"FILL" - DARK BROWN TO TAN, SILTY SAND OR SANDY SILT, LOOSE TO COMPACT, OCCASIONAL WOOD OR GLASS PIECES. (OSHA TYPE C, 1.5H : 1V)

"FILL/REWORKED NATIVE" - OLIVE GRAY CLAYEY SILT, LITTLE SAND & GRAVEL, STIFF. (OSHA TYPE B, 1H : 1V)

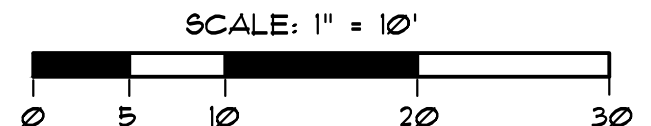
"GLACIAL TILL" - GRAY GRAVELLY SILT, LITTLE SAND & CLAY, COMPACT TO DENSE. (OSHA TYPE A, 0.75H : 1V)

NOTE: ALLOWABLE OSHA SLOPES SHOWN APPLY TO SOIL ABOVE THE GROUNDWATER TABLE AND ARE FOR SHORT-TERM CONSTRUCTION CONDITIONS. OSHA SLOPES BELOW GROUNDWATER ARE 1.5H : 1V. PERMANENT SLOPES MAY BE STEEPER.

## LEGEND



THE ACTUAL LOCATION OF THE B-3 TEST BORING IS 40'± TO THE NORTH. DATA WAS EXTRAPOLATED TO THIS LOCATION BASED ON SIMILAR GEOLOGY



|                                                                                       |  |                                    |              |
|---------------------------------------------------------------------------------------|--|------------------------------------|--------------|
| PROJECT: PROPOSED RESIDENTIAL BUILDING<br>153 - 165 SHERIDAN STREET - PORTLAND, MAINE |  | CLIENT: BD SHERIDAN LLC            |              |
| TITLE: SOIL CROSS SECTION                                                             |  | DRAWN BY: KRF                      | APPR BY: WAP |
| SCALE: 1" = 10'                                                                       |  | DATE: MARCH 21, 2016               |              |
| 113 PLEASANT STREET<br>ROCKLAND, ME 04841<br>Tel: (207) 318-1161                      |  | <br>SUMMIT<br>ENGINEERING SERVICES |              |
| 145 LISBON ST. - SUITE 601<br>LEWISTON, ME 04240<br>Tel: (207) 516-3313               |  | PROJ. #: 16030                     |              |
|                                                                                       |  | FIGURE: 1                          |              |



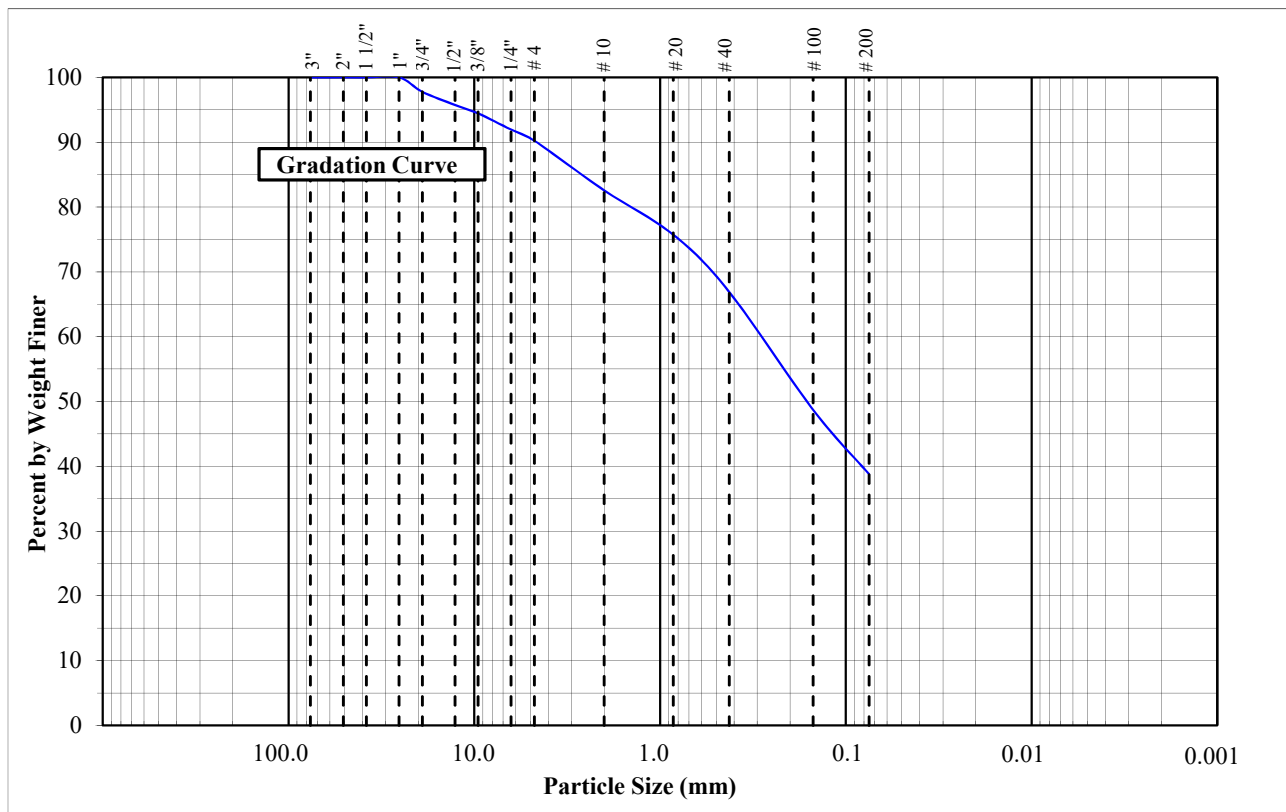
## GRAIN SIZE ANALYSIS - ASTM D422

PROJECT NAME: New Apartment Building  
CLIENT: BD Sheridan, LLC  
SOURCE: Boring B-2, 5'-12'  
DATE: 3/25/2016

PROJECT NUMBER: 16030  
SAMPLE NUMBER: B-2, S-2 & S-3  
DESCRIPTION: SAND, some Silt & Clay, little Gravel, SM-SC  
TECHNICIAN: Erika Stewart, E.I.

### DATA

| <u>PARTICLE SIZE mm</u> | <u>% BY WT FINER</u> |
|-------------------------|----------------------|
| 76.20 (3 in)            | 100.0                |
| 50.80 (2 in)            | 100.0                |
| 38.10 (1-1/2 in)        | 100.0                |
| 25.40 (1 in)            | 100.0                |
| 19.05 (3/4 in)          | 97.8                 |
| 12.70 (1/2 in)          | 95.7                 |
| 9.53 (3/8 in)           | 94.4                 |
| 6.35 (1/4 in)           | 92.0                 |
| 4.75 (No. 4)            | 90.2                 |
| 2.00 (No. 10)           | 82.6                 |
| 0.85 (No. 20)           | 75.7                 |
| 0.43 (No. 40)           | 66.9                 |
| 0.15 (No. 100)          | 48.7                 |
| 0.075 (No. 200)         | 38.8                 |



REMARKS: Moisture Content = 11.4%



### ATTERBERG LIMIT TEST - ASTM D4318

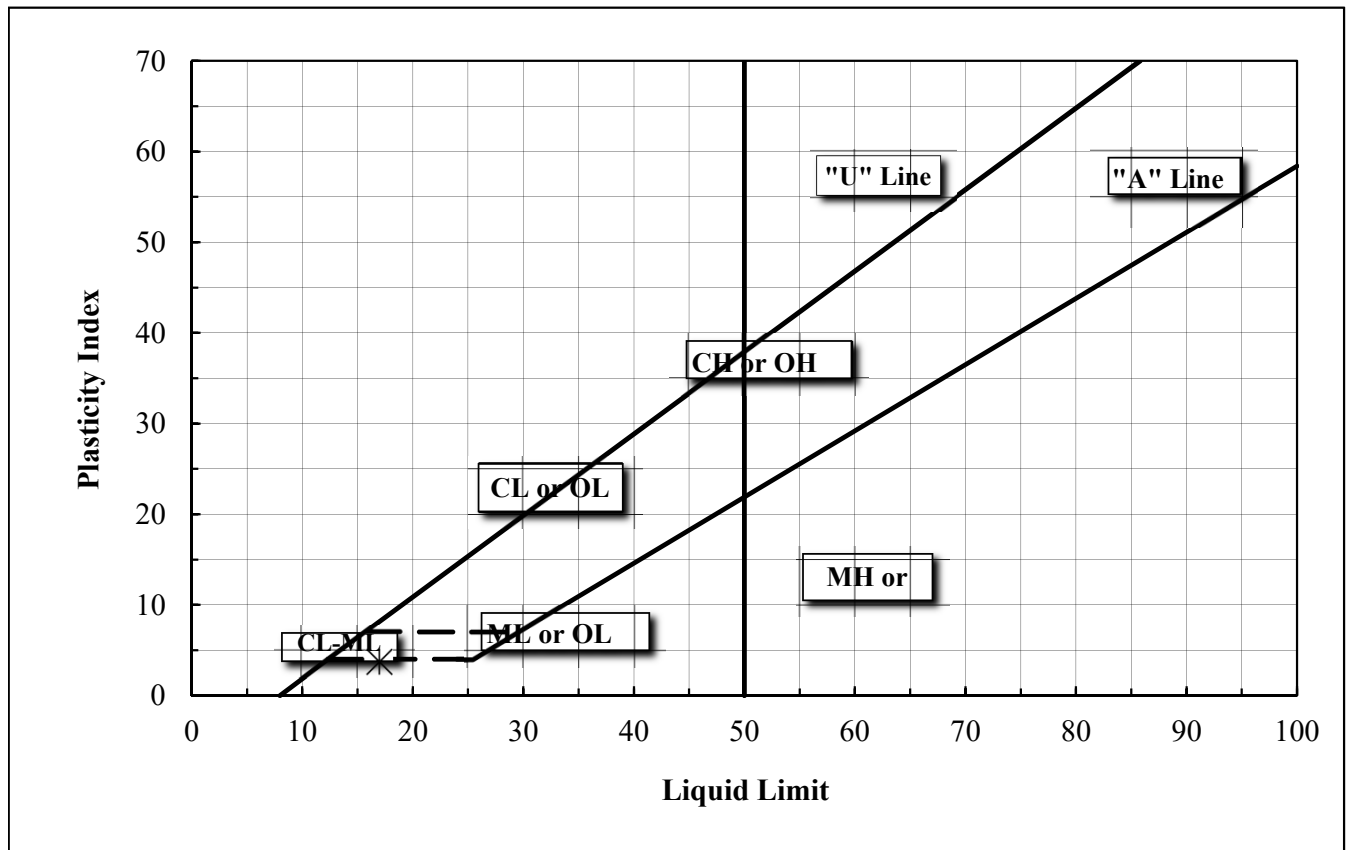
Method "A" (Multi-point)

PROJECT NAME: New Apartment Building  
CLIENT: BD Sheridan, LLC  
SOURCE: Fill / Reworked Native  
DATE: 3/28/2016

PROJECT NUMBER: 16030  
SAMPLE NUMBER: B-2, S-2 & S-3  
DEPTH: 5'-12'  
TECHNICIAN: Erika Stewart, E.I.

### DATA

| Source | Depth  | LL | PL | PI | Classification                                    |
|--------|--------|----|----|----|---------------------------------------------------|
| B-2    | 5'-12' | 17 | 13 | 4  | Gray SAND, some Silt & Clay, little Gravel, SM-SC |
|        |        |    |    |    |                                                   |
|        |        |    |    |    |                                                   |
|        |        |    |    |    |                                                   |
|        |        |    |    |    |                                                   |



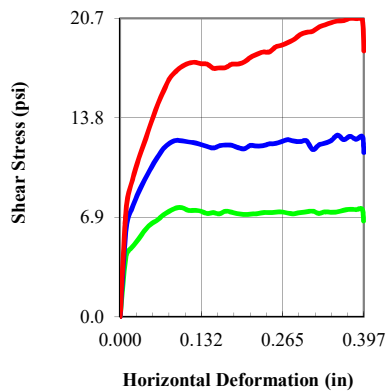
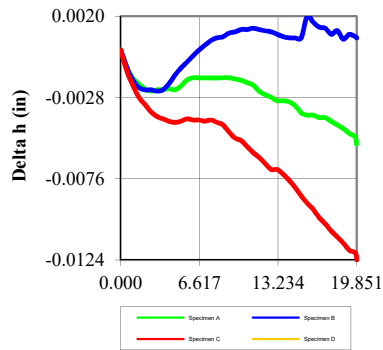
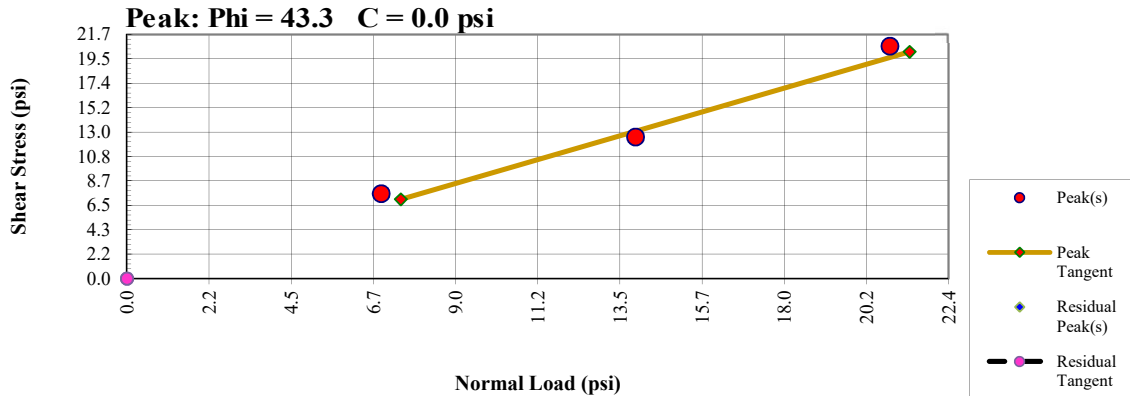
Notes: Sample was screened on the #40 sieve to remove gravel and med-coarse sand before performing Atterberg Limit test.

**Summit Geoengineering Services**  
**Direct Shear Test (ASTM D3080)**



Checked By: Craig Coolidge, P.E.

Date: 4/4/2016



| Specimen       |        |        |        |   |
|----------------|--------|--------|--------|---|
| Initial        | A      | B      | C      | D |
| Moisture (%)   | 16.51  | 15.95  | 15.13  |   |
| Density (pcf)  | 118.01 | 121.21 | 121.10 |   |
| Void Ratio     | 0.428  | 0.391  | 0.392  |   |
| Saturation (%) | 100.00 | 100.00 | 100.00 |   |
| Diameter (in)  | 2.000  | 2.000  | 2.000  |   |
| Height (in)    | 0.750  | 0.750  | 0.750  |   |

| Final                 | A      | B      | C      | D |
|-----------------------|--------|--------|--------|---|
| Moisture (%)          | 12.58  | 12.92  | 11.74  |   |
| Density (pcf)         | 118.01 | 122.23 | 121.10 |   |
| Void Ratio            | 0.428  | 0.379  | 0.392  |   |
| Saturation (%)        | 96.52  | 100.00 | 100.00 |   |
| Diameter (in)         | 2.000  | 2.000  | 2.000  |   |
| Height (in)           | 0.710  | 0.693  | 0.687  |   |
| Normal Stress (psi)   | 6.9    | 13.9   | 20.8   |   |
| Peak Stress (psi)     | 7.6    | 12.6   | 20.7   |   |
| Residual Stress (psi) |        |        |        |   |
| Strain (%)            | 19.823 | 17.702 | 19.851 |   |
| Rate (in/min)         | 0.005  | 0.005  | 0.005  |   |

| Project Date |         |
|--------------|---------|
| Date         | 3/29/16 |

Tested By: Erika Stewart, E.I.

Date: 4/4/2016

|                 |                                                   |                     |     |     |     |  |  |  |  |
|-----------------|---------------------------------------------------|---------------------|-----|-----|-----|--|--|--|--|
| Project:        | New Apartment Building                            | N/A                 | N/A | N/A | N/A |  |  |  |  |
| Location:       | Sheridan Street, Portland, ME                     |                     |     |     |     |  |  |  |  |
| Project Number: | 16030                                             |                     |     |     |     |  |  |  |  |
| Boring Number   | B-2                                               |                     |     |     |     |  |  |  |  |
| Sample Number:  | S-2 & S-3                                         |                     |     |     |     |  |  |  |  |
| Depth:          | 5'-12'                                            | Failure Photographs |     |     |     |  |  |  |  |
| Sample Type:    | Remolded                                          |                     |     |     |     |  |  |  |  |
| Description:    | Gray SAND, some Silt & Clay, little Gravel, SM-SC |                     |     |     |     |  |  |  |  |
| Test Type:      | Direct Shear                                      |                     |     |     |     |  |  |  |  |
| Remarks:        |                                                   |                     |     |     |     |  |  |  |  |

March 10, 2017

Planning Department  
City of Portland Maine  
389 Congress Street  
Portland, Maine 04101

**Re: 155 Sheridan Design Narrative**

The proposed building to be located at 155 Sheridan Street on Munjoy Hill comprises a 19 unit urban condominium development. The project, consists of 1 building designed to be nestled into the steep hillside that exists presently at the property. The building has an elevation on Sheridan Street of four levels.

The massing of the facade on Sheridan Street is broken up by a rhythm of projecting porch bays. These porches break down the scale of the facade through the use of shadow lines, color changes and texture. The porches are designed to read as a finer more open texture than the adjacent bays and main body of the building, through the use of columns, brackets and open railing systems. The window fenestration not on the bays is based on a traditional vernacular double hung window unit used in pairs to help further define the facade rhythm and scale the facades.

The Southwest facing elevation of the building has a large amount glazing to maximize the views toward Back Cove and Mt. Washington as well as to capture passive solar energy.

The exterior materials of the building consist durable / low maintenance products, these include fibercement clapboard siding with a cedar shingle texture and exposed fastener fibercement panels, a colored parge coating at the above grade foundation walls, and an EPDM roof membrane. The two siding materials (clapboard and panel) interplay to further break down the scale of the elevations and add visual interest to reinforce the design concept. These two siding materials are of a similar base color but differing brightness and saturation.

155 Sheridan is designed to incorporate many energy efficiency measures including a building envelope with increased

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ryan@senatorearchitecture.com





insulation, low flow plumbing fixtures, and high efficiency mechanical systems.

### **Zoning Assessment**

The project is designed to meet the R-6 zoning ordinance as well as the height overlay recently imposed on the property.

### **Consistency with City of Portland Design Standards**

The project will be designed to meet the City of Portland design standards, please see the design narrative above as to how the project meets the R-6 Zone design standards in particular

### **HVAC equipment Specifications**

The HVAC equipment for the project will meet applicable state and federal emission requirements, the detailed specifications for the HVAC equipment will be submitted to the City at a future date when those systems are final designed.

### **Code Review**

Please see the attached Code review for the project referencing NFPA 101 2009 and IBC 2009.

### **Signage**

Exterior signage is shown on the building facade adjacent to the main entry to the building, a separate signage permit application will be filed with the city at the time of building permit.

### **Exterior Lighting**

The exterior lighting for the project will be down lighting, see the attached cut sheet for the front facade lighting as shown on the street elevation. Each exterior deck will also have a cut off down light, see the attached cut sheet.

We look forward to discussing the vision for 155 Sheridan at the upcoming meeting.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ryan Senatore", written in a cursive, flowing style.

Ryan Senatore, AIA LEED-AP

Principal

207-747-5159

[senatorearchitecture.com](http://senatorearchitecture.com)

[ryan@senatorearchitecture.com](mailto:ryan@senatorearchitecture.com)



Exterior downlight at street level facade on Sheridan Street

|              |                                                                                                                                                                                                                                                                                                                                       |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Item Code:   | SON-ANGLED-PLANE-NAR-DNLT-OTDR-LED-W-SCE                                                                                                                                                                                                                                                                                              |
| Description: | <b>Material(s):</b> Metal<br><br><b>Dimensions:</b> <ul style="list-style-type: none"><li>• Overall: 4"W X 7.75"H X 2.25" extension</li><li>• Backplate: 2.5"W X 5.25"H</li></ul><br><b>Lamp Type:</b> LED<br><br><b>Bulbs:</b> 1 X 10W 120V LED array, 90 CRI, 3000K, 420 lumens (included)<br><br><b>Listing:</b> ADA, WET-LOCATION |
| Price:       | Now: \$229.50<br>Compare: \$270.00<br>+ Free Shipping                                                                                                                                                                                                                                                                                 |

- Options: **Finish:**
- Gray

Bronze

White

The Angled Plane Narrow Downlight Outdoor LED Wall Sconce reflects downward LED illumination for outdoor applications, and can also be used as an uplight fixture for indoor use. Its clean and minimal design is ideal for most modern interiors and exteriors.

Offered in three textured finishes: gray, bronze and white, the Angled Plane is a minimal and stylish addition to modern indoor and outdoor spaces. Dimmable with an electronic low voltage or standard TRIAC dimmer (sold separately). LED driver located in outlet box. ADA compliant. Shown in gray.

If you have questions, call (866) 428 9289

## P5674 SERIES

LED Wall Mount • Wet Location



### Specifications:

#### Description:

The P5674 Series are ideal for a wide variety of interior and exterior applications including residential and commercial. The Cylinders feature a 120V alternating current source and eliminates the need for a traditional LED driver. This modular approach results in an encapsulated luminaire that unites performance, cost and safety benefits.

#### Construction:

- Powdercoated Antique Bronze (-20), White (-30), Black (-31), Metallic Gray (-82)
- Die-cast aluminum construction
- Flicker-free dimming to 10% brightness with many ELV type dimmers (See Dimming Notes)
- Covers a standard 4" recessed outlet box
- Mounting strap for outlet box included

#### Performance:

|                     |                                    |
|---------------------|------------------------------------|
| Number of Modules   | 1                                  |
| Input Power         | 17W                                |
| Input Voltage       | 120V                               |
| Input Frequency     | 60Hz                               |
| Lumens/LPW          | 1000/58 (LM-79) per module         |
| CCT                 | 3000K                              |
| CRI                 | 90                                 |
| Life                | 60,000 (L70/TM-21)                 |
| EMI/RFI             | FCC Title 47, Part 15, Class B     |
| Min. Start Temp     | -30° C                             |
| Max. Operating Temp | 30° C                              |
| Warranty            | 5 yrs.                             |
| Labels              | cCSAus certified for wet locations |

### P5674-30/30K

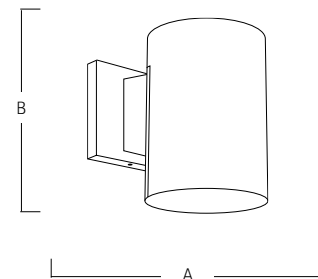
#### Images:



#### Dimensions:

|    |        |
|----|--------|
| A  | B      |
| 5" | 7-1/2" |

|               |
|---------------|
| Extends H/CTR |
| 8" 2.5        |



#### Catalog number:

| Base  | Finish              | Color Temp  | CRI    |
|-------|---------------------|-------------|--------|
| P5674 | 20 - Antique Bronze | 30K - 3000K | 90 CRI |
|       | 30 - White          |             |        |
|       | 31 - Black          |             |        |
|       | 82 - Metallic Gray  |             |        |

# P5674 SERIES

LED Wall Mount • Wet Location



## P5674-30/30K

### Dimming Notes:

P5674 is designed to be compatible with many Electronic Low Voltage (ELV-Reverse Phase) controls.

The following is a partial list of known compatible dimmer controls:

### Electronic Low Voltage ELV Reverse Phase Controls

|         |               |                         |
|---------|---------------|-------------------------|
| Lutron  | Diva Series   | (Part Number DVELV-300) |
| Lutron  | Nova T Series | (Part Number NTELV-300) |
| Lutron  | Vierti Series | (Part Number VTELV-600) |
| Lutron  |               | (Part Number MAELV-600) |
| Lutron  |               | (Part Number SPELV-600) |
| Leviton |               | (Part Number AWRMG-EAW) |

Digital type dimmers are not recommended.

Dimming capabilities will vary depending on the dimmer control, load, and circuit installation.

Always refer to dimmer manufacturer instructions or a controls specialist for specific requirements.

Dimmer control brand names where identified above are trade names or registered trademarks of each respective company.



155 SHERIDAN STRUCTURAL DESIGN CONCEPT  
MKL | SI | 16-0020 | 3/13/17

- Notes:
- Preliminary design: NOT FOR CONSTRUCTION.
  - Based on architectural and civil drawings for site and building.
  - All elevations are based on USGS per civil drawings.

DRIVE HP18x135 PILES @ 6'-0" O.C. W/ 3"x P.T. LAGGING AT PERIMETER -TYP. MAX UNBALANCED RETAINED HEIGHT = 13'-0". SEE CIVIL FOR ELEVATIONS.

INSTALL 1ST COURSE WHALERS AND BRACING @ ELEVATION 145.00'

1ST COURSE

BEGIN EXCAVATION ONCE PERIMETER PILINGS ARE INSTALLED



INSTALL 2ND COURSE OF  
WHALERS (HP16x121) AND  
BRACES (HP18x135 @ 12FT) @  
ELEV. 138.00'

1ST COURSE

2ND COURSE

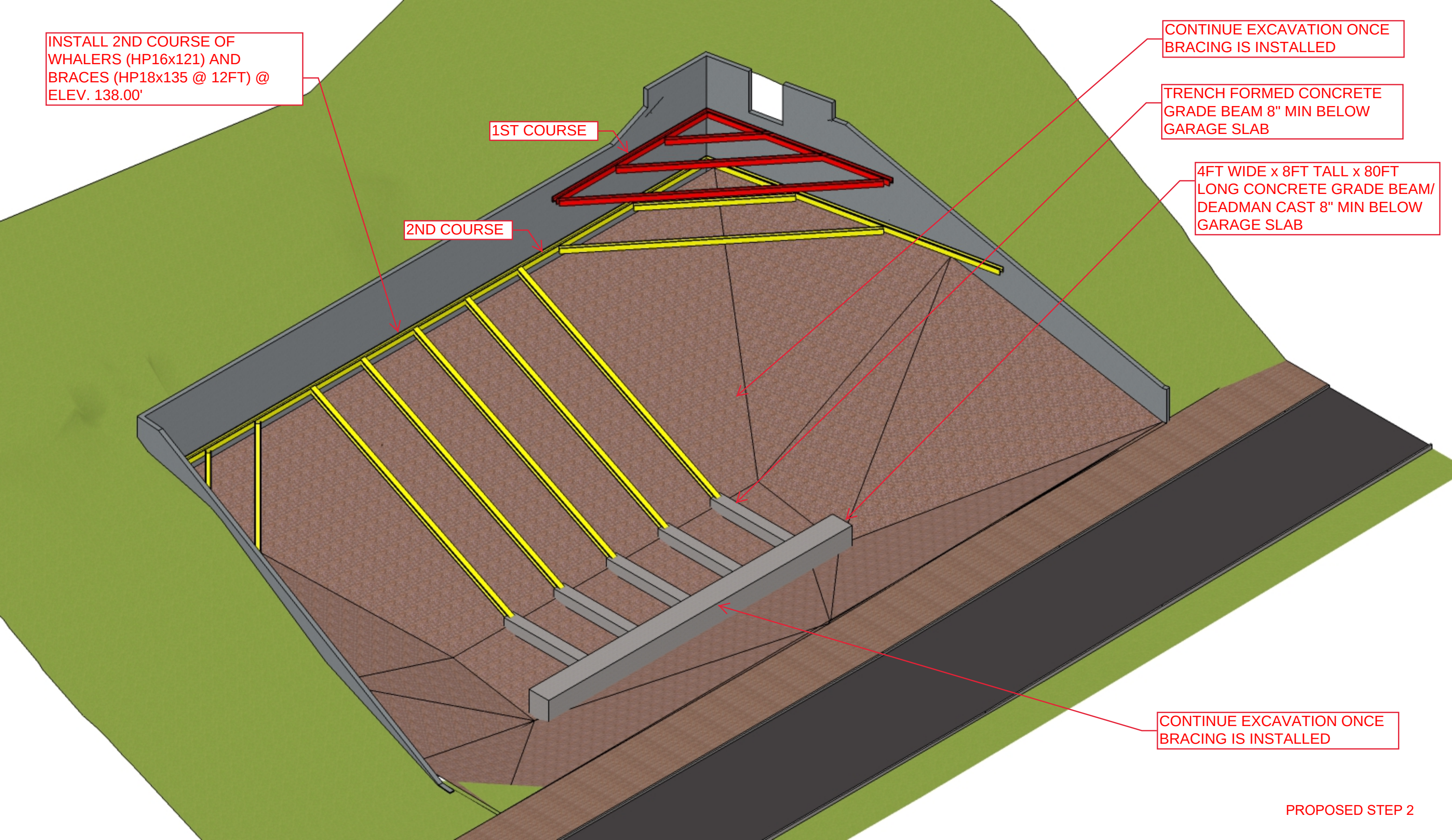
CONTINUE EXCAVATION ONCE  
BRACING IS INSTALLED

TRENCH FORMED CONCRETE  
GRADE BEAM 8" MIN BELOW  
GARAGE SLAB

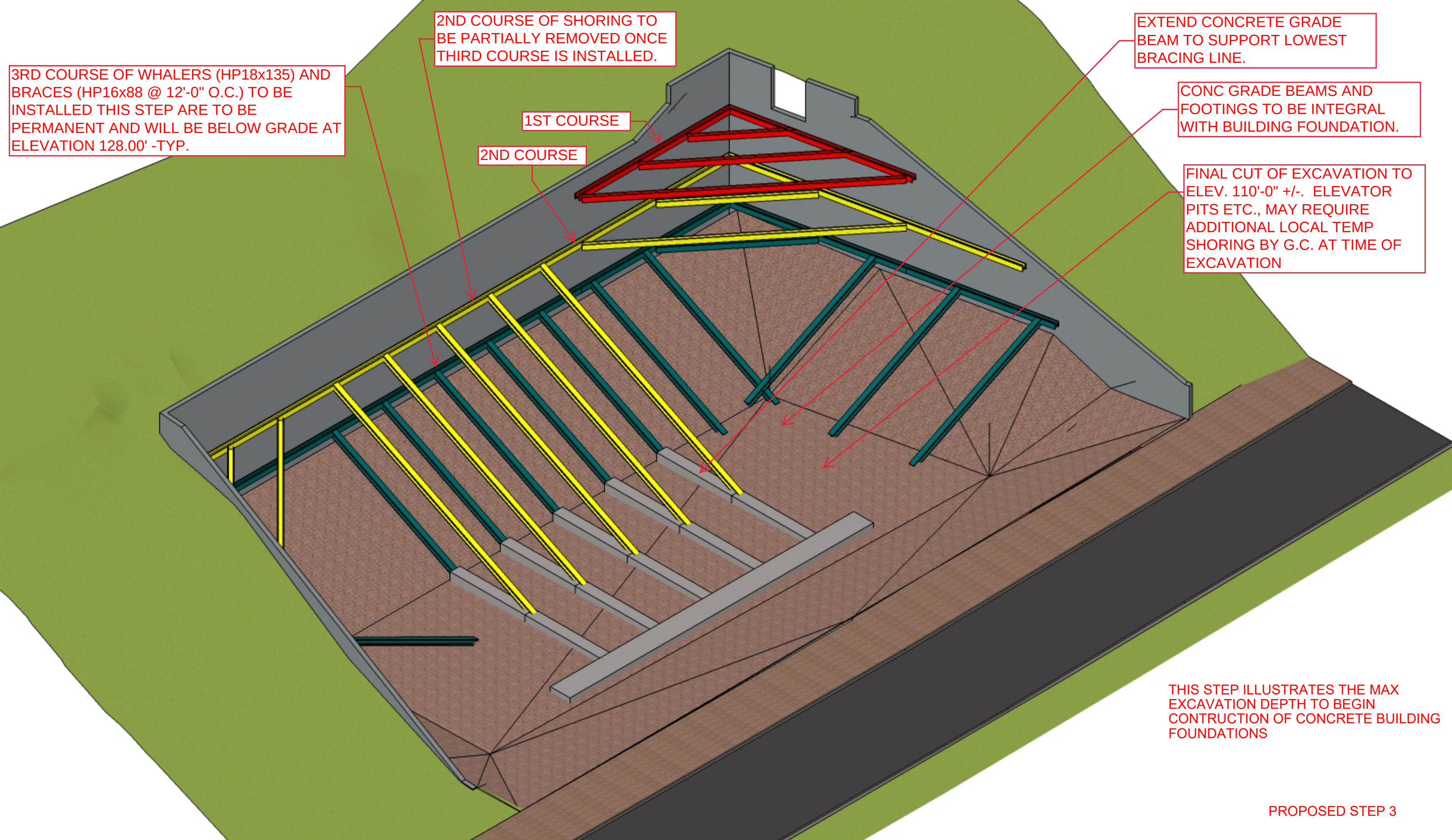
4FT WIDE x 8FT TALL x 80FT  
LONG CONCRETE GRADE BEAM/  
DEADMAN CAST 8" MIN BELOW  
GARAGE SLAB

CONTINUE EXCAVATION ONCE  
BRACING IS INSTALLED

PROPOSED STEP 2







2ND COURSE OF SHORING TO BE PARTIALLY REMOVED ONCE THIRD COURSE IS INSTALLED.

EXTEND CONCRETE GRADE BEAM TO SUPPORT LOWEST BRACING LINE.

CONC GRADE BEAMS AND FOOTINGS TO BE INTEGRAL WITH BUILDING FOUNDATION.

FINAL CUT OF EXCAVATION TO ELEV. 110'-0" +/- . ELEVATOR PITS ETC., MAY REQUIRE ADDITIONAL LOCAL TEMP SHORING BY G.C. AT TIME OF EXCAVATION

3RD COURSE OF WHALERS (HP18x135) AND BRACES (HP16x88 @ 12'-0" O.C.) TO BE INSTALLED THIS STEP ARE TO BE PERMANENT AND WILL BE BELOW GRADE AT ELEVATION 128.00' -TYP.

1ST COURSE

2ND COURSE

THIS STEP ILLUSTRATES THE MAX EXCAVATION DEPTH TO BEGIN CONSTRUCTION OF CONCRETE BUILDING FOUNDATIONS

PROPOSED STEP 3



CORNER BRACING THIS SIDE TO REMAIN

2ND COURSE OF SHORING REMOVED AS SHOWN ONCE 3RD COURSE INSTALLED

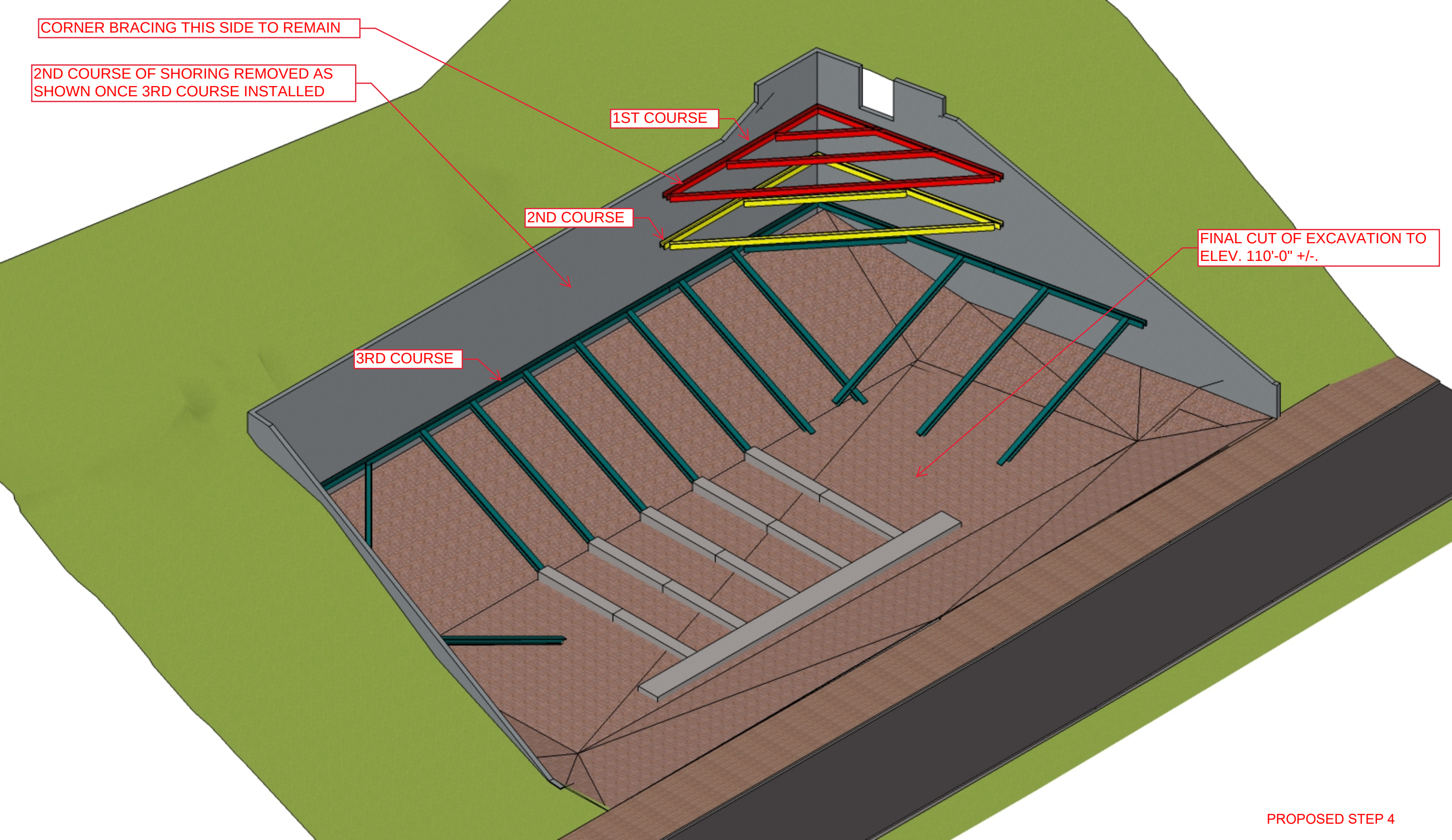
1ST COURSE

2ND COURSE

3RD COURSE

FINAL CUT OF EXCAVATION TO ELEV. 110'-0" +/-.

PROPOSED STEP 4





PERMANENT BRACING TO REMAIN.

1ST COURSE

2ND COURSE

3RD COURSE

BEGIN CONSTRUCTION OF CONC FOUNDATION. 3FT & 4FT WIDE FOOTINGS BEARING ON SOIL W/ 18" CONCRETE EXTERIOR WALLS. ASSUMING 3,000PSF BEARING PRESSURE (TO BE CONFIRMED)

BRACING TO REMAIN AT THIS PHASE, BUT WILL BE CUT OFF AND ATTACHED TO FOUNDATION WALL AT WING WALLS

PERFORATED CONCRETE BUTTRESS WALLS ARE APPROXIMATE AND WILL LIKELY STEP BACK AT 2ND FLOOR.

5FT WIDE x 14" DEEP x CONT. CONC FOOTING BELOW BUTTRESS WALLS (NOT SHOWN)



STRUCTURAL COMPACTED  
BACKFILL INSTALLED AFTER 2ND  
AND THIRD FLOOR ARE  
INSTALLED. PERMANENT 3RD  
COURSE BRACING TO REMAIN  
(NOT SHOWN AS BELOW GRADE)

1ST COURSE

2ND COURSE

BUILD CONCRETE OR CMU  
ELEVATOR SHAFT FULL  
HEIGHT TO BRACE END WALL  
EXCAVATION.

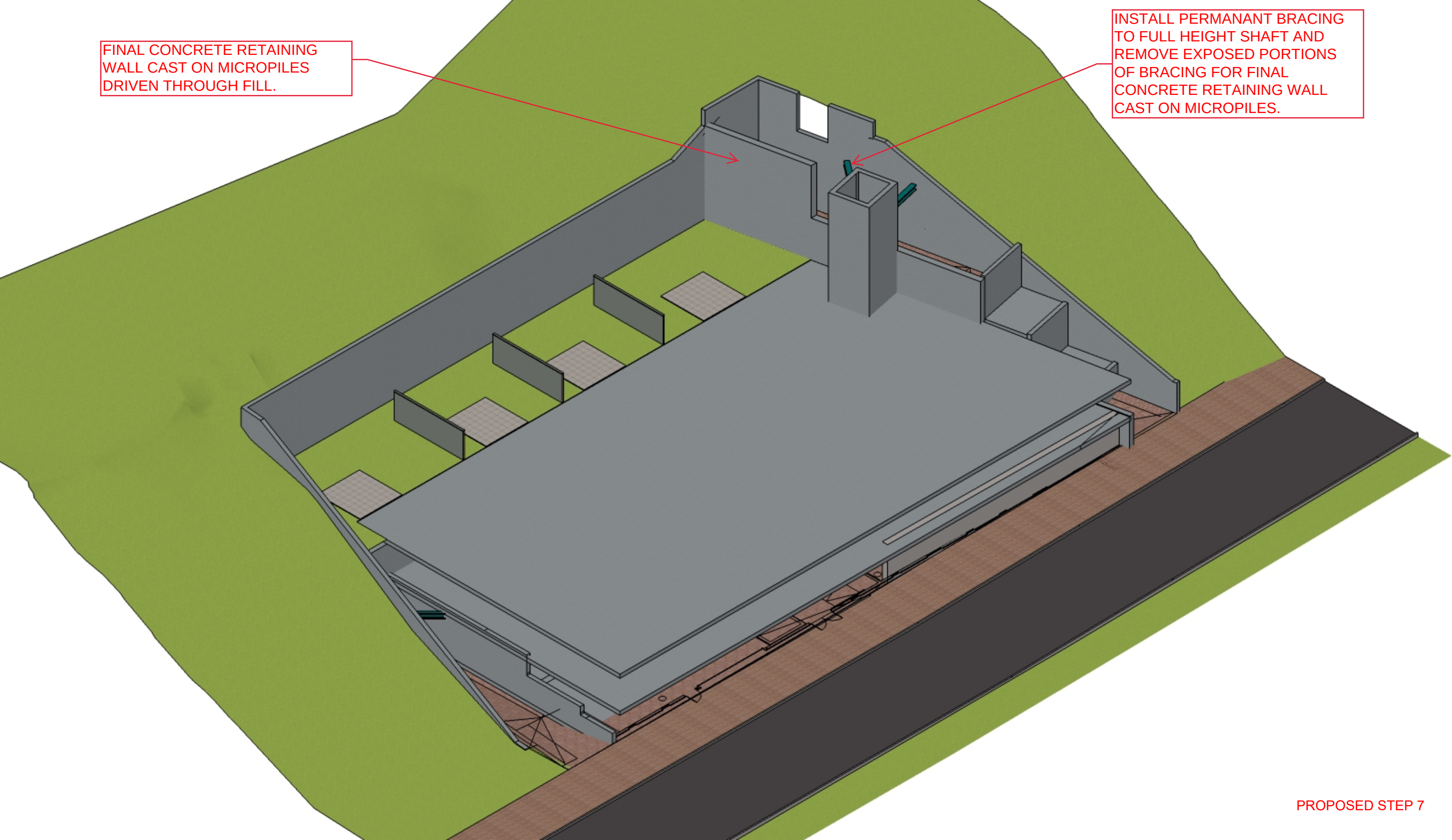
BEGIN CONSTRUCTION OF  
STEPPED RETAINING WALLS  
AFTER 2ND AND THIRD FLOOR  
ARE INSTALLED.

**BUILD 2ND AND 3RD FLOOR.**  
BOTH FLOORS CONSTRUCTED  
OF 6 1/2" TOTAL DEPTH 4,500PSI  
NORMAL WEIGHT CONCRETE  
ON GALV. 2" VLI 22 GAGE  
COMPOSITE METAL DECKING  
ON STEEL FRAMED BEAMS @  
8'-0" O.C. MAX.



FINAL CONCRETE RETAINING  
WALL CAST ON MICROPILES  
DRIVEN THROUGH FILL.

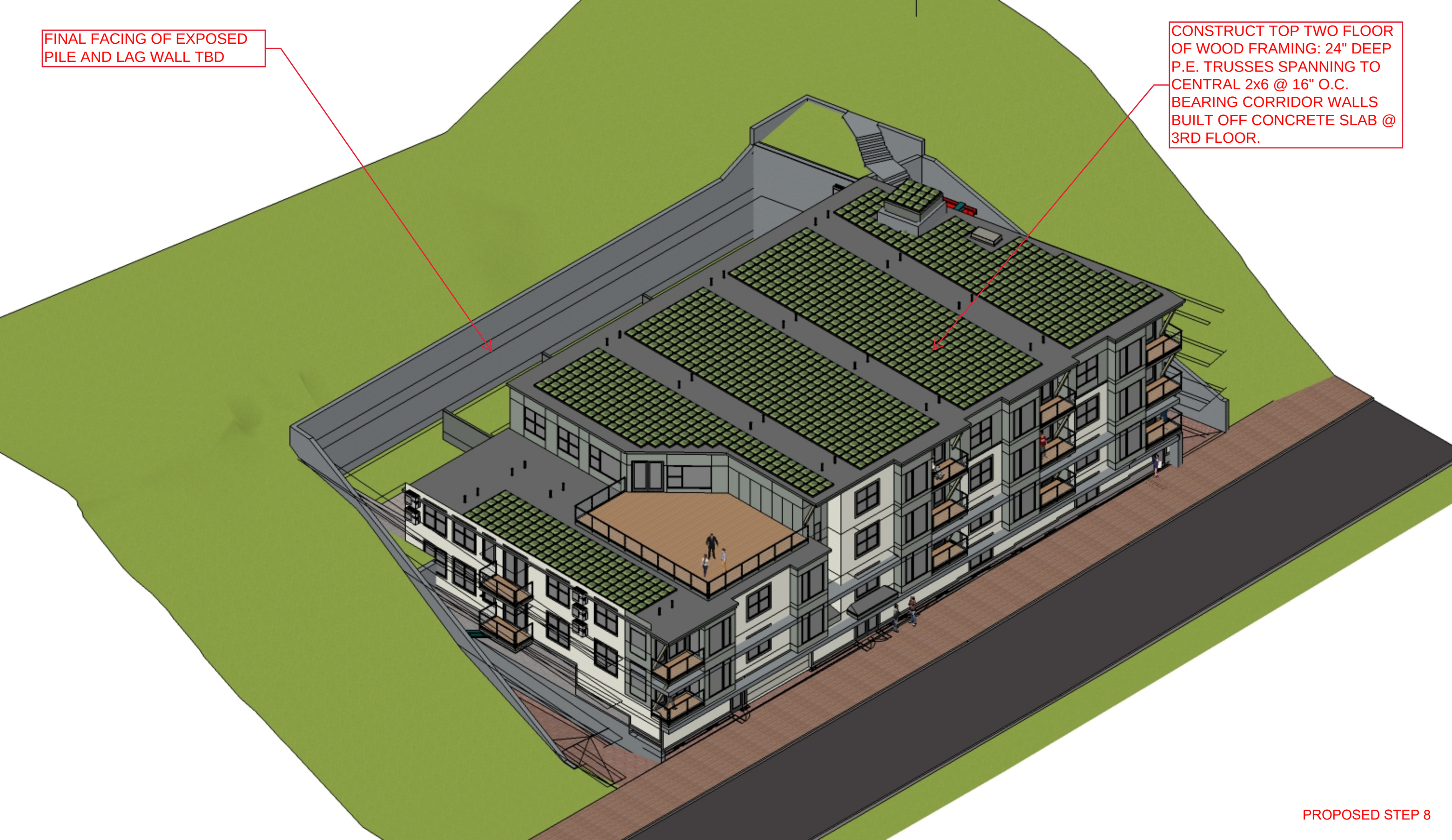
INSTALL PERMANANT BRACING  
TO FULL HEIGHT SHAFT AND  
REMOVE EXPOSED PORTIONS  
OF BRACING FOR FINAL  
CONCRETE RETAINING WALL  
CAST ON MICROPILES.



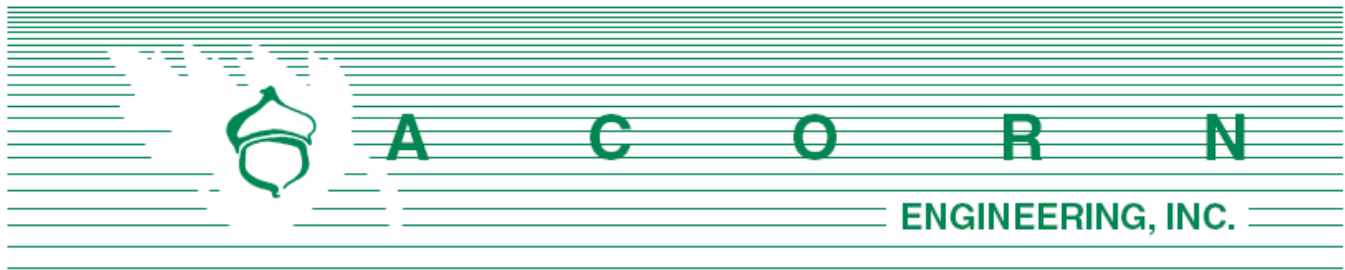


FINAL FACING OF EXPOSED  
PILE AND LAG WALL TBD

CONSTRUCT TOP TWO FLOOR  
OF WOOD FRAMING: 24" DEEP  
P.E. TRUSSES SPANNING TO  
CENTRAL 2x6 @ 16" O.C.  
BEARING CORRIDOR WALLS  
BUILT OFF CONCRETE SLAB @  
3RD FLOOR.







Division of Housing and Community Development  
City of Portland, Maine  
389 Congress Street, Room 312  
Portland, ME 04101

May 11, 2017

Subject: Conditional Use for Ensuring Workforce Housing Inclusionary Zoning  
Planning Board Review Application  
Redevelopment of 161 York Street - Portland, Maine

To Whom This May Concern,

BD Sheridan LLC is pleased to submit the accompanying package of submission materials related to the proposed nineteen-unit urban infill project at 155 Sheridan Street and its compliance with the standards set by the Workforce Housing Inclusionary Zoning. This letter and attachments are a follow-up to the preliminary application package submitted on May 11, 2017. The development will include one, one-bedroom workforce housing unit for sale within the proposed building.

This submission package is intended to meet the City's Inclusionary Zoning Submission Requirements as outlined in the Planning Board Review Application. The proposed project site is located within the East End neighborhood and is currently occupied by a single-family, 1.5-story home. It is proposed that the site be redeveloped into a high-density, multi-unit building with nineteen internal parking spaces on the first level and three upper floors of residential units. The development site is located within the City's R-6 Zoning District, and complies with the permitted uses within the zone.

All residential units will have identical interior standards; the proposed workforce unit does not differ in size or standard from the other single bedroom market-rate units. The market strategy for the workforce unit will also mimic the strategy of the market-rate units and is proposed to be approached in the same fashion.

A summary of the materials included as part of the application submission set, supplementary to the Site Plan Application set, are as follows:

Documents:

- U. Inclusionary Zoning Cover Letter
- V. Inclusionary Zoning Application
- W. Conformity with Applicable Conditional Use Standards

Drawings:

- Civil Site Plan Set, Dated 3/28/17
  - *As submitted as part of the Site Plan Application*
- Architectural Submission Set, Dated 3/9/17
  - *As submitted as part of the Site Plan Application*
- Architectural Workforce Unit Floor Plan, Dated 4/27/17

BD Sheridan, LLC and the design team look forward to your review of this project. If you have any questions regarding these materials or the completeness of the application materials, please contact us within the next five (5) days.

Sincerely,



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





# **Conditional Use for Ensuring Workforce Housing Inclusionary Zoning Planning Board Review Application Portland, Maine**

Planning and Urban Development Department  
Planning Division and Housing and Community Development

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Conditional Use review of applications to ensure workforce housing in development projects that create ten or more new dwelling units. The units may be for rent or for sale and created through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements. At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or rent. All developments of ten units or more a conditional uses subject to Planning Board review on the condition that they comply with the requirements of section 14-487.

## **A. Ensuring Workforce Housing: Standards -Section 14-484**

**(d) Workforce Housing Minimum** At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or for rent. The number of units required is rounded down to a whole number if providing units on- or off-site, or shall include a fractional value in cases where a project prefers to pay a fee-in-lieu as per (e)3. below.

### **(e) Standards**

1. Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.
2. Workforce units are encouraged to be integrated with the rest of the development, should use a common entrance and should provide no indications from common areas that these units are workforce housing units.
3. Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be 10 percent of the total number of bedrooms in the development. For the purposes of this section, for every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.
4. As an alternative to providing workforce housing units, projects may pay a fee in lieu of some or all of the units. In-lieu fees shall be paid into the Housing Trust Fund as defined in Sec. 14-489. The fee for affordable units not provided shall be \$100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement.
5. Workforce housing units for sale, if converted to workforce housing units for rent, shall become subject to the income limits and other requirements of such units.
6. If at least 33 percent of the units in a development are workforce units, the development is eligible for subsidy through an Affordable Housing TIF, subject to City Council approval.

7. The term of affordability for the required 10 percent workforce units provided shall be defined as follows:

| Percentage of Workforce Units Provided | Minimum Term of Affordability for Required Workforce Units                |
|----------------------------------------|---------------------------------------------------------------------------|
| 10%                                    | Longest term permitted under federal, state and local laws and ordinances |
| 25%                                    | 30 years                                                                  |
| 50%                                    | 20 years                                                                  |
| 100%                                   | 10 years                                                                  |

**(f) Implementing Regulations.** Regulations to further specify the details of this section shall be developed, including, but not limited to:

1. Specific methodology for income verification;
2. Situations where less than permanent affordability might be considered; and
3. Guidelines for meeting the requirement that off-site units be “in the same neighborhood”.

**B. Site Plan Application: Please submit the Conditional Use Application in addition to the applicable Site Plan Application.**

Portland’s development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: <http://me-portland.civicplus.com/DocumentCenter/Home/View/1080>

Design Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2355>

Technical Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2356>

**Planning Division**  
Fourth Floor, City Hall  
389 Congress Street  
(207)874-8719

**Housing and Community Development**  
Room 313, Third Floor, City Hall  
389 Congress Street  
(207)482-5028

**Office Hours**  
Monday thru Friday  
8:00 a.m. – 4:30 p.m.



**PROJECT NAME:**

155 Sheridan Street

**PROPOSED DEVELOPMENT ADDRESS:**

155 Sheridan Street Portland, Maine 04101

012-Q-010 &amp;

**CHART/BLOCK/LOT (s):** 012-Q-012**Applicable Zone:** R-6**CONTACT INFORMATION:**

|                                                                                                                                                                                                                                                                                                       |                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant – must be owner, Lessee or Buyer</b><br>Name: Bernie Saulnier<br>BD Sheridan, LLC<br>Business Name, if applicable:<br>Address: 1266 Furnace Brook Parkway<br>Qunicy, MA 02169<br>City/State : Zip Code:                                                                                  | <b>Applicant Contact Information</b><br>Work # (207) 571-4166<br>Home#<br>Cell # Fax#<br>e-mail: saulnier04@yahoo.com                     |
| <b>Owner – (if different from Applicant)</b><br>Name: Acorn Engineering, Inc.<br>Will Savage, P.E.<br>Address: 158 Danforth Street<br>City/State : Portland, Zip Code: ME 04102                                                                                                                       | <b>Owner Contact Information</b><br>Work # (207) 775-2655<br>Home# (207) 317-1884<br>Cell # Fax#<br>e-mail: wsavage@acorn-engineering.com |
| <b>Billing Information</b><br>Name: (See Applicant Information)<br>Address:<br>City/State : Zip Code:                                                                                                                                                                                                 | <b>Billing Information</b><br>Work #<br>Cell # Fax#<br>e-mail:                                                                            |
| <b>Designated person/person(s) for uploading to e-Plan:</b><br>Name: Olivia Dawson<br>e-mail: odawson@acorn-engineering.com<br><br>Name: William Savage<br>e-mail: wsavage@acorn-engineering.com<br><br>Name: Patrick Venne & Bernie Saulnier<br>e-mail: patrickjvenne@gmail.com saulnier04@yahoo.com |                                                                                                                                           |

**RIGHT, TITLE OR INTEREST:**

Deed, see attached

(Please identify the status provide documentary evidence, attached to this application, of the applicant's right, title, or interest in the subject property (ex: deed, option or contract to purchase or lease the property.)

**EXISTING USE:** Describe the existing use of the subject property.

The locus site is currently occupied by a 1.5-story, single family house

**PROJECT DESCRIPTION:**

The project proposes to redevelop the site into a 4-story, 19 unit building outfitted with a green roof and first floor parking garage.

**INCLUSIONARY ZONING:**

|                          |   |
|--------------------------|---|
| # IZ Units               | 1 |
| On-Site IZ Units         | 1 |
| Off-Site IZ Units        |   |
| # IZ Homeownership Units | 1 |
| # IZ Rental Units        |   |
| # IZ Efficiencies        |   |
| # IZ 1-Beds              | 1 |
| # IZ 2-Beds              |   |
| # IZ 3-Beds              |   |
| IZ Fee In-Lieu           |   |

**APPLICATION FEES:**

☒ Conditional Use Review to Ensure Workforce Housing (\$100.00)

(Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)

The City invoices separately for the following:

- Notices (\$.75 each)
- Legal Ad (% of total Ad)
- Planning Review (\$50.00 hour)
- Legal Review (\$75.00 hour)

Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.

## INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

Please refer to the application checklist (attached) for a detailed list of submission requirements.

1. Fill out the application completely and e-mail the application only to [planning@portlandmaine.gov](mailto:planning@portlandmaine.gov)  
(Please be sure to designate a person who will be responsible for uploading documents and drawings.)  
This step will generate the project ID number for your project.
2. An invoice for the application fee will be e-mailed to you. Payments can be made on-line at [Pay Your Invoice](#), by mail or in person at City Hall, 4<sup>th</sup> Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.
3. The designated person responsible for uploading documents and drawings will receive an email from [eplan@portlandmaine.gov](mailto:eplan@portlandmaine.gov) with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

**Reminder: Before the project can move forward, the application fee shall be paid in full and all required documents and drawings shall be uploaded into e-plan correctly.**

4. Follow the link below (Applying Online Instructions) for step by step instructions on how to do the following:  
Tab 1 - Setting up the appropriate compatibility settings for your PC and getting started in e-plan.  
Tab 2 - Preparing your drawings, documents and photos for uploading using the correct naming conventions  
Tab 3 - Preparing and uploading revised drawings and documents

### [Applying Online Instructions](#)

5. When ready, upload your files and documents into the following folders:  
"Application Submittal – Drawings"  
"Application Submittal – Documents"
6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

| Applicant Checklist | Planner Checklist | # of Copies | GENERAL WRITTEN SUBMISSIONS CHECKLIST                                                                                                                                                              |
|---------------------|-------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X                   |                   | 1           | Completed Application Form                                                                                                                                                                         |
| X                   |                   | 1           | Cover letter stating the nature of the project.                                                                                                                                                    |
| X                   |                   | 1           | Evidence of right, title and interest.                                                                                                                                                             |
| X                   |                   | 1           | Written Submittals that address the conditional use standards of Sec. 14-484, including unit size and bedroom count                                                                                |
| X                   |                   | 1           | Proposed Marketing Strategy                                                                                                                                                                        |
| n/a                 |                   | 1           | Written Proposal for providing workforce units on-site, off-site, or payment of fee-in-lieu.                                                                                                       |
| n/a                 |                   | 1           | If the project is to be phased, provide written description of project phasing and accommodation of workforce units.                                                                               |
|                     |                   |             | <b>Plans and Construction Details Submission Checklist</b>                                                                                                                                         |
| X                   |                   | 1           | An accompanying site plan application, as applicable.                                                                                                                                              |
| X                   |                   | 1           | Floor Plans of all units and identifying proposed designated workforce housing units                                                                                                               |
| X                   |                   | 1           | Interior Standards for Units for market rate and workforce housing units, including kitchen, bathroom, flooring and closet amenities                                                               |
| n/a                 |                   | 1           | If workforce units are proposed off-site, provide vicinity map with project location and workforce unit locations within the applicable census block group map or within 1500 feet of the project. |



**APPLICANT SIGNATURE:**

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

**This application is for a Conditional Use IZ Review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.**

|                                                                                                              |                   |
|--------------------------------------------------------------------------------------------------------------|-------------------|
| Signature of Applicant:<br> | Date:<br>5-2-2017 |
|--------------------------------------------------------------------------------------------------------------|-------------------|

## **W. Conformity with Conditional Use Standards**

The following statement is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-487.

### **OVERVIEW**

This project conforms with all the applicable design standards of Section 14-487 (e) as demonstrated in the following narrative.

#### **(e) Standards**

1. Not applicable; the project will not be constructed in phases.
2. The project proposes that the workforce unit be integrated directly within the multi-unit building and include access to the site's amenities including a shared front lobby entrance.
3. The workforce unit will be a one-bedroom unit, similar to that of the majority of the building.
4. The workforce unit is to be offered on-site.
5. If the workforce unit for sale is converted to a rental unit at a later date will be subject to income limits and other workforce unit requirements.
6. Not applicable
7. Because 10% of the available units will be defined a workforce, the minimum term of affordability required is to be the longest term permitted under federal, state, and local laws and ordinances.





**155 Sheridan Street – Level III Development Review Application**

**Neighborhood Meeting Certification**

I, (Applicant/Consultant) hereby certify that a neighborhood meeting was held on **June 21<sup>st</sup>, 2017** at the **East End Community School** at **6:00pm**.

I also certify that on **June 9<sup>th</sup>**, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.
2. Residents on the “interested parties” list.
3. A digital copy of the notice was also provided to the Planning Division ([jmy@portlandmaine.gov](mailto:jmy@portlandmaine.gov) and [ldobson@portlandmaine.gov](mailto:ldobson@portlandmaine.gov)) and the assigned planner to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,



6/22/17 (date)

Attached to this certification are:

1. Copy of the invitation sent
2. Neighborhood Meeting Sign-In Sheet
3. Neighborhood Meeting Minutes



Dear Neighbor:

June 8, 2017

On behalf of BD Sheridan, LLC we are pleased to invite you to a neighborhood meeting to discuss our plans for the proposed project at 155 Sheridan Street within the Residential, R-6, Zone in Portland. The project includes the development of a nineteen unit, four-story residential building with resident parking provided on the first level. Parking will be accessed via Sheridan Street and residents will have access from both Sheridan Street and Fort Sumner Park.

The proposed project meets the development requirements as set by the Fort Sumner Park Height Overlay Ordinance: the building is set at least fifteen feet from the park property and remains below the vertical height requirement as it decreases from the park's apex elevation.

Meeting Location: East End Community School – Cafeteria  
195 North Street, Portland, ME 04101

Meeting Date: Wednesday, June 21, 2017

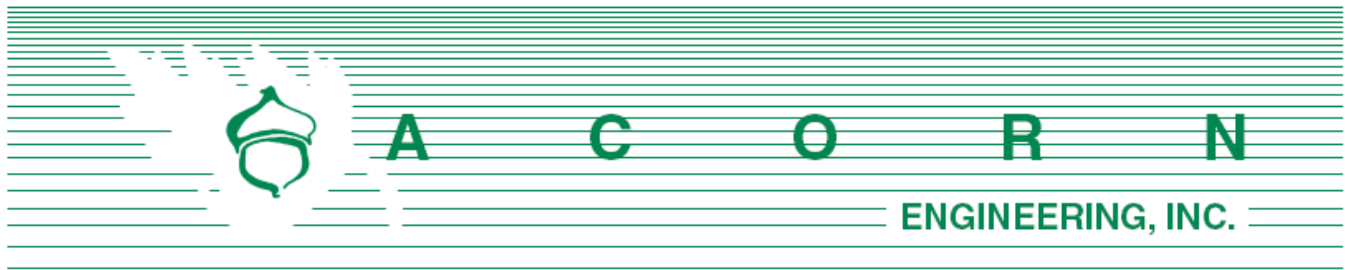
Meeting Time: 6:00 p.m.

The City code requires that property owners within 500 feet of the proposed development and residents on an “interested parties list” be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions regarding the neighborhood meeting, please don't hesitate to call me at 274 - 1298. We look forward to seeing you at the meeting.

Sincerely,

Patrick Venne  
Owner's Representative  
Redwood Development Consulting, LLC



## **155 Sheridan Street Redevelopment Project Level III Site Plan and Subdivision Application**

### **Neighborhood Meeting Minutes**

June 21, 2017 6:00pm

East End Community School Cafeteria

#### Design Team Attendees:

|               |                                                      |
|---------------|------------------------------------------------------|
| Patrick Venne | Developer's Representative - Presenter               |
| Ryan Senatore | Architect - Presenter                                |
| Will Savage   | Civil Engineer - Presenter                           |
| Olivia Dawson | Civil Engineer/Landscape Designer - Minutes Recorder |

#### Presentation:

##### **Patrick Venne:**

- Introduced the design team in attendance and elaborated on the progression of the Sheridan project:
  - o Discussed how the project to be presented today during the meeting was an accumulation of year-long coordination efforts with the City and neighbors
  - o Elaborated on how the project was subject to a City enacted moratorium that stalled design work and delayed the project from site plan review last fall
  - o Spoke to the project transforming from a six story, 34-unit building that obscured a portion of the views from Fort Sumner Park to a four-story, 19-unit building that preserves the existing sight lines
- Emphasized that the project application as it is stands and was submitted to the city fully complies with the new Fort Sumner Park Overlay zoning ordinance
  - o Pointed out that at the proposed building height, the existing views from Fort Sumner Park would not be obstructed
  - o Further emphasized that the developer has gone above and beyond the standard of care for coordinating with the City and committing to public outreach

## Ryan Senatore:

- First discussed the proposed floor plans:
  - o The first floor is to be occupied by 19 parking spaces with a common entrance/exit driveway, a primary entranceway with a lobby, and a secondary egress. Noted that the majority of this floor would be underground as highlighted in dark grey on each of the floor plans. No residential units are proposed on this level.
  - o The second floor is to be a mix of single and two-bedroom units with a large tenant storage room. Units will have either a patio space or balcony.
  - o The third floor is to be a 'double-loaded corridor' with one and two-bedroom units on either side of the hallway. Units to also have either a patio or balcony space. The units facing the rear of the property will have larger, private patio and yard space between the building and the retaining wall.
  - o The fourth floor is to have units each with a balcony and a shared roof deck area (a portion of the deck space is to be screened off for private use). The fourth-floor plan does not span the full width of the building in order to comply with the height restrictions as set by the Fort Sumner Park Overlay. The remaining roof space not occupied by the roof deck is to be partially covered by green roof trays. There will also be pedestrian access from the fourth floor to Fort Sumner Park.
- Reviewed the sectional view of the building that highlighted how the first and second floors would be below the third-floor surface elevation towards the rear of the property.
- Spoke to the proposed building characteristics and the exterior façade:
  - o The west elevation facing Sheridan Street is designed to have variation in massing in order to break up the relatively large scale of the building. The face is to alternate between indented balconies, room overhangs, and large windows flush with the exterior wall in order to create contrast. The exterior wall materials are to alternate in similar fashion between cedar-stamped composite siding and smooth siding in three cream and green based colors. It was noted that green roof trays are also proposed on the rooftop. The drawing also illustrates a red line that represents the decreasing maximum allowable building elevation as set by the Overlay ordinance and how the building complies with the height cap.
  - o The south elevation illustrates the elevation change between the floors and the path and stairway leading to Fort Sumner Park. It was emphasized that although the structure appears to be above the existing surface grades, the section at which the elevation view was taken is not in line with the apex of the park and the apex is taller than the top of building.
  - o The east elevation highlights the third and fourth level patios and balconies as well as the shared fourth level roof deck and green roof trays on both the top of building and top of third floor rooftops.
  - o The north elevation further illustrates the use of retaining walls in the project and how the building complies with the maximum building height requirement.
- Reviewed the proposed massing of the building in a series of renders with views looking to the south and north down Sheridan Street, the view looking uphill from Washington Ave, and the view from Fort Sumner Park. As illustrated in the view from Fort Sumner, the proposed building will not impede on the existing park views.



**Will Savage:**

- First reviewed the location of the site and what the existing condition is:
  - o The site is bordered mostly by the residential R-6 zone to the north towards North Street, to the west towards Walnut Street and Mancini Electric, and to the east towards Marion Street and Cumberland Ave. To the south, along Washington Ave and Fox Street there is the B-2b Business Zone. And directly abutting the property to the east is the newly designated ROS Recreational Open Space zone for Fort Sumner Park.
  - o There is also the Portland Trails path that crosses Sheridan Street into Fort Sumner Park towards the south of the property.
  - o Noted that there are existing steep slopes towards Sheridan Street.
  - o Touched on conclusions of the Tree Survey performed by a licensed arborist of the existing vegetation within the property: per the survey, the majority of the site is occupied by the invasive Norway Maples trees and other invasive understory vegetation
- Discussed the proposed site characteristics:
  - o Solid waste generated by the residents is to be stored internally within the first-floor parking garage.
  - o Internal bicycle parking for the residents is to be provided within the tenant storage space on the second floor.
  - o The workforce housing unit is to be provided on the third floor and have access to a private patio space.
  - o There are seven street trees proposed along Sheridan Street and approximately 30% of the site is to be landscaped
- Emphasized that there will be new utilities and services for the building but all services will be routed underground.
- Discussed the proposed stormwater treatment systems:
  - o The project proposes a system of green roof trays that help treat and store rain water that then drains into an Underdrained Subsurface Sand Filter (USSF)
  - o The USSF system provides both treatment and storage for the stormwater generated on-site and is to outlet into the existing stormwater infrastructure within Sheridan Street





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:** Will there be an impact from the building onto the solar panels at 156 Sheridan Street (directly across the street from the proposed project)?

**A (Ryan):** We have not yet looked into the possibility that the proposed building would block those panels. However, looking at the location and elevations of the two buildings it is unlikely that new building at 155 Sheridan will impact the panels. That being said, we can study this impact in greater depth.

**Q:** Will the elevator shaft (override) be taller than the maximum allowable building height and impact the park (Fort Sumner Park)?

**A (Ryan):** No, the elevator override will remain below the height limit.

**Q:** You mentioned providing Workforce Housing on-site for one of the units. What is Workforce housing?

**A (Will):** Per the City's affordable housing initiative started last year, there is an Inclusionary Zoning Application that must be filed in tangent with the Site Plan Application to the City that requires new developments to provide affordable housing in three different ways: contribute a sum to the Portland Housing Authority, purchase a unit off-site and designate it as affordable, or provide a workforce unit within the proposed building that has deed restrictions on sale price and future selling prices. It is often more desirable from the developer's standpoint to buy out of the requirement or provide the unit off-site, essentially, for lack of a better word, segregating the unit from the market-rate units within the property. In contrast, this project will have a workforce unit on the third floor with a patio space that is comparable to the surrounding market rate units.

**Q:** What is the City's parking requirement for this project? Where will residents park their second car?

**A (Will):** The City does not require parking for the first three residential units and then requires one parking space per unit thereafter; we are proposing 19 parking spaces, one space per unit, including a handicapped accessible space. As for the second car, we are seeing that many first time condo-buyers or retirees looking to downsize, the projected buyers of these units, are often using only one car.

**Q:** Are you required to purchase parking spots from the City for contractors and the construction crew? *(Additional concern was voiced for this question that was answered in similar fashion)*

**A (Will):** When and where the construction crews will be parking is to be included in the project's Construction Management Plan submitted as part of the site plan application. The City is working on a new submission requirements for the construction management plan with the goal of reducing conflicts between contractors and neighbors during construction and maintaining a safe environment within and outside the jobsite.



**Q:** Can you expand upon the pedestrian walkway that accessed by Fort Sumner Park. Is it private? Who is the intended use for?

**A (Will):** The walkway is intended to provide gated, private access from the park for the residents. The walkway will extend from the fourth level to the Fort Sumner property line at grade. The gate will be a flight of stairs below Fort Sumner and remain out of sight from the park.

**Q:** Who will be maintaining the green roof?

**A (Will):** It will be the condo association's responsibility for the upkeep of the green roof trays which are included in the stormwater maintenance agreement. This agreement, as filed with the City of Portland as part of the site plan application, requires the condo association to hire a qualified stormwater inspector to inspect the property's stormwater BMPs annually (the subsurface stormwater system and green roof) and provide the City and condo association with an inspection report and recommended maintenance actions if any.

**Q:** Has there been a date scheduled for the first Workshop Meeting?

**A (Patrick):** No date has been confirmed by the Planning Staff as of yet but we are tentatively scheduled for July 11<sup>th</sup>.

**Q:** What is the estimated construction period?

**A (Ryan):** We estimate the project will take about 12-months to complete.

**Q:** What is the projected cost of the units?

**A (Patrick):** There is no estimated price point at this time but the unit prices will be influenced by the asking prices of the new condos within the neighborhood including the new development across the street at 156 Sheridan Street.

**Q:** Who is the construction company for the project?

**A (Ryan):** We are conducting interviews with different companies at this time but have not selected anyone yet.

**Q:** Who is the developer?

**A (Patrick):** The project is being developed by BD Sheridan, LLC and Vazza Real Estate Group which are represented by Bernie Saulnier.

**Q:** What are you proposing to replace the trees that were removed during construction? I see that Gingko trees are proposed along the street and those are not native to Maine.

**A (Will & Olivia):** We currently are proposing seven street trees as well as evergreen trees along the front building face and small arborvitaes along the rear retaining wall fence line. Although we are proposing Gingko trees at this point in the design process, the final species is to be reviewed by



and accepted by the City Arborist, Jeff Tarling.

**Q:** What sort of excavating or earthmoving techniques will be used during construction? Will there be any blasting? I directly about the project site to the north along North Street and I am concerned about construction activities impacting my foundation.

**A (Will):** Based upon the results of the Geotechnical Report there is no blasting proposed during project construction but there will be piles driven into the ground for the pile and lag retaining wall. With your permission, the contractor can conduct a survey of your foundation prior to any earthmoving activities. This inspection, including pictures of the existing foundation condition, will be used as a baseline for any damage claims filed during or following project construction.

**Q:** What is preventing someone from falling from atop the retaining wall?

**A (Ryan):** There will be a minimum 42" tall black chain link fence atop the retaining wall, closer to the park's apex point the fence will be lower in elevation so that the existing views are not impacted.

**Q:** Will there be screening proposed during the construction process to prevent trash and debris from blowing into the worksite?

**A (Will):** Any proposed screening will be defined by the construction management plan and later by the contractor during construction. We will look into implementing temporary structures for blowing debris within the construction management plan. General housekeeping will be the responsibility of the Contractor to minimize trash.

**Q:** What is the height of the retaining wall to the north?

**A (Will):** The retaining wall height varies and is approximately 20-24 ft.

**Q:** What does the fence along the retaining wall look like and will it impose on the park views?

**A (Ryan):** We are proposing a black chain link fence that is virtually invisible and undetectable from a distance. This fence will taper off prior to the park so that the views are not impeded on.

**Q:** Will lights from the units be visible from the park?

**A (Ryan):** If we look at the south elevation again (from the presentation) you can see that the units on the second through fourth floors will remain below the park elevation and the lights will shine towards the lower slopes of the park and not be in direct sight.

**Q:** Can you expand upon what a green roof is?

**A (Will):** A green roof consists of covering a building roof or a portion of the roof with plantings that can include anything from small, dense shrub-like species to upwards of tall grasses and trees. We are proposing a smaller, modular green roof system made up of 2-foot by 2-foot trays. Green roofs not only provide a more visually interactive roof scape but also reduce the urban heat index in cities and provide additional stormwater treatment for rainfall events.



**Q:** What type of plants will be planted on the green roof?

**A (Ryan):** Green roofs can be planted with a variety of species from grasses to small compact vegetation. These species are also often drought resistant.

**Q:** Are there any waivers being asked as part of this project? Do you expect to ask for additional waivers further along in the application process? How will we know if a waiver is requested?

**A (Will):** We are not asking for any waivers at this time nor do we expect to ask for waivers in the future. I would like to emphasize that the City does not simply take our word on the waivers and conducts a third party, professional review of the project application to verify that no waivers from the land code ordinance are required. If they do identify a need for a waiver they will contact the developer and that contact request will be public information. Concerned citizens should contact the Planner – Matt Grooms to receive updates on the project.

**Q:** Is there any possibility of providing additional plantings along the retaining wall fence along the park property line?

**A (Ryan & Will):** If we were to plant anything along this fence line the sightline through the chain link fence will be obscured by the plant growth and potentially decrease views from the park.

**Q:** Is any remedial work proposed for the park property directly abutting the retaining wall?

**A (Patrick):** During construction, the contractor might need to request a temporary construction easement and use a limited portion of the city land. However, that land will be required to be graded and built to its existing condition following the end of construction. Also, it should be noted that the park surface directly abutting the site is a riprap stabilized slope and as limited plant growth and landscaping.

At this time the project does not require temporary construction rights from adjacent parcels.

**Q:** What are you proposing for landscaping on the south facing wall towards Fort Sumner?

**A (Olivia):** The landscaped space along the walkway is proposed to be planted with evergreen groundcover.

**Q:** When will you anticipate breaking ground on construction?

**A (Patrick):** Hopefully this October.

**Q:** How does the flattop roof handle snow accumulation?

**A (Ryan):** The roof is designed to account for an assumed amount of ‘dead weight’ loading from snow accumulation and will require additional truss supports for the snow loading. The roof will be designed to withstand the additional weight from the green roof.

**Q:** Would you consider a different fence style such as wrought iron for the retaining wall fencing?



**A (Will & Ryan):** We hadn't considered a wrought iron fence but we can look into the implications of proposing it.

**Q:** Can you elaborate on the design moratorium that was placed on this project.

**A (Patrick):** Last year the city enacted a development moratorium that prevented the project moving forward in the site plan application process and gave the City time to outline and pass an amendment to the land code ordinance for properties abutting the Fort Sumner Park in the R-6 residential zone. The amendment was passed earlier this year.

**Q:** Will there be on-site or off-site marketing for the units?

**A (Patrick):** We have no finalized the marketing plan for these units but it is assumed that the marketing will take place off-site.

Additional Comments from the Public:

1. There was some concern from the neighbors during the discussion of the green roof maintenance that the roof's vegetation would not be properly maintained by the residents and could suffer from neglect because it is not in their direct line of sight. It was also expressed that they would prefer shorter plantings on the rooftop, the shorter the better.
2. During the latter portion of the question and answering period, a member and representative of the Friends of Fort Sumner Park spoke in favor of the project and in appreciation of the developer's and design team's efforts to adjust the scope of the project to comply with the new park overlay ordinance. This support statement was later seconded by another neighbor.

*Meeting concluded at approximately 7:15pm.*

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 email address so that they can be reviewed, revised, and resubmitted as necessary.

Recorded by,



Olivia Dawson, E.I.  
Design Engineer  
Acorn Engineering, Inc.

[odawson@acorn-engineering.com](mailto:odawson@acorn-engineering.com)





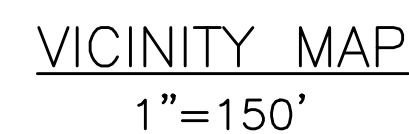
**155 Sheridan Street Redevelopment**

**Neighborhood Meeting Sign-In Sheet – June 21<sup>st</sup>, 2017**

*Please Print your Name and Address*

1. Debra Byers 156 Sheridan St. PHd
2. CAROL McCRACKEN 645 Congress ST-
3. Carolyn Young 135 SHERIDAN ST #201
4. Randy Young 135 SHERIDAN ST #201
5. Dave Cowie 32 North Street, Portland 04101
6. Douglas Cowie " " " "
7. GARY MARCISSE 69 Vesprest Munja Hill
8. Lisa Arsenault 135 Sheridan St.
9. Karen Snylen 22 Waterville
10. Gene S Manganello 84 Duker St.
11. ~~Dave~~ 125 Sheridan St
12. Susan York-Velby 135 Sheridan St
13. \_\_\_\_\_
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BD SHERIDAN, LLC  
PORTLAND, MAINE



CALL BEFORE YOU DIG  
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1-888-344-7233

|      |                                                             |
|------|-------------------------------------------------------------|
| C-01 | COVER SHEET & LEGEND                                        |
| C-02 | GENERAL NOTES                                               |
| EX   | EXISTING CONDITIONS PLAN                                    |
| C-03 | DEMOLITION, CONSTRUCTION MANAGEMENT, & EROSION CONTROL PLAN |
| C-10 | SITE PLAN                                                   |
| L-1  | LANDSCAPE PLAN                                              |
| C-20 | UTILITY PLAN                                                |
| C-30 | GRADING & DRAINAGE PLAN                                     |
| C-40 | SITE DETAILS - 1                                            |
| C-41 | SITE DETAILS - 2                                            |
| C-42 | UTILITY DETAILS                                             |
| C-43 | DRAINAGE DETAILS                                            |
| C-44 | UNDERDRAINED SUBSURFACE SAND FILTER DETAILS                 |
| C-45 | EROSION & SEDIMENTATION CONTROL NOTES                       |
| C-46 | EROSION & SEDIMENTATION CONTROL DETAILS                     |

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PORTLAND, MAINE  
CONTACT: BILL BRAY, P.E.  
(207) 774-3603

| APPROX. | APPROXIMATE                        |
|---------|------------------------------------|
| BC      | BOTTOM OF CURB                     |
| BMP     | BEST MANAGEMENT PRACTICE           |
| BOT.    | BOTTOM                             |
| CB      | CATCH BASIN                        |
| CF      | CUBIC FOOT                         |
| CIP     | CAST IN PLACE                      |
| 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             |
| FI      | FIELD INLET                        |
| FT.     | FEET                               |
| GAL.    | GALVANIZED                         |
| ID      | INNER DIAMETER                     |
| IN.     | INCH                               |
| INV.    | INVERT                             |
| L       | LENGTH                             |
| MAX.    | MAXIMUM                            |
| MDOT    | MAINE DEPARTMENT OF TRANSPORTATION |
| MFG.    | MANUFACTURED                       |
| MH      | MANHOLE                            |
| MIN.    | MINIMUM                            |
| 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                 |
| 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                        |
| TWC     | TIME WARNER CABLE                  |
| TYP.    | TYPICAL                            |
| UD      | UNDERDRAIN                         |
| UGE     | UNDERGROUND ELECTRIC               |

PRELIMINARY  
NOT ISSUED FOR  
CONSTRUCTION

[illegible]



GENERAL NOTES:

- 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 SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN 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 TITCOMB ASSOCIATES FOR VAZZA REAL ESTATE GROUP AND BD SHERIDAN, LLC DATED MARCH 6, 2016.
8. SUBSURFACE DATA HAVE BEEN OBTAINED BY SUMMIT GEOENGINEERING SERVICES, INC. AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ALSO REVIEW THE REPORT PRIOR TO SUBMITTING A BID.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE 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 THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
10. THE CONTRACTOR SHALL REVIEW ACORN'S CONSTRUCTION MANAGEMENT PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. CONSTRUCTION MANAGEMENT, MEANS AND METHODS, TRAFFIC CONTROL, ETC. 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. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH ACRON.
13. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF ADJACENT PROPERTIES INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL.

CIVIL SITE NOTES:

3. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP AND ERECTION DRAWINGS SHALL 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 SHALL 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 SHALL 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, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.
12. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

SPECIAL INSPECTION NOTES:

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. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.
8. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
9. SPECIAL INSPECTION FIRM SHALL BE EMPLOYED BY BD SHERIDAN LLC AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, OR ELEVATION AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO THEIR ORIGINAL LOCATION 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 FOUNDATION CORNERS.
6. CONTRACTOR TO ENSURE THAT DRIVEWAYS AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND IN USE AT ALL TIMES.

## PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN - LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT 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 THE PROJECT GEOTECHNICAL ENGINEER.
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.

EROSION CONTROL NOTES:

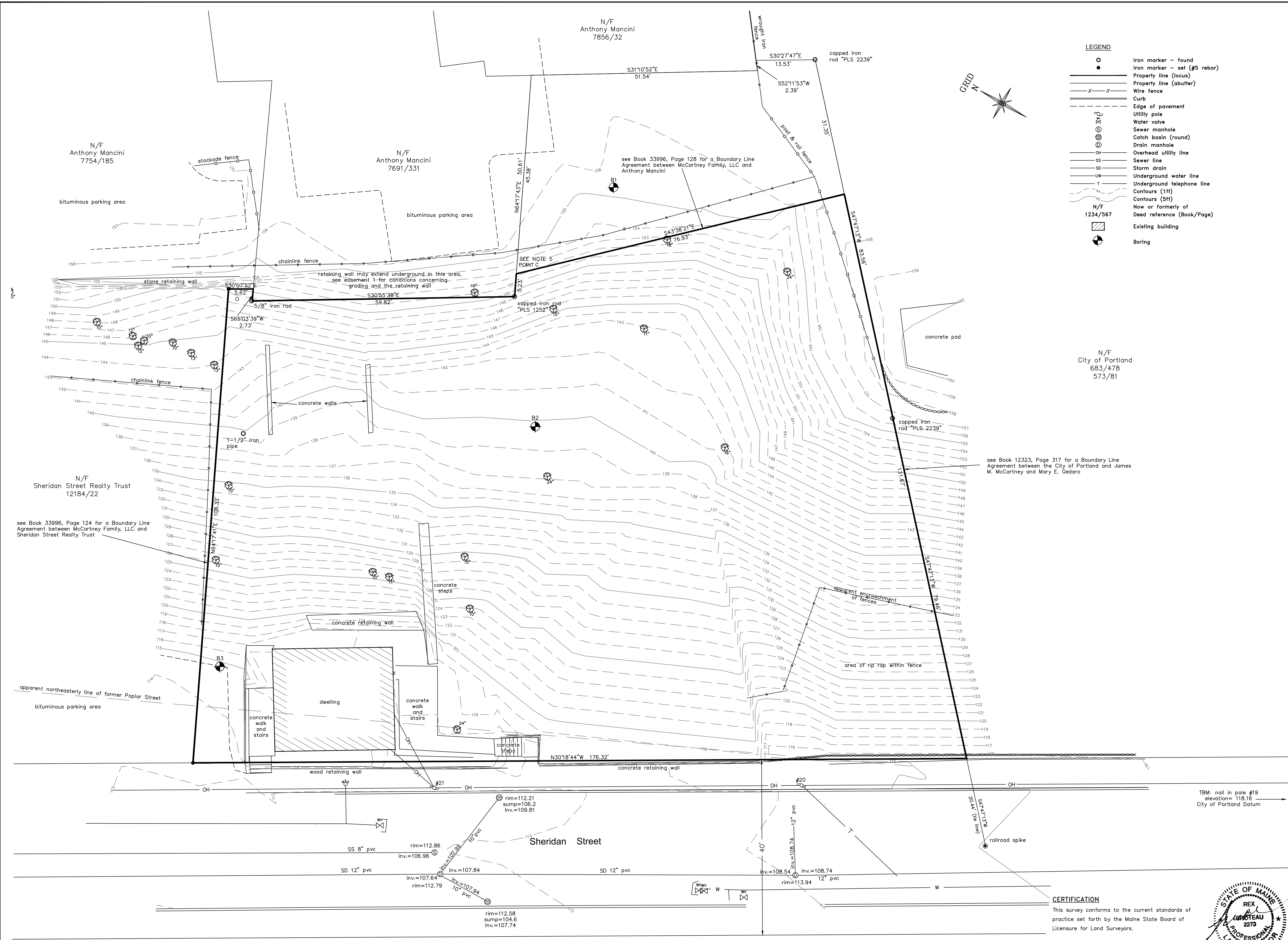
1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT 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, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
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. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

- 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 TO BYPASS EXISTING SEWER FLOW CONTROL AT CONNECTION TO EXISTING SYSTEM AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES.
4. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
5. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET C-42.
6. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT "WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURES", MOST RECENT EDITION.
7. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.
8. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.
9. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
11. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.
12. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.
13. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.
14. 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.

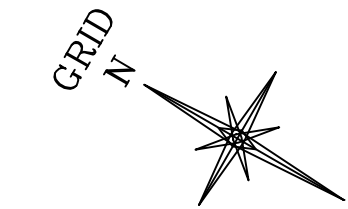
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**LEGEND**

- Iron marker – found
- Iron marker – set (#5 rebar)
- Property line (locus)
- Property line (abutter)
- Wire fence
- Curb
- Edge of pavement
- Utility pole
- Water valve
- Sewer manhole
- Catch basin (round)
- Drain manhole
- OH Overhead utility line
- SS Sewer line
- SD Storm drain
- UW Underground water line
- T Underground telephone line
- Contours (1ft)
- Contours (5ft)
- Now or formerly of
- Deed reference (Book/Page)
- Existing building
- Boring



- NOTES**
- 1) Book and Page references are to the Cumberland County Registry of Deeds.
  - 2) Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.
  - 3) Elevations are based on City of Portland datum.
  - 4) Utility information on this plan is approximate, based on location of visible features and information contained on plans and drawings provided by others. DigSafe and/or the appropriate utilities should be contacted prior to any construction.

- REFERENCES**
- 1) City of Portland, Maine Standard Boundary Survey of Proposed Property Line Between Land of James M. McCartney, et al. and Land of City of Portland at Fort Sumner Park dated September, 1995.
  - 2) Plan showing old and new lines of Poplar Street by Charles R. Goodell, C.E., undated (1864?), on file in the City of Portland Archives Plan 370/42.
  - 3) Plan Showing Division Between the Fort Sumner Lot and Lot owned by Messrs. Jose, Gould, and Clark by C. R. Goodell, dated January 12, 1865, recorded in Plan Book 2, Page 45.
  - 4) Untitled working plan by E. C. Jordan showing boundary between Fort Sumner Park and Lands formerly of Shanahan and Pierce, as Surveyed 1886-1927, on file at Owen Haskell, Inc., Portland, Maine.
  - 5) Plan Showing Division Line Between Lands of Hiram Pierce and City of Portland (surveyor unknown) dated May 31, 1892, on file in the City Engineer's Archives, Plan 371/1.
  - 6) City of Portland Tax Assessor's Map of 1882, recorded in Plan Book 5, Page 12.
  - 7) Plan Showing Little, Weeks, and Moody Lot, Munjoy Hill (surveyor and date unknown) on file in the City Engineer's Archives, Plan 86/1.
  - 8) Untitled plan showing subdivision of land of Elijah Kellogg, dated April 10, 1802, recorded in Book 51, Page 297.
  - 9) Untitled plan showing division of land on Mount Joy Neck by the proprietors, dated November 14, 1793 recorded in Book 39, Page 552.
  - 10) Plan of Land (Standard Boundary Survey) on North Street, Portland, Maine for Anthony Mancini by Owen Haskell, Inc., dated April 5, 1988, on file at Owen Haskell, Inc., Portland, Maine.
  - 11) Plan No. 6 in Book 169 page 478, dated November 1839.
  - 12) City Street records, and working plans on file in the city engineer's archives.
  - 13) Boundary Survey made for Anthony Mancini by Owen Haskell, Inc. dated December 6, 2012.

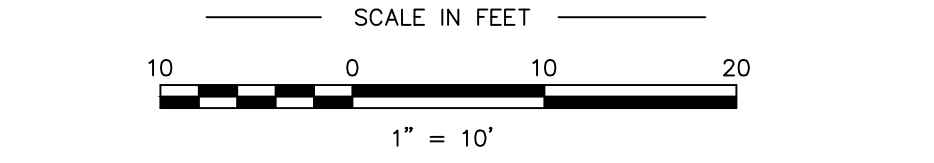
**REMARKS**

1) Grading restrictions set forth in the conveyance of George F. Hitchings to Charles Bailey in Book 314, Page 544.

**NOTES**

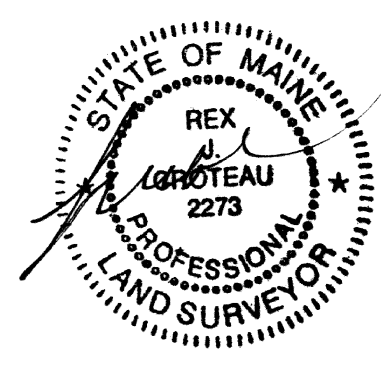
18,140 square feet

McCartney Family, LLC: Book 32471, Page 220  
Book 32471, Page 222  
Book 32471, Page 224  
Book 32471, Page 226  
Book 32471, Page 228



**CERTIFICATION**

This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.



Rex J. Croteau, P.L.S. #2273

**PLAN OF**

Exhibit C of Survey

153-165 Sheridan Street Portland, Maine

**MADE FOR**

Vicente R. E. G. BD S. LLC

1266 Furnace Brook Parkway, Suite 300 Quincy, Massachusetts

|             |                     |                 |
|-------------|---------------------|-----------------|
| JOB #216013 | DATE: March 4, 2016 | SCALE: 1" = 10' |
| BOOK #891   |                     |                 |
| 216013.dwg  |                     |                 |
| FILE #9819  |                     |                 |

**Titcomb Associates**

133 Gould Road, Falmouth, ME 04105  
(207)797-9199



1. CONTRACTOR TO COORDINATE WITH UNTIL TO IDENTIFY, IF ANY, AN EXISTING GAS SERVICE OR VALVE WITHIN THE STREET FRONTAGE. IF ONE IS EXISTING, CONTRACTOR TO SHUT DOWN THE EXISTING GAS SERVICE AND ABANDON THE LINE IN ACCORDANCE WITH ALL CITY, STATE, AND FEDERAL REGULATIONS AND MAINTAIN RECORD.
2. CONTRACTOR TO COORDINATE WITH CMP ON THE RELOCATION OF UTILITY POLE #21. ALL CONSTRUCTION AND INSTALLATION ACTIVITIES TO COMPLY WITH THE CMP MANUAL, MOST RECENT EDITION.
3. EXISTING ASPHALT AND CONCRETE TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. 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.
5. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. FOR ADDITIONAL ENVIRONMENTAL INFORMATION, REFER TO THE PHASE I ENVIRONMENTAL SITE ASSESSMENT FOR SAUNLIER DEVELOPMENT, LLC DATED 4/4/16. CONTRACTOR TO REVIEW PHASE I - ESA PRIOR TO BID OR WORK. A COPY CAN BE MADE AVAILABLE UPON REQUEST.
7. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE EXISTING PLANS AND TO RECONSTRUCT.
8. NOTE THAT ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION.
9. EXISTING BARRIERS SHALL BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR FUTURE PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
10. CONTRACTOR SHALL PROVIDE PROTECTIVE FENCING ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
11. CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AT ALL LOCATIONS OF INGRESS AND EGRESS DURING CONSTRUCTION TO THE SITE. SEE DETAIL.
12. CONTRACTOR SHALL PROVIDE PROTECTIVE FENCING AND PROPERTY SETBACK ARE TO BE REMOVED. CONTRACTOR TO PROTECT EXISTING TREES OUTSIDE THE PROPOSED RETAINING WALL TO THE GREATEST DEGREE FEASIBLE WITHOUT IMPACTING CONSTRUCTION ACTIVITIES.
13. ALL EXISTING TREES AS HIGHLIGHTED WITHIN THE PLAN TO BE REMOVED AT A DEPTH TWO FEET BELOW THE EXISTING SURFACE AT PROJECT CONSTRUCTION COMPLETION.
14. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, AND DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS

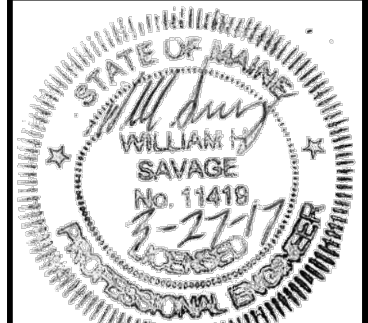
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**155 SHERIDAN STREET**

VAZZA REAL ESTATE GROUP  
BD SHERIDAN, LLC  
1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY,

|                                                                                      |                                                                                    |                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | ACORN ENGINEERING, INC.<br>58 DANFORTH ST. PORTLAND, MAINE 04102<br>(207) 775-2855 | THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS AUTHORIZED BY ACORN ENGINEERING, INC. SHALL BE MADE BY THE ENGINEER WITHOUT LIABILITY TO ACORN ENGINEERING, INC. |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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| FILE:        | 1069_CIVIL |
| JN:          | 1069       |
| SCALE:       | 1"=10'     |
| DESIGNED BY: | OJD        |
| DRAWN BY:    | OJD        |
| CHECKED BY:  | WHS        |



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**C-03**



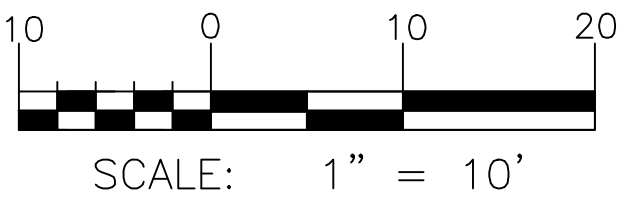
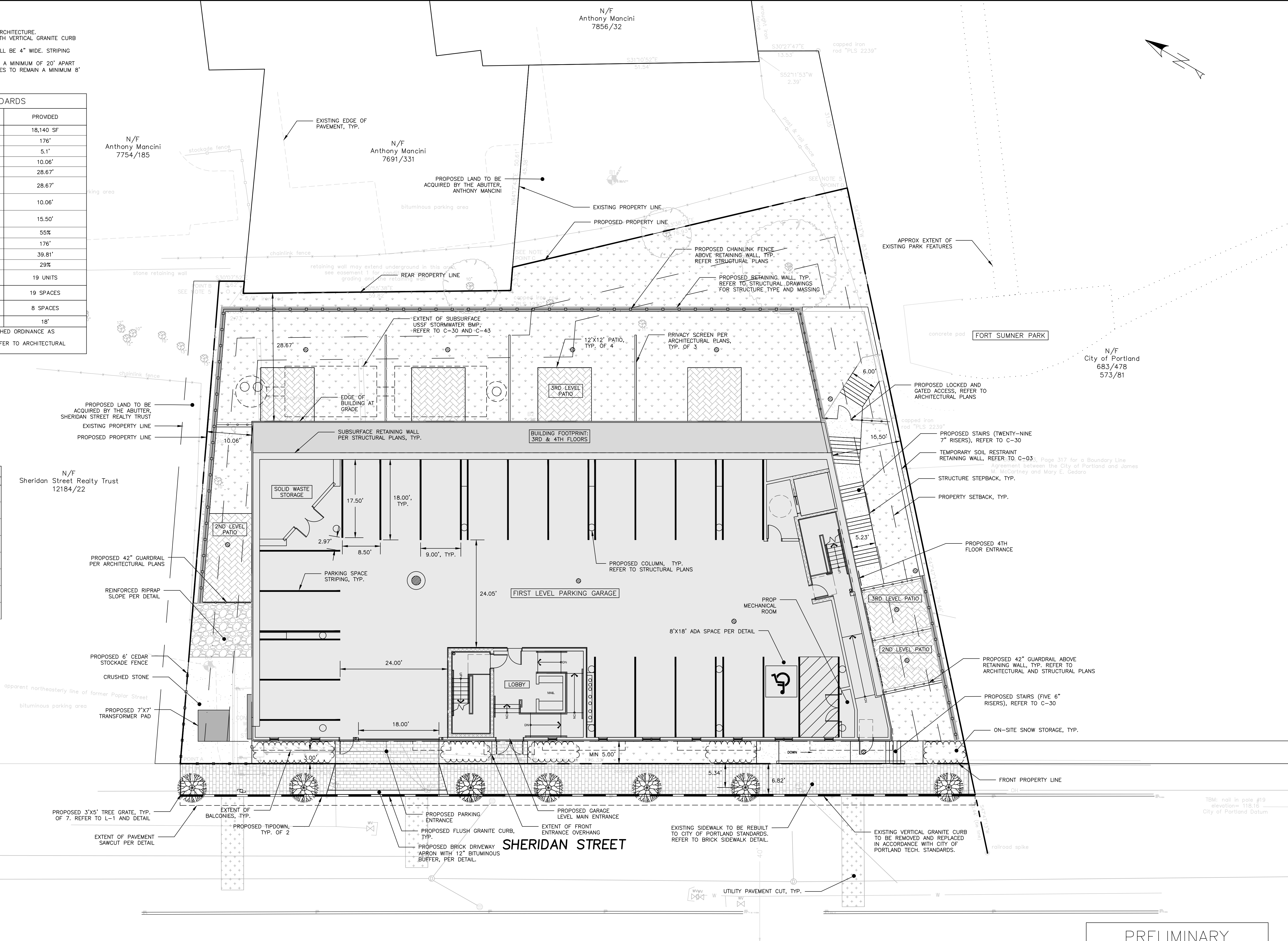
- GENERAL NOTES:
1. ZONING ANALYSIS COMPLETED BY RYAN SENATORE ARCHITECTURE.
  2. CONTRACTOR TO REPLACE ALL EXISTING CURBING WITH VERTICAL GRANITE CURB PER DETAIL.
  3. INTERIOR STRIPING AS INDICATED ON SITE PLAN SHALL BE 4" WIDE. STRIPING SHALL BE WHITE UNLESS OTHERWISE NOTED.
  4. TREE GRATES AND STREET TREES SHALL BE PLACED A MINIMUM OF 20' APART MEASURED FROM CENTERLINE OF GRATE. TREE GRATES TO REMAIN A MINIMUM 8' FROM UTILITY POLES.

| SPACE AND BULK STANDARDS                     |                                            |           |
|----------------------------------------------|--------------------------------------------|-----------|
| ZONE: R6                                     | REQUIRED                                   | PROVIDED  |
| MINIMUM LOT SIZE                             | 2,000 SF                                   | 18,140 SF |
| MINIMUM STREET FRONTAGE                      | 20'                                        | 176'      |
| FRONT YARD (AVG)                             | 5'                                         | 5.1'      |
| SIDE YARD                                    | 5'                                         | 10.06'    |
| REAR YARD                                    | 10'                                        | 28.67'    |
| STRUCTURE STEPBACKS (REAR YARD ABOVE 35')    | 15'                                        | 28.67'    |
| STRUCTURE STEPBACKS (SIDE YARD ABOVE 35')    | 10'                                        | 10.06'    |
| MIN BUILDING SETBACK FROM FORT SUMNER PARK   | 15'                                        | 15.50'    |
| MAXIMUM LOT COVERAGE                         | 60%                                        | 55%       |
| MINIMUM LOT WIDTH                            | 20'                                        | 176'      |
| MAXIMUM BUILDING HEIGHT*                     | 45'                                        | 39.81'    |
| LANDSCAPED OPEN AREA                         | 20%                                        | 29%       |
| MAXIMUM NUMBER OF DWELLING UNITS             | 725 SF/UNIT = 25 UNITS                     | 19 UNITS  |
| RESIDENTIAL PARKING                          | 1 SPACE PER UNIT AFTER 3 UNITS = 16 SPACES | 19 SPACES |
| MIN. INTERNAL RESIDENT BIKE STORAGE SPACES** | 2 SPACES/5 D.U. = 8 SPACES                 | 8 SPACES  |
| MAX. GARAGE OPENING                          | 20'                                        | 18'       |

\*FINAL BUILDING HEIGHT TO NOT IMPEDE ON THE VIEW SHED ORDINANCE AS DESCRIBED IN THE FORT SUMNER PARK OVERLAY ZONE  
\*\*INTERNAL BIKE STORAGE PROVIDED ON 2ND LEVEL. REFER TO ARCHITECTURAL PLANS FOR STORAGE SPACE LOCATION

| PARKING SUMMARY      |                  |
|----------------------|------------------|
| PARKING DIMENSION    | # PARKING SPACES |
| STANDARD (9'X18')    | 17               |
| COMPACT (8.5'X17.5') | 1                |
| ADA (8'X18')         | 1                |
| TOTAL SPACES         | 19               |

| LEGEND      |                         |
|-------------|-------------------------|
| HATCH STYLE | ASSOCIATED AREAS        |
|             | BRICK SIDEWALK          |
|             | RIPRAP SLOPE            |
|             | LANDSCAPED AREAS        |
|             | CONCRETE                |
|             | UTILITY PAVEMENT CUT    |
|             | CRUSHED STONE           |
|             | PATIO                   |
|             | DESIGNATED SNOW STORAGE |



PRELIMINARY  
NOT ISSUED FOR  
CONSTRUCTION

|              |         |
|--------------|---------|
| ISSUED FOR   | BY      |
| PRELIM. APP. | WHS     |
|              | 3/28/17 |

|                                                       |  |
|-------------------------------------------------------|--|
| SITE PLAN                                             |  |
| 155 SHERIDAN STREET                                   |  |
| VAZZA REAL ESTATE GROUP                               |  |
| BD SHERIDAN, LLC                                      |  |
| 1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169 |  |

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| DRAWING NAME: | PROJECT NAME: | CLIENT: |
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| DRAWN BY:    | OJD        |
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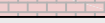
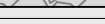
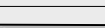
  

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| DRAWING NO. |
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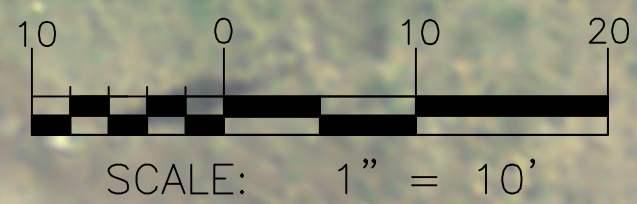
1. ALL PROPOSED GREEN SPACES AND ASSOCIATED PLANT SPECIES ARE TO COMPLY WITH THE CITY OF PORTLAND TECHNICAL STANDARDS. ANY SUBSTITUTIONS SHALL BE REVIEWED FOR APPROVAL BY THE CITY ARBORIST.
2. ALL PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
3. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
4. ALL PLANTS MAINTAINED AND GROWN IN CONTAINER MINIMUM OF 6 MONTHS.
5. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
6. CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
7. 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.
8. 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.
9. THE MAJORITY OF SPECIES ARE SPECIFIED WITHIN THE MAIN PE BUFFER ZONE. PLANT LIST AND ARE NATIVE AND SALT & DRAUGHT RESISTANT.
10. SEE PERMANENT SEEDING TABLE ON SHEET C-46 FOR MAINTAINED LAWN AREAS.

| PLANT SCHEDULE |                             |                    |     |                    |
|----------------|-----------------------------|--------------------|-----|--------------------|
| ID             | BOTANICAL NAME              | COMMON NAME        | QTY | SIZE               |
| GRASSES        |                             |                    |     |                    |
| CA             | CALAMAGROSTIS ACUTIFLORA    | KARL FOERSTER      | 10  | 1 GAL.             |
| GROUNDCOVER    |                             |                    |     |                    |
| JH             | JUNIPERUS HORIZONTALIS      | CREeping JUNIPER   | 220 | 3 QT.              |
| SHRUBS         |                             |                    |     |                    |
| WF             | WEIGELA FRENCH              | LOW BUSH BLUEBERRY | 50  | 1 GAL.             |
| PM             | PINUS MUGO MUGO             | COMPACT MUGO PINE  | 28  | 2 GAL.             |
| TREES          |                             |                    |     |                    |
| JV             | JUNIPERUS VIRGINIANA        | EASTERN JUNIPER    | 9   | MIN 4-5' TALL      |
| GB             | GINKGO GILOBA 'AUTUMN GOLD' | AUTUMN GOLD GINKGO | 7   | MIN 2-2.5" CALIBER |

| LEGEND                                                                           |                    |
|----------------------------------------------------------------------------------|--------------------|
| HATCH STYLE                                                                      | ASSOCIATED AREAS   |
|  | BRICK SIDEWALK     |
|  | RIPRAP SLOPE       |
|  | LANDSCAPED AREAS   |
|  | CONCRETE           |
|  | BUILDING FOOTPRINT |
|  | CRUSHED STONE      |



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CONSTRUCTION

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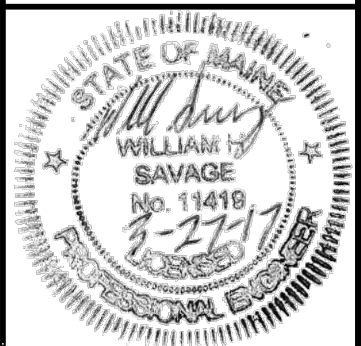
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| DRAWING NAME: | LANDSCAPE PLAN                                                                                       |
| PROJECT NAME: | 155 SHERIDAN STREET                                                                                  |
| CLIENT:       | VAZZA REAL ESTATE GROUP<br>BD SHERIDAN, LLC<br>1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169 |

 N I N I N I N I N

ACORN ENGINEERING, INC.  
158 DANFORTH ST., PORTLAND MAINE 04102  
(207) 775-2655

THIS PLAN SHALL NOT BE MOVED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, ARE THE SOLE RESPONSIBILITY OF THE USER AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

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| DRAWN BY:    | OJD        |
| CHECKED BY:  | WHS        |



DRAWING NO.  
**L-1**



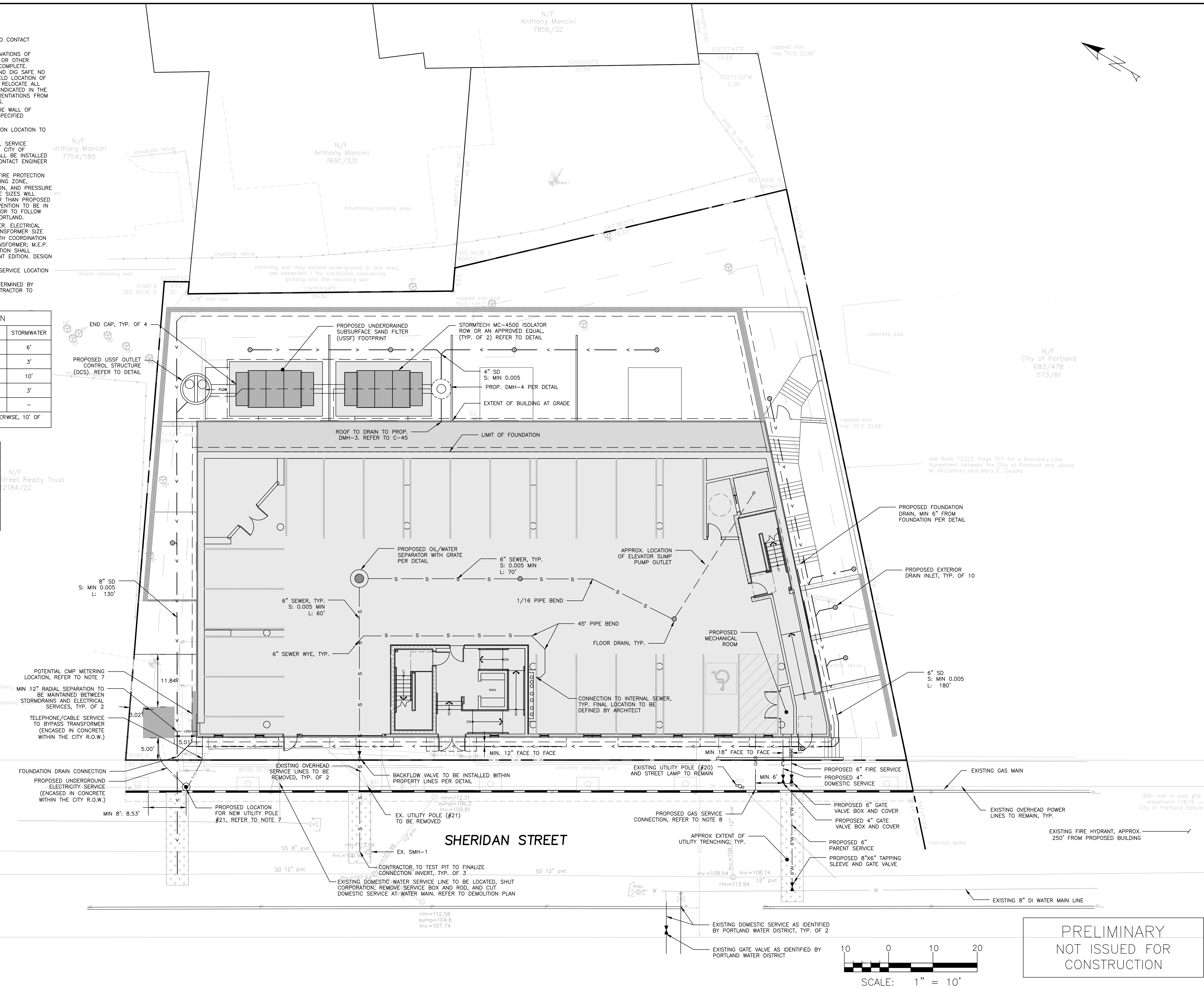
4. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
5. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED BY THE CITY OF PORTLAND FOR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IF IT IS DETERMINED THAT THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS, CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM THE EXISTING CONDITIONS, INCLUDING FIELD SURVEY, PRIOR TO ANY CHANGES.
6. FOR ALL UTILITIES, MINIMUM ENGINEERING DESIGN LIMITS EXTEND TO OUTSIDE WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
7. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTION LOCATION TO EACH RESIDENTIAL UNIT.
8. WATER 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 PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER FOR ADDITIONAL INFORMATION.
9. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. WATER SERVICE VALVES TO BE INSTALLED WITHIN THE FURNISHING ZONE, APPROX. 3' FROM CURB FACE. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL BE DETERMINED BY THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW THE PORTLAND WATER DISTRICT STANDARDS FOR FINAL POSITIONING OF METER.
10. 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 DEFINED BY M.E.P. FINAL UTILITY PANEL #21 LOCATION TO BE DEFINED WITH COORDINATION AND APPROVAL FROM CMP. TELEPHONE/CABLE SERVICES TO BYPASS TRANSFORMER; M.E.P. TO PROVIDE SERVICE TO THE BUILDING. ALL ELECTRICAL WORK SHALL BE COMPLETED IN ACCORDANCE WITH CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
11. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERING TO BE DEFINED BY M.E.P. DESIGNER.
12. CABLE AND TELEPHONE PULLBOXS AND PREDESTAL LOCATIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE.

| 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'  | —          |

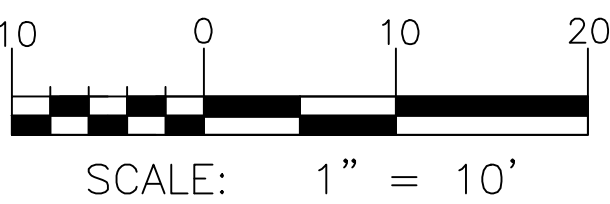
\*PERMISSIBLE ONLY IF SEWER IS LAID MIN. 18" BELOW WATER SERVICE; OTHERWISE, 10" OF HORIZONTAL SEPARATION MUST BE MAINTAINED.

| STRUCTURE SCHEDULE |         |         |          |
|--------------------|---------|---------|----------|
| STRUCTURE          | RIM     | INV. IN | INV. OUT |
| OWS                | 111.20' | TBD     | TBD      |
| EX. SMH-1*         | 112.86' | —       | 106.98'  |
| EX. SMH-2*         | 112.12' | 103.82' | —        |

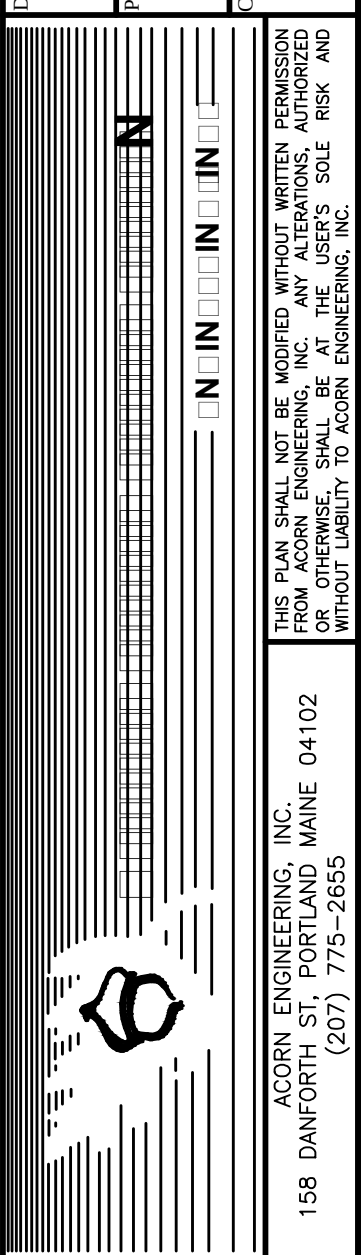
\* EXISTING STRUCTURES AS DEFINED BY THE EXISTING CONDITIONS SURVEY DATED MARCH 4, 2016 BY TPCB ASSOCIATES



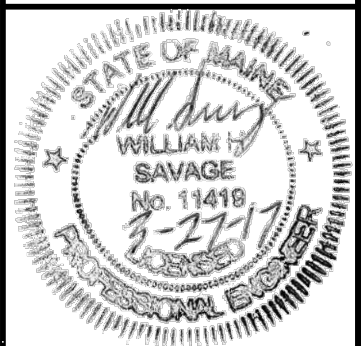
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| DRAWING NAME:       |                                                                                                      |
| UTILITY PLAN        |                                                                                                      |
| PROJECT NAME:       |                                                                                                      |
| 155 SHERIDAN STREET |                                                                                                      |
| CLIENT:             | VAZZA REAL ESTATE GROUP<br>BD SHERIDAN, LLC<br>1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169 |



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| FILE:        | 1069_CIVIL |
| JN:          | 1069       |
| SCALE:       | 1"=10'     |
| DESIGNED BY: | WHS        |
| DRAWN BY:    | OJD        |
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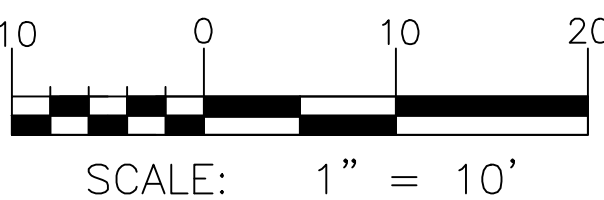
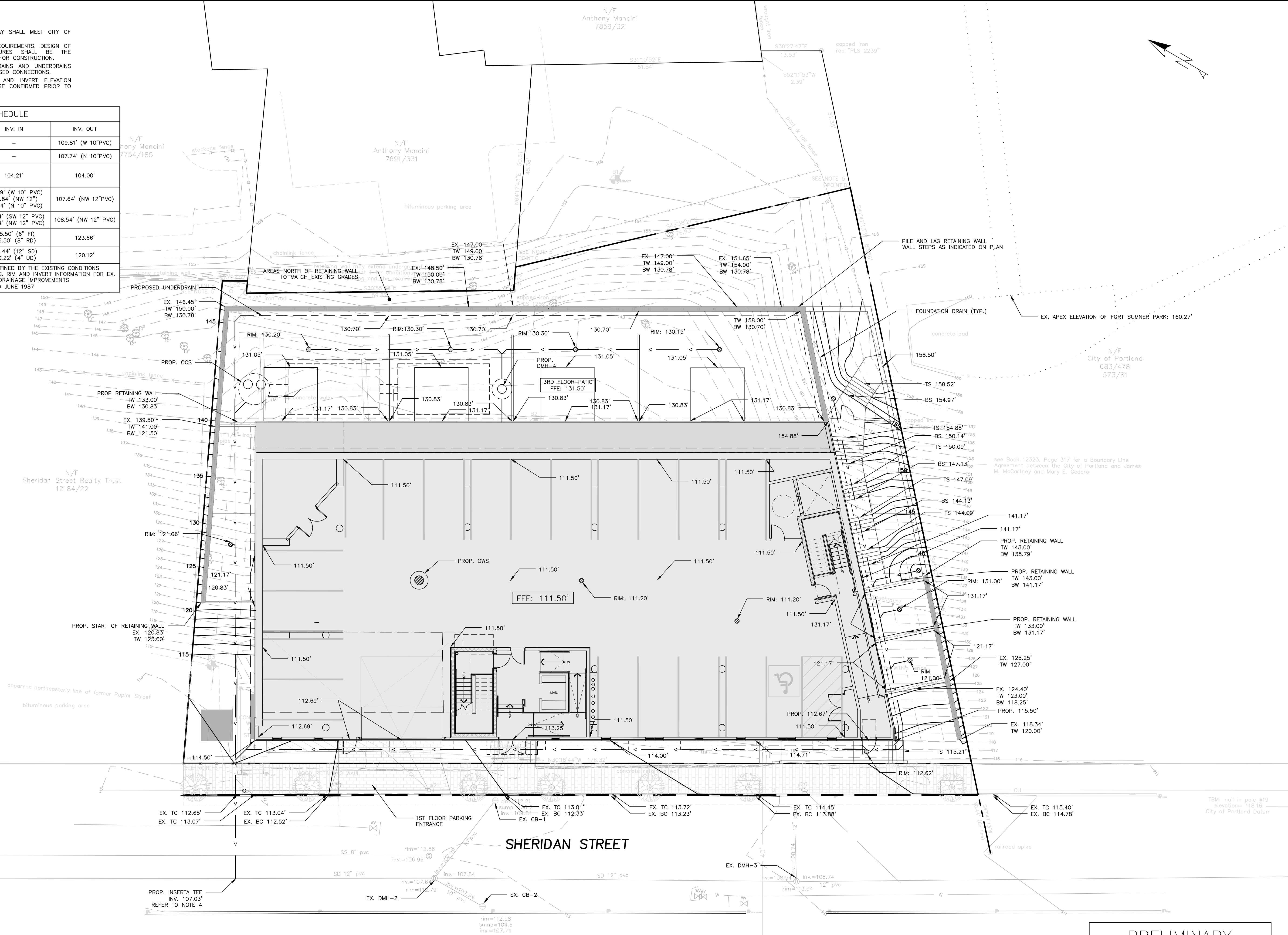
DRAWING NO.  
**C-20**



- GENERAL NOTES:
1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
  2. 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.
  3. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
  4. CONTRACTOR TO NOTE THAT THE EXISTING RIM AND INVERT ELEVATION INFORMATION PROVIDED FOR EX. DMH-1 ARE TO BE CONFIRMED PRIOR TO CONNECTING THE PROPOSED 8" SD OUTLET.

| STRUCTURE SCHEDULE |                   |         |                                                                |                      |
|--------------------|-------------------|---------|----------------------------------------------------------------|----------------------|
| STRUCTURE          | INTERIOR DIAMETER | RIM     | INV. IN                                                        | INV. OUT             |
| EX. CB-1           | -                 | 112.21' | -                                                              | 109.81' (W 10"PVC)   |
| EX. CB-2           | -                 | 112.58' | -                                                              | 107.74' (N 10"PVC)   |
| EX. DMH-1*         | -                 | 111.46' | 104.21'                                                        | 104.00'              |
| EX. DMH-2          | -                 | 112.79' | 107.99' (W 10" PVC)<br>107.84' (NW 12")<br>107.94' (N 10" PVC) | 107.64' (NW 12"PVC)  |
| EX. DMH-3          | -                 | 113.94' | 108.74' (SW 12" PVC)<br>108.74' (NW 12" PVC)                   | 108.54' (NW 12" PVC) |
| DMH-4              | 4'                | 130.80' | 125.30' (6" FI)<br>125.50' (8" RD)                             | 123.66'              |
| OCS                | 6'                | 130.80' | 126.44' (12" SD)<br>120.22' (4" UD)                            | 120.12'              |

\* EXISTING STRUCTURES EXCEPT FOR EX. DMH-1 AS DEFINED BY THE EXISTING CONDITIONS SURVEY DATED MARCH 6, 2016 BY TITOMB ASSOCIATES. RIM AND INVERT INFORMATION FOR EX. DMH-1 AS DEFINED BY SHEET 5 OF SHERIDAN STREET DRAINAGE IMPROVEMENTS (#86103-30-64-04) BY CITY OF PORTLAND DPW DATED JUNE 1987



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CONSTRUCTION

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| ISSUED FOR   | BY      |
| PRELIM. APP. | WHS     |
|              | 3/28/17 |

|                                                       |
|-------------------------------------------------------|
| GRADING & DRAINAGE PLAN                               |
| 155 SHERIDAN STREET                                   |
| VAZZA REAL ESTATE GROUP                               |
| BD SHERIDAN, LLC                                      |
| 1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169 |

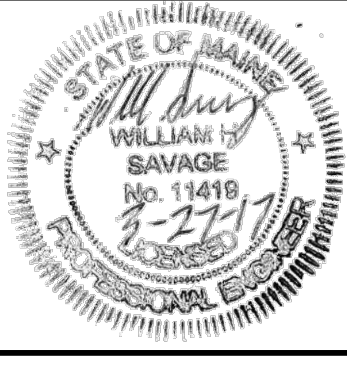
DRAWING NAME: PROJECT NAME: CLIENT:

SEE BOOK 12323, PAGE 317 FOR A BOUNDARY LINE AGREEMENT BETWEEN THE CITY OF PORTLAND AND JAMES M. MCCARTNEY AND MARY E. GEDARO

FOR ANY STATE NOT BEING USED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC.

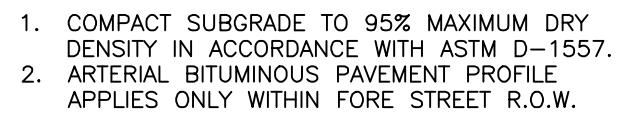
ACORN ENGINEERING, INC.  
158 DANFORTH ST. PORTLAND, MAINE 04102  
(207) 775-2655

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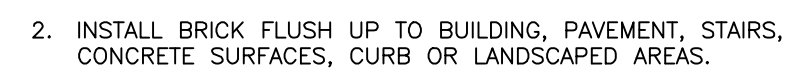


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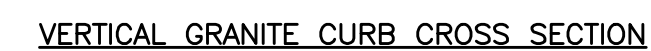




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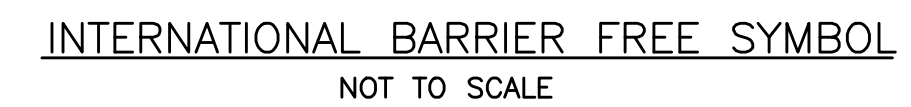


1. ALL PLANT SELECTION AND INSTALLATION WILL BE IN COMPLIANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL (SECTION 4).
2. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
3. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN IN PLANT LIST (IF ANY), THE NUMBER OF PLANTS SHOWN ON PLAN WILL TAKE PRECEDENCE.
4. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
5. 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.
6. ALL PROPOSED PLANTS SHALL BE LOCATED CAREFULLY AS SHOWN ON THE PLANS AND THE PLACEMENTS SHALL BE APPROVED BY ENGINEER BEFORE THE PLANTS ARE INSTALLED.
7. ALL DISTURBED AREAS NOT TO BE PAVED OR PLANTED SHALL BE LOAMED AND SEEDDED AS SHOWN. THE SEED MIX SPECIFICATIONS ARE AS FOLLOWS: LESCO FINE FESCUE LINKS BLEND OF 35% HARD FESCUE, 35% CREeping RED FESCUE, 20% CHEWINGS FESCUE AND 10% SHEEP FESCUE. ADD 5% LITTLE BLUESTEM AND 5% NORTHEAST WILDFLOWER SEED MIXTURE BY WEIGHT TO THE LINKS BLEND.
8. STAKING AND GUYING SHALL BE DETERMINED BY THE ENGINEER ON A TREE BY TREE BASIS. FOR PRICING PURPOSES, PROVIDE A PER TREE UNIT COST FOR STAKING AND GUYING. IF STAKING AND GUYING IS REQUIRED, REMOVE TREE WRAP, STAKES, AND GUY WIRES AT END OF FIRST GROWING SEASON.
9. FOR TREE PLANTING IN LAWN AREAS, ANY DISTURBED LAWN SHALL BE LOAMED AND SEEDDED AS NECESSARY.

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9. FOR TREE PLANTING IN LAWN AREAS, ANY DISTURBED LAWN SHALL BE LOAMED AND SEEDDED AS NECESSARY.



- NOTES:**
1. DIG HOLE AT LEAST 2 TIMES THE DIAMETER OF THE ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH THE TOP AT DOWNHILL EDGE OF THE HOLE.
  2. TOPSOIL BACKFILL SHALL BE NATURAL FRIABLE, FERTILE, FINE LOAMY SOIL POSSESSING THE CHARACTERISTICS OF TOPSOIL IN THE VICINITY WHICH PRODUCE A HEAVY GROWTH. TOPSOIL SHALL CONTAIN LESS THAN 1% ORGANIC MATTER. TOP SOIL SHALL HAVE A pH VALUE OF NOT LESS THAN 5.5 NOR MORE THAN 7.0.
  3. CONTAINER GROWN STOCK - REMOVE CONTAINER PROTECTING THE ROOT BALL, GENTLY COMB OUT THE ROOTS, PRUNE DAMAGED ROOTS.
  4. BACKFILL THE HOLE WITH TOPSOIL TO A DEPTH NOT TO EXCEED 8" THEN WATER SUFFICIENTLY TO SETTLE. TOPSOIL, REPEAT SOIL BACKFILL, WATER, DRAIN. TOPSOIL SHALL BE TAMPED UNDER EDGES OF ROOT BALL PLANTS. PLANTS TO BE GROWN IN AROUND SHALL BE PLANTED IN AN EARTHEN SAUCER. SOAK PLANTS TWICE WITH TOPSOIL FIRST TWO-FOUR HOURS OF PLANTING.



- 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 R7-5 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.



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CONSTRUCTION

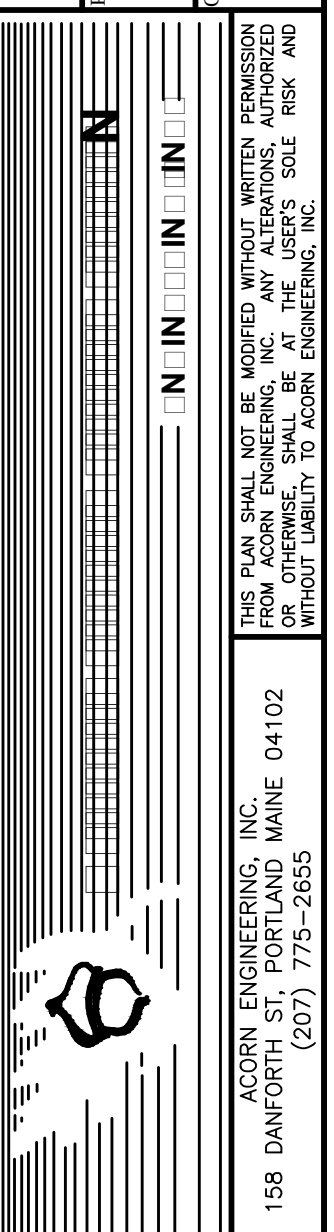
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## SITE DETAILS - 2

**155 SHERIDAN STREET**

**BD SHERIDAN, LLC**  
1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169

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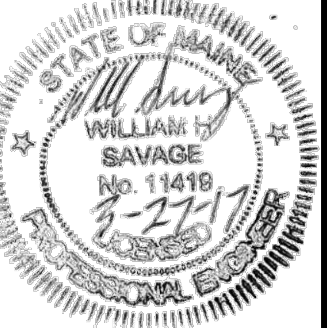
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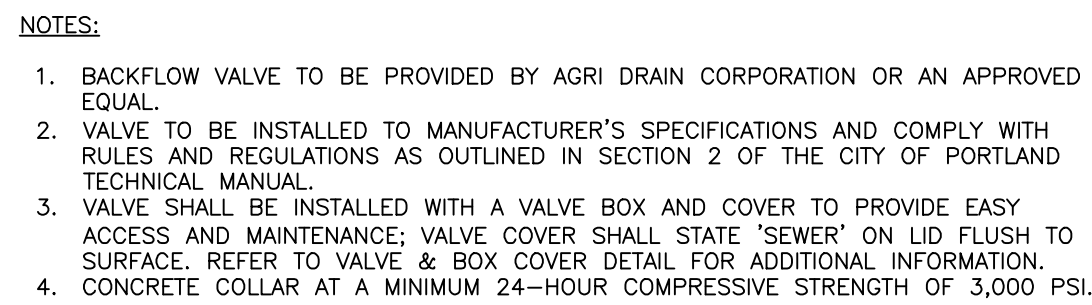
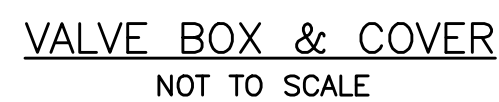
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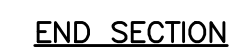
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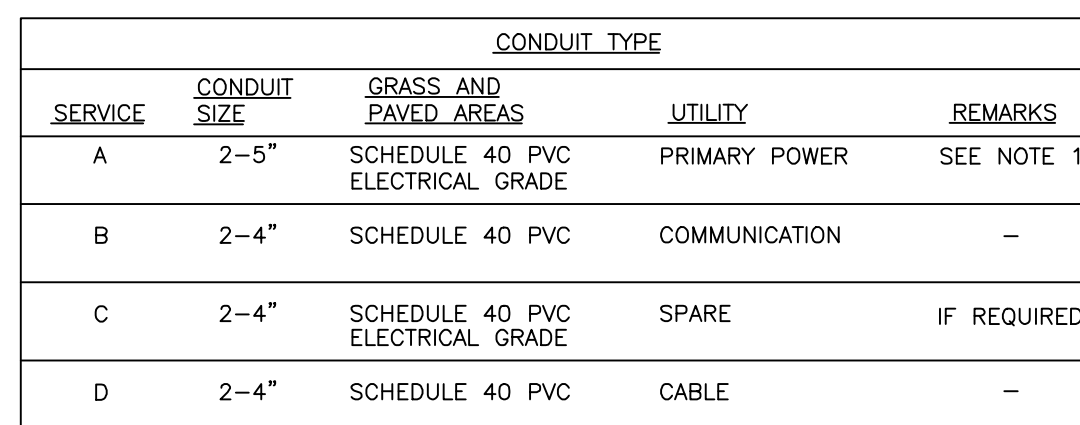
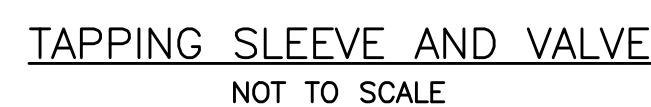




BACKFLOW VALVE ASSEMBLY  
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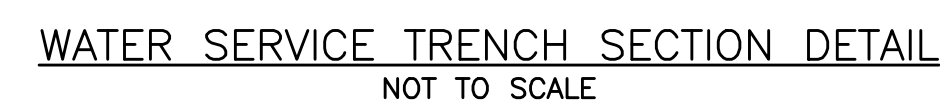
THRUST BLOCKING  
NOT TO SCALE



- NOTES:
1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.
  2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.

UTILITY TRENCH – PRIMARY AND SECONDARY POWER,  
TELEPHONE, AND CABLE

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CONSTRUCTION

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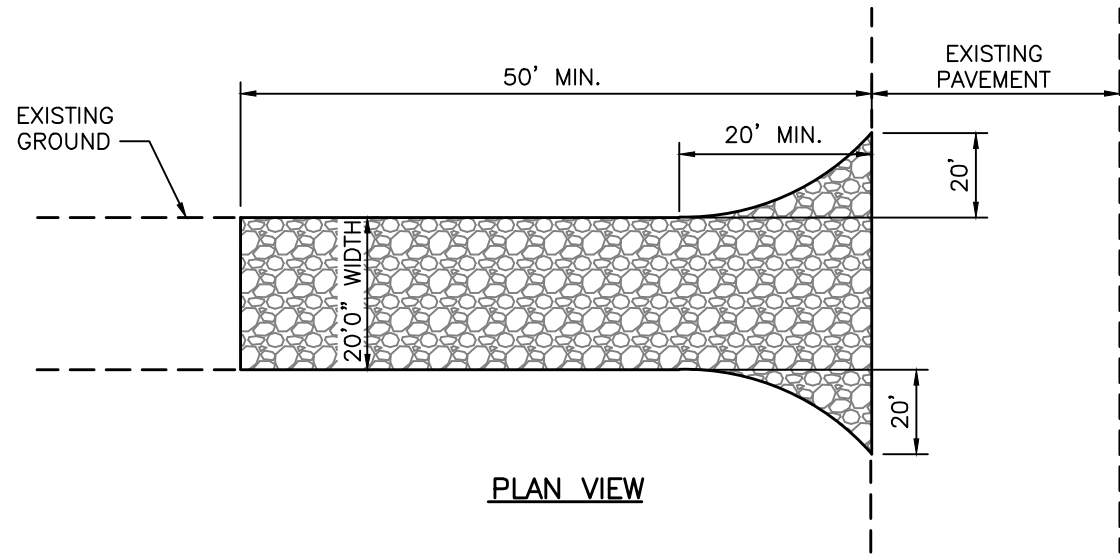
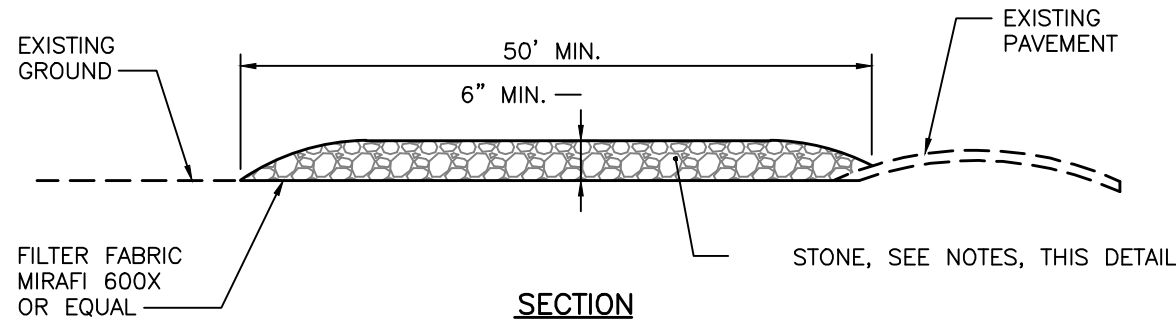






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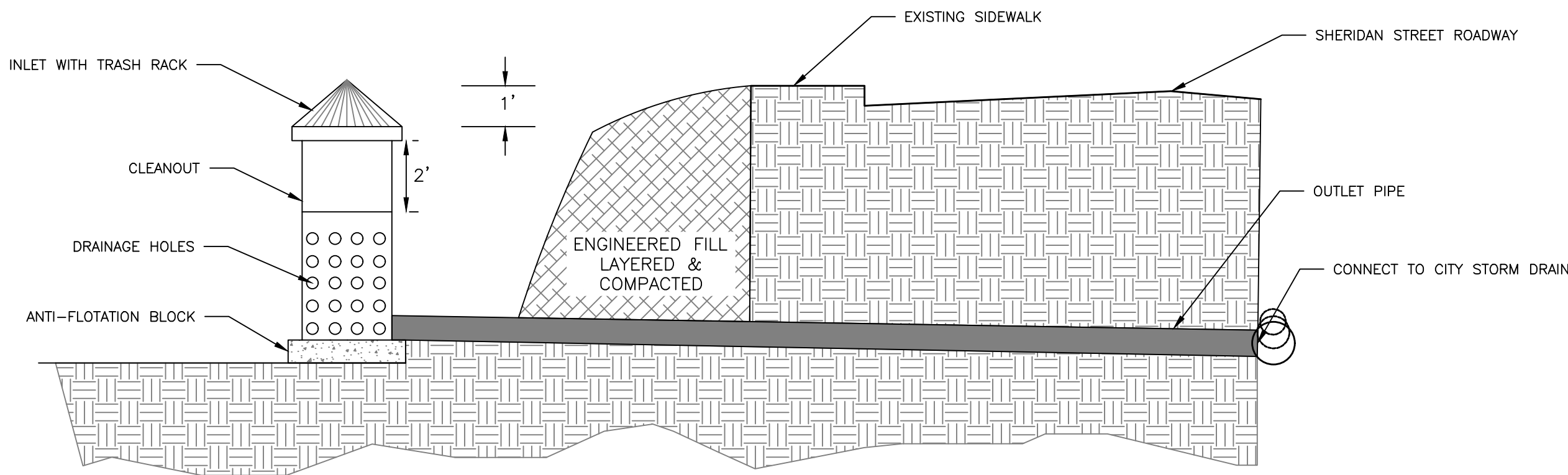
1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"-3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED 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



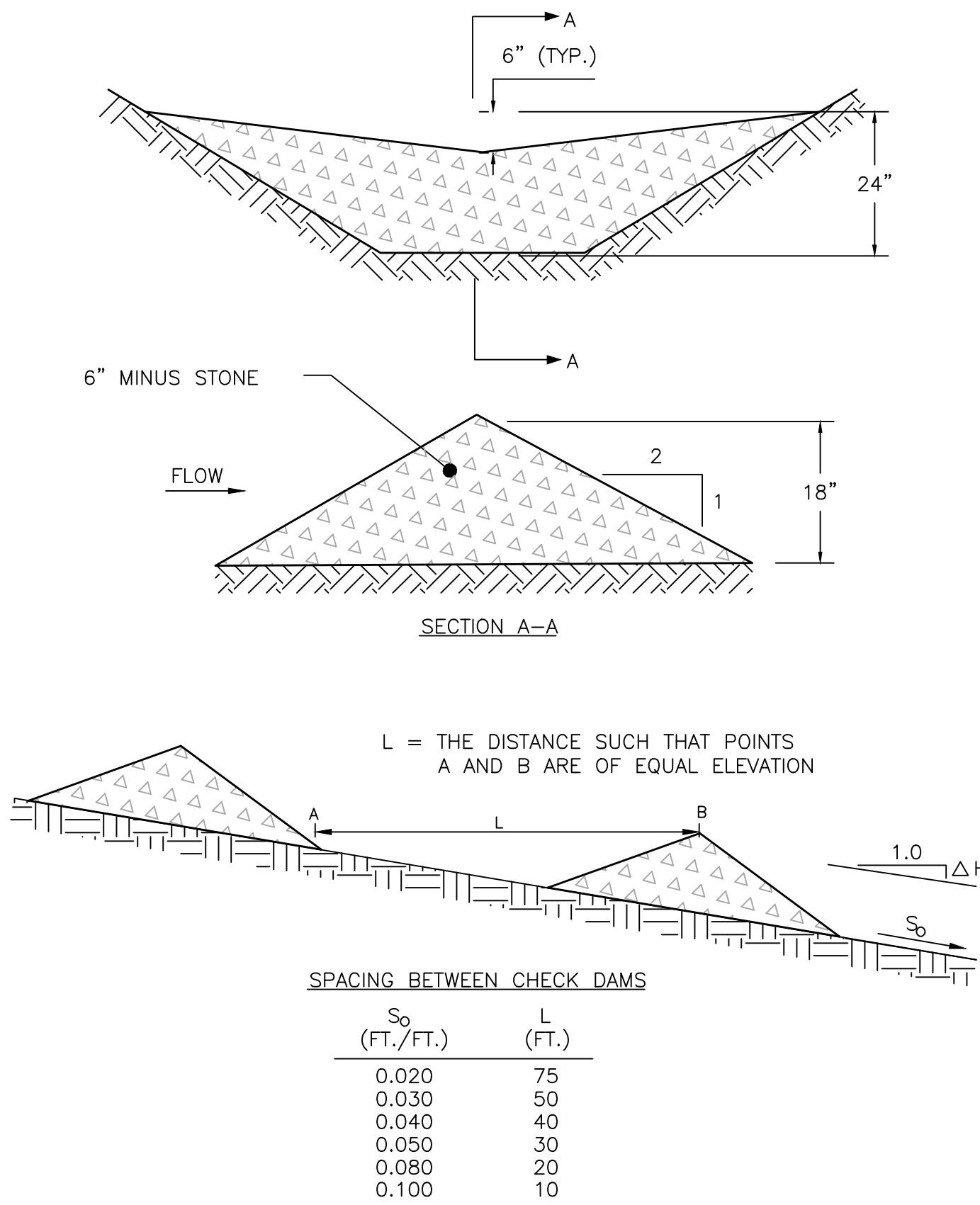
STABILIZED CONSTRUCTION ENTRANCE  
NOT TO SCALE

GENERAL NOTES:

1. EMBANKMENT FOUNDATION AREA SHALL BE CLEARED OF STUMPS, ROOTS, BRUSH, ETC. TO PROVIDE GOOD CONTACT.
2. BASINS ARE TO BE CONSTRUCTED BEFORE THE GROUND IS FROZEN.
3. ALL NATIVE SOIL IS TO BE SCARIFIED BEFORE THE FIRST LAYER OF FILL.
4. ALL EMBANKMENTS NOT SUPPORTED BY RIP RAP SHALL BE COVERED WITH EROSION CONTROL MIX IN ACCORDANCE WITH THE EROSION AND SEDIMENTATION CONTROL PLAN.



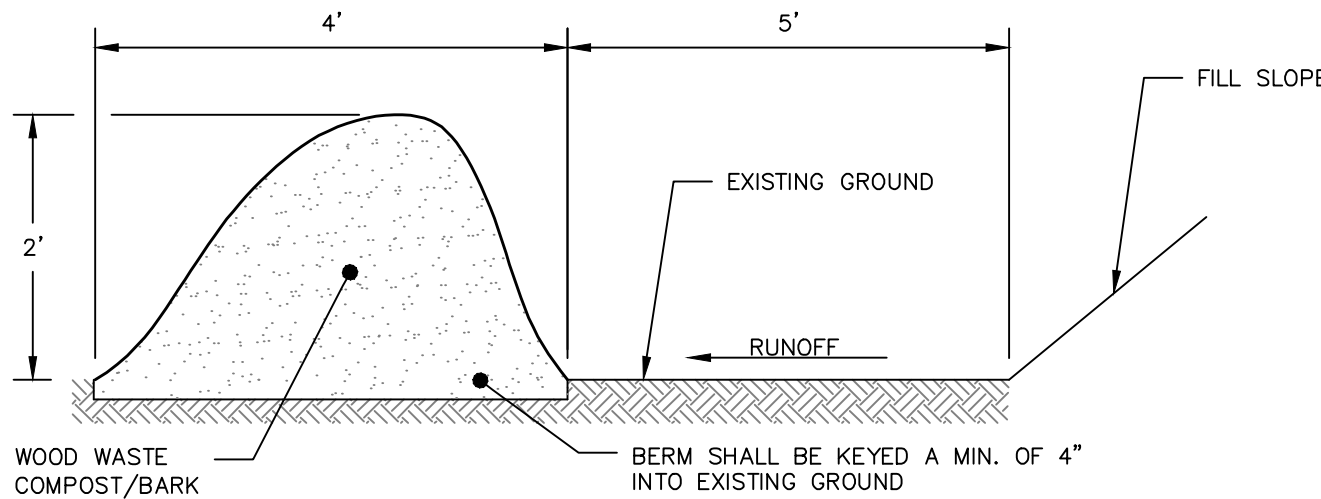
SEDIMENTATION BASIN CROSS-SECTION  
NOT TO SCALE



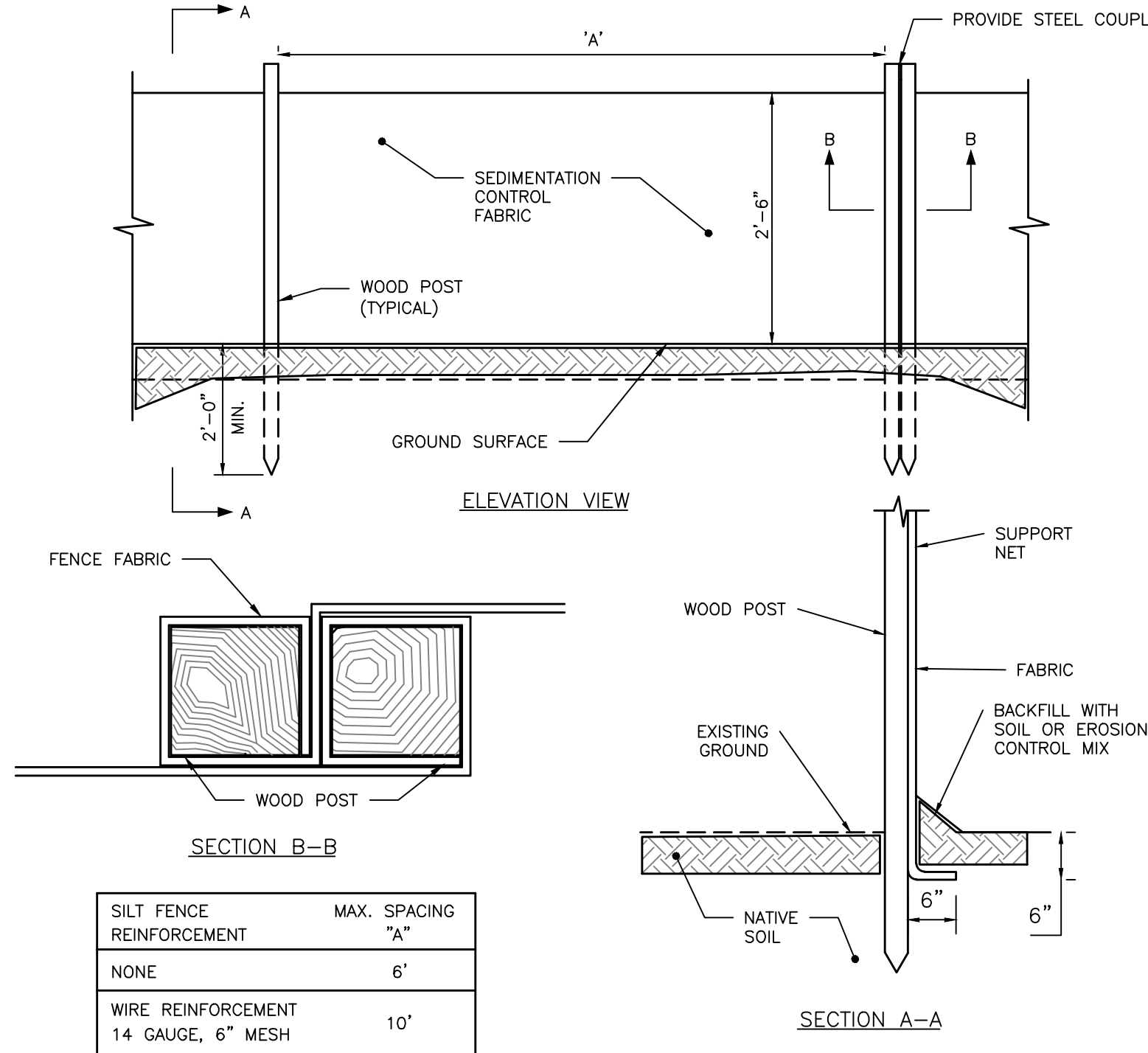
STONE CHECK DAM  
NOT TO SCALE

NOTES:

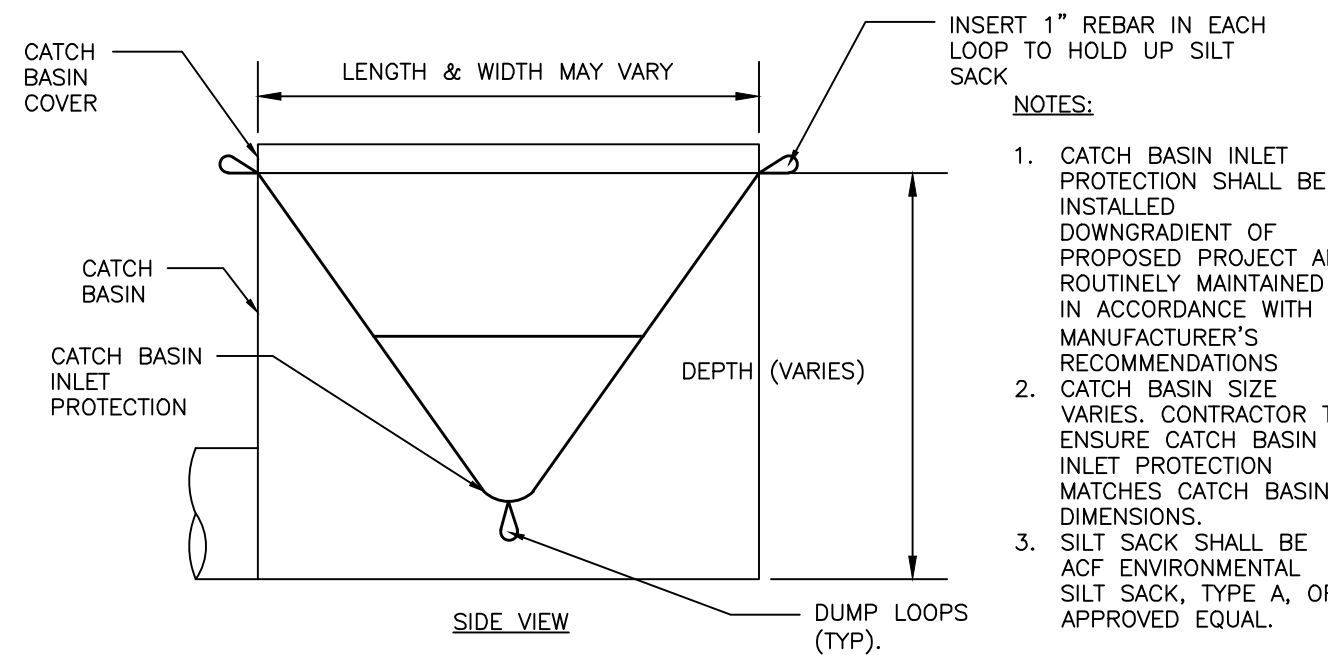
1. THE EROSION CONTROL MIX SHALL CONFORM TO THE FOLLOWING STANDARDS AND IN ACCORDANCE WITH THE MAINE DEP'S EROSION AND SEDIMENT CONTROL BMPs SECTION B-1:
  - A. THE ORGANIC PORTIONS SHALL BE FIBROUS AND ELONGATED TO ALLOW FOR THE INTERLOCKING OF MATERIAL.
  - B. pH - 5.0 - 8.0.
  - C. PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70% TO A MAXIMUM 85% PASSING A 0.75" (3/4") SCREEN.
  - D. THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100% DRY WEIGHT BASIS.
  - E. NO STONES LARGER THAN 4" IN DIAMETER.
  - F. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
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



SILTATION FENCE DETAIL  
NOT TO SCALE



CATCH BASIN INLET PROTECTION  
NOT TO SCALE

PRELIMINARY  
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CONSTRUCTION

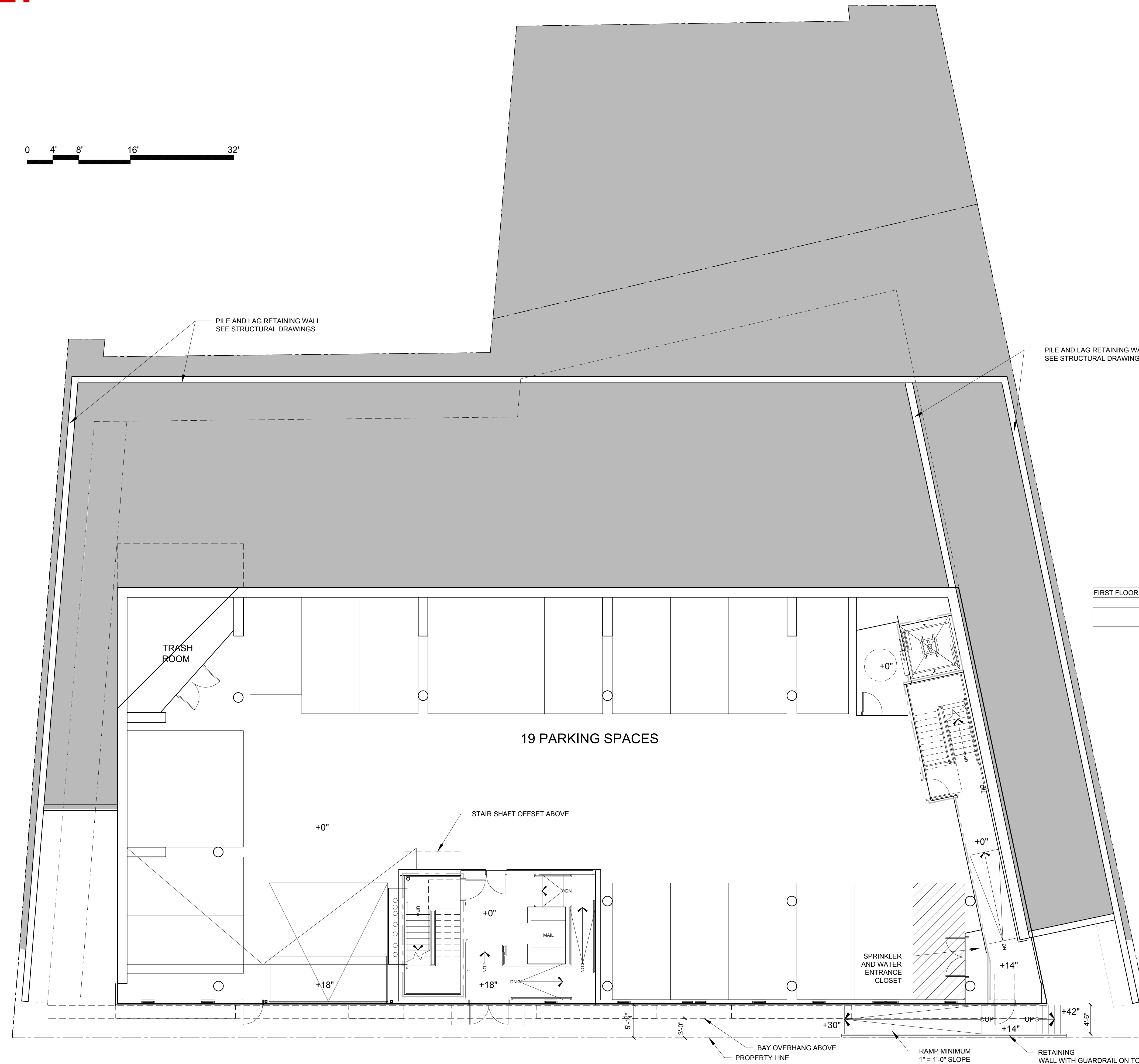
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| PRELIM APP       | WHS    |
|                  | 3/7/17 |
| DRAWING NO. C-46 |        |

|                                                       |  |
|-------------------------------------------------------|--|
| DRAWING NAME: EROSION & SEDIMENTATION CONTROL DETAILS |  |
| PROJECT NAME: 155 SHERIDAN STREET                     |  |
| CLIENT: VAZZA REAL ESTATE GROUP                       |  |
| 1266 FURNACE BROOK PARKWAY SUITE 300 QUINCY, MA 02169 |  |

|                  |
|------------------|
| FILE: CIVIL_1069 |
| JN: 1069         |
| SCALE: NTS       |
| DESIGNED BY: WHS |
| DRAWN BY: SUL    |
| CHECKED BY: WHS  |

|                                                                                      |
|--------------------------------------------------------------------------------------|
| STATE OF MAINE<br>WILLIAM T. SAVAGE<br>No. 11419<br>3-27-17<br>Professional Engineer |
|--------------------------------------------------------------------------------------|

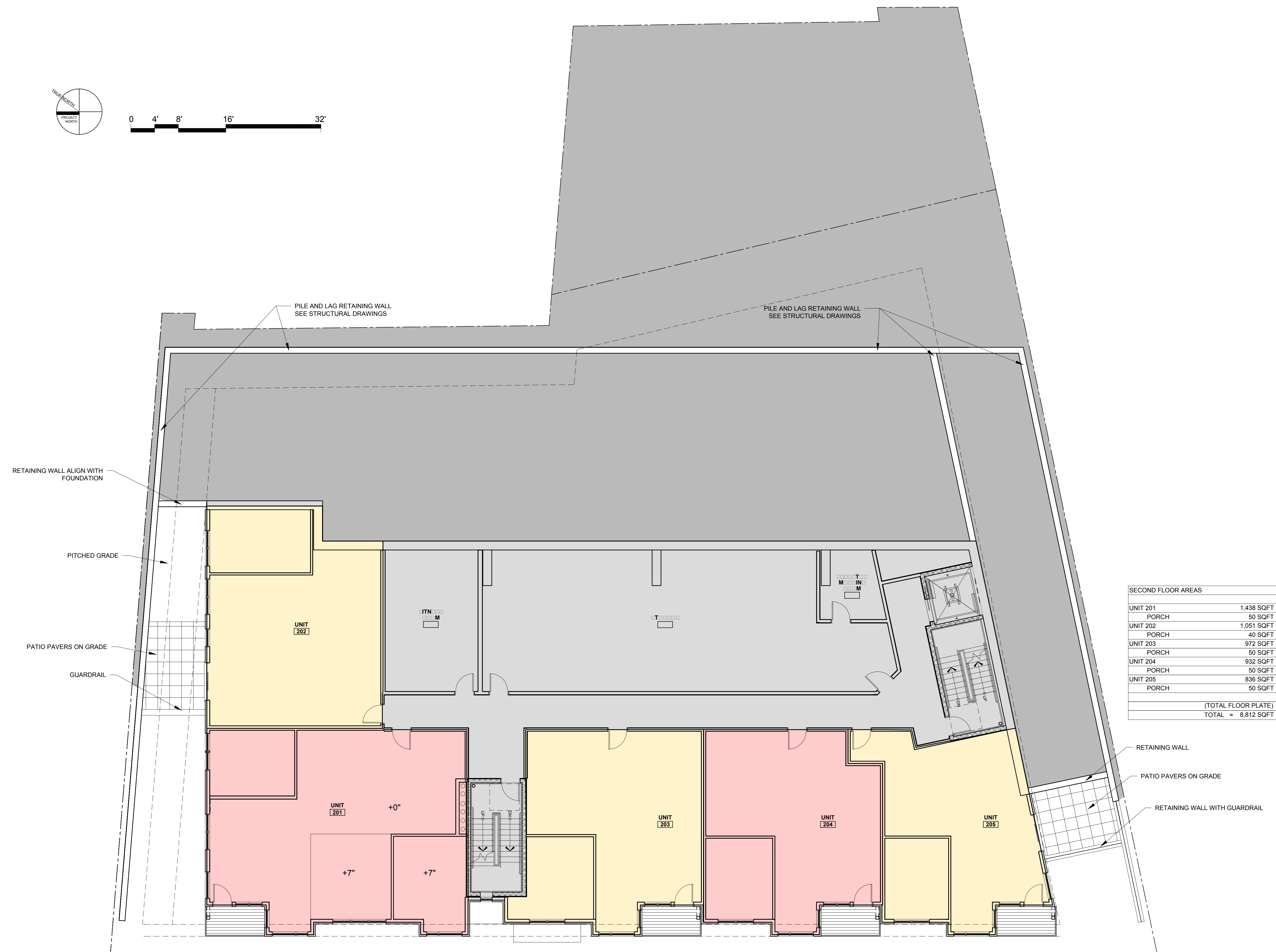




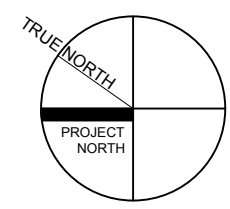
|                     |
|---------------------|
| FIRST FLOOR AREAS   |
|                     |
| (TOTAL FLOOR PLATE) |
| TOTAL = 8,620 SQFT  |

$$\frac{1}{8}'' = 1'-0''$$




$$\frac{1}{8}'' = 1'-0''$$





PILE AND LAG RETAINING WALL  
SEE STRUCTURAL DRAWINGS

RETAINING WALL WITH  
GUARDRAIL



| THIRD FLOOR AREAS   |              |
|---------------------|--------------|
| UNIT 301            | 1,438 SQFT   |
| PORCH               | 50 SQFT      |
| UNIT 302            | 1,136 SQFT   |
| PORCH               | 40 SQFT      |
| UNIT 303            | 972 SQFT     |
| PORCH               | 50 SQFT      |
| UNIT 304            | 891 SQFT     |
|                     |              |
| UNIT 305            | 930 SQFT     |
| PORCH               | 50 SQFT      |
| UNIT 306            | 916 SQFT     |
|                     |              |
| UNIT 307            | 836 SQFT     |
| PORCH               | 50 SQFT      |
| UNIT 308            | 1,131 SQFT   |
| PORCH               | 50 SQFT      |
|                     |              |
| (TOTAL FLOOR PLATE) |              |
| TOTAL               | = 9,569 SQFT |

RETAINING WALL

RETAINING WALL WITH  
GUARDRAIL

RETAINING WALL WITH  
GUARDRAIL



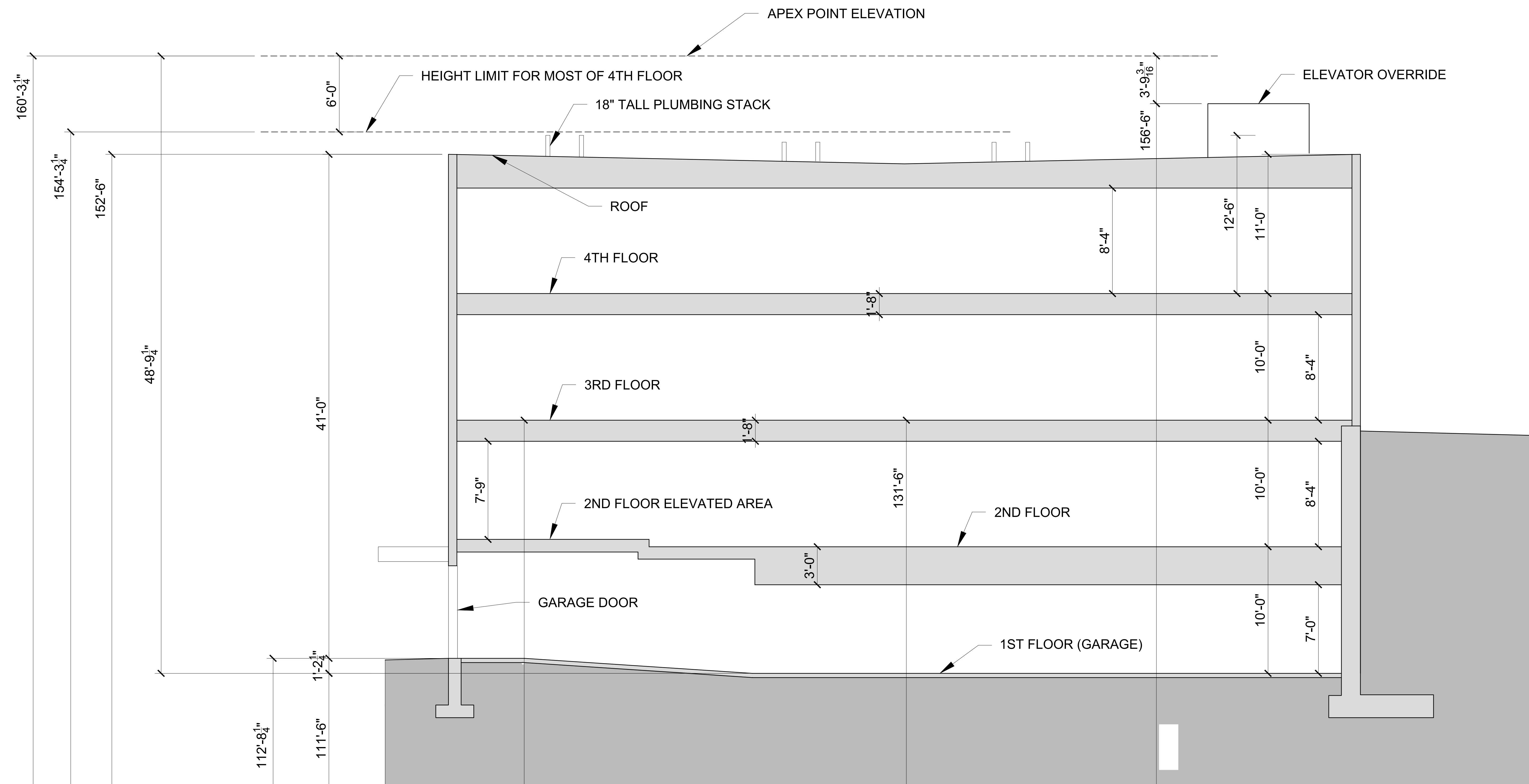


| FOURTH FLOOR AREAS  |              |
|---------------------|--------------|
| UNIT 401            | 1,280 SQFT   |
| PORCH               | 199 SQFT     |
| UNIT 402            | 916 SQFT     |
| PORCH               | 50 SQFT      |
| UNIT 403            | 959 SQFT     |
| PORCH               | 50 SQFT      |
| UNIT 404            | 834 SQFT     |
| PORCH               | 50 SQFT      |
| UNIT 405            | 933 SQFT     |
| PORCH               | 50 SQFT      |
| UNIT 406            | 836 SQFT     |
| PORCH               | 50 SQFT      |
| (TOTAL FLOOR PLATE) |              |
| TOTAL               | = 7,045 SQFT |

FOURTH FLOOR CONCEPT PLAN

1/8" = 1'-0"





SECTION

1/4" = 1'-0" (WHEN PRINTED AT 24" X 36")





WEST ELEVATION

1/8" = 1'-0" (WHEN PRINTED AT 24" X 36")





SOUTH ELEVATION

1/8" = 1'-0" (WHEN PRINTED AT 24" X 36")





EAST ELEVATION

1/8" = 1'-0" (WHEN PRINTED AT 24" X 36")





NORTH ELEVATION #1

1/8" = 1'-0" (WHEN PRINTED AT 24" X 36")



# 155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017



VIEW LOOKING SOUTH

**BD SHERIDAN LLC**

PROGRESS PRINT ONLY  
Not for Construction

**RSA**



# 155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017



VIEW LOOKING SOUTH





VIEW LOOKING NORTH



# 155 SHERIDAN STREET

PORTLAND, MAINE

MARCH 09, 2017



VIEW LOOKING NORTH





VIEW FROM WASHINGTON AVE.





VIEW FROM FORT SUMNER PARK APEX





# Memorandum

## Planning and Urban Development Department

### Planning Division

**To:** Chair Boepple and Members of the Portland Planning Board

**From:** Jean Fraser, Planner

**Date:** July 7<sup>th</sup>, 2017

**Re:** **July 11<sup>th</sup> 2017 Planning Board Workshop**  
Level III Site Plan, Subdivision and Inclusionary Housing:  
12 unit Condominium, One Joy Place  
Onejoy Place, LLC , Applicant

#### I. INTRODUCTION

Onejoy Place, LLC has submitted a Level III Site Plan and Subdivision application for the construction of a three story 12-unit residential building on a 5,851 sq ft backland “urban infill” site at 1 Joy Place, a short private street located between 157 and 165 Brackett Street. The site is vacant and previously occupied by a dilapidated house. The parcel has existing access from Brackett Street via Joy Place.

The site is within the B-1 zone and within the West End Historic District. The Historic Preservation Board has held two Workshops on the design of the project and the submitted elevations have been revised to address the HP Board comments.

The project is subject to the Inclusionary Zoning requirements and the applicant has proposed one unit of workforce housing.

The focus of the site plan review is the provision of parking, since the layout of the new building does not does not include space to meet all of the off-street parking requirements, and Joy Place is a narrow dead-end street that serves 4 other units in the front duplex building nearest to Brackett Street.

The applicant had been in discussions with the City to develop this site in conjunction with the use and improvement of the abutting school parking lot, including some leased spaces for the new residential development. Alternatives discussed included selling the school parking lot to the developer or using the lot for overnight parking for this development. The sale option is not moving forward, and at present no overnight parking arrangement has been agreed to.

The applicant held a Neighborhood Meeting on June 28, 2017 which was attended by one neighbor; notes are included in Attachment R. The Planning Division has received 7 public comments generally in support of the project (see *Section VI* below). This Workshop was noticed to 250 neighbors and interested parties, and the public notice appeared in the *Portland Press-Herald* on July 3<sup>rd</sup> and 4<sup>th</sup>, 2017.

**Applicant:** Onejoy Place, LLC (Todd Alexander)  
**Consultants:** Terradyn Consultants (Michael Tadema-Wielandt), Engineers;  
Archetype (David Lloyd, Architects)



Required reviews and requested waivers (note that waivers have not been requested but may be needed):

| <b>Applicant's Proposal</b>                         | <b>Applicable Standards</b>                                                                                                            |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| New structure of 12 dwelling units                  | Subdivision Review                                                                                                                     |
| Multifamily building of 3591 square feet            | Level III Site Plan Review                                                                                                             |
| Proposed building within West End Historic District | Requires a Certificate of Appropriateness (Article IX) from the Historic Preservation Board (note; B1 Design Standards not applicable) |
| Proposed one bed unit of workforce housing          | Inclusionary Zoning                                                                                                                    |

## II. PROJECT DATA

| <b>SUBJECT</b>                 | <b>DATA</b>                                                                                                                              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Existing Zoning</b>         | B1                                                                                                                                       |
| <b>Existing Use</b>            | vacant                                                                                                                                   |
| <b>Proposed Use</b>            | residential                                                                                                                              |
| <b>Parcel Size</b>             | 5,851 sq ft                                                                                                                              |
| <b>Impervious Surface Area</b> |                                                                                                                                          |
| --Existing                     | 3,164 sq ft                                                                                                                              |
| --Proposed                     | 3,602 sq ft                                                                                                                              |
| --Net Change                   | 438 sq ft                                                                                                                                |
| <b>Total Disturbed Area</b>    | 5,851 sq ft                                                                                                                              |
| <b>Building Footprint</b>      |                                                                                                                                          |
| --Existing                     | 0                                                                                                                                        |
| --Proposed                     | 2,612 sq ft                                                                                                                              |
| --Net Change                   |                                                                                                                                          |
| <b>Building Floor Area</b>     |                                                                                                                                          |
| --Existing                     | 0                                                                                                                                        |
| --Proposed                     | 3,591 sq ft                                                                                                                              |
| <b>Residential</b>             |                                                                                                                                          |
| - Existing # units             | 0                                                                                                                                        |
| - Proposed # units             | 12 one bed units                                                                                                                         |
| <b>Parking Spaces</b>          | 12 required; 4 tandem on site; application refers to 10 being leased but lease not submitted; payment of a fee in lieu is also an option |
| <b>Bicycle parking Spaces</b>  | 5 (in basement of new building)                                                                                                          |

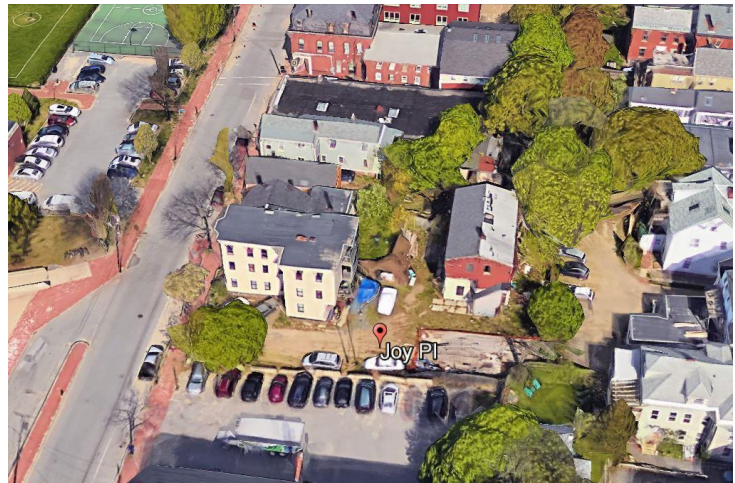
## III. EXISTING CONDITIONS

The generally flat site is located at the far end of Joy Place, pictured here where it joins Brackett Street between a duplex at 165/167 Brackett (comprising a single-family home and a 3-unit apartment building) and the parking lot owned by the City of Portland and used by Reiche School staff as the school is across the street. To the rear of the site are the back yards of residential homes on Winter Street.



The site in the wider context is shown below:





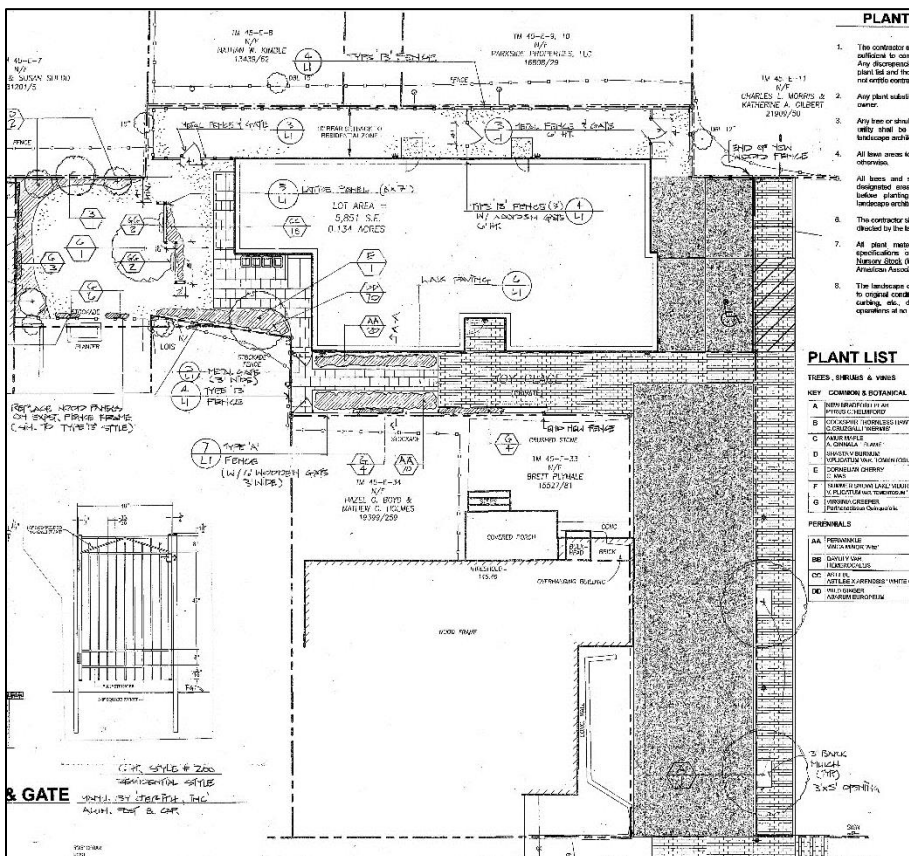
(The existing "red" building has been demolished).

Joy Place is a private street, 24 feet in width near Brackett Street and 12 feet wide at the rear after the bend. The abutting properties are understood to have deeds which require it to remain open and unobstructed.

#### IV. PROPOSED DEVELOPMENT

The proposal is to construct a 3-story building with 4 units on each floor, with floor areas ranging from 475 sq ft to 660 sq ft in area. The proposals include improvements in Joy Place and the ROW; a description is in Attachment A and illustrated in the Plans.

Two of the first-floor units have private yard areas at the back, and a community open landscaped area is provided for all residents to the north of the building (see Landscaping Plan below & in Plan P11)



The proposed sidewalk along Joy Place (with trees) is proposed to be located on City of Portland land.

## V. STAFF REVIEW

### A. ZONING ASSESSMENT - PARKING REQUIREMENTS

The proposals meet all of the dimensional standards of the B1 zone but it is not clear how the parking requirement for 12 parking spaces is going to be addressed. The current application proposes:

- 4 parking spaces on site- of which 2 are accessible and 2 are tandem and compact
- 10-part time (overnight and weekend) spaces leased from the City in the abutting parking lot that serves the Reiche school.

Parking requirements on this site can be met by one, or a combination of, the following options:

- Provision of 12 parking spaces on site
- Payment of a fee in lieu (approx. \$5000 per parking space) that would go into the Sustainable Transportation Fund for eligible projects. If this option was applied to this project the question is whether the payment would be for 10 spaces or 8 spaces, depending on how the tandem spaces are counted.
- Provision of a shared-use vehicle (one equates to 8 required parking spaces, but can be no more than 50% of the parking requirement);
- Requesting that the Planning Board establish different parking requirements based on unique conditions that result in a lesser parking demand than the existing parking requirement of one space per unit.
- Securing leased parking spaces (full time) within 1500 feet of the site, confirmed by a lease for at least 5 years;

Staff are concerned that the absence of on-site parking spaces will not only place more pressure on the limited on-street parking in this area, but also increase the chances that Joy Place will be blocked with illegal parking and prevent emergency access.

The City's Parking Manager has outlined his perspective about the parking context, the current use of the adjacent school parking lot, and his concerns about the parking provision for the proposed 12-unit development ([Attachment 5](#)).

The focus of the review is to clarify how the applicant intends to address the off-street parking requirement.

### B. SUBDIVISION STANDARDS

#### 14-496. Subdivision Plat Requirements and 14-497. General Requirements (a) Review Criteria

The proposals appear to generally meet the Subdivision standards apart from parking (see above under *Zoning*) and some minor technical comments.

### C. SITE PLAN STANDARDS

The site plan standards appear to be generally addressed except for the following:

**Parking:** See discussion under *Zoning* above; the Board may wish to offer guidance to the applicant regarding the options or combination of options that address the parking requirement.

In addition the Traffic Engineer reviewer has noted a number of requirements regarding how parking for both the proposed project and for the adjacent property at 165 Brackett (3 unit) should be organized in relation to Joy Place and avoid backing out onto Brackett Street, and requested a layout plan ([Attachment 1](#)).

**Bicycle Parking:** the number of proposed bicycle parking spaces meets the ordinance, but all are located in the basement so there are no spaces available for visitors. Staff recommend at least two bicycle parking spaces be provided in a visible and accessible location outside the building.

**Snow Storage:** A Snow Removal Agreement will need to be developed and documented in the Condominium Documents and the Subdivision Plat.

**Landscaping:** The proposed brick sidewalk with trees appears to be located on City of Portland land and the applicant will need to provide a license or other agreement that gives him rights to carry out this work. This amenity could be located within Joy Place if the pedestrian paved area was flush. Revisions to the proposals for the area within the narrow part of Joy Place are anticipated in order to address the neighbor concerns (167 Brackett- see PC1) and any comments from the City Arborist.

**Street Trees:** The project needs to include 12 street trees (one per unit) and has proposed two street trees in Joy Place to demarcate the pedestrian walkway. A revised plan is required to show the final location of the trees that takes account of the emergency service access requirements and parking provision for the existing units adjacent to Joy Place. In addition, the applicant is requested to confirm how the remaining 10 required street trees will be provided (noting the options available in the Technical Standards).

**Fire Prevention:** The Fire Department raised a concern about cars parking in Joy Place and potentially preventing access for emergency service vehicles. The applicant provided further information to the Fire Department (Attachment Q) as to how parking would be controlled, and the Fire Department has requested additional signage in terms of “No Parking – Fire Lane” be provided to discourage parking in Joy Place (Attachment 3).

**Historic Resources:** The Historic Preservation Board has held two Workshops on the project and the applicant has revised the architecture to address the HP comments. A HP Board hearing will be scheduled as soon as the site plan review is concluded.

**Exterior Lighting and HVAC** - this has not been reviewed in detail.

#### **D. DESIGN STANDARDS IN THE SITE PLAN ORDINANCE**

The B1 Design Standards do not apply as the project is within the West End Historic District and the Historic Preservation Board review substitutes. Similarly, the design standards that are part of the Multi-family and Other Housing Types Design Standard are not applicable.

The following Multifamily Design Standards continue to apply:

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

Staff comment: two of the ground level units have private outdoor space, and a community open space available to all residents is provided adjacent to the building.

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

Staff comment: This standard appears to be met.



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

Staff comment: The four on-site parking spaces will be visible from Brackett Street but would appear as two cars. There is wood cedar board fencing between the parking spaces and the neighbor on Winter Street, but the plan envisages an open sidewalk along the side boundary between the site and the City's parking lot.

#### **E. INCLUSIONARY ZONING**

This project is subject to the Inclusionary Zoning ordinance that ensures the provision of workforce housing. A development of ten or more units of housing in the City is required to provide on-site workforce housing units or make an in-lieu payment to the City's Housing Trust.

The applicant has submitted a Conditional Use application to address the Inclusionary zoning requirements (Attachment A) and has proposed one unit (one-bedroom) of workforce housing. This appears to meet the ordinance requirement, subject to further review of the deed restrictions and other details.

#### **VI PUBLIC COMMENTS**

The Planning Division has received 7 letters from neighbors, including the owners of the two properties between the proposed new building and Brackett Street (who share access via Joy Place). All but one of the letters generally support the project, with the abutter at 167 Brackett (single family) raising some detailed concerns relating to the location and design of the fencing and landscape and the need to maintain rear access to her property via Joy Place.

#### **NEXT STEPS**

The final submission will need to include:

- Clarification of how the parking requirement will be met, and associated leases or other documentation as required in the ordinance
- Subdivision Plat and draft condominium documents with reference to maintaining Joy Place clear for emergency services (and parking, if applicable)
- RTI documentation for installing sidewalk along Joy Place outside of parcel boundaries (or relocate within Joy Place)
- Clarification of how the street tree requirements will be met
- Revised Landscape Plan
- Provide additional Workforce Housing information (eg deed restrictions) to the Housing & Community Development Division and finalize details
- Revisions to address the Board and staff review comments, including a parking layout plan for Joy Place and vicinity.

*(attachments next page)*

## **ATTACHMENTS:**

### **Attachments to Memorandum**

1. Traffic Engineering Review comments
2. Engineering Review comments
3. Fire Department comments
4. City Arborist comments
5. Parking Manager comments

### **Public Comments (there will be quite a few)**

### **Applicant's Submittal**

- A. Cover Letter and Application Site Plan
- B. Cover letter & Application IZ Conditional Use
- C. Development Description
- D. Right, title and Interest
- E. State and Federal Permits
- F. Land use Ordinance Review
- G. Easements/other burdens
- H. Financial and Technical Capability letter
- I. Construction Management
- J. Natural Features
- K. Stormwater Management
- L. Consistency with City Master Plans
- M. Utilities
- N. Solid Waste
- O. Fire Safety & Emergency Services Info
- P. Conformity with Standards
- Q. HVAC Equipment
- R. Neighborhood meeting Information

### **Plans**

- P1. Cover Sheet
- P2. General Notes
- P3. Boundary Survey
- P4. Existing Conditions and Removals
- P5. Construction Management Plan
- P6. Site Layout Plan
- P7. Grading Plan
- P8. Utility Plan
- P9. Site Details
- P10. Utility & Drainage Details
- P11. Landscaping Plan
- P12. Photometric Plan
- P13. Floor Plans (4 sheets)
- P14. Elevations

---

## 1 Joy Place - Preliminary Traffic Comments

1 message

---

**Tom Errico** <thomas.errico@tylin.com>

Fri, Jul 7, 2017 at 11:45 AM

To: Jean Fraser <jf@portlandmaine.gov>

Cc: Katherine Earley <kas@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Lauren Swett <lszett@woodardcurran.com>, "kgray@portlandmaine.gov" <kgray@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Jean – The following summarizes my preliminary traffic comments following a review of the application materials.

- The project is not expected to generate a significant amount of traffic and therefore is not expected to create safety or congestion deficiencies. A Traffic Movement Permit is not required.
- I find the driveway width of 22.65 feet to be acceptable. The width of the driveway does narrow at the sidewalk to 19 feet. Given low traffic volumes, I find this to be acceptable.
- It is my understanding that parking for the abutting property will be provided in the rear of the building and along Joy Place. A parking layout plan shall be provided that illustrates how the three vehicles will park and circulate into and out of the spaces. I'm concerned about the parking area along Joy Place and encroachment into the driveway access/egress area (and ensuring only one parallel vehicle parks).
- I do not recommend backing maneuvers from Joy Place onto Brackett Street and thus the applicant should demonstrate that vehicles can turn around on site.
- The applicant should note how the tandem parking spaces will be managed.
- The driveway apron shall be designed to provide a maximum cross-slope of 2 percent along the pedestrian accessibility route.
- The applicant should note if a waiver for driveway separation is required according to the City's Technical Standards.
- The construction management plan should include details on sidewalk and Brackett Street roadway impacts during utility work. The plan should also provide information on



contractor parking, delivery and laydown of materials, and impacts to parking for the abutting building.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE

Senior Associate

Traffic Engineering Director

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"One Vision, One Company"

## MEMORANDUM



**TO:** Jean Fraser, Planner  
**FROM:** Lauren Swett, PE & Craig Sweet, EIT  
**DATE:** July 6, 2017  
**RE:** One Joy Place, Level III Site Plan Application

Woodard & Curran has reviewed the Level III Site Plan Application for the proposed development located at 1 Joy Place in Portland, Maine. The project involves the demolition of an existing vacant single family home and the construction of a proposed 12-unit condominium and associated improvements to Joy Place a Private Road accessing the site.

### Documents Reviewed by Woodard & Curran

- Level III Site Plan Application and attachments, dated April 26, 2017, prepared by Terradyn Consultants, LLC, on behalf of Onejoy Place, LLC.
- Engineering Plans, Sheets C-1.0, C-1.1, C-2.0, C-2.2, C-2.3, C-3.0, C-4.0, C-5.0, C-6.0, C-6.1, P-1.0, dated April 25, 2017, prepared by Terradyn Consultants, LLC, on behalf of Onejoy Place, LLC.
- Architectural Plans, Sheets A1.00, A1.01, A1.02, A1.03, & A2.01, dated May 19, 2017, prepared by Archetype Architects, on behalf of Onejoy Place, LLC.
- Landscaping Plan, L.1, dated April 25, 2017, prepared by Anthony Muench Landscape Architect, on behalf of Onejoy Place, LLC.

### Comments

- 1) In accordance with Section 14-526.4.d(i) The plans should note a location for snow storage. The snow storage location should be sited outside of existing and proposed drainage courses.
- 2) Per the City of Portland Technical Standards, sewer laterals are not permitted to connect to manholes. The service should connect directly to the main.
- 3) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. The Applicant has indicated that there will be an increase in impervious area of approximately 820 square feet on the property of 1 Joy Place. We offer the following comments:
  - a) Basic Standard: Plans, notes, and details should be provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500. Details have been provided and location of erosion control features are shown on the grading plan. Notes addressing inspection and maintenance requirements and housekeeping practices should be provided.
  - b) General Standard: The project will result in an increase in impervious area of less than 1,000 square feet, and will not be required to meet the General Standard. We encourage the Applicant to review the City's Stormwater Service Charge Credit Manual (available online) to evaluate whether they may want to incorporate stormwater quality treatment measures that qualify for a future Stormwater Service Charge credit.
  - c) Flooding Standard: The project will result in an increase in impervious area of less than 1,000 square feet, and will not be required to meet the Flooding Standard.
- 4) All work within the City Right-of-Way is required to comply with City of Portland Technical Standards. Brick sidewalk and pavement details for work within the right of way should be in compliance with the Technical Standards.
- 5) The pipe burial detail notes that minimum cover is 1 foot. It was noted that in some areas, cover over pipe will be less than 3'. Insulation should be provided in areas with minimal cover to prevent freezing.

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## MEMORANDUM

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**To:** FILE

**From:** Jean Fraser

**Subject:** Application ID: 2017-103

**Date:** 7/6/2017

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**Comments Submitted by: Keith Gautreau/Fire on 7/6/2017**

I have read the email sent from the applicant about the background on the emergency access and parking. The Fire Dept. would like to see some signage in terms of "No Parking Fire Lane" in addition to the language in the deed. We feel it would be necessary in helping maintain the only access to the proposed 12 unit building.

**Comments Submitted by: Keith Gautreau/Fire on 7/6/2017**

I would like to know what is proposed for street numbering / address for 911? Once we determine that please follow the guidelines:

**Premises Identification**

The main entrance of the building must be the address for the property. This should be consistent with 911, tax assessor, Inspections Division and future mailing address.

Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer.

If the building entry faces a different street, both the street name and number should be large enough to read from the street.

Address numbers must be a minimum of 6 inches high.

The number should be in Arabic numerals rather than spelled out (for example, "130" instead of "One Hundred and Thirty").

Color: Addresses should be in a color that contrasts with the background.

Whenever possible, should be illuminated.

Provide additional address signs at entrances to the property when the building address is not legible from the public street.

Buildings set back in groups that share common entrances can make quickly locating a specific building and the shortest route difficult. On such sites, additional signs with directional arrows and/or diagrams of the buildings and access layout should be posted.

**Building**

The new building shall not affect the egress or required Fire Department access for the neighboring building.



---

## Fwd: One Joy Place - to PB Workshop July 11th

1 message

---

**Jean Fraser** <jf@portlandmaine.gov>  
To: "Fraser, Jean" <jf@portlandmaine.gov>

Fri, Jul 7, 2017 at 9:49 AM

From: **John Peverada** <jbp@portlandmaine.gov>  
Date: Wed, Jul 5, 2017 at 11:48 AM  
Subject: Re: One Joy Place - to PB Workshop July 11th  
To: Jean Fraser <jf@portlandmaine.gov>  
Cc: "Gautreau, Keith" <kng@portlandmaine.gov>, "Errico, Thomas" <thomas.errico@tylin.com>, "Bartlett, Jeremiah" <jbartlett@portlandmaine.gov>, "Hyman, Bruce" <bhyman@portlandmaine.gov>, "Tarling, Jeff" <jst@portlandmaine.gov>, "Swett, Lauren" <lszett@woodardcurran.com>

Jean,

I understand that the developer of Joy Place can meet the zoning requirement for off street parking by making a payment in lieu of parking, for the number of required parking spaces not provided on site. While this will satisfy the approval process it will further exasperate the lack of existing on and off street parking in the Reich neighborhood. I have received complaints from both existing residents (some in brand new buildings) as well as businesses about the lack of parking in the neighborhood.

Reiche School depends on the Bracket St Lot as do residents during off hours, so leasing spaces in that lot is not a solution, if anything it is detrimental. During parking bans cars park in the lot in tandem blocking others in, and the school expects vehicles in violation to be towed from the lots before school begins. See the attached photo.

*The primary demand for residential parking is typically at night and on weekends; however, as more people choose to work at home, demand during normal weekday business hours may increase, competing with customer and downtown employee parking*

1. With more residents parking on the street there will be more conflict between the neighborhood residents, businesses and emergency vehicles.
2. Without adequate parking the residents will be more apt to be towed for street

sweeping or snow bans, and emergency vehicles and snow plows will have a more difficult time maneuvering. The congestion and apartment turnover in Parkside are good examples of the above.

I fully understand that more housing on the peninsula could be beneficial; however I think that it should be created in a way that it does not negatively impact others. Most landlords that I talk to say that most of their tenants have 2 or more cars, in many cases two families are sharing one apartment, or teenagers have cars, and others have overnight guest.

For the above stated reasons, I think that it is unfortunate that this development will not be providing at least one off street parking space per unit, unless the developers can verify that a majority of the units will be reserved for elderly. I still believe that the majority of tenants/owners will own vehicles. Even if they do not use their vehicles daily, they will need a place to park or store them.

Please forward this memo onto the Planning Board. Let me know if you need any additional information from me concerning this matter.

Thanks

John



**Brackett St Lot Blocked in.jpg**  
1049K

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## 1 Joy Place (CBL #045 E049; ID#2017-128) comments

2 messages

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**Hazel Holmes** <hazelholmes@gmail.com>

Fri, Jun 23, 2017 at 11:02 AM

To: planningboard@portlandmaine.gov, Mat Holmes <mat.holmes@gmail.com>,  
bab@portlandmaine.gov  
Cc: jf@portlandmaine.gov

This email outlines some concerns around the plan for the building being constructed at 1 Joy Place (CBL #045 E049; ID#2017-128).

We (Hazel and Mathew Holmes) live at 167 Brackett Street and are abutters along the passageway that runs in front of the new condo's main front entrance. By deed, we have a right of way to our property using that passageway that we need to keep open for access to the back of our property.

Because we'll need to use the right of way for vehicle access (landscaping trailers, loads of compost for the backyard garden, or appliance deliveries to the kitchen, etc.), we want to make sure that the right of way is passable by vehicle, and maintains its 12' width.

Looking at the submitted plan, it is not clear that the passageway remains sufficiently open. There wasn't a scale on the landscaping plan, so I couldn't measure it to confirm the width. I know it is tight with 1 Joy Place structure being built right up to the edge of right of way.

I also could not tell if the low-growing vinca is actually growing in a raised bed that would impinge on the travel lane.

We ask that the paving and landscaping keep the right of way a clear 12' wide, allowing for vehicles, without running into/over planting beds.

We also have some notes on the fence that is being build to separate the passageway and Joy Place building from our back yard.

To recap, we request that the project:

- Use a fence on our property line that is **7' or taller** and that has **no gaps between fence boards** (to maintain visual privacy between the passage between our buildings and our back yard).
- Use **solid material (wood) for fence gate** material, also for privacy.
- **Relocate gate 3-6 feet from the corner where it is located** on the plan (existing plantings on our property are in the way if it stays the corner location and would obstruct passage)
- Confirm that our deeded right of way is a clear **12' wide** and allows for vehicle passage.

We have shared these concerns with Todd Alexander, and he has said that he'll make the needed changes. I am writing to the planning board so the comments are on record and the issues are not lost in the planning process.

We are unfortunately not able to attend the upcoming neighborhood meeting because of travel plans.

Thank you,  
Hazel and Mat Holmes

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## Support for One Joy Place

1 message

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**Peter Tousignant** <petetousignant@gmail.com>

Fri, Jun 30, 2017 at 2:37 PM

To: jf@portlandmaine.gov

Cc: jlevine@portlandmaine.gov, bab@portlandmaine.gov

Jean,

I live at 30 Winter Street in Portland and am writing to voice my support for the proposed residential development at One Joy Place, for the public record. My support is based on the merits of the proposed project itself and the positive track record of the developer. The project will replace the structurally unsound remains of an old building with modern for-sale housing that is desperately needed in the West End. The proposed building is appropriately scaled for the neighborhood and will attract homeowners to the area. The proposed development also adequately addresses the City's parking requirements. The developer has worked closely with municipal leadership to propose improvements to the adjacent City-owned parking lot in exchange for parking access for One Joy Place residents. All aspects of the project have been thoughtfully designed, and the project would seem to adequately address all municipal requirements.

I have known the developer, Todd Alexander, professionally and personally for approximately 10 years. He has a successful track record of developing housing projects across the country. Additionally, he lives in the West End and has demonstrated a profound commitment to the improvement of the neighborhood. Todd recently-developed West Port Lofts on Tate Street, which like One Joy Place, replaced an underutilized parcel with much-needed modern for-sale housing. Todd has the experience and expertise to see One Joy Place through to successful completion.

As you know, the dilapidated structure that currently sits on the Joy Place site is both an eyesore and a physical hazard. Todd Alexander has patiently and persistently worked with the City to craft a plan that will finally redevelop the site. He took the proactive step of fencing the property once he had site control, but the neighborhood will still be best served by seeing this project be approved quickly, so that the existing structure can be demolished and replaced with new housing as quickly as possible.

Thank you very much.

-Peter

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Peter Tousignant  
[207-229-3557](tel:207-229-3557)

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## Re: 1 Joy Place

1 message

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**brett plymale** <brettplymale@hotmail.com>

Wed, Jul 5, 2017 at 11:37 AM

To: Jean Fraser <jf@portlandmaine.gov>

Hi Jean,

I have three parking spaces for my tenants, one for each unit. Unit 1 parks along side the building, Units 2&3 park directly behind the building. Currently the 3rd floor tenants have an extra car, a red Ford Ranger, and have been temporarily parking to right side of Joy Place. They are a married couple and are in the process of downsizing to a one car family- but the lease on the first car doesn't run out until the fall. They're great tenants I've been very upfront that this is temporary.

Thanks,

Brett

Sent from my iPhone

On Jul 5, 2017, at 11:14 AM, Jean Fraser <jf@portlandmaine.gov> wrote:

Brett

Thank you for your comments, which will be included in the packet going to the Planning Board on Friday.

I note that your tenants appear to be parking partly on the private street Joy Place - and that may be an issue re emergency access to the rear new building.

Could you confirm how many parking spaces you own and their configuration- ie are they all on your property? (is the entirety of the spaces on your property?)

thank you

Jean

On Sun, Jul 2, 2017 at 11:03 PM, brett plymale <brettplymale@hotmail.com> wrote:

Hi Jean,

My name is Brett Plymale, and I'm the owner of 165 Brackett St, a property

which shares a common driveway with Joy Place. I bought this 3 unit building in 2000 and have seen a lot of changes on the street over the past 17 years. For as long as I've owned my building, Joy Place has been a delapidated eyesore and magnet for people with seemingly nowhere else to go. Just yesterday I found an empty vodka bottle along with empty beer cans near to where my tenants park and I know that no one in the building would have been so inconsiderate.

It is my understanding that Todd Alexander and his group are in the process of site plan approval for a 12 unit building directly behind my property. Over the past couple of years, Todd has reached out at several points to let me know the state of the project and to listen to my concerns and answer any questions. Initially, I was thinking that it would probably be a 4 or 5 unit building that would replace the existing structure at 1 Joy Place. When I learned that a 12 unit building was being proposed I had some doubts about how the footprint of Joy Place could comfortably accommodate that amount of new housing, and how they were going to address an obvious impeding parking issue.

That being said, I understand the need for more housing in the neighborhood. I understand that developers need to invest in projects that have prospects for a good return. And, I understand that something has to be done with 1 Joy Place. It simply cannot stay as it is.

I was happy to learn that there would be no parking on the property for the residents of Joy Place and that all concerned parties are committed to uphold the integrity of our deeded shared driveway. It is imperative that the driveway remain clear for emergency vehicles and for my tenants to be able come and go from their parking spaces without fear of being blocked in or their spaces being taken.

From the site plans that Todd has shared with me, it looks like there has been considerable attention paid to improve the look of the driveway, walkway and Reiche School parking lot. With those improvements, along with a functional property operating at Joy Place, I think Todd's plans are a step in the right direction. Again, I'm hoping the amount of units won't overwhelm the neighboring properties, mine included, but my concerns are outweighed by the need for improvement of Joy Place.

Thanks,  
Brett

Brett Plymale  
274 Concord St. west  
Portland, ME 04103  
[207-776-8962](tel:207-776-8962)



## 1 Joy Place

1 message

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**Tim Gebhardt** <timg@gpmmaine.com>

Wed, Jul 5, 2017 at 11:57 AM

To: jf@portlandmaine.gov

Cc: bab@portlandmaine.gov, jlevine@portlandmaine.gov

Dear Jean:

I am writing to express my strong support for the project at 1 Joy Place Portland. This property has been a community liability for years and we are thrilled to have such a high quality project being proposed.

As neighbors, abutters, community members, and business owners the new building and improved sidewalk represents a great improvement over the existing conditions. The site plan is extremely well thought out and the emphasis on walkability will benefit area businesses. The handsome building design will make a great addition to the cityscape.

From a market point of view, dense, low cost, high quality housing is exactly what the city needs to attract and retain people.

Buyers of these units may be in a position to build wealth and financial security for roughly the price of renting; what is more, the project may likewise be attractive to older people who have downsized and may be looking for a more affordable situation that does not involve private car ownership.

In any case, we see this project as a triple bottom line winner with great community benefits.

Thank you,

Tim Gebhardt CMCA

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## Joy Place

1 message

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**Nathan Kimble Benchmark**

<nkimble@benchmarkmaine.com>

To: jf@portlandmaine.gov

Wed, Jul 5, 2017 at 12:15  
PM

Hello Jean,

I'm the owner of 100 Winter Street and share a boundary with Joy Place. The lot and buildings on it have been in disrepair and uninhabitable for decades. It's been encouraging to see it final become a useful and contributing part of the city. Although disappointed that the original plan didn't make it to fruition, I'm pleased to see and am generally supportive of Renewal Housings proposed current plan. This is a vast improvement over the current situation that exists at the lot, the adjacent driveway and parking lot. The improvements for sidewalk and city parking in exchange for some overnight and weekend parking is a reasonable solution that will help to define and make workable these three difficult and unique parcels. I look forward to seeing it progress.

### Nathan Kimble

Broker | Owner

Benchmark Residential & Investment Real Estate  
One Hundred Congress, Portland, ME, USA

Tel. +1(207)650-2487

Email [nkimble@benchmarkmaine.com](mailto:nkimble@benchmarkmaine.com)

MLS 008487

**Local - Savvy - Responsive**

## One Joy Place

1 message

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**Trevor Watson** <trevorewatson@gmail.com>

Wed, Jul 5, 2017 at 2:01 PM

To: jf@portlandmaine.gov

Cc: bab@portlandmaine.gov, jlevine@portlandmaine.gov

To Portland Planning Board:

My name is Trevor Watson and I own 33 West Street, I support Renewal Housing Associates development proposal for One Joy Place. This has been an eyesore for over a decade and this inventive proposal should be applauded as it will significantly enhance this area which should be of critical concern for the city due to close proximity to Reiche School.

I'm also very impressed with the thoughtful consideration to accommodate developments parking burden while simultaneously improving city infrastructure via public/private mutually beneficial plan which will generate a continued revenue stream, while also increasing spaces available to Reiche School.

This project will be a great benefit to the neighborhood, school and create much needed housing. Todd and gang should be commended for this proposal, as well as their history of reaching out to the neighborhood throughout this process.

Thank you,

TEW



## Joy Place

1 message

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**Jed Rathband** <jed@stonestrowconsulting.com>

Wed, Jul 5, 2017 at 9:57 PM

To: jf@portlandmaine.gov

Cc: bab@portlandmaine.gov, jlevine@portlandmaine.gov

To: Jean Fraser,

Re: Joy Place

From: Jed Rathband, 38 Spruce Street, Portland

Date 7/7/17

Ms. Fraser,

I am writing in support of the proposed Joy Place development that is currently under consideration. The lot in question is a short stroll from my apartment and currently it doesn't have much going for it. However, I do believe the proposal before you could be a really great solution for a parcel that has been underutilized for years.

The plan allows for much needed housing and will contribute to the street life in an area of the West End that feels rather vacant. The added benefit is the additional parking spots on the City owned land that the developer is willing to shoulder.

I'm sure area business will benefit by having more patrons, the school will benefit as hopefully more families move in to the neighborhood and an otherwise blighted lot will be improved. A win-win for the city and the neighborhood.

Thank you for your consideration,

Jed Rathband

## Google Groups

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### 1 Joy Place

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**Kim Roseberry** <roseberry00@gmail.com>

Jul 8, 2017 2:07 PM

Posted in group: **Planning Board**

Dear Planning Board,

I am writing to you in regards to the development at 1 Joy Place, the property that abuts my house. I am unable to attend the 7/11 workshop and therefore would like to submit my comments here.

Firstly, 12 new units with only parking for 4 vehicles is an unreasonable burden to place on the neighborhood. Brackett Street recently lost several spaces with the new sidewalk configurations. Parking is INCREDIBLY difficult, and 12 units means there will be between 12 and 24 new vehicles on the streets. This is entirely unsustainable and the developer should be required to provide at least 12 parking spots.

Secondly, the 12 units are an average of less than 300 sqft each based on the advertised 3591sqft of floor space, not even considering the area deducted for common areas like hallways and stairs. I do not consider such small spaces as "apartments" but something closer to dormitory rooms. These cannot be considered quality living spaces, and are a clear attempt to maximize profit for the developer through packing people in as tightly as possible.

Thirdly, the recently Portland Comprehensive Plan is meant to address affordable housing in the city. Yet, here we have a development that does little to meet the intentions of that plan. One out of 12 units slated as "affordable" is a weak gesture to meet weak guidelines and nothing more.

In the end, this development will cause additional crowding in an already strained neighborhood, and will exacerbate the affordability issues that exist. I cannot give my support to this project, but rather would like to voice my objection to the development .

Best,  
Kimberly Roseberry  
173 Brackett St.  
Portland, ME 04102

## Google Groups

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### Joy Place

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**Nance Parker** <nance.parker1@gmail.com>

Jul 11, 2017 9:20 AM

Posted in group: **Planning Board**

I am unable to attend the planning board meeting tonight but have been to numerous previous meetings about this same proposal. So I would like to state in writing yet again my concerns. While Portland keeps reiterating the need for affordable housing this proposal gives us only 1 out of 12 units of so-called "affordable" housing, the understanding is that 11 will be "unaffordable" housing. Our neighborhood doesn't need that we already have one of those buildings on the corner. The builders/ profiteers are providing 4 parking spaces for these 12 units! Is this a joke? where are the the potential 8 plus cars parking? On the roof? Most likely neither the planning board nor the builders have ever had to find parking on Brackett Street. We are already at over capacity. Then the thought of these said 8-12 cars entering Brackett St from Joy Place at anytime of the day , let alone in the morning when school is in session is a frightening thought. Once again has any of you looked at the chaos that is now Brackett St in the morning ? We have 2 popular grocery stores [Fresh Approach & Rosemont] with countless delivery trucks.all day, we have a dance and yoga studio with classes changing every hour, there are school busses , parents drop-offs 300 children, never mind ambulances [ we are between 2 hospitals] The road is over used ,too narrow and filled to capacity. We have reached saturation in our neighborhood and on Brackett Street. Please consider these factors before you allow ANOTHER high -end apartment to be put in. The consequences of which affect the quality of our life here in Portland. Sincerely Nance Parker, 139 Brackett St. and director of Shoestring Theater 155 Brackett St



April 26, 2017

Ms. Barbara Barhydt  
Development Review Services Coordinator  
Planning Division  
389 Congress Street, 4<sup>th</sup> Floor  
Portland, ME, 04101

**Onejoy Place Condominium  
One Joy Place, Portland  
Level III Site Plan & Subdivision Application**

Dear Barbara:

On behalf of Onejoy Place, LLC, Terradyn Consultants is pleased to submit the enclosed application materials and drawings for Onejoy Place Condominium, a proposed 12-unit condominium building located at 1 Joy Place in Portland.

The project site is comprised of Lots 48 and 49 on Tax Map 45, Block E and is located in the city's B-1 zoning district. The enclosed materials include information about the existing project site and the proposed project and are intended to meet the Level III Final Site Plan submission requirements outlined in Section 14-527 of the City of Portland Land Use Ordinance.

Enclosed with this cover letter are the following written materials:

| <b>Onejoy Place Condominium – Application Materials</b> |                                               |
|---------------------------------------------------------|-----------------------------------------------|
|                                                         | Level III Development Review Application Form |
| Section 1                                               | Development Description                       |
| Section 2                                               | Right, Title and Interest                     |
| Section 3                                               | State & Federal Permits                       |
| Section 4                                               | Land Ordinance Review                         |
| Section 5                                               | Easements or Other Burdens                    |
| Section 6                                               | Technical & Financial Capacity                |
| Section 7                                               | Construction Management Plan                  |
| Section 8                                               | Natural Features                              |
| Section 9                                               | Stormwater Management                         |
| Section 10                                              | Consistency with Master Plans                 |
| Section 11                                              | Utilities                                     |
| Section 12                                              | Solid Waste                                   |
| Section 13                                              | Fire Safety                                   |
| Section 14                                              | Conformity with Applicable Design Standards   |
| Section 15                                              | Verification of Proposed HVAC Equipment       |

In addition to the written materials, the following project drawings are enclosed:

| Onejoy Place Condominium – Site Development Plans |                                          |
|---------------------------------------------------|------------------------------------------|
| C-1.0                                             | Cover Sheet                              |
| C-1.1                                             | General Notes                            |
| C-2.0                                             | Boundary & Topographic Survey            |
| C-2.1                                             | Recording Plat                           |
| C-2.2                                             | Existing Conditions & Demolition Plan    |
| C-2.3                                             | Construction Management Plan             |
| C-3.0                                             | Site Layout Plan                         |
| C-4.0                                             | Grading, Drainage & Erosion Control Plan |
| C-5.0                                             | Utility Plan                             |
| C-6.0                                             | Site Details                             |
| C-6.1                                             | Utility & Drainage Details               |
| L-1                                               | Landscape Plan                           |
| P-1                                               | Lighting Photometric Plan                |

We look forward to your review of this project and request to be placed on the next available Planning Board agenda to discuss the project with the Board. In the interim, if you have any questions or need additional information, please contact me.

Sincerely,

**TERRADYN CONSULTANTS LLC**



Michael E. Tadema-Wielandt, P.E.  
Vice President

cc Todd Alexander, Onejoy Place LLC  
David Lloyd, Archetype PA

Enc.

April 26, 2017

Ms. Barbara Barhydt  
Development Review Services Coordinator  
Planning Division  
389 Congress Street, 4<sup>th</sup> Floor  
Portland, ME, 04101

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| C-2.0                                             | Boundary & Topographic Survey            |
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| C-2.2                                             | Existing Conditions & Demolition Plan    |
| C-2.3                                             | Construction Management Plan             |
| C-3.0                                             | Site Layout Plan                         |
| C-4.0                                             | Grading, Drainage & Erosion Control Plan |
| C-5.0                                             | Utility Plan                             |
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Sincerely,

**TERRADYN CONSULTANTS LLC**



Michael E. Tadema-Wielandt, P.E.  
Vice President

cc Todd Alexander, Onejoy Place LLC  
David Lloyd, Archetype PA

Enc.



## **Level III – Preliminary and Final Site Plans Development Review Application Portland, Maine**

Planning and Urban Development Department  
Planning Division

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Level III: Preliminary or Final Site Plan. Please note that Portland has delegated review from the State of Maine for reviews under the Site Location of Development Act, Chapter 500 Stormwater Permits, and Traffic Movement Permits.

### **Level III: Site Plan Development includes:**

- New structures with a total floor area of 10,000 sq. ft. or more except in Industrial Zones.
- New structures with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- New temporary or permanent parking area(s) or paving of existing unpaved parking areas for more than 75 vehicles.
- Building addition(s) with a total floor area of 10,000 sq. ft. or more (cumulatively within a 3 year period) except in Industrial Zones.
- Building addition(s) with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- A change in the use of a total floor area of 20,000 sq. ft. or more in any existing building (cumulatively within a 3 year period).
- Multiple family development (3 or more dwelling units) or the addition of any additional dwelling unit if subject to subdivision review.
- Any new major or minor auto business in the B-2 or B-5 Zone, or the construction of any new major or minor auto business greater than 10,000 sq. ft. of building area in any other permitted zone.
- Correctional prerelease facilities.
- Park improvements: New structures greater than 10,000 sq. ft. and/or facilities encompassing 20,000 sq. ft. or more (excludes rehabilitation or replacement of existing facilities); new nighttime outdoor lighting of sports, athletic or recreation facilities not previously illuminated.
- Land disturbance of 3 acres or more (includes stripping, grading, grubbing, filling or excavation).

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: <http://me-portland.civicplus.com/DocumentCenter/Home/View/1080>

Design Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2355>

Technical Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2356>

#### **Planning Division**

Fourth Floor, City Hall  
389 Congress Street  
p.m. (207) 874-8719

[planning@portlandmaine.gov](mailto:planning@portlandmaine.gov)

#### **Office Hours**

Monday thru Friday  
8:00 a.m. – 4:30

**PROJECT NAME:**

Onejoy Place Condominium

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**PROPOSED DEVELOPMENT ADDRESS:**

1 Joy Place, Portland, Maine 04102

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**PROJECT DESCRIPTION:**

Construction of a three-story residential building containing 12 units.

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**CHART/BLOCK/LOT:** 45/E/48, 45/E/49

**PRELIMINARY PLAN** \_\_\_\_\_(date)

**FINAL PLAN** \_\_\_\_\_(date)

**CONTACT INFORMATION:**

|                                                                                                                                                                                                                                    |                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant – must be owner, Lessee or Buyer</b><br>Name: Onejoy Place, LLC<br>Business Name, if applicable: c/o Renewable Housing Assoc.<br>Address: 2 Union Street, 5th Floor<br>City/State : Portland, ME      Zip Code: 04101 | <b>Applicant Contact Information</b><br>Work #: (207) 347-3018<br>Home #:<br>Cell #:                              Fax#:<br>e-mail: talexander@renewalhousing.com |
| <b>Owner – (if different from Applicant)</b><br>Name: SAME<br>Address:<br>City/State :                      Zip Code:                                                                                                              | <b>Owner Contact Information</b><br>Work #:<br>Home #:<br>Cell #:                              Fax#:<br>e-mail:                                                  |
| <b>Agent/ Representative</b><br>Name: Michael Tadema-Wielandt, P.E.<br>Terradyn Consultants, LLC<br>Address: 565 Congress Street, Suite 310<br>City/State : Portland, ME      Zip Code: 04101                                      | <b>Agent/Representative Contact information</b><br>Work #:<br>Home #:<br>Cell #: (207) 632-9010      Fax#:<br>e-mail: mtw@terradyconsultants.com                 |
| <b>Billing Information</b><br>Name: Todd Alexander<br>Renewal Housing Associates<br>Address: 2 Union Street, 5th Floor<br>City/State : Portland, ME      Zip Code: 04101                                                           | <b>Billing Contact Information</b><br>Work #: (207) 347-3018<br>Home #:<br>Cell #:                              Fax#:<br>e-mail: talexander@renewalhousing.com   |



|                                                                                                                                                                                    |                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineer</b><br>Michael Tadema-Wielandt, P.E.<br>Name: Terradyn Consultants, LLC<br>Address: 565 Congress Street, Suite 310<br>City/State : Portland, ME      Zip Code: 04101   | <b>Engineer Contact Information</b><br>Work #:<br>Home #:<br>Cell #: (207) 632-9010      Fax#:<br>e-mail: mtw@terradyconsultants.com |
| <b>Surveyor</b><br>John Swan<br>Name: Owen Haskell, Inc.<br>Address: 390 U.S. Route One<br>City/State : Falmouth, ME      Zip Code: 04105                                          | <b>Surveyor Contact Information</b><br>Home #:<br>Work #: (207) 774-0424<br>Cell #:      Fax#:<br>e-mail: jswan@owenhaskell.com      |
| <b>Architect</b><br>David Lloyd<br>Name: Archetype, P.A.<br>Address: 48 Union Warf<br>City/State : Portland, ME      Zip Code: 04101                                               | <b>Architect Contact Information</b><br>Work #: (207) 772-6022<br>Home #:<br>Cell #:      Fax#:<br>e-mail: llloyd@archetypepa.com    |
| <b>Attorney</b><br>Name:<br>Address:<br>City/State :      Zip Code:                                                                                                                | <b>Attorney Contact Information</b><br>Work #:<br>Home #:<br>Cell #:      Fax#:<br>e-mail:                                           |
| <b>Designated person/person(s) for uploading to e-Plan:</b><br>Name: Michael Tadema-Wielandt<br>e-mail: mtw@terradyconsultants.com<br><br>Name:<br>e-mail:<br><br>Name:<br>e-mail: |                                                                                                                                      |

**APPLICATION FEES:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Level III Development (check applicable reviews)</b><br/><input checked="" type="checkbox"/> Less than 50,000 sq. ft. (\$750.00)<br/><input type="checkbox"/> 50,000 - 100,000 sq. ft. (\$1,000)<br/><input type="checkbox"/> 100,000 – 200,000 sq. ft. (\$2,000)<br/><input type="checkbox"/> 200,000 – 300,000 sq. ft. (\$3,000)<br/><input type="checkbox"/> over 300,00 sq. ft. (\$5,000)<br/><input type="checkbox"/> Parking lots over 11 spaces (\$1,000)<br/><input type="checkbox"/> After-the-fact Review (\$1,000.00 plus applicable application fee)</p> <p><b>Plan Amendments (check applicable reviews)</b><br/><input type="checkbox"/> Planning Staff Review (\$250)<br/><input type="checkbox"/> Planning Board Review (\$500)</p> <p>_____</p> <p>The City invoices separately for the following:</p> <ul style="list-style-type: none"><li>• Notices (\$.75 each)</li><li>• Legal Ad (% of total Ad)</li><li>• Planning Review (\$50.00 hour)</li><li>• Legal Review (\$75.00 hour)</li></ul> <p>Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.</p> | <p><b>Other Reviews (check applicable reviews)</b><br/><input type="checkbox"/> Traffic Movement (\$1,500)<br/><input type="checkbox"/> Stormwater Quality (\$250)<br/><input checked="" type="checkbox"/> Subdivisions (\$500 + \$25/lot)<br/>    # of Lots <u>12</u> x \$25/lot = <u>300</u><br/><input type="checkbox"/> Site Location (\$3,500, except for residential projects which shall be \$200/lot)<br/>    # of Lots _____ x \$200/lot = _____<br/><input type="checkbox"/> Other _____<br/><input type="checkbox"/> Change of Use<br/><input type="checkbox"/> Flood Plain<br/><input type="checkbox"/> Shoreland<br/><input type="checkbox"/> Design Review<br/><input type="checkbox"/> Housing Replacement<br/><input type="checkbox"/> Historic Preservation</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**INSTRUCTIONS FOR ELECTRONIC SUBMISSION:**

**Please refer to the application checklist (attached) for a detailed list of submission requirements.**

1. Fill out the application completely and e-mail the **application only** to [planning@portlandmaine.gov](mailto:planning@portlandmaine.gov)  
(Please be sure to designate a person who will be responsible for uploading documents and drawings.)  
This step will generate the project ID number for your project.
2. An invoice for the application fee will be e-mail to you. Payments can be made on-line at [Pay Your Invoice](#) , by mail or in person at City Hall, 4<sup>th</sup> Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.
3. The designated person responsible for uploading documents and drawings will receive an email from [eplan@portlandmaine.gov](mailto:eplan@portlandmaine.gov) with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

**Reminder: Before the project can move forward, the application fee shall be paid in full and all required documents and drawings shall be uploaded into e-plan correctly.**

4. Follow the link below (Applying Online Instructions) for step by step instructions on how to do the following:  
Tab 1 - Setting up the appropriate compatibility settings for your PC and getting started in e-plan.  
Tab 2 - Preparing your drawings, documents and photos for uploading using the correct naming conventions  
Tab 3 - Preparing and uploading revised drawings and documents

[Applying Online Instructions](#)

5. When ready, upload your files and documents into the following folders:  
"Application Submittal – Drawings"  
"Application Submittal – Documents"

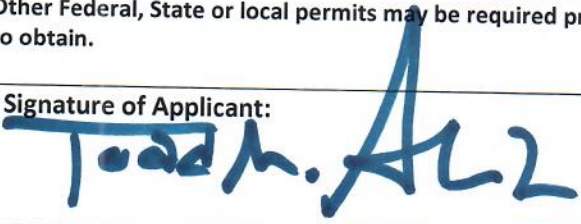
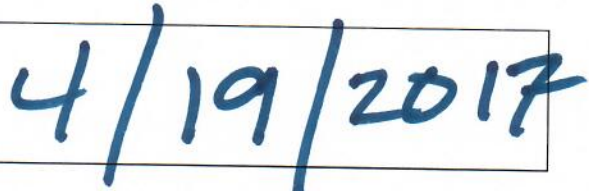
6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

**APPLICANT SIGNATURE:**

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a **legal signature** per Maine state law.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Level III Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

|                                                                                                              |                                                                                             |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Signature of Applicant:<br> | Date:<br> |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|



## PROJECT DATA

The following information is required where applicable, in order to complete the application.

|                                                                                                                                                                                                                          |                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| <b>Total Area of Site</b>                                                                                                                                                                                                | 5,851 sq. ft.                  |
| <b>Proposed Total Disturbed Area of the Site</b>                                                                                                                                                                         | 5,851 sq. ft.                  |
| If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland. |                                |
|                                                                                                                                                                                                                          |                                |
| <b>Impervious Surface Area</b>                                                                                                                                                                                           |                                |
| Impervious Area (Total Existing)                                                                                                                                                                                         | 3,164 sq. ft.                  |
| Impervious Area (Total Proposed)                                                                                                                                                                                         | 3,602 sq. ft.                  |
|                                                                                                                                                                                                                          |                                |
| <b>Building Ground Floor Area and Total Floor Area</b>                                                                                                                                                                   |                                |
| Building Footprint (Total Existing)                                                                                                                                                                                      | 0 sq. ft.                      |
| Building Footprint (Total Proposed)                                                                                                                                                                                      | 2,612 sq. ft.                  |
| Building Floor Area (Total Existing)                                                                                                                                                                                     | 0 sq. ft.                      |
| Building Floor Area (Total Proposed)                                                                                                                                                                                     | 3,591 sq. ft.                  |
|                                                                                                                                                                                                                          |                                |
| <b>Zoning</b>                                                                                                                                                                                                            |                                |
| Existing                                                                                                                                                                                                                 | B-1                            |
| Proposed, if applicable                                                                                                                                                                                                  |                                |
|                                                                                                                                                                                                                          |                                |
| <b>Land Use</b>                                                                                                                                                                                                          |                                |
| Existing                                                                                                                                                                                                                 | Vacant, Previously Residential |
| Proposed                                                                                                                                                                                                                 | Residential                    |
|                                                                                                                                                                                                                          |                                |
| <b>Residential, If applicable</b>                                                                                                                                                                                        |                                |
| # of Residential Units (Total Existing)                                                                                                                                                                                  | 0                              |
| # of Residential Units (Total Proposed)                                                                                                                                                                                  | 12                             |
| # of Lots (Total Proposed)                                                                                                                                                                                               | 1                              |
| # of Affordable Housing Units (Total Proposed)                                                                                                                                                                           | 0                              |
|                                                                                                                                                                                                                          |                                |
| <b>Proposed Bedroom Mix</b>                                                                                                                                                                                              |                                |
| # of Efficiency Units (Total Proposed)                                                                                                                                                                                   | 0                              |
| # of One-Bedroom Units (Total Proposed)                                                                                                                                                                                  | 12                             |
| # of Two-Bedroom Units (Total Proposed)                                                                                                                                                                                  | 0                              |
| # of Three-Bedroom Units (Total Proposed)                                                                                                                                                                                | 0                              |
|                                                                                                                                                                                                                          |                                |
| <b>Parking Spaces</b>                                                                                                                                                                                                    |                                |
| # of Parking Spaces (Total Existing)                                                                                                                                                                                     | 10 (lease agreement)           |
| # of Parking Spaces (Total Proposed)                                                                                                                                                                                     | 4                              |
| # of Handicapped Spaces (Total Proposed)                                                                                                                                                                                 | 1                              |
|                                                                                                                                                                                                                          |                                |
| <b>Bicycle Parking Spaces</b>                                                                                                                                                                                            |                                |
| # of Bicycle Spaces (Total Existing)                                                                                                                                                                                     | 0                              |
| # of Bicycle Spaces (Total Proposed)                                                                                                                                                                                     | 5                              |
|                                                                                                                                                                                                                          |                                |
| <b>Estimated Cost of Project</b>                                                                                                                                                                                         | \$2,250,000                    |

| FINAL PLAN - Level III Site Plan |                   |             |                                                                                                                                                                              |
|----------------------------------|-------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant Checklist              | Planner Checklist | # of Copies | GENERAL WRITTEN SUBMISSIONS CHECKLIST<br>(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required) |
| ✓                                |                   | 1           | * Completed Application form                                                                                                                                                 |
| ✓                                |                   | 1           | * Application fees                                                                                                                                                           |
| ✓                                |                   | 1           | * Written description of project                                                                                                                                             |
| ✓                                |                   | 1           | * Evidence of right, title and interest                                                                                                                                      |
| N/A                              |                   | 1           | * Evidence of state and/or federal permits                                                                                                                                   |
| ✓                                |                   | 1           | * Written assessment of proposed project's specific compliance with applicable Zoning requirements                                                                           |
| ✓                                |                   | 1           | * Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site                                                    |
| ✓                                |                   | 1           | * Evidence of financial and technical capacity                                                                                                                               |
| ✓                                |                   | 1           | Construction Management Plan                                                                                                                                                 |
| N/A                              |                   | 1           | A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.                                            |
| ✓                                |                   | 1           | Written summary of significant natural features located on the site (Section 14-526 (b) (a))                                                                                 |
| ✓                                |                   | 1           | Stormwater management plan and stormwater calculations                                                                                                                       |
| ✓                                |                   | 1           | Written summary of project's consistency with related city master plans                                                                                                      |
| ✓                                |                   | 1           | Evidence of utility capacity to serve                                                                                                                                        |
| ✓                                |                   | 1           | Written summary of solid waste generation and proposed management of solid waste                                                                                             |
| ✓                                |                   | 1           | A code summary referencing NFPA 1 and all Fire Department technical standards                                                                                                |
| ✓                                |                   | 1           | Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14-526 and in City of Portland Design Manual      |
| ✓                                |                   | 1           | Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.                                    |

| Applicant Checklist | Planner Checklist | # of Copies | <b>SITE PLAN SUBMISSIONS CHECKLIST</b><br>(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required) |
|---------------------|-------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ✓                   |                   | 1           | * Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual                                                                           |
| ✓                   |                   | 1           | <b>Final Site Plans including the following:</b>                                                                                                                              |
| ✓                   |                   |             | Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);               |
| ✓                   |                   |             | Existing and proposed structures on parcels abutting site;                                                                                                                    |
| ✓                   |                   |             | All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;                                                |
| ✓                   |                   |             | Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;        |
| ✓                   |                   |             | Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;                                                       |
| N/A                 |                   |             | Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;                                                    |
| ✓                   |                   |             | Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;                                                                |
| ✓                   |                   |             | Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;                                                 |
| ✓                   |                   |             | Location of all snow storage areas and/or a snow removal plan;                                                                                                                |
| ✓                   |                   |             | A traffic control plan as detailed in Section 1 of the Technical Manual;                                                                                                      |
| N/A                 |                   |             | Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);                                            |
| N/A                 |                   |             | Location and proposed alteration to any watercourse;                                                                                                                          |
| N/A                 |                   |             | A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;                                                   |
| N/A                 |                   |             | Proposed buffers and preservation measures for wetlands;                                                                                                                      |
| ✓                   |                   |             | Existing soil conditions and location of test pits and test borings;                                                                                                          |
| ✓                   |                   |             | Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;                                                           |
| ✓                   |                   |             | A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;                                                                              |
| ✓                   |                   |             | Grading plan;                                                                                                                                                                 |
|                     |                   |             | Ground water protection measures;                                                                                                                                             |
| ✓                   |                   |             | Existing and proposed sewer mains and connections;                                                                                                                            |

- Continued on next page -



|     |  |                                                                                                                                                                                                                                |
|-----|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ✓   |  | Location of all existing and proposed fire hydrants and a life safety plan in accordance with Section 3 of the Technical Manual;                                                                                               |
| ✓   |  | Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;                                                                                            |
| ✓   |  | Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;                                                                                                         |
| ✓   |  | Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;                                                             |
| ✓   |  | Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;                                                                                                                             |
| N/A |  | A shadow analysis as described in Section 11 of the Technical Manual, if applicable;                                                                                                                                           |
|     |  | A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance; |
| ✓   |  | Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;                                                                                               |
| ✓   |  | An exterior lighting plan in accordance with Section 12 of the Technical Manual;                                                                                                                                               |
| ✓   |  | A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;                                                                                                                        |
| ✓   |  | Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.                                                                                                                  |

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## LIST OF ATTACHMENTS

### Section 1:

Attachment A – Existing Site Photographs

Attachment B – Owner’s Association Documents

Attachment C – Test Pit Logs & Location Map

### Section 2:

Attachment A – Property Deed

### Section 6:

Attachment A – Renewal Housing Associates Company Resume & Project Experience

Attachment B – Letter of Financial Capacity

### Section 7:

Attachment A – Construction Management Plan

### Section 11:

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### Section 12:

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Attachment A – HVAC Equipment Cut Sheets



## LIST OF PLANS

| SHEET # | TITLE                                    |
|---------|------------------------------------------|
| C-1.0   | COVER SHEET                              |
| C-1.1   | GENERAL NOTES & LEGEND                   |
| C-2.0   | BOUNDARY & TOPOGRAPHIC SURVEY            |
| C-2.1   | RECORDING PLAT                           |
| C-2.2   | EXISTING CONDITIONS & DEMOLITION PLAN    |
| C-2.3   | CONSTRUCTION MANAGEMENT PLAN             |
| C-3.0   | SITE LAYOUT PLAN                         |
| C-4.0   | GRADING, DRAINAGE & EROSION CONTROL PLAN |
| C-5.0   | UTILITY PLAN                             |
| C-6.0   | SITE DETAILS                             |
| C-6.1   | UTILITY & DRAINAGE DETAILS               |
| L-1     | LANDSCAPING PLAN                         |
| P-1     | LIGHTING PHOTOMETRIC PLAN                |

## 1. DEVELOPMENT DESCRIPTION

### 1.1 OVERVIEW

Onejoy Place, LLC intends to construct a 3-story, 12-unit condominium building on a 5,851 square foot parcel located at 1 Joy Place in Portland, Maine. The parcel, identified as lots 48 & 49, Block E, on the City of Portland Assessors' Map 45, was formerly a residential lot but is currently vacant. The project also includes improvements to Joy Place, a private Right-of-Way used to access the site.

### 1.2 PROJECT PURPOSE AND NEED

The proposed project includes redevelopment of a vacant lot in an area that has utility infrastructure in place and will provide residential units that are compatible with the existing neighborhood.

### 1.3 EXISTING CONDITIONS

The existing site includes a vacant, dilapidated house and a slab from a former garage. The remainder of the site is primarily gravel surface. Utility services to the existing house included water, sewer, natural gas, power, and telecommunications.

Residential uses abut the site to the north, east, and west. A city-owned parking lot is located directly south of the site, and the Reiche Community School is located across Brackett Street to the west.

The site is accessed from Joy Place, a private Right-of-Way shared with the residential house at 165 Brackett Street. Joy Place is approximately 24 feet wide and features a gravel surface. The street conditions in the vicinity of the Project Site are:

| Street Name         | Description                                                | On-street Parking                                                       | Sidewalk | Notes                                                          |
|---------------------|------------------------------------------------------------|-------------------------------------------------------------------------|----------|----------------------------------------------------------------|
| Brackett Street     | Approximately 32 feet wide paved way with two-way traffic. | Yes. Parallel parking on both sides of the street in front of the site. | Brick    | "Bump out" with crosswalk to Reiche School north of Joy Place. |
| Joy Place (Private) | ~24 feet wide gravel with two way traffic                  | No                                                                      | None     |                                                                |

The site has very little elevation change. It generally slopes east to the eastern property boundary. The Joy Place right-of-way slopes gently to Brackett Street. Photographs of the existing site are provided in Attachment A-1.

### 1.4 PROPOSED DEVELOPMENT

The development program includes the following components:

### **1.4.1 ON-SITE**

A new three-story building with a footprint of 2,615 square feet will be constructed on the site. Each floor will feature four (4) one-bedroom condominium units between 475 and 660 square feet in size. The northern half of the building will feature a full basement that will be used by the residents for bicycle parking and general storage. Elevation views and perspective renderings of the proposed building are provided in Attachment 1-B.

The two first-floor units on the east side of the building will have exclusive use private yard areas, and a community yard area for all residents will be created north of the building. Solid waste bins and a kayak storage rack will also be provided on the north side of the building, which will be accessed by residents through a locked gate from the Joy Place right-of-way.

### **1.4.2 OFF-SITE IMPROVEMENTS**

New utility services will be installed in Joy Place to serve the proposed building, and the right-of-way will be graded and paved. An 8' wide brick sidewalk will be constructed on the south side of Joy Place, on property owned by the City of Portland, for the common benefit of the residents of the project and those parking in the city-owned parking lot. Street trees and lighting will be installed in the sidewalk.

### **1.5 TRAFFIC**

The 12-unit condominium project is expected to generate between 6 and 7 vehicle trips during the PM peak hour and approximately 70 vehicle trips on a weekday. The relatively small amount of traffic that will be generated by the project is not expected to have a detrimental effect on the surrounding street network.

### **1.6 SOILS/GEOTECHNICAL REVIEW**

Summit Geoengineering Services, Inc. has conducted test pits on the property and generally found between 2 and 5 feet of sandy fill over gravelly sand and glacial till. Test pit logs and a location map are provided in Attachment 1-C.

### **1.7 UTILITIES AND STORMWATER**

The proposed project will include the installation of new utility services to the building. All new utility services will be provided from the existing utilities available within Brackett Street. The proposed locations of the new utility services are shown on the Utility Plan (Sheet C-5.0). More information on proposed utility services is provided in Section 11 of this application.

Post-development stormwater runoff will closely follow existing runoff patterns. Runoff from the building and much of Joy Place will be collected in a new subsurface drainage system and conveyed to the 12" combined sewer in Brackett Street. Lawn areas will continue to flow across the eastern property boundary, as they do today. More



information on stormwater runoff from the site is provided in Section 9 of this application.

## **1.8 ATTACHMENTS**

Attachment 1-A – Existing Site Photographs

Attachment 1-B – Building Elevation Views & Renderings

Attachment 1-C – Test Pit Logs & Location Map

**ATTACHMENT 1-A**

**Existing Site Photographs**

**EXISTING SITE PHOTOGRAPHS**  
1 JOY PLACE, PORTLAND, MAINE

ONEJOY PLACE CONDOMINIUM  
ONEJOY PLACE, LLC



PHOTO 1 – STANDING IN JOY PLACE RIGHT OF WAY, FACING NORTH

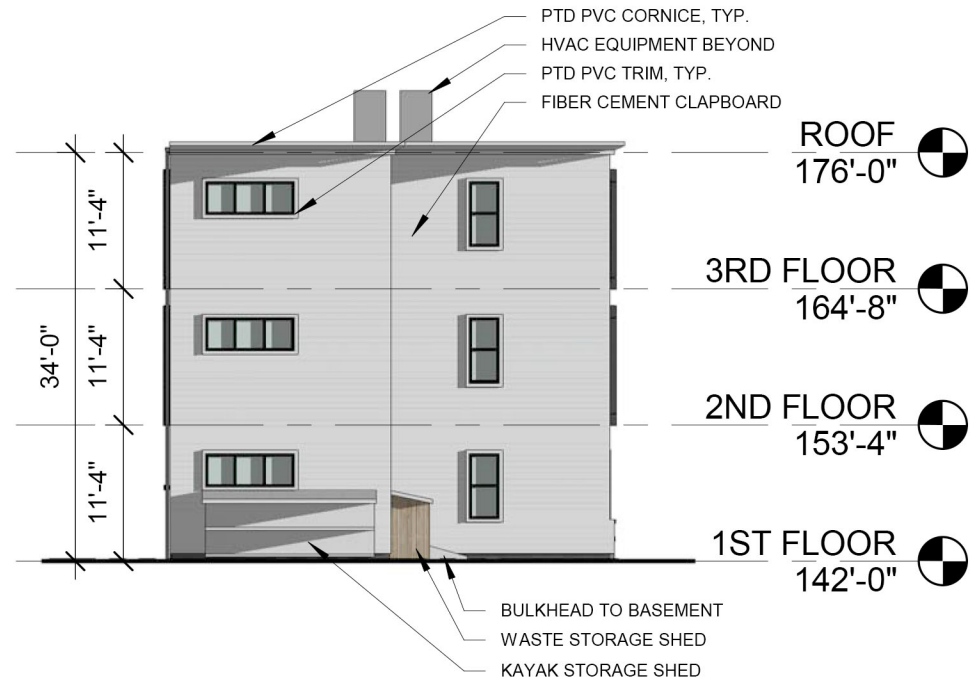


PHOTO 2 –STANDING IN THE NORTHERN PORTION OF THE LOT, FACING SOUTH.



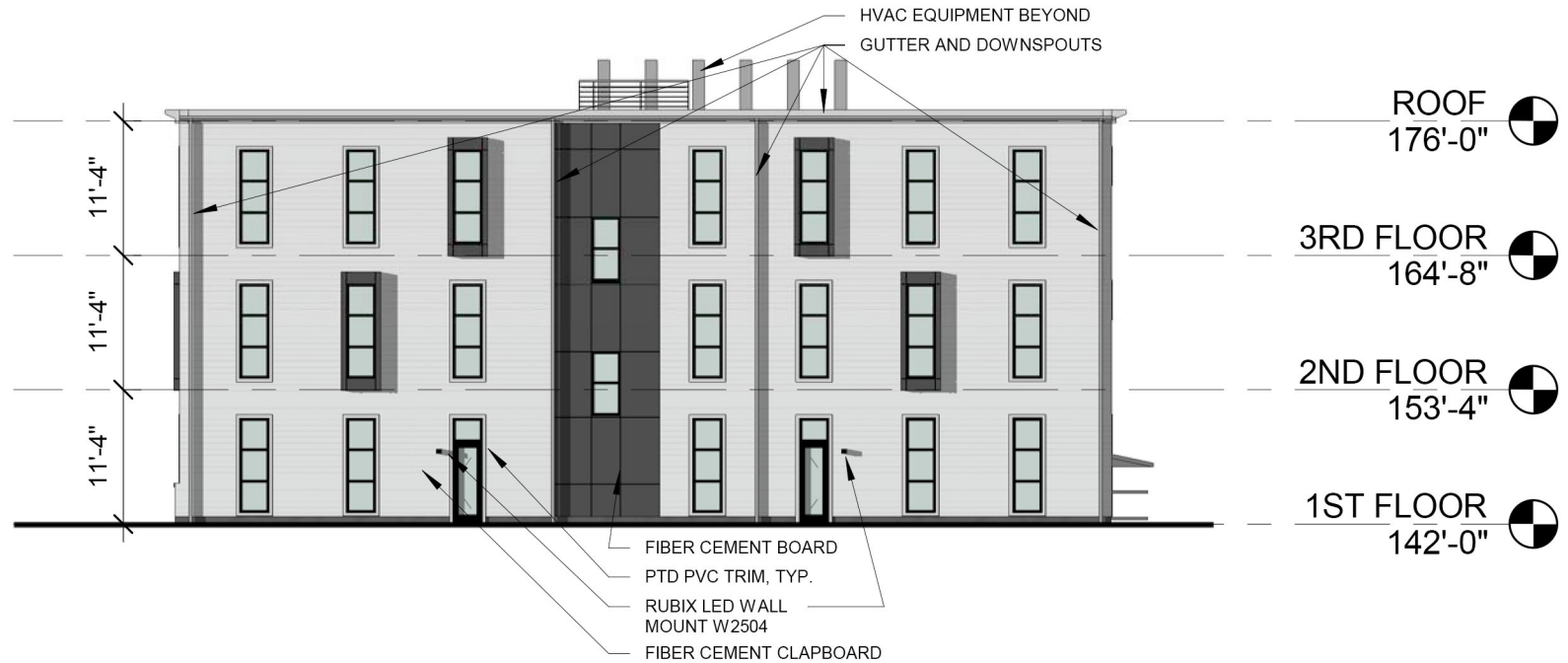
**ATTACHMENT 1-B**

**Building Elevation Views & Perspective Renderings**



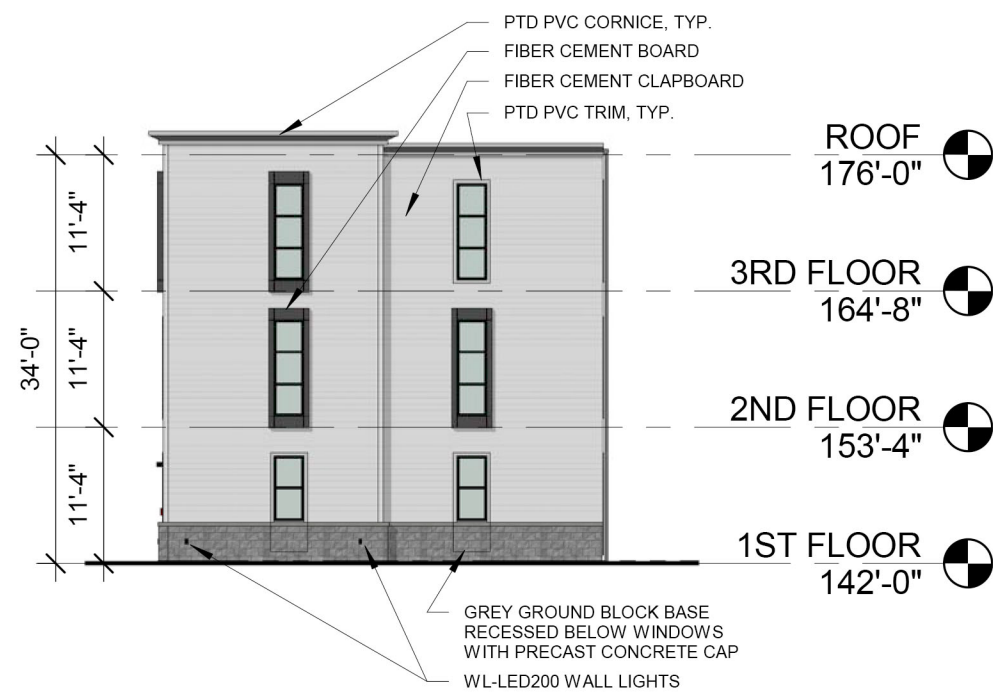
## 4 | NORTH ELEVATION

1/16" = 1'-0"



## 3 | EAST ELEVATION

1/16" = 1'-0"



## 2 | SOUTH ELEVATION

1/16" = 1'-0"



## 1 | WEST ELEVATION

1/16" = 1'-0"



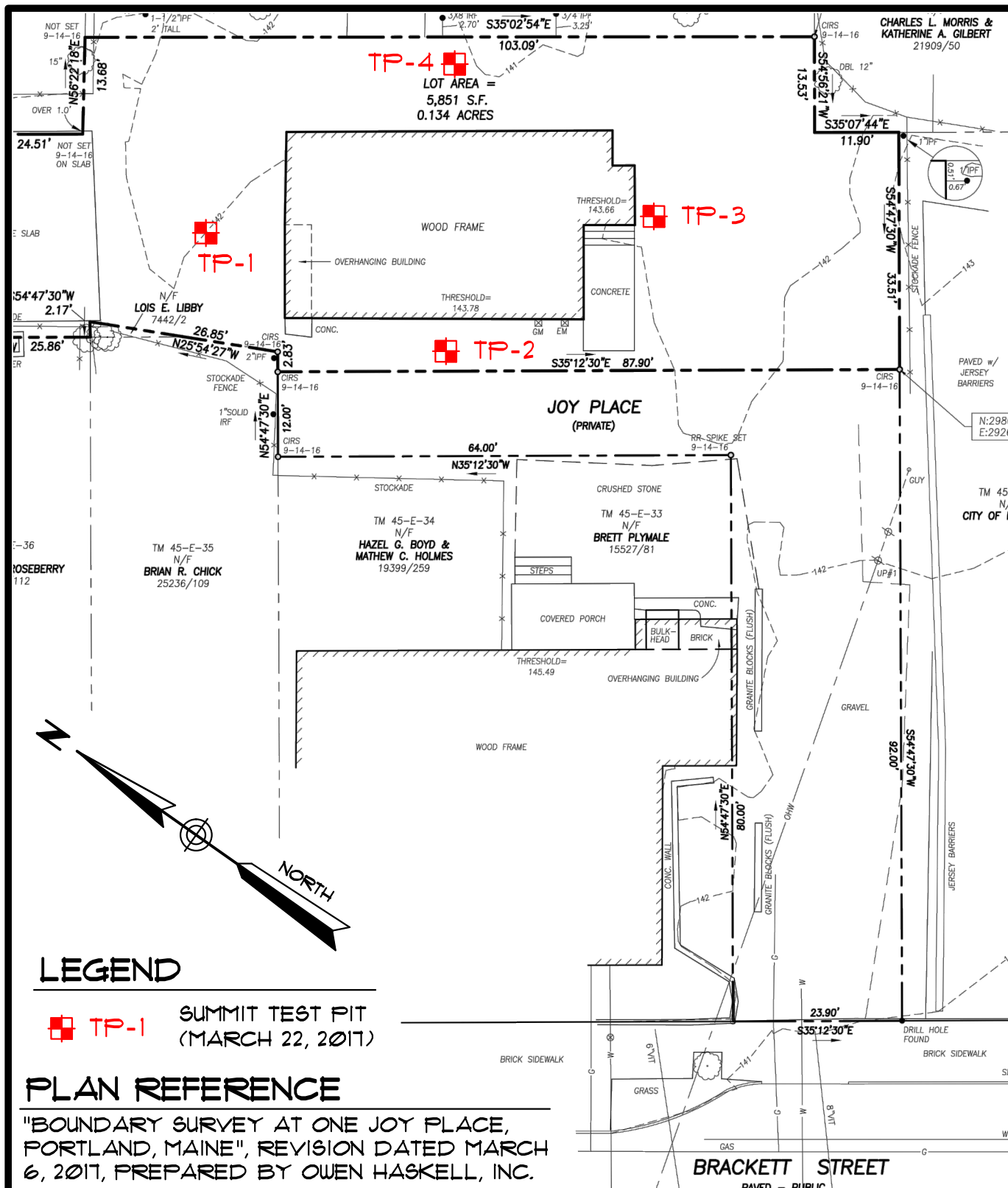






**ATTACHMENT 1-C**

**Test Pit Logs & Location Map**



## TEST BORING LOCATION PLAN PROPOSED BUILDING

1 JOY PLACE - PORTLAND, MAINE  
PREPARED FOR  
**ONEJOY PLACE LLC**

|                 |                 |                 |
|-----------------|-----------------|-----------------|
| DATE: 3-23-2017 | DRAWN BY: KRF   | CHECKED BY: WMP |
| JOB: 17053      | SCALE: 1" = 20' | FILE: 17053 TP  |

145 LISBON ST. - SUITE 601  
LEWISTON, ME 04240  
Tel.: (207) 576-3313

173 PLEASANT STREET  
ROCKLAND, ME 04841  
Tel.: (207) 318-1161

**SUMMIT**  
GEOENGINEERING SERVICES  
www.summitgeoeng.com



|                                                                                   |                                                                                    |                                                          |                |                               |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------|----------------|-------------------------------|
|  |                                                                                    | <b>TEST PIT LOG</b>                                      |                | Test Pit # <b>TP-1</b>        |
|                                                                                   |                                                                                    | Project: Joy Place<br>Brackett Street<br>Portland, Maine |                | Project #: 17053              |
|                                                                                   |                                                                                    |                                                          |                | Groundwater:<br>None Observed |
| Contractor: Summit Geoengineering Services                                        |                                                                                    | Ground Surface Elevation:                                |                |                               |
| Equipment: Tacheuchi Rubber Tracked                                               |                                                                                    | Reference:                                               |                |                               |
| Summit Staff: B. Peterlein, P.E.                                                  |                                                                                    | Date: 3/22/2017                                          | Weather: Sunny |                               |
| Depth                                                                             | <b>DESCRIPTION</b>                                                                 |                                                          |                |                               |
| (ft)                                                                              | <b>ENGINEERING</b>                                                                 | <b>GEOLOGIC/GENERAL</b>                                  |                |                               |
| 1                                                                                 | Dark brown to black Sandy SILT, little Gravel, mixed with bricks, dry, compact, ML | FILL                                                     |                |                               |
| 2                                                                                 |                                                                                    |                                                          |                |                               |
| 3                                                                                 | Olive-brown Sandy SILT, trace Gravel, few Cobbles, firm to compact, moist, SM      |                                                          |                |                               |
| 4                                                                                 | Frequent Cobbles and small Boulders                                                |                                                          |                |                               |
| 5                                                                                 | Sidewalls vertical                                                                 |                                                          |                |                               |
| 6                                                                                 | Brown Gravelly SAND, trace Silt, few Cobbles, compact, dry, SP                     | MARINE FAN DEPOSIT                                       |                |                               |
| 7                                                                                 |                                                                                    |                                                          |                |                               |
| 8                                                                                 |                                                                                    |                                                          |                |                               |
| 9                                                                                 |                                                                                    |                                                          |                |                               |
| 10                                                                                | End of Test Pit at 9 ft                                                            |                                                          |                |                               |
| 11                                                                                |                                                                                    |                                                          |                |                               |
| 12                                                                                |                                                                                    |                                                          |                |                               |
| 13                                                                                |                                                                                    |                                                          |                |                               |
| 14                                                                                |                                                                                    |                                                          |                |                               |
| 15                                                                                |                                                                                    |                                                          |                |                               |
| 16                                                                                |                                                                                    |                                                          |                |                               |
| 17                                                                                |                                                                                    |                                                          |                |                               |

|                                                                                   |                                                                                    |                                                          |                |                               |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------|----------------|-------------------------------|
|  |                                                                                    | <b>TEST PIT LOG</b>                                      |                | Test Pit # <b>TP-2</b>        |
|                                                                                   |                                                                                    | Project: Joy Place<br>Brackett Street<br>Portland, Maine |                | Project #: 17053              |
|                                                                                   |                                                                                    |                                                          |                | Groundwater:<br>None Observed |
| Contractor: Summit Geoengineering Services                                        |                                                                                    | Ground Surface Elevation:                                |                |                               |
| Equipment: Tacheuchi Rubber Tracked                                               |                                                                                    | Reference:                                               |                |                               |
| Summit Staff: B. Peterlein, P.E.                                                  |                                                                                    | Date: 3/22/2017                                          | Weather: Sunny |                               |
| Depth                                                                             | <b>DESCRIPTION</b>                                                                 |                                                          |                |                               |
| (ft)                                                                              | <b>ENGINEERING</b>                                                                 | <b>GEOLOGIC/GENERAL</b>                                  |                |                               |
| 1                                                                                 | Black to olive-brown fine to medium SAND, trace Silt, few Cobbles, moist, loose SP | FILL                                                     |                |                               |
| 2                                                                                 |                                                                                    |                                                          |                |                               |
| 3                                                                                 |                                                                                    |                                                          |                |                               |
| 4                                                                                 | Brown SAND, little Gravel, trace Silt, few Cobbles and Boulders, dry, compact, SP  | MARINE FAN DEPOSIT                                       |                |                               |
| 5                                                                                 |                                                                                    |                                                          |                |                               |
| 6                                                                                 | Sidewalls vertical                                                                 |                                                          |                |                               |
| 7                                                                                 |                                                                                    |                                                          |                |                               |
| 8                                                                                 |                                                                                    |                                                          |                |                               |
| 9                                                                                 | Gray Silty SAND, little Gravel, few Cobbles, dry, dense, slightly mottled, SP      | GLACIAL TILL                                             |                |                               |
| 10                                                                                | End of Test Pit at 9.5 ft                                                          |                                                          |                |                               |
| 11                                                                                |                                                                                    |                                                          |                |                               |
| 12                                                                                |                                                                                    |                                                          |                |                               |
| 13                                                                                |                                                                                    |                                                          |                |                               |
| 14                                                                                |                                                                                    |                                                          |                |                               |
| 15                                                                                |                                                                                    |                                                          |                |                               |
| 16                                                                                |                                                                                    |                                                          |                |                               |
| 17                                                                                |                                                                                    |                                                          |                |                               |

|                                                                                   |                                                                                                                          |                                                          |                         |                               |  |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------|-------------------------------|--|
|  |                                                                                                                          | <b>TEST PIT LOG</b>                                      |                         | Test Pit # <b>TP-3</b>        |  |
|                                                                                   |                                                                                                                          | Project: Joy Place<br>Brackett Street<br>Portland, Maine |                         | Project #: 17053              |  |
|                                                                                   |                                                                                                                          |                                                          |                         | Groundwater:<br>None Observed |  |
| Contractor: Summit Geoengineering Services                                        |                                                                                                                          | Ground Surface Elevation:                                |                         |                               |  |
| Equipment: Tacheuchi Rubber Tracked                                               |                                                                                                                          | Reference:                                               |                         |                               |  |
| Summit Staff: B. Peterlein, P.E.                                                  |                                                                                                                          | Date: 3/22/2017                                          |                         | Weather: Sunny                |  |
| Depth                                                                             | <b>DESCRIPTION</b>                                                                                                       |                                                          |                         |                               |  |
| (ft)                                                                              | <b>ENGINEERING</b>                                                                                                       |                                                          | <b>GEOLOGIC/GENERAL</b> |                               |  |
| 1                                                                                 | Brown Gravelly SAND, trace Silt, dry, loose, SP                                                                          |                                                          | FILL                    |                               |  |
| 2                                                                                 |                                                                                                                          |                                                          |                         |                               |  |
| 3                                                                                 | Brown Gravelly SAND, trace Silt, occasional Cobbles<br>and Boulders, dry, dense, SP<br><br>Sidewalls vertical and stable |                                                          | MARINE FAN DEPOSIT      |                               |  |
| 4                                                                                 |                                                                                                                          |                                                          |                         |                               |  |
| 5                                                                                 |                                                                                                                          |                                                          |                         |                               |  |
| 6                                                                                 |                                                                                                                          |                                                          |                         |                               |  |
| 7                                                                                 |                                                                                                                          |                                                          |                         |                               |  |
| 8                                                                                 |                                                                                                                          |                                                          |                         |                               |  |
| 9                                                                                 | Gray Silty SAND, little Gravel, moist, dense, slightly mottled, SP                                                       |                                                          | GLACIAL TILL            |                               |  |
| 10                                                                                | End of Test Pit at 9.5 ft                                                                                                |                                                          |                         |                               |  |
| 11                                                                                |                                                                                                                          |                                                          |                         |                               |  |
| 12                                                                                |                                                                                                                          |                                                          |                         |                               |  |
| 13                                                                                |                                                                                                                          |                                                          |                         |                               |  |
| 14                                                                                |                                                                                                                          |                                                          |                         |                               |  |
| 15                                                                                |                                                                                                                          |                                                          |                         |                               |  |
| 16                                                                                |                                                                                                                          |                                                          |                         |                               |  |
| 17                                                                                |                                                                                                                          |                                                          |                         |                               |  |



|                                                                                   |                                                                                             |                                                          |                         |                               |  |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------|-------------------------------|--|
|  |                                                                                             | <b>TEST PIT LOG</b>                                      |                         | Test Pit # <b>TP-4</b>        |  |
|                                                                                   |                                                                                             | Project: Joy Place<br>Brackett Street<br>Portland, Maine |                         | Project #: 17053              |  |
|                                                                                   |                                                                                             |                                                          |                         | Groundwater:<br>None Observed |  |
| Contractor: Summit Geoengineering Services                                        |                                                                                             | Ground Surface Elevation:                                |                         |                               |  |
| Equipment: Tacheuchi Rubber Tracked                                               |                                                                                             | Reference:                                               |                         |                               |  |
| Summit Staff: B. Peterlein, P.E.                                                  |                                                                                             | Date: 3/22/2017                                          |                         | Weather: Sunny                |  |
| Depth                                                                             | <b>DESCRIPTION</b>                                                                          |                                                          |                         |                               |  |
| (ft)                                                                              | <b>ENGINEERING</b>                                                                          |                                                          | <b>GEOLOGIC/GENERAL</b> |                               |  |
| 1                                                                                 | Brown Silty SAND mixed with Cobbles, rags, plastic, small branches, frozen, SM              |                                                          | FILL                    |                               |  |
| 2                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 3                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 4                                                                                 | Brown Gravelly SAND, trace Silt, frequent Cobbles and Boulders, moist, loose to compact, SP |                                                          | MARINE FAN DEPOSIT      |                               |  |
| 5                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 6                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 7                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 8                                                                                 | Gray Silty SAND, little Gravel, moist, dense, slightly mottled, SP                          |                                                          | GLACIAL TILL            |                               |  |
| 9                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 10                                                                                | End of Test Pit at 9 ft                                                                     |                                                          |                         |                               |  |
| 11                                                                                |                                                                                             |                                                          |                         |                               |  |
| 12                                                                                |                                                                                             |                                                          |                         |                               |  |
| 13                                                                                |                                                                                             |                                                          |                         |                               |  |
| 14                                                                                |                                                                                             |                                                          |                         |                               |  |
| 15                                                                                |                                                                                             |                                                          |                         |                               |  |
| 16                                                                                |                                                                                             |                                                          |                         |                               |  |
| 17                                                                                |                                                                                             |                                                          |                         |                               |  |

## **2. Right, Title and Interest**

### **2.1 OVERVIEW**

The current owner of the property and the applicant is Onejoy Place, LLC. A copy of the current property deed is attached as attachment 2-A.

### **2.2 PARKING**

The proposed project is required to have 12 parking spaces per ordinance requirements, as summarized in the following table:

| <b>USE</b>           | <b>RATE REQUIRED</b> | <b># OF SPACES</b> |
|----------------------|----------------------|--------------------|
| 12 Residential Units | 1 space per unit     | 12 Spaces          |
|                      | <b>TOTAL</b>         | 12 Spaces          |

Four parking spaces will be provided on site, and the applicant is in discussion with the City of Portland to lease parking spaces in the adjacent parking lot to meet the ordinance requirement.

### **2.3 ATTACHMENTS**

Attachment 2-A – Property Deed

**ATTACHMENT 2-A**

**Current Deed**



## QUITCLAIM DEED WITH COVENANT

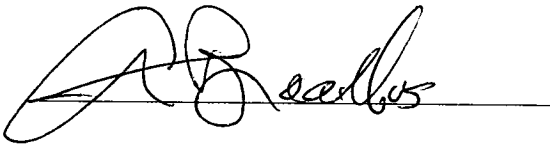
MAINE REAL ESTATE TAX PAID

ALBERT BRESSETTE of Windham, Maine, whose mailing address is P.O. Box 345, Portland, Maine 04112 (the "Grantor"), for consideration paid, grants to ONEJOY PLACE LLC, a Maine limited liability company, whose mailing address is c/o Renewal Housing Associates, Three Canal Plaza, Suite 501, Portland Maine 04101, WITH QUITCLAIM COVENANT, a certain lot or parcel of land, together with the buildings and improvements thereon, situated easterly of, but not adjacent to, Brackett Street in the City of Portland, County of Cumberland and State of Maine, Maine, more particularly described in Schedule A attached hereto and made a part hereof.

Meaning and intending to convey, and hereby conveying, the same premises conveyed to the Grantor by Quitclaim Deed With Covenant from Gloria Bresette and Albert Bresette dated July 27, 1997, and recorded in the Cumberland County Registry of Deeds in Book 13359, Page 103.

IN WITNESS WHEREOF, ALBERT BRESSETTE has hereunto set his hand and seal this 31 day of August, 2016.

WITNESS:



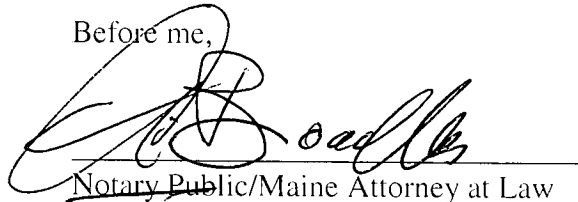
  
Albert Bresette

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss.

August 31, 2016

Then personally appeared the above named ALBERT BRESSETTE and acknowledged the foregoing instrument to be his free act and deed.

Before me,

  
Notary Public/Maine Attorney at Law

Print name: Andrew L. Broodles

My commission expires: \_\_\_\_\_

## Schedule A

A certain lot or parcel of land, together with the buildings and improvements thereon, situated easterly of, but not adjacent to, Brackett Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Commencing at a point at the intersection of the easterly sideline of Brackett Street with the northerly sideline of Spring Street;

Thence, N 35°12'30" W along the easterly sideline of said Brackett Street 402.21 feet to a drill hole and the southerly sideline of a private right of way known as Joy Place;

Thence, N 54°47'30" E along the southerly sideline of said Joy Place 92.00 feet to the true point of beginning;

Thence, from the true point of beginning, N 35°12'30" W along the easterly sideline of said Joy Place 87.90 feet to the land now or formerly of Brian R. Chick as described in Deed recorded in the Cumberland County Registry of Deeds (the "Registry") in Book 25236, Page 109;

Thence, N 54°47'30" E along land of said Chick 2.83 feet to a point;

Thence, N 25°54'27" W along land of said Chick 26.85 feet to a point;

Thence, S 54°47'30" W along land of said Chick 2.17 feet to land now or formerly of Kimberly A. Roseberry as described in Deed recorded in said Registry in Book 28025, Page 112;

Thence, N 35°12'30" W along land of said Roseberry 25.86 feet to land now or formerly of Basha LLC as described in Deed recorded in said Registry in Book 29175, Page 300;

Thence, N 55°37'30" E along land of said Basha LLC a distance of 28.71 feet to land now or formerly of David R. Shedd and Susan Shedd as described in Deed recorded in said Registry in Book 31201, Page 5;

Thence, S 35°07'44" E along land of said Shedd 24.51 feet to a point;

Thence, N 56°22'18" E along land of said Shedd 13.68 feet to land now or formerly of Nathan W. Kimble as described in Deed recorded in said Registry in Book 13439, Page 62;

Thence, S 35°02'54" E along land of said Kimble and land now or formerly of Parkside Properties, LLC as described in Deed recorded in said Registry in Book 16808, Page 29, a distance of 103.09 feet to land now or formerly of Charles L. Morris and Katherine A. Gilbert as described in Deed recorded in said Registry in Book 21909, Page 50;

Thence, S 54°56'21" W along land of said Morris and Gilbert 13.53 feet to a point;

Thence, S 35°07'44" E along land of said Morris and Gilbert 11.90 feet to land now or formerly of the City of Portland;

Thence, S 54°47'30" W along land of said City of Portland 33.51 feet to the easterly sideline of said Joy Place and the point of beginning; containing 5,851 sf.

The above described premises are hereinafter referred to as the "Premises."

Reference is made to a plan entitled "Boundary Survey at 1 Joy Place, Portland, Maine made for Onejoy Place LLC" dated August 24, 2016 by Owen Haskell, Inc., and recorded in said Registry of Deeds in Plan Book 216, Page 330 (the "Plan").

The Premises are conveyed together with a right of passageway, in common with others, over a strip of land formerly known as Tinkhams Court, so-called, being approximately twenty-four (24) feet in width and extending from Brackett Street in a northeasterly direction to the Premises, and a right of passageway, in common with others, over a twelve (12) foot wide passageway extending from the most easterly end of said Tinkhams Court in a northwesterly direction along the southwesterly side of the Premises, said Tinkhams Court and said passageway being now known as Joy Place, which Tinkhams Court and said passageway are shown on the Plan as Joy Place and being more particularly bounded and described as follows:

Beginning at a point on the easterly sideline of said Brackett Street, said point of beginning being distant 402.21 feet as measured along said easterly sideline of Brackett Street on a bearing of N 35°-12'-30" W from the northwesterly side of Spring Street;

Thence N 54°-47'-30" E along land of City of Portland 92.00 feet to a point;

Thence N 35°-12'-30" W along land now or formerly of Albert Bresette, being the Premises, 87.90 feet to a point;

Thence S 54°-47'-30" W along land now or formerly of Brian R. Chick 12.00 feet to a point;

Thence S 35°-12'-30" E along lands now or formerly of Hazel G. Boyd et al and Brett Plymale 64.00 feet to a point;

Thence S 54°-47'-30" W along said land of Plymale 80.00 feet to a point;

Thence S 35°-12'-30" E along said Brackett Street 23.90 feet to the point of beginning.

All bearings are magnetic in the year 1967.

Subject to the condition that said Tinkhams Court and said passageway, now known as Joy Place, are to be kept open and unobstructed forever.

Also hereby conveying all other right, title and interest that the Grantor may have in and to said Joy Place as shown on the Plan.

Received  
Recorded Register of Deeds  
Aug 31, 2016 12:23:36P  
Cumberland County  
Nancy A. Lane

10/1/2016 10:10:10 AM  
10/1/2016 10:10:10 AM  
10/1/2016 10:10:10 AM  
10/1/2016 10:10:10 AM



### **3. STATE AND FEDERAL PERMITS**

The project requires State Fire Marshall Approval. The development is subject to Site Plan and Subdivision approval by the City of Portland and Building Permit(s) are also required.

## 4. LAND ORDINANCE REVIEW

### 4.1 OVERVIEW

The property currently lies within the City of Portland B-1 Neighborhood Business Zone. The following Space and Bulk requirements apply to the B-1 Zone:

| <b>B-1 Zone Summary<br/>Dimensional and Parking Requirements<br/>Applied to 1 Joy Place</b> |                                |                                                                                                |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------|
| <b>Zoning Requirements</b>                                                                  | <b>B-1 Zoning<br/>Standard</b> | <b>Project Site</b>                                                                            |
| Minimum Lot Size                                                                            | None                           | 5,851 s.f.                                                                                     |
| Minimum Lot Area per<br>Dwelling Unit                                                       | 435 s.f.                       | 465 s.f.                                                                                       |
| Minimum Frontage                                                                            | 20 feet                        | 88 feet                                                                                        |
| Front Yard                                                                                  | Min: 0 feet    Max: 10 feet    | 0.12 feet                                                                                      |
| Minimum Side Yard                                                                           | 0 feet                         | 4.0 feet                                                                                       |
| Minimum Rear Yard                                                                           | 10 feet                        | 10 feet                                                                                        |
| Maximum Impervious<br>Surface                                                               | 90%                            | 62.2%                                                                                          |
| Maximum Building Height                                                                     | 45 feet                        | 34 feet                                                                                        |
| Parking Residential Use                                                                     | 1 space per unit               | 4 on-site spaces<br>10 off-site spaces via<br>parking lease agreement<br>with City of Portland |

### 4.2 SHORELAND ZONING

The site is not located within the Shoreland Zoning District.

## **5. EASEMENTS OR OTHER BURDENS**

### **5.1 OVERVIEW**

Owen Haskell, Inc. completed a boundary survey of the site in August of 2016. No easements or other burdens exist on the project site.

## 6. TECHNICAL AND FINANCIAL CAPACITY

### 6.1 TECHNICAL CAPACITY

The applicant has assembled a highly qualified team of professionals to plan, permit, and develop construction documents for the project. The Team is working under the direction of Mr. Todd Alexander of Renewal Housing Associates as Project Developer. The Team services will be provided by the following companies and their respective team leaders:

### 6.2 CONSULTANT TEAM

|                              |                                                                                                                                                                                                                                        |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Civil Engineer</i>        | Michael Tadema-Wielandt, P.E.<br>Terradyn Consultants, LLC<br>565 Congress Street<br>Portland, ME 04101<br>(207) 632-9010 – Cell<br>(207) 221-1317 – Fax<br><a href="mailto:mtw@terradyconsultants.com">mtw@terradyconsultants.com</a> |
| <i>Surveyor</i>              | John Swan<br>Owen Haskell, Inc.<br>390 US Route 1, Unit 10<br>Falmouth, Maine 04105<br>(207) 774-0424 – Work<br>(207) 774-0511 – Fax<br><a href="mailto:jswan@owenhaskell.com">jswan@owenhaskell.com</a>                               |
| <i>Architect</i>             | David Lloyd<br>Archetype, PA<br>48 Wharf Street<br>Portland, ME 04101<br>(207) 772-6022 – Work<br>(207) 772-4056 – Fax<br><a href="mailto:lloyd@archetypepa.com">lloyd@archetypepa.com</a>                                             |
| <i>Electrical</i>            | Will Bennett, Jr.<br>Bennett Engineering<br>P.O. Box 297<br>Freeport, ME 04032<br>(207) 865-9475 – Work<br>(207) 865-1800 – Fax                                                                                                        |
| <i>Geotechnical Engineer</i> | William Peterlein, P.E.<br>Summit Geoengineering Services<br>145 Lisbon Street, Suite 601<br>Lewiston, ME 04240<br>(207) 576-3313 – Work<br><a href="mailto:bpeterlein@summitgeoeng.com">bpeterlein@summitgeoeng.com</a>               |



### **6.3 EXPERIENCE OF PROJECT TEAM**

The team of consultants retained by the Developer has expertise and experience in the design of similar projects. Resumes of key personnel for the development team can be provided upon request.

The applicant has significant experience in the development and management of large residential projects. A company resume, including a list of current and completed projects under the direction of the applicant, is provided in attachment 6-A.

### **6.4 FINANCIAL CAPACITY**

The applicant has the capacity to finance the proposed project. A letter of financial capacity for the project is contained in Attachment 6-B.

### **6.5 CONSTRUCTION COST ESTIMATE**

The project has an overall construction cost estimate of \$2,250,000. This construction cost value is considered preliminary and subject to change as building design and project layout is refined, etc.

### **6.6 ATTACHMENTS**

Attachment 6-A – Renewal Housing Associates Company Resume & Project Experience

Attachment 6-B – Letter of Financial Capacity

**ATTACHMENT 6-A**

**Renewal Housing Associates Company Resume & Project Experience**

# Company Resume & Project Experience

## THE COMPANY:

Renewal Housing Associates LLC (“Renewal”) is a multifamily housing development company based in Portland, Maine. Renewal’s primary focus is renovating legacy affordable housing properties that require capital improvements and long-term use restrictions. The company’s principals are specialist in obtaining federal, state and local resources to reinvest in and preserve subsidized elderly and family rental housing. Renewal also develops small, urban for-sale housing projects targeting middle income and first-time homebuyers.

Renewal is an affiliate of Leon N. Weiner & Associates Inc. (“LNWA”), a Delaware-based real estate development company founded in 1949. LNWA and its affiliates operate more than 4,500 housing units located in eight states and the District of Columbia. The company has extensive experience developing affordable, market rate and mixed-income housing serving both the for-sale and rental markets. Members of the LNWA management team have served in numerous leadership positions in the housing industry, including Chairman of the National Association of Home Builders, Chairman of the Federal Home Loan Bank of Pittsburgh, and Chairman of the Mortgage Roundtable.

## OUR APPROACH:

The principals at Renewal recognize that every real estate development has a unique set of stakeholders with distinct goals. As a result, Renewal’s role will vary from project to project. Renewal’s principals are comfortable working in any capacity, including traditional buyer-developer-operator, joint venture partner or fee-for-service developer. Most importantly, as part of a company that has developed real estate for more than 60 years, Renewal focuses on opportunities to work with people that are committed to the things that define successful projects; a spirit of collaboration, a desire for shared success and a view toward long-term relationships.

## OUR TEAM:

Renewal is led by its two principals, David Lakari and Todd M. Alexander. David has been involved in housing development for more than 40 years and focused on affordable housing preservation for the past 20 years. David founded Renewal with LNWA in 2001. Prior to Renewal, he was Executive Director of the Maine State Housing Authority from 1994 to 1999 and served on board for the National Council of State Housing Agencies. David holds a JD from the University of Maine.

Todd has worked as an affordable housing developer since 2003, during which time he has completed projects involving more than 2,500 units and \$250MM in total investment. He has experience recapitalizing properties utilizing a wide variety of public and private sector sources of debt and equity. He is a former Board President for Community Housing of Maine and the Downtown Portland Corporation. Todd received a Master’s degree in Urban Planning from Cornell University and a Bachelor’s degree from Colby College.

# Company Resume & Project Experience

| PROJECTS COMPLETED   |                  |                   |                   |       |         |               | Total Development Costs |
|----------------------|------------------|-------------------|-------------------|-------|---------|---------------|-------------------------|
| Property             | Location         | Role              | Placed In Service | Units | Type    | Financing     |                         |
| Windsor Apartments   | Wilmington, DE   | Developer   Owner | 2001              | 169   | Elderly | TEB/LIHTC     | \$8,470,000             |
| Oak Hill Village     | Willoughby, OH   | Developer   Owner | 2002-03           | 182   | Family  | TEB/LIHTC     | \$12,547,000            |
| Spellman House       | College Park, MD | Developer   Owner | 2003              | 140   | Elderly | TEB/LIHTC     | \$12,519,000            |
| Compton Towne        | Wilmington, DE   | Developer   Owner | 2004              | 76    | Family  | TEB/LIHTC     | \$7,135,000             |
| Clifton Plaza        | Cleveland, OH    | Developer   Owner | 2006              | 108   | Elderly | TEB/LIHTC     | \$7,599,000             |
| Alden-Berkley        | College Park, MD | Developer   Owner | 2006-07           | 56    | Family  | TEB/LIHTC     | \$8,971,000             |
| Collinson Apartments | Akron, OH        | Developer   Owner | 2007              | 101   | Elderly | TEB/LIHTC     | \$7,683,000             |
| Warren Heights       | Warren, OH       | Developer   Owner | 2008              | 188   | Family  | TEB/LIHTC     | \$10,177,000            |
| Capitol Hill Towers  | Washington, D.C. | Developer   Owner | 2013              | 204   | Elderly | TEB/LIHTC     | \$36,586,792            |
| Marshall Plaza       | Lorain, OH       | Developer   Owner | 2013              | 89    | Family  | TEB/LIHTC     | \$6,740,287             |
| Kensington Square    | Elyria, OH       | Developer         | 2009              | 192   | Family  | TEB/LIHTC     | \$10,704,000            |
| Hampshire House      | Warren, OH       | Developer         | 2011              | 150   | Family  | TEB/LIHTC     | \$11,863,000            |
| Riverview Towers     | Camden, NJ       | Developer         | 2013              | 225   | Elderly | REFI/FMAC     | \$10,650,000            |
| Huntington Towers    | New London, CT   | Developer         | 2013              | 120   | Elderly | REFI/FNMA     | \$8,250,000             |
| Burlington Manor     | Burlington, NJ   | Developer         | 2015              | 120   | Elderly | REFI/FNMA     | \$7,500,000             |
| Ivywood              | Columbus, OH     | Developer         | 2016              | 124   | Family  | 9% LIHTC      | \$13,500,000            |
| Oak Hill             | Franklin, PA     | Developer   Owner | 2016              | 120   | Family  | 9% LIHTC      | \$15,000,000            |
| Yorkview             | Massillon, OH    | Developer   Owner | 2017              | 50    | Family  | 9% LIHTC      | \$6,500,000             |
| Main Towers          | Newark, DE       | Developer         | 2016              | 150   | Elderly | TEB/LIHTC     | \$15,000,000            |
|                      |                  |                   |                   | 2,564 |         |               | \$217,395,079           |
| IN DEVELOPMENT       |                  |                   |                   |       |         |               |                         |
| Arlington Square     | Elyria, OH       | Developer         | TBD               | 60    | Family  | 9% LIHTC      | \$7,800,000             |
| Onejoy               | Portland, ME     | Developer         | 2018              | 12    | Family  | Conventional  | \$2,250,000             |
| Fenway Manor         | Cleveland, OH    | Developer   Owner | TBD               | 143   | Elderly | TEB/LIHTC/HTC | \$39,000,000            |
|                      |                  |                   |                   | 215   |         |               | \$49,050,000            |



**ATTACHMENT 6-B**

**Letter of Financial Capacity**



April 4, 2017

Planning Board  
City of Portland  
Portland, Maine

Re: Financial Capacity to Develop 1 Joy Place, Portland, Maine ("Onejoy")  
Onejoy Place, LLC | Renewal Housing Associates LLC  
2 Union Street, 5<sup>th</sup> Floor  
Portland, Maine 04101

To Whom It May Concern:

I am writing on behalf of Onejoy Place, LLC, its Sole Member, Renewal Housing Associates LLC ("RHA") and its principals, Leon N. Weiner & Associates Inc., David Lakari and Todd Alexander.

PNC Bank N.A. has worked with and provided corporate banking services to the parties described above for more than sixty years. The bank has conducted a preliminary review of the appropriate financial statements, operating accounts and pro forma information related to the proposed housing development at 1 Joy Place in Portland, Maine. Based on our past experience and our review of the financial information, the Bank believes the parties have the management capability and financial resources necessary to complete the proposed project.

If you should need further information or clarification, please contact me at (302) 429-2826.

Respectfully,

A handwritten signature in blue ink, appearing to read "Jeffrey R. Bierlein".

Jeffrey R. Bierlein  
Vice President

Member of The PNC Financial Services Group

300 Delaware Avenue W1-W300-06-2 Wilmington Delaware 19801

[www.pnc.com](http://www.pnc.com)

## **7. CONSTRUCTION MANAGEMENT PLAN**

The following information is provided in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(1).

### **7.1 CONSTRUCTION MANAGEMENT PLAN**

Onejoy Place, LLC is seeking to commence construction during the spring or summer of 2017 and complete work by the spring of 2018. The construction will involve site work and new building construction. The attached construction plan outlines the anticipated timeline and sequence of activities.

### **7.2 ATTACHMENTS**

Attachment 7-A – Construction Management Plan

**ATTACHMENT 7-A**

**Construction Management Plan**



**CONSTRUCTION MANAGEMENT PLAN**  
**FOR**  
**ONEJOY PLACE CONDOMINIUM**  
1 JOY PLACE, PORTLAND, MAINE

- Construction shall be managed by an on-site project superintendent
- A temporary project sign may be installed at the entrance to Joy Place
- All materials will be delivered via Joy Place and stockpiled in the locations shown on the Construction Management Plan included in the plan set (Sheet C-2.3)
- All construction shall comply with 2009 NFPA 1 chapter 16 safe guards during building construction, alteration and demolition operations.
- Any cutting and welding work performed onsite shall require a "hot work" permit from the Portland Fire Department.
- The general contractor shall post emergency contact information on the project site property during construction in the event of an after hours emergency. This contact information shall also be provided to the Portland Fire Department.
- The applicant or assigned representative shall purchase a knox padlock from the Portland Fire Department to allow access by the Portland Fire Department.
- Streets shall maintain a 20' width for fire department access at all times.
- Utility connections in Brackett Street will require temporary lane and sidewalk closures. The contractor shall coordinate these closures with the City of Portland. The contractor shall provide flaggers for traffic control as necessary.

## **8.0 NATURAL FEATURES**

### **8.1 OVERVIEW**

The development site has been entirely developed and does not contain any significant natural features including wetlands, vernal pools or other protected resources or wildlife habitats.

## **9. STORMWATER MANAGEMENT**

The following information is provided in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-526(b)(3).

### **9.1 OVERVIEW**

The existing project site is entirely developed and relatively flat. Stormwater runoff from most of the project site drains overland across the eastern property boundary. The Joy Place right of way generally drains toward Brackett Street. There are no known areas of erosion or flooding on or adjacent to the site.

Post development stormwater runoff will generally follow existing patterns. Runoff from Joy Place, the four proposed parking spaces, and the proposed building will drain to Brackett Street, where it will enter the city's combined storm sewer. Runoff from the remainder of the site will drain overland across the eastern property boundary, as it does today.

The existing project site, including the Joy Place right of way, contains approximately 5,550 square feet of impervious surface. Redevelopment of the project site will result in an increase of approximately 820 square feet of impervious area and a total impervious surface of 6,365 square feet. The project will result in less than 1,000 square feet of new impervious surface and less than 5,000 square feet of non-roof redeveloped impervious surface and is not required to meet the General or Flooding Standards.

The project is not expected to cause ponding, flooding, or erosion problems on or downstream of the site. The relatively small amount of runoff entering the city's combined storm sewer network is not expected to overburden the system.

## **10. CONSISTENCY WITH CITY MASTER PLANS**

### **10.1 OVERVIEW**

Our office is not aware of any applicable Master Plans created for the project site.



## **11. UTILITIES**

### **11.1 OVERVIEW**

The proposed project will involve installation of new utility services to the building. All new utility services will be provided from the franchise utilities available within Brackett Street. The proposed locations of the new utility services are shown on the Utility Plan (Sheet C-5.0).

### **11.2 WATER SUPPLY**

The proposed project will receive its water supply from the Portland Water District's (PWD) public water supply system. Separate 6" fire and 2" domestic services will be installed to the building from PWD's existing main in Brackett Street. PWD has indicated in a letter dated April 19, 2017 that the district will be able to serve the proposed project.

#### **11.2.1 Total Project Water Usage**

The total average daily water demand for the proposed project is estimated to be 1,440 gallons per day, based on design flows published in the State of Maine Subsurface Wastewater Disposal Rules.

12 x 1 Bedroom Residential Units at 120 gpd/unit = 1,440 gpd

### **11.3 WASTEWATER DISPOSAL**

The proposed project will be connected to the Portland Water District's and City of Portland's wastewater collection and conveyance systems. The City of Portland Wastewater Capacity Application has been completed and forwarded to Mr. Brad Roland.

The overall project is anticipated to generate an average daily flow of approximately 1,440 gpd. Based on the existing sewer system in the area, there appears to be adequate capacity to handle these projected flow amounts.

### **11.4 ELECTRICITY SUPPLY**

CMP currently maintains overhead and underground utilities in the area. The proposed building will be served by a new underground feed from a new riser pole, which will be set on the east side of Brackett Street.

### **11.5 ATTACHMENTS**

Attachment 11-A – Correspondence with Utilities

**ATTACHMENT 11-A**

**Correspondence with Utilities**

March 30, 2017

MEANS  
means@pwd.org  
Portland Water District  
225 Douglass Street  
Portland, ME 04104

**Request for Ability to Serve Letter**  
**12-Unit Residential Development**  
**1 Joy Place, Portland, Maine**

Dear Sir or Madam:

**Terradyn Consultants LLC** has been retained by Renewal Housing Associates to assist with site design and permitting for a proposed 12-unit condominium development project located at 1 Joy Place in Portland, Maine. We are writing to request a letter confirming the Portland Water District's ability to serve the proposed development.

The 5,851 square foot parcel is identified as Block E, Lot 45 on the City of Portland Tax Map 49. The site is accessed off Bracket Street via Joy Place, a private right-of-way. An existing vacant house is located on the site. Water service for the house is located within the Joy Place right-of-way.

The proposed project includes the construction of a 2,600 square foot, 3-story building, including 12 condominium units. Joy Place will be reconstructed for vehicular and pedestrian access, and public water and sewer utilities will be installed to serve the project. It is anticipated that the existing water service will be retired, and a new parent/child service will be installed for fire protection and domestic water use for the new building.

Attached are a site location figure showing the property delineated on a USGS map and a preliminary site utility plan of the project, showing how the development may be served with water. A spreadsheet showing the total number of proposed plumbing fixtures is provided in a separate document.

Please provide our office with confirmation that the Portland Water District has the ability to serve the proposed development. As the design is refined, we will provide more detailed drawings of the project for your review.

If you have any questions or need more information to make your determination on ability to serve, please contact me at (207) 632-9010 or [mtw@terradynconsultants.com](mailto:mtw@terradynconsultants.com).

Sincerely,

**TERRADYN CONSULTANTS LLC**

A handwritten signature in black ink that reads "Michael E. Tadema-Wielandt". The signature is written in a cursive, flowing style.

Michael E. Tadema-Wielandt, P.E.  
Vice President

cc: Todd Alexander, Renewall Housing Associates  
David Lloyd, Archetype

Enc.





## Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

April 19, 2017

Michael Tadema-Wielandt  
Teradyn Consultants LLC  
565 Congress Street, Suite 310  
Portland, ME 04101

Re: 1 Joy Place, PO  
Ability to Serve with PWD Water

Dear Mr. Tadema-Wielandt:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on March 30, 2017. Based on the information provided per plans dated 3/7/17, 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 does not constitute approval of this project from the District. Review and approval of final plans is required.**

### Conditions of Service

The following conditions of service apply:

- A new 6-inch fire service with 2-inch domestic service tapped off from it may be installed from the water main in Brackett Street. The service should enter through the properties frontage on Brackett Street at least 10-feet from any side property lines. Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.
- The existing building 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 per PWD standards.
- If necessary, proper easement documentation must be obtained from any properties that the new service line will cross. The easement(s) should specifically cite the right to install and maintain utilities. A copy of the deed for each of the proposed parcels must be provided to the District prior to completing new service applications.
- Water District approval of water infrastructure plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our current standards.
- Once the project is ready for construction, the owner or contractor will need to make an appointment to come in and complete a service application form and pay the necessary fees.



### Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper water service line provides water service to this 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 6-inch diameter cast iron water main in Brackett Street and a public fire hydrant located 150 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 54 psi on January 27, 2016.

### 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 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.

### 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](mailto: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 "Gordon S. Johnson", with a long, sweeping horizontal line extending to the right.

Gordon S. Johnson, P.E.  
Engineering Services Manager

April 25, 2017

Bradley Roland, P.E.  
Wastewater Resources Division  
Department of Public Services  
55 Portland Street  
Portland, ME 04101

**Onejoy Place Condominium**  
**1 Joy Place, Portland, Maine**  
**Wastewater Capacity Application**

Dear Brad:

**Terradyn Consultants LLC** has been retained by Onejoy Place, LLC and Renewal Housing Associates to assist with site design and permitting for a proposed 12-unit condominium development project located at 1 Joy Place in Portland. We are writing to request confirmation that the City of Portland has the ability to provide sanitary sewer service for the proposed development.

The 5,851 square foot parcel is identified as Block E, Lots 48 & 49 on the City of Portland Tax Map 45. The site is accessed off Bracket Street via Joy Place, a private right-of-way. An existing vacant house is located on the site. Existing sewer service for the house is located within the Joy Place right-of-way.

The proposed project includes the construction of a 2,600 square foot, 3-story building, including 12 condominium units. Joy Place will be reconstructed for vehicular and pedestrian access, and public water and sewer utilities will be installed to serve the project. It is anticipated that the existing sewer service will be removed, and a new 6" service will be installed to serve the new building.

The project is expected to generate approximately 1,440 gallons of wastewater per day based on the Maine Subsurface Wastewater Disposal Rules.

Attached are a site location figure showing the property delineated on a USGS map, preliminary site and utility plans of the project showing how the development may be served with sewer service, and a City of Portland Wastewater Capacity Application form.

Please provide our office with confirmation that the City of Portland has the ability to provide sanitary sewer service to the proposed development and any comments you may have on the attached drawing.

If you have any questions or need more information, please contact me at (207) 632-9010 or [mtw@terradync consultants.com](mailto:mtw@terradync consultants.com).

Sincerely,

**TERRADYN CONSULTANTS LLC**

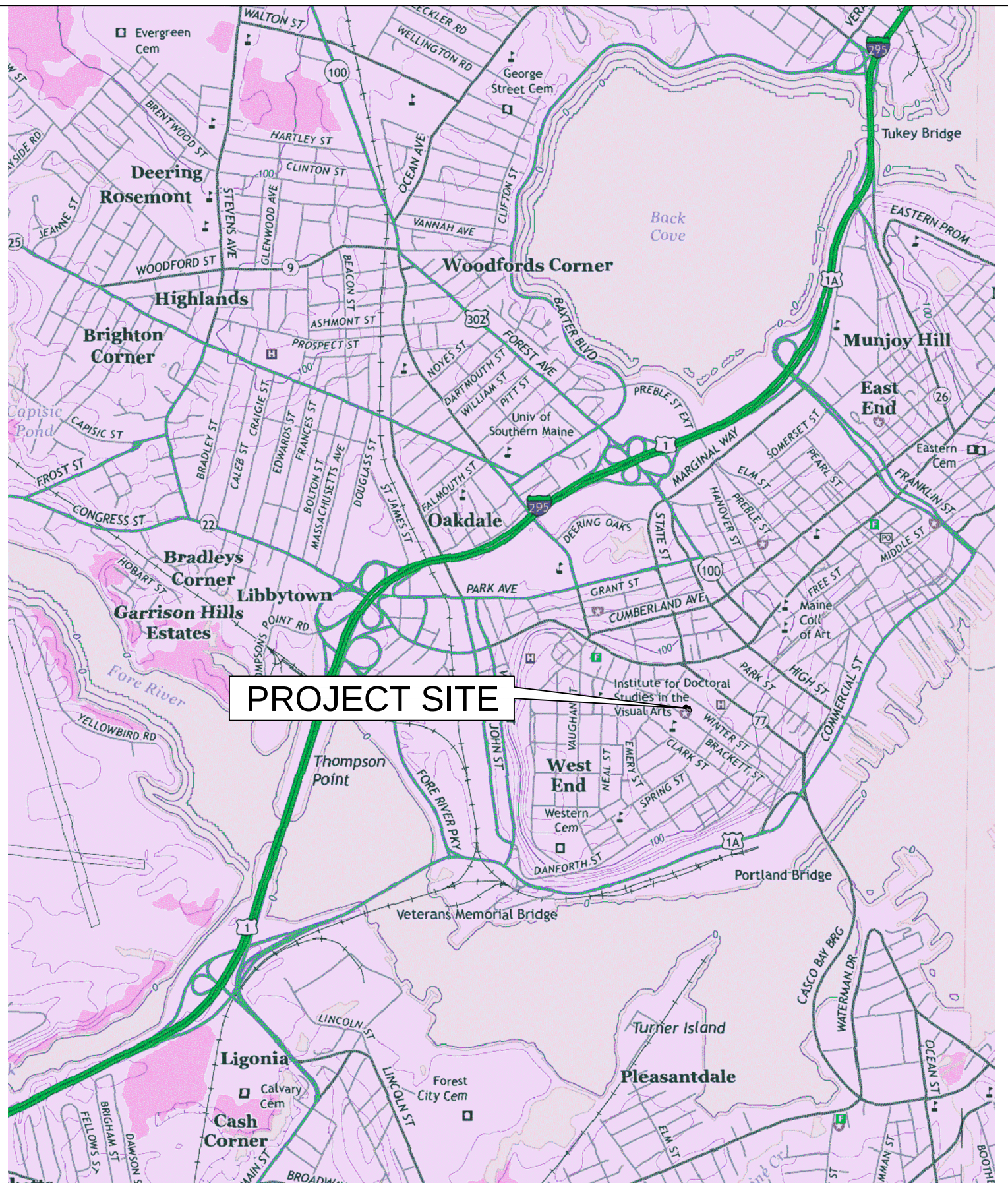
A handwritten signature in black ink that reads "Michael E. Tadema-Wielandt". The signature is written in a cursive, flowing style.

Michael E. Tadema-Wielandt, P.E.  
Vice President

cc: Todd Alexander, Renewal Housing Associates  
David Lloyd, Archetype

Enc.





SHEET DESCRIPTION  
JOY PLACE  
U.S.G.S. QUADRANGLE MAP  
PORTLAND WEST

PREPARED FOR  
RENEWALL HOUSING ASSOCIATES  
THREE CANAL PLAZA, SUITE 501  
PORTLAND, MAINE 04101



Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

P.O. Box 339  
111 Elderberry Lane  
New Gloucester, ME 04260  
Office: (207) 926-5111  
Fax: (207) 221-1317  
www.terradynconsultants.com

JOB NO.  
1704

DATE  
3/30/2017

SCALE  
1"=2,000'

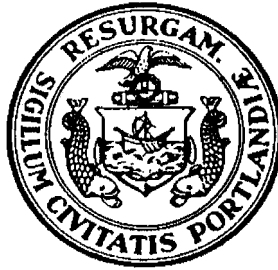
FIGURE  
1

OF  
2



# CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,  
55 Portland Street,  
Portland, Maine 04101-2991



Bradley Roland, P.E.  
Water Resources Division

Date: 4/25/2017

## 1. Please, Submit Utility, Site, and Locus Plans.

Site Address: One Joy Place, Portland

Chart Block Lot Number: 45/E/48, 45/E/49

Proposed Use: Residential

Previous Use: Residential

Existing Sanitary Flows: N/A GPD

Existing Process Flows: N/A GPD

Description and location of City sewer that is to receive the proposed building sewer lateral.

12" combined sewer in Brackett Street

Site Category

|                                    |                                     |
|------------------------------------|-------------------------------------|
| Commercial (see part 4 below)      | <input type="checkbox"/>            |
| Industrial (complete part 5 below) | <input type="checkbox"/>            |
| Governmental                       | <input type="checkbox"/>            |
| Residential                        | <input checked="" type="checkbox"/> |
| Other (specify)                    | <input type="checkbox"/>            |

*Clearly, indicate the proposed connections, on the submitted plans.*

## 2. Please, Submit Contact Information.

City Planner's Name: Not assigned yet Phone: \_\_\_\_\_

Owner/Developer Name: Onejoy Place LLC, c/o Renewal Housing Associates, LLC

Owner/Developer Address: 2 Union Street, 5th Floor, Portland, ME 04101

Phone: 207 347-3018 Fax: \_\_\_\_\_ E-mail: talexander@renewalhousing.com

Engineering Consultant Name: Terradyn Consultants, LLC, Michael Tadema-Wielandt, P.E.

Engineering Consultant Address: 565 Congress Street, Suite 310, Portland, ME 04101

Phone: 207-632-9010 Fax: \_\_\_\_\_ E-mail: mtw@terradyconsultants.com

*Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.*

## 3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 1,440 GPD

Peaking Factor/ Peak Times: x6

Specify the source of design guidelines: (i.e. "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify) State of Maine Subsurface Wastewater Disposal Rules

*Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.*

12 x 1 Bedroom Units x 120 GPD/Unit = 1,440 GPD

#### 4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A

Size of External Grease Interceptor: \_\_\_\_\_

Retention Time: \_\_\_\_\_

Peaking Factor/ Peak Times: \_\_\_\_\_

*Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.*

#### 5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: N/A GPD

Do you currently hold Federal or State discharge permits? Yes \_\_\_\_\_ No \_\_\_\_\_

Is the process wastewater termed categorical under CFR 40? Yes \_\_\_\_\_ No \_\_\_\_\_

OSHA Standard Industrial Code (SIC): (<http://www.osha.gov/oshstats/sicser.html>)

Peaking Factor/Peak Process Times: \_\_\_\_\_

*Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.*

*Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.*

\_\_\_\_\_

## **12. SOLID WASTE**

### **12.1 OVERVIEW**

The project will generate solid waste both during construction and on an on-going basis after construction is complete. Estimates of solid waste generation, recycling rates, and procedures for the transport and disposal of solid waste that will be generated by the operation of the proposed development are provided below.

The following amount of solid waste associated with the construction and operation of the development have been estimated:

- 53 cubic yards of construction debris related to the new building construction activities (excluding volume of recycled materials).
- 408 pounds per week of solid waste will be generated by the operation of the development. Assuming that 50% of the waste is recycled, it is estimated that the project will generate 5.3 tons of recyclable waste and 5.3 tons of non-recyclable waste per year.

### **12.2 SOLID WASTE GENERATED DURING THE BUILDING CONSTRUCTION**

Approximately 53 cubic yards of construction debris is expected to be generated during construction. Assuming that 80% of construction debris is recycled, construction of the project will generate approximately 26.5 c.y. of non-recyclable waste.

The waste stream will be transported and disposed of at the following locations:

|                                     |                                                                                                                                                         |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazardous Materials:                | WMI Crossroads Facility in Norridgewock, Maine                                                                                                          |
| Mixed Construction Material:        | Riverside Recycling Facility in Portland, Maine; WMI Crossroads Facility in Norridgewock, Maine or Juniper Ridge in Old Town, Maine (Contractor option) |
| Separated Wood Construction Debris: | KTI Biofuels in Lewiston, Maine                                                                                                                         |
| Separated Metal/Ferrous Material:   | One Steel Recycling Inc. in Arundel or Oakland, Maine                                                                                                   |

The collection, transfer, disposal, and payment of all fees for solid wastes shall be the responsibility of the Contractor, with all waste transferred by a licensed non-hazardous waste transporter.



### **12.3 SOLID WASTE GENERATED FROM THE OPERATION OF THE DEVELOPMENT**

Approximately 408 pounds of solid waste and recyclable material is expected to be generated every week by the residents of the project. The operational solid waste and recyclable material will be collected by the City of Portland in accordance with Chapter 12 of the City Code.

### **12.4 ATTACHMENTS**

Attachment 12-A – Computations of Types and Volumes of Solid Wastes for Construction Project

**ATTACHMENT 12-A**

**Computations of Types of Volumes of Solid Wastes**

## ATTACHMENT 12-A

### **SOLID WASTES COMPUTATIONS AND DISPOSAL**

#### **A. NEW BUILDING CONSTRUCTION:**

Basis of Estimate: 10 c.y./1,500 s.f. of finished space

Area: Approximately 7,845 square feet of finished space

Solid Waste: Approximately 53 c.y.

Other Wastes Associated with Other Site Construction: Cardboard from packaging etc.: Limited Quantity

Total: 53 c.y. before recycling

Net: 11 c.y. if 80% of the material is recycled

#### Disposition:

Assume 10 percent is concrete which can be sent to the approved aggregate recycling facilities operated by Shaw Bros. or R.J. Grondin and Sons for processing into recycled aggregate.

Assume 70 percent is wood or metal which can be transported to KTI Biofuels in Lewiston (for wood) or One Steel Recycling in Oakland, Maine for metals.

Approximately 11 cubic yards of mixed construction debris that will be hauled to the Riverside Recycling Facility in Portland, WMI Crossroads facility in Norridgewock, Maine or the Juniper Ridge Facility in Old Town, Maine.

The contractor should provide dumpsters designated by material type and identify recycling methods and disposal sites prior to construction. All haulers must have a current non-hazardous waste haul license.

#### **B. OPERATIONAL SOLID WASTE:**

##### **RESIDENTIAL USE:**

Basis of Estimate: 17 pounds/wk per individual. Estimate of 2 individuals per residential unit. From Table 14-1 of the CEQR Technical Manual from January 2014 Edition; Source: New York City Department of Sanitation.

Number of individuals: 24

Solid Waste: Approximately 408 pounds/week

## **13. FIRE SAFETY**

### **13.1 OVERVIEW**

The applicant and project team will provide the Portland Fire Department with the information required in the PFD Site Review Checklist, as well as a basic review of NFPA 1 and City of Portland Technical Standards related to public safety.

The project site will be accessed from Joy Place, which will be improved with a 22.5' wide paved surface. A 6" cast iron water main owned by the Portland Water District currently exists in Brackett Street, and the closest fire hydrant is located on the west side of Brackett Street, approximately 25 feet south of the intersection of Brackett Street and Joy Place.

Joy Place will provide access to two sides of the proposed building, which will be fully sprinkled in compliance with all applicable codes.



## **14. CONFORMITY WITH APPLICABLE DESIGN STANDARDS**

### **14.1 OVERVIEW**

This project conforms to all applicable Site Plan Standards of Section 14-526 of the city's Land Use Ordinance as described in the following narrative.

#### **(a) Transportation Standards**

##### **1. Impact on Surrounding Street Systems:**

The project will not have a significant impact on the surrounding street system. Vehicles will access the site and parking areas from existing access points and the estimated number of new vehicle trips generated by the project is insignificant compared to existing trips on surrounding streets.

##### **2. Access and Circulation:**

###### **a. Site Access and Circulation**

(i) Pedestrian access to the site will be provided via a new sidewalk along Joy Place, connecting to the existing sidewalk on Brackett Street. Door controlled access will be provided at each of the building entry locations.

(ii) The project will use existing points of access.

(iii) Drive up features are not proposed

(iv) Site access has been designed so as not to impede potential future connection to adjacent streets.

###### **b. Loading and Servicing**

(i) Delivery or service vehicles are expected to be infrequent and may temporarily use on-street parking on Brackett Street or access the site from Joy Place.

###### **c. Sidewalks.**

(i) A new sidewalk will be constructed along the Joy Place right-of-way and will connect to the existing city sidewalk on Brackett Street. All sidewalk improvements shall conform to the City of Portland Technical Manual as shown on the project drawings.

(ii) The sidewalk ramp at Joy Place will be reconstructed in accordance with City of Portland Technical Design Standards.

- (iii) The proposed sidewalk along Joy Place will connect directly to the existing city sidewalk on Brackett Street.

3. Public Transit Access:

Metro Bus Route 8 runs east on Spring Street. The nearest bus stop to the project is at the intersection of Spring Street and Brackett Street, approximately 450' south of Joy Place. The project does not meet the minimum threshold to require a new transit facility.

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

- (i) The project requires one parking space per unit, or 12 total spaces. Four (4) spaces will be provided on site, south of the building, and will be accessed from Joy Place. One of the on-site spaces will be accessible, and two will be compact spaces. The applicant is currently negotiating with the city to provide 10 additional off-street parking spaces within the city owned surface parking lot directly south of the project site via a lease parking agreement.
- (ii) A parking study is not required for this project.
- (iii) Not applicable
- (iv) Of the 14 proposed parking spaces, 12 will meet the dimensional requirements for a "Standard Parking Space" (9' x 18'), and 2 will meet the requirements for a "Compact Parking Space" (8' x 15') as defined in the City of Portland Technical Manual. Approximately (14%) of the parking spaces will be compact spaces.
- (v) The proposed on-site parking area, as well as the existing city owned parking lot, will be paved with bituminous concrete.

b. Location and Required Number of Bicycle Parking Spaces:

- (i) The project requires 2 bicycle parking spaces for every 5 dwelling units, or 5 spaces. A minimum of 5 bicycle parking spaces will be provided in the basement storage area.

c. Motorcycles and Scooter Parking:

- (i) Dedicated motorcycle/scooter parking is not provided.

d. Snow Storage:

- (i) Because of the unique characteristics of the site and the Joy Place right-of-way, there is limited area available for snow storage. Landscaped areas in front of the proposed building and north of the entrance will be available for snow storage. A snow removal plan will be implemented as required.
- (ii) Snow will not be stored in parking areas, and no bio-retention is proposed.

5. Transportation Demand Management (TDM):

- a. A TDM plan is not required for this project.

**(b) Environmental Quality Standards**

1. Preservation of Significant Natural Features:

- a. The development site has been entirely developed and does not contain any significant natural features including wetlands, vernal pools or other protected resources or wildlife habitats.

b. Not applicable

c. Not applicable

2. Landscaping and Landscaping Preservation:

a. Landscape Preservation.

- (i) The only two trees on the project site are in the northwest corner of the parcel. One tree is located less than 3' from the brick structure on the abutting property and has exposed roots. The other onsite tree is located along the western property boundary is damaging the existing fence in this location. Both trees will be removed as part of the project.

(ii) The existing trees are not within required setback areas

(iii) Not applicable.

(iv) A waiver is not required from this standard.

(v) The project is not in the Shoreland Zone

b. Site Landscaping.

- (i) Landscaped Buffers:

(a) The proposed solid waste containers will be enclosed in a cedar enclosure. No other storage or service areas are proposed.

(b) Not applicable.

(c) Not applicable.

(d) Not applicable.

(ii) Parking Lot Landscaping:

(a) Not applicable. The onsite parking area will only have 4 parking spaces.

(b) Not applicable.

(c) Not applicable.

(d) Not applicable

(e) Not Applicable

(iii) Street Trees

(a) Two street trees are proposed along the private Joy Street Right of Way. The trees will be located within the proposed sidewalk located on the abutting city-owned parcel.

(b) Not Applicable.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

The existing project site, including the Joy Place right of way, contains approximately 5,550 square feet of impervious surface.

Redevelopment of the project site will result in an increase of approximately 820 square feet of impervious area and a total impervious surface of 6,365 square feet. This level of development is not required to meet the General or Flooding Standards.

Post development stormwater runoff will follow existing patterns. Runoff from Joy Place, the four proposed parking spaces, and the proposed building will drain to Brackett Street, where it will enter the city's combined storm sewer. Runoff from the remainder of the site will drain overland across the eastern property boundary, as it does today.

(i) The project will not result in flooding of adjacent lots.



- (ii) Runoff volumes and rates will not increase onto adjacent lots.
  - (iii) Volumes and rates of stormwater runoff into the Brackett Street right of way are expected to decrease. The project will not create ponding, flooding, or other drainage problems within Brackett Street.
  - (iv) Volumes and rates of stormwater runoff into the city's storm drain network are expected to be similar to existing volumes and rates. The project will not create problems downstream or exceed the capacity of the system.
- b. The project will result in less than 1,000 square feet of new impervious surface and less than 5,000 square feet of non-roof redeveloped impervious surface and is not required to meet the General or Flooding Standards.
  - c. Not Applicable. The project is not located in a watershed of an urban impaired stream.
  - d. Not applicable.
  - e. The project will be served by both a public wastewater system and public drainage system. The project will not pose a risk of groundwater contamination.
  - f. Wastewater will flow to the public sewer system, which is adequately sized for the project flows.

**(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 of Portland Land Use Ordinance and off-premises infrastructure.
- b. Not applicable.

2. Public Safety and Fire Prevention:

- a. The site has been designed to promote safety and security for residents and their guests. Access to the common yard area will be restricted using a key pad operated locked gate at the northwest corner of the proposed building. Site lighting will provided added security.

- b. Emergency vehicle access will be via Joy Place, which will feature a 22.5' wide paved surface.
- c. An existing fire hydrant is located on the west side of Brackett Street, across from the project site. The proposed building will also feature sprinklers for fire suppression.

3. Availability and Adequate Capacity of Public Utilities:

- a. The project will be served by new water, sewer, and storm drain utilities. The Portland Water District has indicated that their system has capacity to serve the project, and a Wastewater Capacity Application has been forwarded to Brad Roland at the City of Portland.
- b. Overhead electrical and telecommunications utilities exist in Brackett Street. The project site will be served by underground utilities.
- c. All new utility infrastructure will meet the provisions of the Technical Manual.
- d. The project will be connected to the public sewer system within Brackett Street.
- e. The sanitary sewer and stormwater collection systems were designed to comply with City standards.
- f. An exterior solid waste storage area will be located on the north side of the building, accessible to only residents. The solid waste containers will be screened and protected with a cedar enclosure, and will not be visible from public areas or adjacent properties.

**(d) Site Design Standards**

1. Massing, Ventilation and Wind Impact:

- a. The bulk, location and height of the proposed building will not result in adverse impacts to abutting properties.
- b. The bulk, location and height of the proposed building will not substantially reduce the value or utility of adjacent structures.
- c. HVAC systems will be located on the roof of the proposed building. Venting is proposed to be directed away from public spaces and adjacent residential sites.

2. Shadows:

- a. The project is not expected to cause shadows on publically available open space, or have an adverse effect on vegetation as a result of shadows cast from the proposed building.

3. Snow and Ice Loading:

- a. The proposed building will have a flat roof. Accumulated snow and ice will not fall onto adjacent properties or public ways.

4. View Corridors:

- a. The project site is located outside the Downtown Vision View Corridor Protection Plan.

5. Historic Resources:

- a. The development subject to a Certificate of Appropriateness under article IX (historic preservation) of the Land Use Ordinance.
- b. Not Applicable
- c. There are no known archaeological resources on the site.

6. Exterior Lighting:

a. Site Lighting

- (i) Exterior site lighting will be provided by building mounted lights, including recessed canopy and wall packs, and two pole mounted lights along the proposed sidewalk adjacent to Joy Place. All fixtures will feature full cut-off optics to prevent unintended light pollution. Proposed lighting is shown on the Lighting Photometric Plan (Sheet P-1).

b. Architectural and Specialty Lighting:

- (i) No architectural or specialty lighting is proposed.
- (ii) No up-lighting is proposed.

c. Street Lighting

- (i) No street lighting is proposed

7. Noise and Vibration:

Noise levels are expected to meet the permitted levels for the B-1 Zone.

- a. HVAC and Mechanical Equipment
  - (i) HVAC equipment will be located on the roof of the proposed building and will meet all applicable state and federal emissions requirements. The units will not be visible from Brackett Street or adjacent sites.
  - (ii) Not Applicable. No emergency generator is proposed.

8. Signage and Wayfinding:

- a. All signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.
  - (i) The project is subject to a Certificate of Appropriateness.
  - (ii) Not applicable. No commercial or directional traffic signage is proposed as part of the project.
  - (iii) Not applicable. No on-site directional traffic signage is proposed as part of the project.
  - (iv) Not applicable. No waiver is required.

9. Zoning Related Design Standards:

- a. The project is located within a historic zone and is subject to the City of Portland Historic Preservation standards.



## **15. VERIFICATION OF PROPOSED HVAC EQUIPMENT**

### **15.1 OVERVIEW**

The following manufacturer cut sheets verify that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

### **15.2 ATTACHMENTS**

Attachment 15-A – HVAC Equipment Cut Sheets

**ATTACHMENT 15-A**

**HVAC Equipment Cut Sheets**

# System 12RLFCD Submittal

**AOU12RLFC, ARU12RLF**

## Compact Duct

Job Name: \_\_\_\_\_ Approval: \_\_\_\_\_ Date: \_\_\_\_\_  
 Location: \_\_\_\_\_ Construction: \_\_\_\_\_  
 Engineer: \_\_\_\_\_ Unit #: \_\_\_\_\_  
 Submitted to: \_\_\_\_\_ Drawing #: \_\_\_\_\_  
 Submitted by: \_\_\_\_\_ Reference: \_\_\_\_\_

**Outdoor Unit Power** 208-230/VAC-1Ph-60Hz  
 Available Voltage Range 187-253VAC  
 Fuse Size, Max. 15A  
 MCA 13.4A

**Compressor** Inverter Driven Variable Speed DC Rotary  
 No. used 1  
 Output 850W  
 Lubricant Oil POE (RB68)

**Fan type** Propeller  
 Motor Output 115W  
 Airflow Rate Cooling/Heating (High) 1206 / 1083CFM

**Refrigerant** 410A  
 Outdoor Unit 2lbs 10oz  
 Control Electronic Expansion Valve  
 O.D. Discharge (in) 1/4"(Flare)  
 O.D. Suction (in) 3/8"(Flare)

**Dimensions** H x W x D  
 Uncrated (in) 24-1/2 x 31-3/32 x 11-11/32  
 (mm) (620 x 790 x 290)  
 Crated (in) 28-1/16 x 37-7/32 x 15-9/16  
 (mm) (713 x 945 x 395)

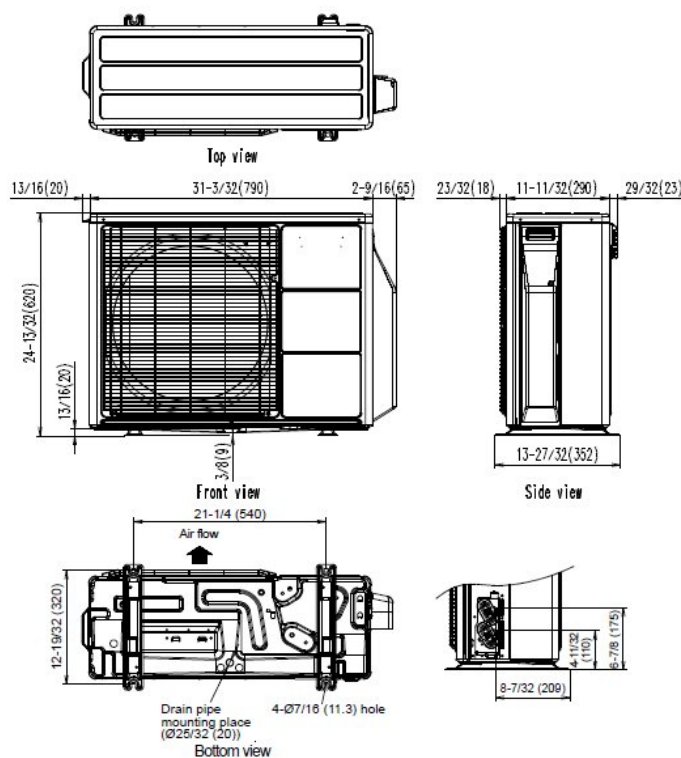
**Weight** Outdoor  
 Net 84lbs (38kg)  
 Gross Shipping 93lbs (42kg)

**Cooling**  
 Rated Capacity 12,000BTU/h  
 Min-Max Capacity 3,100~13,600BTU/h  
 Rated Power Input 0.94kw  
 Max. Power Input 1.45kw  
 SEER 20.0  
 Outdoor Sound Rating 49dB

**Heating**  
 Rated Capacity 16,000BTU/h  
 Min-Max Capacity 3,100~19,400BTU/h  
 Rated Power Input 1.30kw  
 Max. Power Input 2.00kw  
 HSPF 11.5  
 Outdoor Sound Rating 50dB

**Piping Lengths**  
 Max. Piping Length (Total) 66ft  
 Max. Pipe Height Difference 49ft  
 Connection method (Flared)

**Operating Range**  
 Cooling 14°F~115°F DB  
 Heating -5°F~75°F DB



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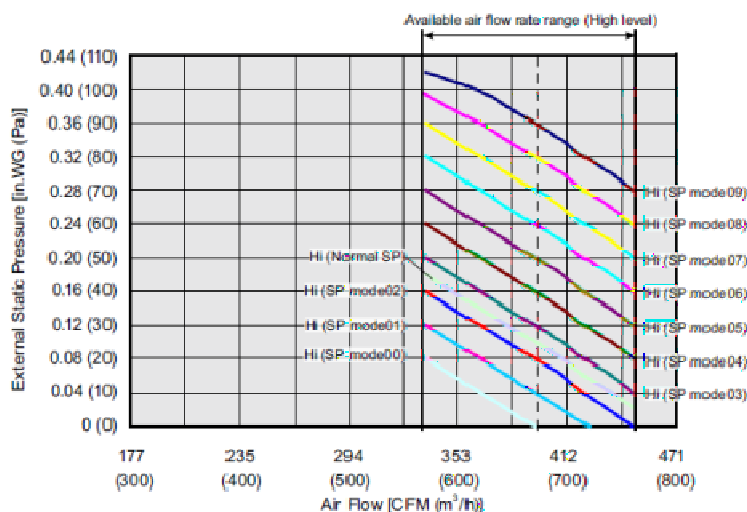
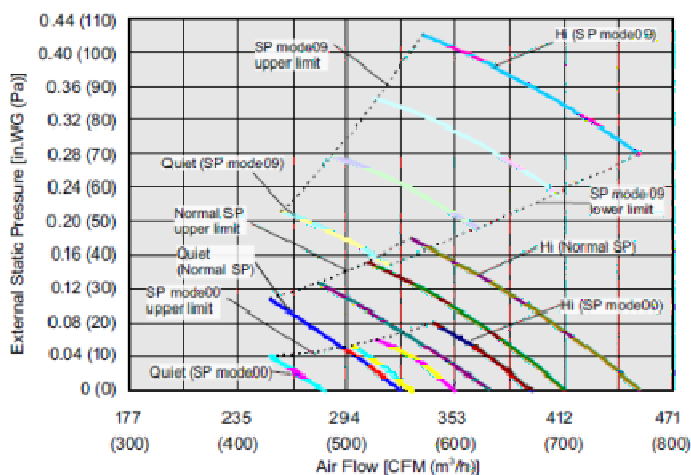


|                      |                  |                              |
|----------------------|------------------|------------------------------|
| <b>Power</b>         | V/Hz/P           | 230/60/1                     |
| <b>Fan type</b>      |                  | Sirocco                      |
| No. Motors           | (W)              | 2 (81)                       |
| CFM [1.10 in.WG]     | (Hi,Me,Lo,Qu)    | 383/353/324/283              |
| Sound Pressure Level | db (Hi,Me,Lo,Qu) | 29/28/27/26                  |
| F.L. A.              | (A)              | .37                          |
| <b>Refrigerant</b>   |                  | 410A                         |
| O.D. Discharge       | in (mm)          | Ø1/4" (6.35)                 |
| O.D. Suction         | in (mm)          | Ø3/8" (9.52)                 |
| <b>Dimensions</b>    |                  | H x W x D                    |
| Uncrated             | (in)             | 7-25/32 × 27-9/16 × 24-13/32 |
|                      | (mm)             | (198 × 700 × 620)            |
| Crated               | (in)             | 10-7/8 × 38-1/8 × 29-3/4     |
|                      | (mm)             | (276 × 968 × 756)            |
| <b>Weight</b>        |                  |                              |
| Net                  | lbs. (kg)        | 41 (19)                      |
| Gross Shipping       | lbs. (kg)        | 55 (25)                      |

|                                  |            |                  |
|----------------------------------|------------|------------------|
| <b>Cooling Capacity</b>          | (BTU/h)    | 12,000           |
| <b>Moisture Removal</b>          | pt/h (l/h) | 2.7 (1.3)        |
| <b>Heating Capacity</b>          | (BTU/h)    | 13,500           |
| <b>Temperature Setting Range</b> |            |                  |
| Cooling                          | °F(°C)     | 64~90 (18~32)    |
| Heating                          | °F(°C)     | 60~88 (16~31)    |
| <b>Drain Pipe Size**</b>         | OD in      | Ø1-1/16          |
|                                  | ID in      | Ø3/4             |
| <b>Remote Control Type</b>       |            | Wired            |
| <b>Electrical Connection*</b>    | AWG        | 14/3 with ground |

\*Power and communication are fed from the outdoor unit.

\*\*Adapter to 3/4" PVC included with unit.



**Note:**

Specifications are based on the following conditions.

Power source of specifications : 230V

Cooling: Indoor temperature of 80°F(26.67°C)DB / 67°F(19.44°C)WB, and outdoor temperature of 95°F(35°C)DB/75°F(23.89°C)WB.

Heating: Indoor temperature of 70°F(21.11°C)DB / 60°F(15.56°C)WB, and outdoor temperature of 47°F(8.33°C)DB/43°F(6.11°C)WB.

Standard Static Pressure: 0.10in.WG (25Pa)

Pipe length : 16.4ft. (5m) [Outdoor unit - Branch box], 9.8ft. (3m) [Branch box - Indoor unit]

Height difference : 0 ft.(0m) [Outdoor unit - Indoor unit]

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## Submittal Data: 18RLFCD Inverter Driven Heat Pump

18,000 BTU Slim Compact Duct

Job Name: \_\_\_\_\_

Date: \_\_\_\_\_

Location: \_\_\_\_\_

Approval: \_\_\_\_\_

Engineer: \_\_\_\_\_

Construction: \_\_\_\_\_

Submitted to: \_\_\_\_\_

Unit #: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Drawing #: \_\_\_\_\_

Reference: \_\_\_\_\_

### General Features

- Wired remote controller
- Weekly timer
- Dry mode
- Auto louver: up/down
- Auto mode
- Auto changeover
- Low ambient cooling
- Cold prevention
- Daisy chain
- Condensate pump
- Standard Warranty: 5 years parts, 7 years compressor. Applies to systems purchased before June 1<sup>st</sup> 2015\*
- Extended Warranty: 10 years parts, 10 years compressor. Systems that have been installed on or after June 1<sup>st</sup> 2015 by licensed contractors and the online Product Registration has been submitted.\*\*
- Elite Contractor Extended Warranty: 12 years parts, 12 years compressor. Systems that have been installed on or after June 1<sup>st</sup> 2015 by contractors who have met requirements and have been approved for elite contractor status plus, the online Product Registration has been submitted. \*\*\*

### Model Information

Condenser..... AOU18RLFC  
Evaporator..... ARU18RLF

**Electrical**..... 208/230V AC 1ph-60Hz

Available voltage range..... 208/230 +/- 10%

Minimum circuit ampacity..... 17.3 A

Max fuse size..... 20 A

Rated Current

Cooling..... 6.6 A

Heating..... 7.3 A

Input Power

Cooling..... 1.50 kW

Heating..... 1.67 kW

**Capacity**

Nominal cooling..... 18,000 Btu/h

Min-max cooling..... 3,100 – 20,100 Btu/h

Nominal heating..... 21,600 Btu/h

Min-max heating..... 3,100 – 25,600 Btu/h

**Compressor**

Motor output..... 1,000 W

Refrigerant..... R410a

Charge..... 2 lbs. 14 oz.

Oil..... FREOL α68SZ

**Fan Motor**

(Condenser) Type: DC..... Propeller fan x1

(Condenser) Motor Output..... 115 W

(Evaporator) Type..... Sirocco fan x3

(Evaporator) Motor Output..... 96 W

**Heat Exchanger**

Condenser

(H x W x D) in. (mm)..... 23-5/32 x 34-11/16 x 1-7/16 (588x881x36.4)

Fin Pitch..... 20 FPI

Rows x stages..... 2 x 28

Pipe type (Material)..... Copper

Type (Material)..... Aluminum



### Temperature Setting Range

Cooling..... 14°F - 115°F (-10°C – 46°C)

Heating..... -5°F - 75°F (-21°C - 24°C)

### Efficiency

SEER..... 19.7

EER (cooling)..... 3.52 kW/kW

COP (heating)..... 3.79 kW/kW

HSPF (heating)..... 11.3 Btu/hW

Moisture Removal..... 4.2 pints/h / 2.0 liters/h

### Enclosure

(Condenser) Material..... Steel

(Condenser) Color..... Beige (approximate color or Munsell 10 YR 7.5/1.0)

(Evaporator) Material..... Galvanized steel sheet

### Sound Pressure Level

Condenser..... 55 dB (A)

Evaporator..... 32 dB (A)

### Dimensions

H x W x D

Condenser in. (mm)..... 24-1/2 x 31-3/32 x 11-11/32 (620x790x290)

Evaporator in. (mm)..... 7-25/32 x 35-7/16 x 24-13/32 (198x900x620)

### Connection Pipe

Liquid..... 1/4" in. (6.35 mm)

Gas..... 1/2" in. (12.7 mm)

Method (Liquid/Gas)..... Flare

Internal Drain Pump Lift..... 27-9/16"

### Weight

Condenser..... 86 lbs. (39 kg)

Evaporator..... 50 lbs. (23 kg)

### Accessories

UTY-RNNUM..... Wired remote controller

UTY-RVNUM..... Wired remote controller (backlit, shows room temp.)

UTY-RSNUM..... Wired remote controller (simple)

UTY-XSZX..... Remote sensor

UTY-LRHUM..... Receiver unit

UTD-ECS5A..... Slim duct connector kit

UTD-GXSA-W..... Auto louver grille kit

### Intertek® ETL Number

AOU18RLFC..... 91986

ARU18RLF..... 3170288

Fujitsu General America, Inc.

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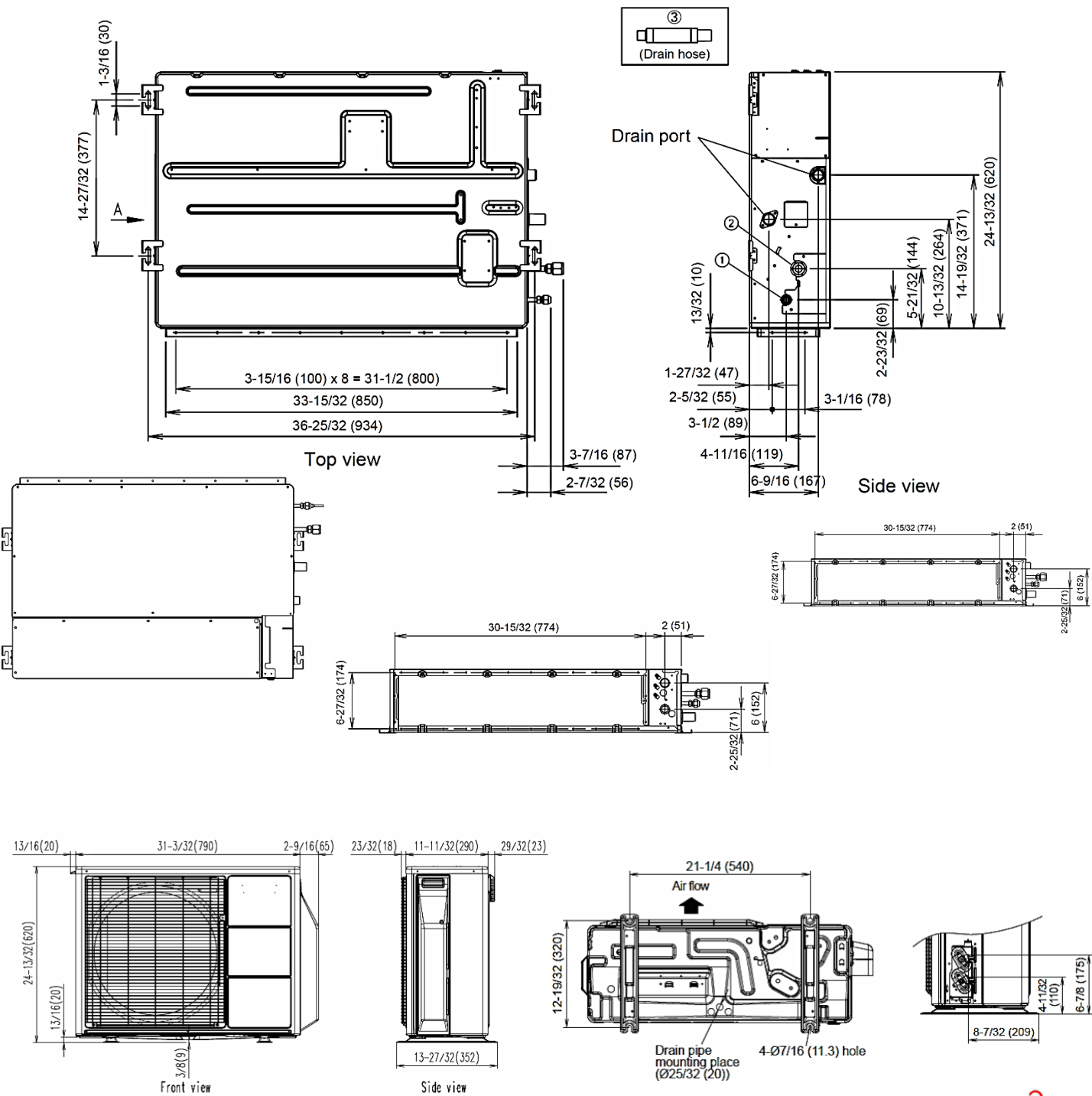
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Note: Specifications are based on the following conditions:  
Cooling: Indoor temperature of 80°F (26.7°C) DB/67°F (19.44°C) WB, and outdoor temperature of 95°F (35°C) DB/75°F (23.9°C) WB.  
Heating: Indoor temperature of 70°F (21.11°C) DB/59°F (15°C) WB, and outdoor temperature of 47°F (8.33°C) DB/43°F (6.11°C) WB.  
Pipe length: 24ft. 7in. (7.5m), Height difference: 0ft. (0m) (Outdoor unit – indoor unit)  
(\*Standard warranty / \*\*10 year warranty / \*\*\*12 year warranty)

## Dimensions: 18RLFCD

[Unit: in. (mm)]



May 30, 2017

Ms. Barbara Barhydt  
Development Review Services Coordinator  
Planning Division  
389 Congress Street, 4<sup>th</sup> Floor  
Portland, ME, 04101

**Onejoy Place Condominium**  
**One Joy Place, Portland**  
**Conditional Use Application – Inclusionary Zoning**

Dear Barbara:

On behalf of Onejoy Place, LLC, Terradyn Consultants is pleased to submit the enclosed Conditional Use Application for Onejoy Place Condominium, a proposed 12-unit condominium building located at 1 Joy Place in Portland.

A complete Level III Development Review application was submitted for the project on April 25, 2017. Because the project includes more than 10 residential units, a Conditional Use permit is also required, and the project must comply with the requirements of Section 14-487 of the city's Land Use Ordinance, which is intended to ensure an adequate supply of workforce housing.

The proposed building includes 12 one-bedroom apartments ranging between 477 and 650 square feet. Floor Plans were previously submitted as part of the Level III Development Review Application. One first floor unit (Unit 1-A) will be designated as a Workforce Unit.

Unit 1-A will have the same number of bedrooms as the other units, and will be outfitted with the same finish package. It will be marketed through a broker and listed on the Multiple Listing Service (MLS). The unit will be deed restricted with income restrictions for perspective buyers and a price set by the formula in the city's Inclusionary Zoning regulations.

The previously submitted Development Review Application materials contained many of the submission requirements for the Conditional Use application, including a description of the development, evidence of the applicant's right, title, and interest, and proposed floor plans. Below is a description of how the project will meet the standards of Section 14-487.

1. The project will be constructed in a single phase.
2. The proposed workforce unit will be completely integrated within the proposed building and will be accessed by the same entrance as the other 11 units.
3. All of the proposed units, including the proposed workforce unit, will have one bedroom and will feature a similar layout.
4. The applicant is proposing to provide the required number of workforce units and will not pay the in-lieu fee.
5. The proposed units will be sold as condominium units. The applicant acknowledges that if the workforce unit is converted to a rental unit, it shall become subject to the income limits and other requirements for such units.
6. Fewer than 33% of the total units will be workforce units. Therefore, the project is not eligible for subsidy through an Affordable Housing TIF.
7. The project will meet the minimum term of affordability required by the Land Use Ordinance.

We look forward to your review of this project and request to be placed on the next available Planning Board agenda to discuss the project with the Board. In the interim, if you have any questions or need additional information, please contact me.

Sincerely,

**TERRADYN CONSULTANTS LLC**



Michael E. Tadema-Wielandt, P.E.  
Vice President

cc Todd Alexander, Onejoy Place LLC  
David Lloyd, Archetype PA

Enc.





# Conditional Use for Ensuring Workforce Housing Inclusionary Zoning Planning Board Review Application Portland, Maine

Planning and Urban Development Department  
Planning Division and Housing and Community Development

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Conditional Use review of applications to ensure workforce housing in development projects that create ten or more new dwelling units. The units may be for rent or for sale and created through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements. At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or rent. All developments of ten units or more a conditional uses subject to Planning Board review on the condition that they comply with the requirements of section 14-487.

## A. Ensuring Workforce Housing: Standards -Section 14-484

**(d) Workforce Housing Minimum** At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or for rent. The number of units required is rounded down to a whole number if providing units on- or off-site, or shall include a fractional value in cases where a project prefers to pay a fee-in-lieu as per (e)3. below.

### **(e) Standards**

1. Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.
2. Workforce units are encouraged to be integrated with the rest of the development, should use a common entrance and should provide no indications from common areas that these units are workforce housing units.
3. Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be 10 percent of the total number of bedrooms in the development. For the purposes of this section, for every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.
4. As an alternative to providing workforce housing units, projects may pay a fee in lieu of some or all of the units. In-lieu fees shall be paid into the Housing Trust Fund as defined in Sec. 14-489. The fee for affordable units not provided shall be \$100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement.
5. Workforce housing units for sale, if converted to workforce housing units for rent, shall become subject to the income limits and other requirements of such units.
6. If at least 33 percent of the units in a development are workforce units, the development is eligible for subsidy through an Affordable Housing TIF, subject to City Council approval.

7. The term of affordability for the required 10 percent workforce units provided shall be defined as follows:

| Percentage of Workforce Units Provided | Minimum Term of Affordability for Required Workforce Units                |
|----------------------------------------|---------------------------------------------------------------------------|
| 10%                                    | Longest term permitted under federal, state and local laws and ordinances |
| 25%                                    | 30 years                                                                  |
| 50%                                    | 20 years                                                                  |
| 100%                                   | 10 years                                                                  |

**(f) Implementing Regulations.** Regulations to further specify the details of this section shall be developed, including, but not limited to:

1. Specific methodology for income verification;
2. Situations where less than permanent affordability might be considered; and
3. Guidelines for meeting the requirement that off-site units be “in the same neighborhood”.

**B. Site Plan Application: Please submit the Conditional Use Application in addition to the applicable Site Plan Application.**

Portland’s development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: <http://me-portland.civicplus.com/DocumentCenter/Home/View/1080>

Design Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2355>

Technical Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2356>

**Planning Division**

Fourth Floor, City Hall  
389 Congress Street  
(207)874-8719

**Housing and Community Development**

Room 313, Third Floor, City Hall  
389 Congress Street  
(207)482-5028

**Office Hours**

Monday thru Friday  
8:00 a.m. – 4:30 p.m.

**PROJECT NAME:**

Onejoy Place Condominium

**PROPOSED DEVELOPMENT ADDRESS:**

1 Joy Place, Portland, Maine 04102

**CHART/BLOCK/LOT (s):** 45/E/48, 45/E/49**Applicable Zone:** B-1**CONTACT INFORMATION:**

|                                                                                                                                                                                                                                                    |                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant – must be owner, Lessee or Buyer</b><br><br>Name: Onejoy Place, LLC<br><br>Business Name, if applicable: c/o Renewable Housing Assoc.<br><br>Address: 2 Union Street, 5th Floor<br><br>City/State : Portland, ME      Zip Code: 04101 | <b>Applicant Contact Information</b><br><br>Work #    (207) 347-3018<br><br>Home#<br><br>Cell #                                      Fax#<br><br>e-mail: talexander@renewalhousing.com |
| <b>Owner – (if different from Applicant)</b><br><br>Name: SAME<br><br>Address:<br><br>City/State : Portland, ME      Zip Code: 04101                                                                                                               | <b>Owner Contact Information</b><br><br>Work #<br><br>Home#<br><br>Cell #                                      Fax#<br><br>e-mail:                                                     |
| <b>Billing Information</b><br><br>Name: Todd Alexander<br>Renewal Housing Associates<br><br>Address: 2 Union Street, 5th Floor<br><br>City/State : Portland, ME      Zip Code: 04101                                                               | <b>Billing Information</b><br><br>Work #    (207) 347-3018<br><br>Cell #                                      Fax#<br><br>e-mail: talexander@renewalhousing.com                        |
| <b>Designated person/person(s) for uploading to e-Plan:</b><br><br>Name: Michael E. Tadema-Wielandt, P.E.<br>e-mail: mtw@terradynconsultants.com<br><br><br>Name:<br>e-mail:<br><br><br>Name:<br>e-mail:                                           |                                                                                                                                                                                        |

**RIGHT, TITLE OR INTEREST:**

The applicant owns the project site. A current deed has been provided.

(Please identify the status provide documentary evidence, attached to this application, of the applicant's right, title, or interest in the subject property (ex: deed, option or contract to purchase or lease the property.)

**EXISTING USE:** Describe the existing use of the subject property.

The existing site contains a vacant house

**PROJECT DESCRIPTION:**

Construction of a three-story residential building containing 12 units.

| INCLUSIONARY ZONING:     |   |
|--------------------------|---|
| # IZ Units               | 1 |
| On-Site IZ Units         | 1 |
| Off-Site IZ Units        | 0 |
| # IZ Homeownership Units | 1 |
| # IZ Rental Units        | 0 |
| # IZ Efficiencies        | 0 |
| # IZ 1-Beds              | 1 |
| # IZ 2-Beds              | 0 |
| # IZ 3-Beds              | 0 |
| IZ Fee In-Lieu           | 0 |

**APPLICATION FEES:**

\_\_\_ Conditional Use Review to Ensure Workforce Housing  
(\$100.00)

(Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)

The City invoices separately for the following:

- Notices (\$.75 each)
- Legal Ad (% of total Ad)
- Planning Review (\$50.00 hour)
- Legal Review (\$75.00 hour)

Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.



## INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

Please refer to the application checklist (attached) for a detailed list of submission requirements.

1. Fill out the application completely and e-mail the **application only** to [planning@portlandmaine.gov](mailto:planning@portlandmaine.gov) (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.
2. An invoice for the application fee will be e-mailed to you. Payments can be made on-line at [Pay Your Invoice](#), by mail or in person at City Hall, 4<sup>th</sup> Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.
3. The designated person responsible for uploading documents and drawings will receive an email from [eplan@portlandmaine.gov](mailto:eplan@portlandmaine.gov) with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

**Reminder: Before the project can move forward, the application fee shall be paid in full and all required documents and drawings shall be uploaded into e-plan correctly.**

4. Follow the link below (Applying Online Instructions) for step by step instructions on how to do the following:  
Tab 1 - Setting up the appropriate compatibility settings for your PC and getting started in e-plan.  
Tab 2 - Preparing your drawings, documents and photos for uploading using the correct naming conventions  
Tab 3 - Preparing and uploading revised drawings and documents

### [Applying Online Instructions](#)

5. When ready, upload your files and documents into the following folders:  
"Application Submittal – Drawings"  
"Application Submittal – Documents"
6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

| Applicant Checklist | Planner Checklist | # of Copies | GENERAL WRITTEN SUBMISSIONS CHECKLIST                                                                                                                                                              |
|---------------------|-------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ✓                   |                   | 1           | Completed Application Form                                                                                                                                                                         |
| ✓                   |                   | 1           | Cover letter stating the nature of the project.                                                                                                                                                    |
| ✓                   |                   | 1           | Evidence of right, title and interest.                                                                                                                                                             |
| ✓                   |                   | 1           | Written Submittals that address the conditional use standards of Sec. 14-484, including unit size and bedroom count                                                                                |
| ✓                   |                   | 1           | Proposed Marketing Strategy                                                                                                                                                                        |
| ✓                   |                   | 1           | Written Proposal for providing workforce units on-site, off-site, or payment of fee-in-lieu.                                                                                                       |
| N/A                 |                   | 1           | If the project is to be phased, provide written description of project phasing and accommodation of workforce units.                                                                               |
|                     |                   |             | <b>Plans and Construction Details Submission Checklist</b>                                                                                                                                         |
| ✓                   |                   | 1           | An accompanying site plan application, as applicable.                                                                                                                                              |
| ✓                   |                   | 1           | Floor Plans of all units and identifying proposed designated workforce housing units                                                                                                               |
| ✓                   |                   | 1           | Interior Standards for Units for market rate and workforce housing units, including kitchen, bathroom, flooring and closet amenities                                                               |
| N/A                 |                   | 1           | If workforce units are proposed off-site, provide vicinity map with project location and workforce unit locations within the applicable census block group map or within 1500 feet of the project. |

**APPLICANT SIGNATURE:**

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

**This application is for a Conditional Use IZ Review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.**

|                                                                                                              |                                                                                             |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Signature of Applicant:<br> | Date:<br> |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|

## 1. DEVELOPMENT DESCRIPTION

### 1.1 OVERVIEW

Onejoy Place, LLC intends to construct a 3-story, 12-unit condominium building on a 5,851 square foot parcel located at 1 Joy Place in Portland, Maine. The parcel, identified as lots 48 & 49, Block E, on the City of Portland Assessors' Map 45, was formerly a residential lot but is currently vacant. The project also includes improvements to Joy Place, a private Right-of-Way used to access the site.

### 1.2 PROJECT PURPOSE AND NEED

The proposed project includes redevelopment of a vacant lot in an area that has utility infrastructure in place and will provide residential units that are compatible with the existing neighborhood.

### 1.3 EXISTING CONDITIONS

The existing site includes a vacant, dilapidated house and a slab from a former garage. The remainder of the site is primarily gravel surface. Utility services to the existing house included water, sewer, natural gas, power, and telecommunications.

Residential uses abut the site to the north, east, and west. A city-owned parking lot is located directly south of the site, and the Reiche Community School is located across Brackett Street to the west.

The site is accessed from Joy Place, a private Right-of-Way shared with the residential house at 165 Brackett Street. Joy Place is approximately 24 feet wide and features a gravel surface. The street conditions in the vicinity of the Project Site are:

| Street Name         | Description                                                | On-street Parking                                                       | Sidewalk | Notes                                                          |
|---------------------|------------------------------------------------------------|-------------------------------------------------------------------------|----------|----------------------------------------------------------------|
| Brackett Street     | Approximately 32 feet wide paved way with two-way traffic. | Yes. Parallel parking on both sides of the street in front of the site. | Brick    | "Bump out" with crosswalk to Reiche School north of Joy Place. |
| Joy Place (Private) | ~24 feet wide gravel with two way traffic                  | No                                                                      | None     |                                                                |

The site has very little elevation change. It generally slopes east to the eastern property boundary. The Joy Place right-of-way slopes gently to Brackett Street. Photographs of the existing site are provided in Attachment A-1.

### 1.4 PROPOSED DEVELOPMENT

The development program includes the following components:

### **1.4.1 ON-SITE**

A new three-story building with a footprint of 2,615 square feet will be constructed on the site. Each floor will feature four (4) one-bedroom condominium units between 475 and 660 square feet in size. The northern half of the building will feature a full basement that will be used by the residents for bicycle parking and general storage. Elevation views and perspective renderings of the proposed building are provided in Attachment 1-B.

The two first-floor units on the east side of the building will have exclusive use private yard areas, and a community yard area for all residents will be created north of the building. Solid waste bins and a kayak storage rack will also be provided on the north side of the building, which will be accessed by residents through a locked gate from the Joy Place right-of-way.

### **1.4.2 OFF-SITE IMPROVEMENTS**

New utility services will be installed in Joy Place to serve the proposed building, and the right-of-way will be graded and paved. An 8' wide brick sidewalk will be constructed on the south side of Joy Place, on property owned by the City of Portland, for the common benefit of the residents of the project and those parking in the city-owned parking lot. Street trees and lighting will be installed in the sidewalk.

### **1.5 TRAFFIC**

The 12-unit condominium project is expected to generate between 6 and 7 vehicle trips during the PM peak hour and approximately 70 vehicle trips on a weekday. The relatively small amount of traffic that will be generated by the project is not expected to have a detrimental effect on the surrounding street network.

### **1.6 SOILS/GEOTECHNICAL REVIEW**

Summit Geoengineering Services, Inc. has conducted test pits on the property and generally found between 2 and 5 feet of sandy fill over gravelly sand and glacial till. Test pit logs and a location map are provided in Attachment 1-C.

### **1.7 UTILITIES AND STORMWATER**

The proposed project will include the installation of new utility services to the building. All new utility services will be provided from the existing utilities available within Brackett Street. The proposed locations of the new utility services are shown on the Utility Plan (Sheet C-5.0). More information on proposed utility services is provided in Section 11 of this application.

Post-development stormwater runoff will closely follow existing runoff patterns. Runoff from the building and much of Joy Place will be collected in a new subsurface drainage system and conveyed to the 12" combined sewer in Brackett Street. Lawn areas will continue to flow across the eastern property boundary, as they do today. More



information on stormwater runoff from the site is provided in Section 9 of this application.

## **1.8 ATTACHMENTS**

Attachment 1-A – Existing Site Photographs

Attachment 1-B – Building Elevation Views & Renderings

Attachment 1-C – Test Pit Logs & Location Map

**ATTACHMENT 1-A**

**Existing Site Photographs**

**EXISTING SITE PHOTOGRAPHS**  
1 JOY PLACE, PORTLAND, MAINE

ONEJOY PLACE CONDOMINIUM  
ONEJOY PLACE, LLC



PHOTO 1 – STANDING IN JOY PLACE RIGHT OF WAY, FACING NORTH

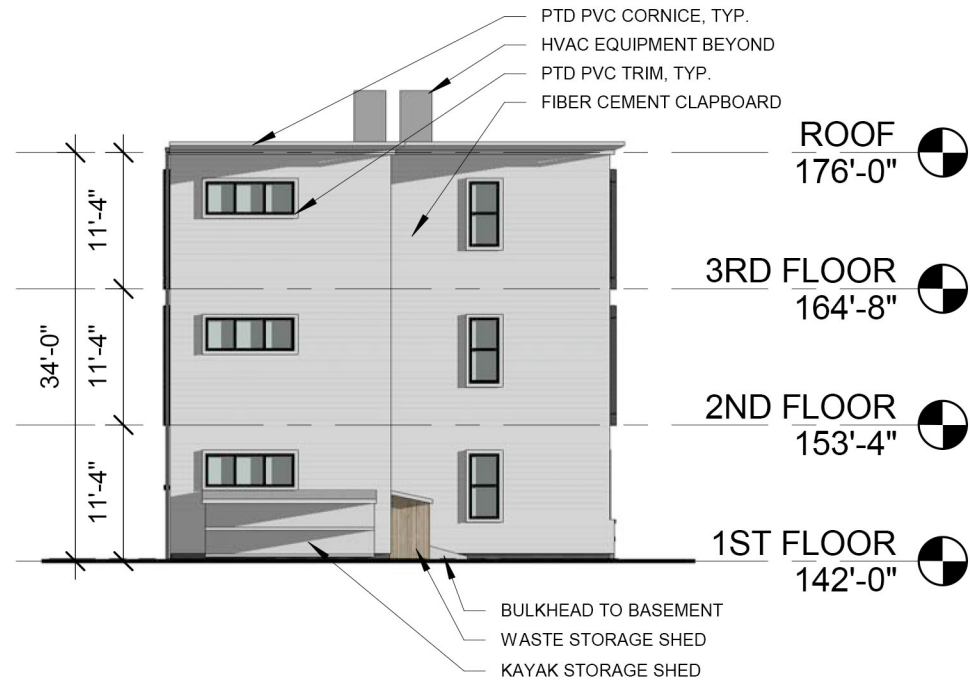


PHOTO 2 –STANDING IN THE NORTHERN PORTION OF THE LOT, FACING SOUTH.

**ATTACHMENT 1-B**

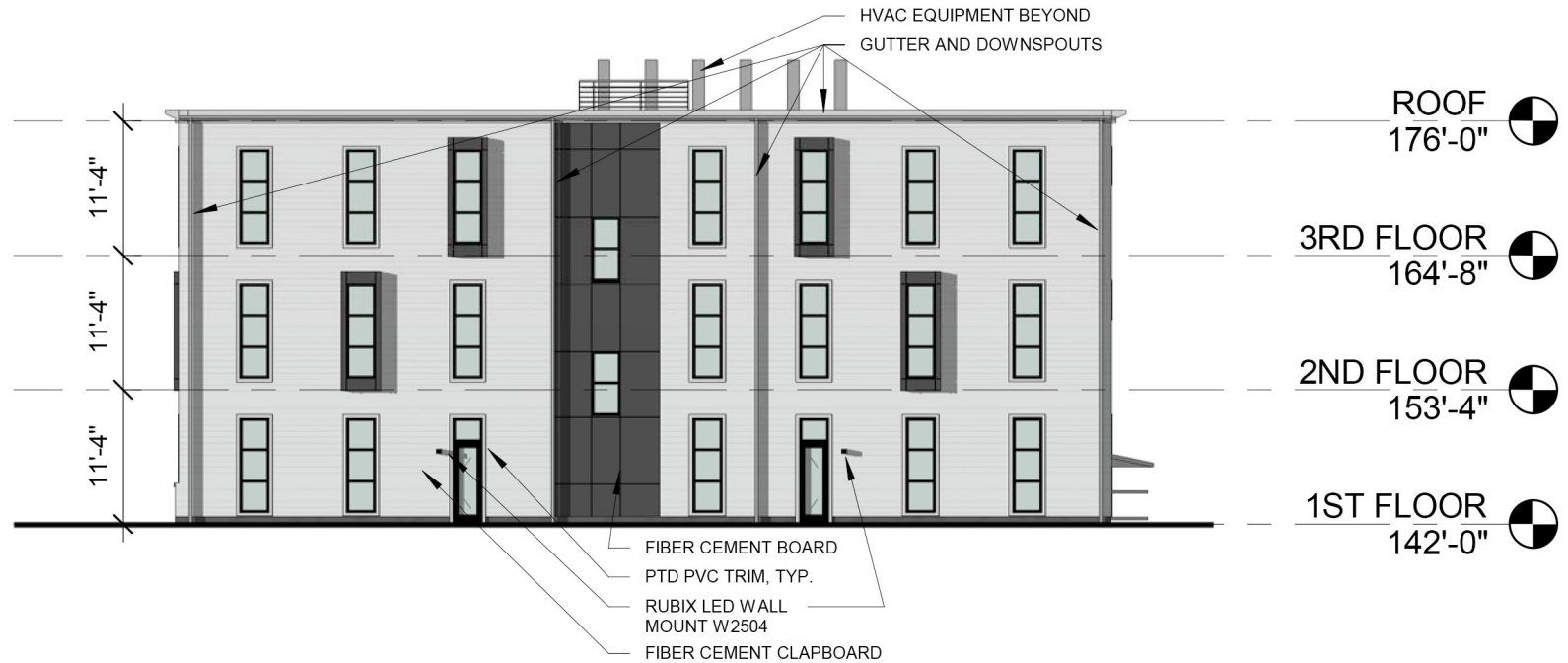
**Building Elevation Views & Perspective Renderings**





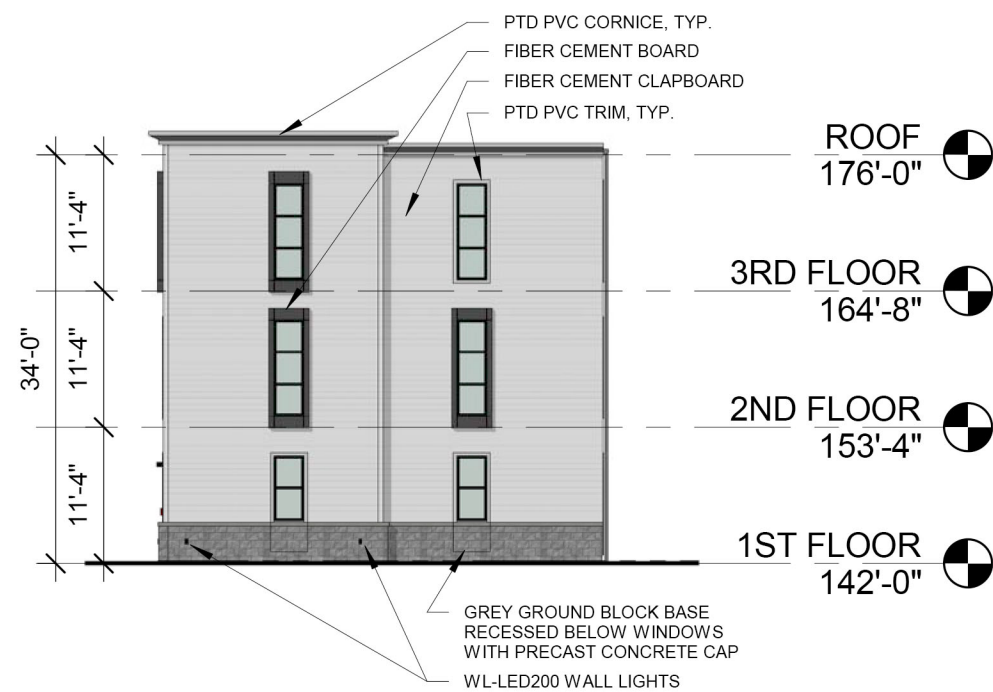
## 4 | NORTH ELEVATION

1/16" = 1'-0"



## 3 | EAST ELEVATION

1/16" = 1'-0"



## 2 | SOUTH ELEVATION

1/16" = 1'-0"



## 1 | WEST ELEVATION

1/16" = 1'-0"









**ATTACHMENT 1-C**

**Test Pit Logs & Location Map**





|                                                                                   |                                                                                    |                                                          |                |                               |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------|----------------|-------------------------------|
|  |                                                                                    | <b>TEST PIT LOG</b>                                      |                | Test Pit # <b>TP-1</b>        |
|                                                                                   |                                                                                    | Project: Joy Place<br>Brackett Street<br>Portland, Maine |                | Project #: 17053              |
|                                                                                   |                                                                                    |                                                          |                | Groundwater:<br>None Observed |
| Contractor: Summit Geoengineering Services                                        |                                                                                    | Ground Surface Elevation:                                |                |                               |
| Equipment: Tacheuchi Rubber Tracked                                               |                                                                                    | Reference:                                               |                |                               |
| Summit Staff: B. Peterlein, P.E.                                                  |                                                                                    | Date: 3/22/2017                                          | Weather: Sunny |                               |
| Depth                                                                             | <b>DESCRIPTION</b>                                                                 |                                                          |                |                               |
| (ft)                                                                              | <b>ENGINEERING</b>                                                                 | <b>GEOLOGIC/GENERAL</b>                                  |                |                               |
| 1                                                                                 | Dark brown to black Sandy SILT, little Gravel, mixed with bricks, dry, compact, ML | FILL                                                     |                |                               |
| 2                                                                                 |                                                                                    |                                                          |                |                               |
| 3                                                                                 | Olive-brown Sandy SILT, trace Gravel, few Cobbles, firm to compact, moist, SM      |                                                          |                |                               |
| 4                                                                                 | Frequent Cobbles and small Boulders                                                |                                                          |                |                               |
| 5                                                                                 | Sidewalls vertical                                                                 |                                                          |                |                               |
| 6                                                                                 | Brown Gravelly SAND, trace Silt, few Cobbles, compact, dry, SP                     | MARINE FAN DEPOSIT                                       |                |                               |
| 7                                                                                 |                                                                                    |                                                          |                |                               |
| 8                                                                                 |                                                                                    |                                                          |                |                               |
| 9                                                                                 |                                                                                    |                                                          |                |                               |
| 10                                                                                | End of Test Pit at 9 ft                                                            |                                                          |                |                               |
| 11                                                                                |                                                                                    |                                                          |                |                               |
| 12                                                                                |                                                                                    |                                                          |                |                               |
| 13                                                                                |                                                                                    |                                                          |                |                               |
| 14                                                                                |                                                                                    |                                                          |                |                               |
| 15                                                                                |                                                                                    |                                                          |                |                               |
| 16                                                                                |                                                                                    |                                                          |                |                               |
| 17                                                                                |                                                                                    |                                                          |                |                               |

|                                                                                   |                                                                                    |                                                          |                         |                               |  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------|-------------------------------|--|
|  |                                                                                    | <b>TEST PIT LOG</b>                                      |                         | Test Pit # <b>TP-2</b>        |  |
|                                                                                   |                                                                                    | Project: Joy Place<br>Brackett Street<br>Portland, Maine |                         | Project #: 17053              |  |
|                                                                                   |                                                                                    |                                                          |                         | Groundwater:<br>None Observed |  |
| Contractor: Summit Geoengineering Services                                        |                                                                                    | Ground Surface Elevation:                                |                         |                               |  |
| Equipment: Tacheuchi Rubber Tracked                                               |                                                                                    | Reference:                                               |                         |                               |  |
| Summit Staff: B. Peterlein, P.E.                                                  |                                                                                    | Date: 3/22/2017                                          |                         | Weather: Sunny                |  |
| Depth                                                                             | <b>DESCRIPTION</b>                                                                 |                                                          |                         |                               |  |
| (ft)                                                                              | <b>ENGINEERING</b>                                                                 |                                                          | <b>GEOLOGIC/GENERAL</b> |                               |  |
| 1                                                                                 | Black to olive-brown fine to medium SAND, trace Silt, few Cobbles, moist, loose SP |                                                          | FILL                    |                               |  |
| 2                                                                                 |                                                                                    |                                                          |                         |                               |  |
| 3                                                                                 |                                                                                    |                                                          |                         |                               |  |
| 4                                                                                 | Brown SAND, little Gravel, trace Silt, few Cobbles and Boulders, dry, compact, SP  |                                                          | MARINE FAN DEPOSIT      |                               |  |
| 5                                                                                 |                                                                                    |                                                          |                         |                               |  |
| 6                                                                                 | Sidewalls vertical                                                                 |                                                          |                         |                               |  |
| 7                                                                                 |                                                                                    |                                                          |                         |                               |  |
| 8                                                                                 |                                                                                    |                                                          |                         |                               |  |
| 9                                                                                 | Gray Silty SAND, little Gravel, few Cobbles, dry, dense, slightly mottled, SP      |                                                          | GLACIAL TILL            |                               |  |
| 10                                                                                | End of Test Pit at 9.5 ft                                                          |                                                          |                         |                               |  |
| 11                                                                                |                                                                                    |                                                          |                         |                               |  |
| 12                                                                                |                                                                                    |                                                          |                         |                               |  |
| 13                                                                                |                                                                                    |                                                          |                         |                               |  |
| 14                                                                                |                                                                                    |                                                          |                         |                               |  |
| 15                                                                                |                                                                                    |                                                          |                         |                               |  |
| 16                                                                                |                                                                                    |                                                          |                         |                               |  |
| 17                                                                                |                                                                                    |                                                          |                         |                               |  |

|                                                                                   |                                                                                                                       |                                                          |                         |                               |  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------|-------------------------------|--|
|  |                                                                                                                       | <b>TEST PIT LOG</b>                                      |                         | Test Pit # <b>TP-3</b>        |  |
|                                                                                   |                                                                                                                       | Project: Joy Place<br>Brackett Street<br>Portland, Maine |                         | Project #: 17053              |  |
|                                                                                   |                                                                                                                       |                                                          |                         | Groundwater:<br>None Observed |  |
| Contractor: Summit Geoengineering Services                                        |                                                                                                                       | Ground Surface Elevation:                                |                         |                               |  |
| Equipment: Tacheuchi Rubber Tracked                                               |                                                                                                                       | Reference:                                               |                         |                               |  |
| Summit Staff: B. Peterlein, P.E.                                                  |                                                                                                                       | Date: 3/22/2017                                          |                         | Weather: Sunny                |  |
| Depth                                                                             | <b>DESCRIPTION</b>                                                                                                    |                                                          |                         |                               |  |
| (ft)                                                                              | <b>ENGINEERING</b>                                                                                                    |                                                          | <b>GEOLOGIC/GENERAL</b> |                               |  |
| 1                                                                                 | Brown Gravelly SAND, trace Silt, dry, loose, SP                                                                       |                                                          | FILL                    |                               |  |
| 2                                                                                 |                                                                                                                       |                                                          |                         |                               |  |
| 3                                                                                 | Brown Gravelly SAND, trace Silt, occasional Cobbles and Boulders, dry, dense, SP<br><br>Sidewalls vertical and stable |                                                          | MARINE FAN DEPOSIT      |                               |  |
| 4                                                                                 |                                                                                                                       |                                                          |                         |                               |  |
| 5                                                                                 |                                                                                                                       |                                                          |                         |                               |  |
| 6                                                                                 |                                                                                                                       |                                                          |                         |                               |  |
| 7                                                                                 |                                                                                                                       |                                                          |                         |                               |  |
| 8                                                                                 | Gray Silty SAND, little Gravel, moist, dense, slightly mottled, SP                                                    |                                                          | GLACIAL TILL            |                               |  |
| 9                                                                                 |                                                                                                                       |                                                          |                         |                               |  |
| 10                                                                                | End of Test Pit at 9.5 ft                                                                                             |                                                          |                         |                               |  |
| 11                                                                                |                                                                                                                       |                                                          |                         |                               |  |
| 12                                                                                |                                                                                                                       |                                                          |                         |                               |  |
| 13                                                                                |                                                                                                                       |                                                          |                         |                               |  |
| 14                                                                                |                                                                                                                       |                                                          |                         |                               |  |
| 15                                                                                |                                                                                                                       |                                                          |                         |                               |  |
| 16                                                                                |                                                                                                                       |                                                          |                         |                               |  |
| 17                                                                                |                                                                                                                       |                                                          |                         |                               |  |



|                                                                                   |                                                                                             |                                                          |                         |                               |  |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------|-------------------------------|--|
|  |                                                                                             | <b>TEST PIT LOG</b>                                      |                         | Test Pit # <b>TP-4</b>        |  |
|                                                                                   |                                                                                             | Project: Joy Place<br>Brackett Street<br>Portland, Maine |                         | Project #: 17053              |  |
|                                                                                   |                                                                                             |                                                          |                         | Groundwater:<br>None Observed |  |
| Contractor: Summit Geoengineering Services                                        |                                                                                             | Ground Surface Elevation:                                |                         |                               |  |
| Equipment: Tacheuchi Rubber Tracked                                               |                                                                                             | Reference:                                               |                         |                               |  |
| Summit Staff: B. Peterlein, P.E.                                                  |                                                                                             | Date: 3/22/2017                                          |                         | Weather: Sunny                |  |
| Depth                                                                             | <b>DESCRIPTION</b>                                                                          |                                                          |                         |                               |  |
| (ft)                                                                              | <b>ENGINEERING</b>                                                                          |                                                          | <b>GEOLOGIC/GENERAL</b> |                               |  |
| 1                                                                                 | Brown Silty SAND mixed with Cobbles, rags, plastic, small branches, frozen, SM              |                                                          | FILL                    |                               |  |
| 2                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 3                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 4                                                                                 | Brown Gravelly SAND, trace Silt, frequent Cobbles and Boulders, moist, loose to compact, SP |                                                          | MARINE FAN DEPOSIT      |                               |  |
| 5                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 6                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 7                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 8                                                                                 |                                                                                             |                                                          |                         |                               |  |
| 9                                                                                 | Gray Silty SAND, little Gravel, moist, dense, slightly mottled, SP                          |                                                          | GLACIAL TILL            |                               |  |
| 10                                                                                | End of Test Pit at 9 ft                                                                     |                                                          |                         |                               |  |
| 11                                                                                |                                                                                             |                                                          |                         |                               |  |
| 12                                                                                |                                                                                             |                                                          |                         |                               |  |
| 13                                                                                |                                                                                             |                                                          |                         |                               |  |
| 14                                                                                |                                                                                             |                                                          |                         |                               |  |
| 15                                                                                |                                                                                             |                                                          |                         |                               |  |
| 16                                                                                |                                                                                             |                                                          |                         |                               |  |
| 17                                                                                |                                                                                             |                                                          |                         |                               |  |

## **2. Right, Title and Interest**

### **2.1 OVERVIEW**

The current owner of the property and the applicant is Onejoy Place, LLC. A copy of the current property deed is attached as attachment 2-A.

### **2.2 PARKING**

The proposed project is required to have 12 parking spaces per ordinance requirements, as summarized in the following table:

| <b>USE</b>           | <b>RATE REQUIRED</b> | <b># OF SPACES</b> |
|----------------------|----------------------|--------------------|
| 12 Residential Units | 1 space per unit     | 12 Spaces          |
|                      | <b>TOTAL</b>         | 12 Spaces          |

Four parking spaces will be provided on site, and the applicant is in discussion with the City of Portland to lease parking spaces in the adjacent parking lot to meet the ordinance requirement.

### **2.3 ATTACHMENTS**

Attachment 2-A – Property Deed

**ATTACHMENT 2-A**

**Current Deed**

## QUITCLAIM DEED WITH COVENANT

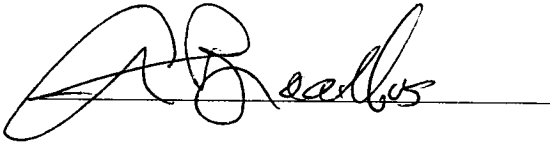
MAINE REAL ESTATE TAX PAID

ALBERT BRESSETTE of Windham, Maine, whose mailing address is P.O. Box 345, Portland, Maine 04112 (the "Grantor"), for consideration paid, grants to ONEJOY PLACE LLC, a Maine limited liability company, whose mailing address is c/o Renewal Housing Associates, Three Canal Plaza, Suite 501, Portland Maine 04101, WITH QUITCLAIM COVENANT, a certain lot or parcel of land, together with the buildings and improvements thereon, situated easterly of, but not adjacent to, Brackett Street in the City of Portland, County of Cumberland and State of Maine, Maine, more particularly described in Schedule A attached hereto and made a part hereof.

Meaning and intending to convey, and hereby conveying, the same premises conveyed to the Grantor by Quitclaim Deed With Covenant from Gloria Bresette and Albert Bresette dated July 27, 1997, and recorded in the Cumberland County Registry of Deeds in Book 13359, Page 103.

IN WITNESS WHEREOF, ALBERT BRESSETTE has hereunto set his hand and seal this 31 day of August, 2016.

WITNESS:



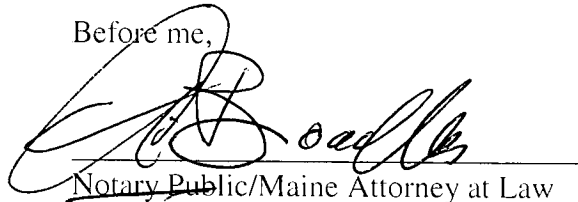
  
Albert Bresette

STATE OF MAINE  
COUNTY OF CUMBERLAND, ss.

August 31, 2016

Then personally appeared the above named ALBERT BRESSETTE and acknowledged the foregoing instrument to be his free act and deed.

Before me,

  
Notary Public/Maine Attorney at Law

Print name: Andrew L. Broodles

My commission expires: \_\_\_\_\_



## Schedule A

A certain lot or parcel of land, together with the buildings and improvements thereon, situated easterly of, but not adjacent to, Brackett Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Commencing at a point at the intersection of the easterly sideline of Brackett Street with the northerly sideline of Spring Street;

Thence, N 35°12'30" W along the easterly sideline of said Brackett Street 402.21 feet to a drill hole and the southerly sideline of a private right of way known as Joy Place;

Thence, N 54°47'30" E along the southerly sideline of said Joy Place 92.00 feet to the true point of beginning;

Thence, from the true point of beginning, N 35°12'30" W along the easterly sideline of said Joy Place 87.90 feet to the land now or formerly of Brian R. Chick as described in Deed recorded in the Cumberland County Registry of Deeds (the "Registry") in Book 25236, Page 109;

Thence, N 54°47'30" E along land of said Chick 2.83 feet to a point;

Thence, N 25°54'27" W along land of said Chick 26.85 feet to a point;

Thence, S 54°47'30" W along land of said Chick 2.17 feet to land now or formerly of Kimberly A. Roseberry as described in Deed recorded in said Registry in Book 28025, Page 112;

Thence, N 35°12'30" W along land of said Roseberry 25.86 feet to land now or formerly of Basha LLC as described in Deed recorded in said Registry in Book 29175, Page 300;

Thence, N 55°37'30" E along land of said Basha LLC a distance of 28.71 feet to land now or formerly of David R. Shedd and Susan Shedd as described in Deed recorded in said Registry in Book 31201, Page 5;

Thence, S 35°07'44" E along land of said Shedd 24.51 feet to a point;

Thence, N 56°22'18" E along land of said Shedd 13.68 feet to land now or formerly of Nathan W. Kimble as described in Deed recorded in said Registry in Book 13439, Page 62;

Thence, S 35°02'54" E along land of said Kimble and land now or formerly of Parkside Properties, LLC as described in Deed recorded in said Registry in Book 16808, Page 29, a distance of 103.09 feet to land now or formerly of Charles L. Morris and Katherine A. Gilbert as described in Deed recorded in said Registry in Book 21909, Page 50;

Thence, S 54°56'21" W along land of said Morris and Gilbert 13.53 feet to a point;

Thence, S 35°07'44" E along land of said Morris and Gilbert 11.90 feet to land now or formerly of the City of Portland;

Thence, S 54°47'30" W along land of said City of Portland 33.51 feet to the easterly sideline of said Joy Place and the point of beginning; containing 5,851 sf.

The above described premises are hereinafter referred to as the "Premises."

Reference is made to a plan entitled "Boundary Survey at 1 Joy Place, Portland, Maine made for Onejoy Place LLC" dated August 24, 2016 by Owen Haskell, Inc., and recorded in said Registry of Deeds in Plan Book 216, Page 330 (the "Plan").

The Premises are conveyed together with a right of passageway, in common with others, over a strip of land formerly known as Tinkhams Court, so-called, being approximately twenty-four (24) feet in width and extending from Brackett Street in a northeasterly direction to the Premises, and a right of passageway, in common with others, over a twelve (12) foot wide passageway extending from the most easterly end of said Tinkhams Court in a northwesterly direction along the southwesterly side of the Premises, said Tinkhams Court and said passageway being now known as Joy Place, which Tinkhams Court and said passageway are shown on the Plan as Joy Place and being more particularly bounded and described as follows:

Beginning at a point on the easterly sideline of said Brackett Street, said point of beginning being distant 402.21 feet as measured along said easterly sideline of Brackett Street on a bearing of N 35°-12'-30" W from the northwesterly side of Spring Street;

Thence N 54°-47'-30" E along land of City of Portland 92.00 feet to a point;

Thence N 35°-12'-30" W along land now or formerly of Albert Bresette, being the Premises, 87.90 feet to a point;

Thence S 54°-47'-30" W along land now or formerly of Brian R. Chick 12.00 feet to a point;

Thence S 35°-12'-30" E along lands now or formerly of Hazel G. Boyd et al and Brett Plymale 64.00 feet to a point;

Thence S 54°-47'-30" W along said land of Plymale 80.00 feet to a point;

Thence S 35°-12'-30" E along said Brackett Street 23.90 feet to the point of beginning.

All bearings are magnetic in the year 1967.

Subject to the condition that said Tinkhams Court and said passageway, now known as Joy Place, are to be kept open and unobstructed forever.

Also hereby conveying all other right, title and interest that the Grantor may have in and to said Joy Place as shown on the Plan.

Received  
Recorded Register of Deeds  
Aug 31, 2016 12:23:36P  
Cumberland County  
Nancy A. Lane

10/1/2016 10:10:10 AM  
10/1/2016 10:10:10 AM  
10/1/2016 10:10:10 AM  
10/1/2016 10:10:10 AM

### **3. STATE AND FEDERAL PERMITS**

The project requires State Fire Marshall Approval. The development is subject to Site Plan and Subdivision approval by the City of Portland and Building Permit(s) are also required.



## 4. LAND ORDINANCE REVIEW

### 4.1 OVERVIEW

The property currently lies within the City of Portland B-1 Neighborhood Business Zone. The following Space and Bulk requirements apply to the B-1 Zone:

| <b>B-1 Zone Summary<br/>Dimensional and Parking Requirements<br/>Applied to 1 Joy Place</b> |                                |                                                                                                |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------|
| <b>Zoning Requirements</b>                                                                  | <b>B-1 Zoning<br/>Standard</b> | <b>Project Site</b>                                                                            |
| Minimum Lot Size                                                                            | None                           | 5,851 s.f.                                                                                     |
| Minimum Lot Area per<br>Dwelling Unit                                                       | 435 s.f.                       | 465 s.f.                                                                                       |
| Minimum Frontage                                                                            | 20 feet                        | 88 feet                                                                                        |
| Front Yard                                                                                  | Min: 0 feet    Max: 10 feet    | 0.12 feet                                                                                      |
| Minimum Side Yard                                                                           | 0 feet                         | 4.0 feet                                                                                       |
| Minimum Rear Yard                                                                           | 10 feet                        | 10 feet                                                                                        |
| Maximum Impervious<br>Surface                                                               | 90%                            | 62.2%                                                                                          |
| Maximum Building Height                                                                     | 45 feet                        | 34 feet                                                                                        |
| Parking Residential Use                                                                     | 1 space per unit               | 4 on-site spaces<br>10 off-site spaces via<br>parking lease agreement<br>with City of Portland |

### 4.2 SHORELAND ZONING

The site is not located within the Shoreland Zoning District.

## **5. EASEMENTS OR OTHER BURDENS**

### **5.1 OVERVIEW**

Owen Haskell, Inc. completed a boundary survey of the site in August of 2016. No easements or other burdens exist on the project site.

## 6. TECHNICAL AND FINANCIAL CAPACITY

### 6.1 TECHNICAL CAPACITY

The applicant has assembled a highly qualified team of professionals to plan, permit, and develop construction documents for the project. The Team is working under the direction of Mr. Todd Alexander of Renewal Housing Associates as Project Developer. The Team services will be provided by the following companies and their respective team leaders:

### 6.2 CONSULTANT TEAM

|                              |                                                                                                                                                                                                                                        |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Civil Engineer</i>        | Michael Tadema-Wielandt, P.E.<br>Terradyn Consultants, LLC<br>565 Congress Street<br>Portland, ME 04101<br>(207) 632-9010 – Cell<br>(207) 221-1317 – Fax<br><a href="mailto:mtw@terradyconsultants.com">mtw@terradyconsultants.com</a> |
| <i>Surveyor</i>              | John Swan<br>Owen Haskell, Inc.<br>390 US Route 1, Unit 10<br>Falmouth, Maine 04105<br>(207) 774-0424 – Work<br>(207) 774-0511 – Fax<br><a href="mailto:jswan@owenhaskell.com">jswan@owenhaskell.com</a>                               |
| <i>Architect</i>             | David Lloyd<br>Archetype, PA<br>48 Wharf Street<br>Portland, ME 04101<br>(207) 772-6022 – Work<br>(207) 772-4056 – Fax<br><a href="mailto:lloyd@archetypepa.com">lloyd@archetypepa.com</a>                                             |
| <i>Electrical</i>            | Will Bennett, Jr.<br>Bennett Engineering<br>P.O. Box 297<br>Freeport, ME 04032<br>(207) 865-9475 – Work<br>(207) 865-1800 – Fax                                                                                                        |
| <i>Geotechnical Engineer</i> | William Peterlein, P.E.<br>Summit Geoengineering Services<br>145 Lisbon Street, Suite 601<br>Lewiston, ME 04240<br>(207) 576-3313 – Work<br><a href="mailto:bpeterlein@summitgeoeng.com">bpeterlein@summitgeoeng.com</a>               |

### **6.3 EXPERIENCE OF PROJECT TEAM**

The team of consultants retained by the Developer has expertise and experience in the design of similar projects. Resumes of key personnel for the development team can be provided upon request.

The applicant has significant experience in the development and management of large residential projects. A company resume, including a list of current and completed projects under the direction of the applicant, is provided in attachment 6-A.

### **6.4 FINANCIAL CAPACITY**

The applicant has the capacity to finance the proposed project. A letter of financial capacity for the project is contained in Attachment 6-B.

### **6.5 CONSTRUCTION COST ESTIMATE**

The project has an overall construction cost estimate of \$2,250,000. This construction cost value is considered preliminary and subject to change as building design and project layout is refined, etc.

### **6.6 ATTACHMENTS**

Attachment 6-A – Renewal Housing Associates Company Resume & Project Experience

Attachment 6-B – Letter of Financial Capacity



**ATTACHMENT 6-A**

**Renewal Housing Associates Company Resume & Project Experience**

# Company Resume & Project Experience

## **THE COMPANY:**

Renewal Housing Associates LLC ("Renewal") is a multifamily housing development company based in Portland, Maine. Renewal's primary focus is renovating legacy affordable housing properties that require capital improvements and long-term use restrictions. The company's principals are specialist in obtaining federal, state and local resources to reinvest in and preserve subsidized elderly and family rental housing. Renewal also develops small, urban for-sale housing projects targeting middle income and first-time homebuyers.

Renewal is an affiliate of Leon N. Weiner & Associates Inc. ("LNWA"), a Delaware-based real estate development company founded in 1949. LNWA and its affiliates operate more than 4,500 housing units located in eight states and the District of Columbia. The company has extensive experience developing affordable, market rate and mixed-income housing serving both the for-sale and rental markets. Members of the LNWA management team have served in numerous leadership positions in the housing industry, including Chairman of the National Association of Home Builders, Chairman of the Federal Home Loan Bank of Pittsburgh, and Chairman of the Mortgage Roundtable.

## **OUR APPROACH:**

The principals at Renewal recognize that every real estate development has a unique set of stakeholders with distinct goals. As a result, Renewal's role will vary from project to project. Renewal's principals are comfortable working in any capacity, including traditional buyer-developer-operator, joint venture partner or fee-for-service developer. Most importantly, as part of a company that has developed real estate for more than 60 years, Renewal focuses on opportunities to work with people that are committed to the things that define successful projects; a spirit of collaboration, a desire for shared success and a view toward long-term relationships.

## **OUR TEAM:**

Renewal is led by its two principals, David Lakari and Todd M. Alexander. David has been involved in housing development for more than 40 years and focused on affordable housing preservation for the past 20 years. David founded Renewal with LNWA in 2001. Prior to Renewal, he was Executive Director of the Maine State Housing Authority from 1994 to 1999 and served on board for the National Council of State Housing Agencies. David holds a JD from the University of Maine.

Todd has worked as an affordable housing developer since 2003, during which time he has completed projects involving more than 2,500 units and \$250MM in total investment. He has experience recapitalizing properties utilizing a wide variety of public and private sector sources of debt and equity. He is a former Board President for Community Housing of Maine and the Downtown Portland Corporation. Todd received a Master's degree in Urban Planning from Cornell University and a Bachelor's degree from Colby College.

# Company Resume & Project Experience

| PROJECTS COMPLETED   |                  |                   |                   |       |         |               | Total Development Costs |
|----------------------|------------------|-------------------|-------------------|-------|---------|---------------|-------------------------|
| Property             | Location         | Role              | Placed In Service | Units | Type    | Financing     |                         |
| Windsor Apartments   | Wilmington, DE   | Developer   Owner | 2001              | 169   | Elderly | TEB/LIHTC     | \$8,470,000             |
| Oak Hill Village     | Willoughby, OH   | Developer   Owner | 2002-03           | 182   | Family  | TEB/LIHTC     | \$12,547,000            |
| Spellman House       | College Park, MD | Developer   Owner | 2003              | 140   | Elderly | TEB/LIHTC     | \$12,519,000            |
| Compton Towne        | Wilmington, DE   | Developer   Owner | 2004              | 76    | Family  | TEB/LIHTC     | \$7,135,000             |
| Clifton Plaza        | Cleveland, OH    | Developer   Owner | 2006              | 108   | Elderly | TEB/LIHTC     | \$7,599,000             |
| Alden-Berkley        | College Park, MD | Developer   Owner | 2006-07           | 56    | Family  | TEB/LIHTC     | \$8,971,000             |
| Collinson Apartments | Akron, OH        | Developer   Owner | 2007              | 101   | Elderly | TEB/LIHTC     | \$7,683,000             |
| Warren Heights       | Warren, OH       | Developer   Owner | 2008              | 188   | Family  | TEB/LIHTC     | \$10,177,000            |
| Capitol Hill Towers  | Washington, D.C. | Developer   Owner | 2013              | 204   | Elderly | TEB/LIHTC     | \$36,586,792            |
| Marshall Plaza       | Lorain, OH       | Developer   Owner | 2013              | 89    | Family  | TEB/LIHTC     | \$6,740,287             |
| Kensington Square    | Elyria, OH       | Developer         | 2009              | 192   | Family  | TEB/LIHTC     | \$10,704,000            |
| Hampshire House      | Warren, OH       | Developer         | 2011              | 150   | Family  | TEB/LIHTC     | \$11,863,000            |
| Riverview Towers     | Camden, NJ       | Developer         | 2013              | 225   | Elderly | REFI/FMAC     | \$10,650,000            |
| Huntington Towers    | New London, CT   | Developer         | 2013              | 120   | Elderly | REFI/FNMA     | \$8,250,000             |
| Burlington Manor     | Burlington, NJ   | Developer         | 2015              | 120   | Elderly | REFI/FNMA     | \$7,500,000             |
| Ivywood              | Columbus, OH     | Developer         | 2016              | 124   | Family  | 9% LIHTC      | \$13,500,000            |
| Oak Hill             | Franklin, PA     | Developer   Owner | 2016              | 120   | Family  | 9% LIHTC      | \$15,000,000            |
| Yorkview             | Massillon, OH    | Developer   Owner | 2017              | 50    | Family  | 9% LIHTC      | \$6,500,000             |
| Main Towers          | Newark, DE       | Developer         | 2016              | 150   | Elderly | TEB/LIHTC     | \$15,000,000            |
|                      |                  |                   |                   | 2,564 |         |               | \$217,395,079           |
| IN DEVELOPMENT       |                  |                   |                   |       |         |               |                         |
| Arlington Square     | Elyria, OH       | Developer         | TBD               | 60    | Family  | 9% LIHTC      | \$7,800,000             |
| Onejoy               | Portland, ME     | Developer         | 2018              | 12    | Family  | Conventional  | \$2,250,000             |
| Fenway Manor         | Cleveland, OH    | Developer   Owner | TBD               | 143   | Elderly | TEB/LIHTC/HTC | \$39,000,000            |
|                      |                  |                   |                   | 215   |         |               | \$49,050,000            |

**ATTACHMENT 6-B**

**Letter of Financial Capacity**





April 4, 2017

Planning Board  
City of Portland  
Portland, Maine

Re: Financial Capacity to Develop 1 Joy Place, Portland, Maine ("Onejoy")  
Onejoy Place, LLC | Renewal Housing Associates LLC  
2 Union Street, 5<sup>th</sup> Floor  
Portland, Maine 04101

To Whom It May Concern:

I am writing on behalf of Onejoy Place, LLC, its Sole Member, Renewal Housing Associates LLC ("RHA") and its principals, Leon N. Weiner & Associates Inc., David Lakari and Todd Alexander.

PNC Bank N.A. has worked with and provided corporate banking services to the parties described above for more than sixty years. The bank has conducted a preliminary review of the appropriate financial statements, operating accounts and pro forma information related to the proposed housing development at 1 Joy Place in Portland, Maine. Based on our past experience and our review of the financial information, the Bank believes the parties have the management capability and financial resources necessary to complete the proposed project.

If you should need further information or clarification, please contact me at (302) 429-2826.

Respectfully,

A handwritten signature in blue ink, appearing to read "Jeffrey R. Bierlein".

Jeffrey R. Bierlein  
Vice President

Member of The PNC Financial Services Group

300 Delaware Avenue W1-W300-06-2 Wilmington Delaware 19801

[www.pnc.com](http://www.pnc.com)

## **7. CONSTRUCTION MANAGEMENT PLAN**

The following information is provided in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(1).

### **7.1 CONSTRUCTION MANAGEMENT PLAN**

Onejoy Place, LLC is seeking to commence construction during the spring or summer of 2017 and complete work by the spring of 2018. The construction will involve site work and new building construction. The attached construction plan outlines the anticipated timeline and sequence of activities.

### **7.2 ATTACHMENTS**

Attachment 7-A – Construction Management Plan

**ATTACHMENT 7-A**

**Construction Management Plan**

**CONSTRUCTION MANAGEMENT PLAN**  
**FOR**  
**ONEJOY PLACE CONDOMINIUM**  
1 JOY PLACE, PORTLAND, MAINE

- Construction shall be managed by an on-site project superintendent
- A temporary project sign may be installed at the entrance to Joy Place
- All materials will be delivered via Joy Place and stockpiled in the locations shown on the Construction Management Plan included in the plan set (Sheet C-2.3)
- All construction shall comply with 2009 NFPA 1 chapter 16 safe guards during building construction, alteration and demolition operations.
- Any cutting and welding work performed onsite shall require a "hot work" permit from the Portland Fire Department.
- The general contractor shall post emergency contact information on the project site property during construction in the event of an after hours emergency. This contact information shall also be provided to the Portland Fire Department.
- The applicant or assigned representative shall purchase a knox padlock from the Portland Fire Department to allow access by the Portland Fire Department.
- Streets shall maintain a 20' width for fire department access at all times.
- Utility connections in Brackett Street will require temporary lane and sidewalk closures. The contractor shall coordinate these closures with the City of Portland. The contractor shall provide flaggers for traffic control as necessary.



## **8.0 NATURAL FEATURES**

### **8.1 OVERVIEW**

The development site has been entirely developed and does not contain any significant natural features including wetlands, vernal pools or other protected resources or wildlife habitats.

## **9. STORMWATER MANAGEMENT**

The following information is provided in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-526(b)(3).

### **9.1 OVERVIEW**

The existing project site is entirely developed and relatively flat. Stormwater runoff from most of the project site drains overland across the eastern property boundary. The Joy Place right of way generally drains toward Brackett Street. There are no known areas of erosion or flooding on or adjacent to the site.

Post development stormwater runoff will generally follow existing patterns. Runoff from Joy Place, the four proposed parking spaces, and the proposed building will drain to Brackett Street, where it will enter the city's combined storm sewer. Runoff from the remainder of the site will drain overland across the eastern property boundary, as it does today.

The existing project site, including the Joy Place right of way, contains approximately 5,550 square feet of impervious surface. Redevelopment of the project site will result in an increase of approximately 820 square feet of impervious area and a total impervious surface of 6,365 square feet. The project will result in less than 1,000 square feet of new impervious surface and less than 5,000 square feet of non-roof redeveloped impervious surface and is not required to meet the General or Flooding Standards.

The project is not expected to cause ponding, flooding, or erosion problems on or downstream of the site. The relatively small amount of runoff entering the city's combined storm sewer network is not expected to overburden the system.

## **10. CONSISTENCY WITH CITY MASTER PLANS**

### **10.1 OVERVIEW**

Our office is not aware of any applicable Master Plans created for the project site.

## **11. UTILITIES**

### **11.1 OVERVIEW**

The proposed project will involve installation of new utility services to the building. All new utility services will be provided from the franchise utilities available within Brackett Street. The proposed locations of the new utility services are shown on the Utility Plan (Sheet C-5.0).

### **11.2 WATER SUPPLY**

The proposed project will receive its water supply from the Portland Water District's (PWD) public water supply system. Separate 6" fire and 2" domestic services will be installed to the building from PWD's existing main in Brackett Street. PWD has indicated in a letter dated April 19, 2017 that the district will be able to serve the proposed project.

#### **11.2.1 Total Project Water Usage**

The total average daily water demand for the proposed project is estimated to be 1,440 gallons per day, based on design flows published in the State of Maine Subsurface Wastewater Disposal Rules.

12 x 1 Bedroom Residential Units at 120 gpd/unit = 1,440 gpd

### **11.3 WASTEWATER DISPOSAL**

The proposed project will be connected to the Portland Water District's and City of Portland's wastewater collection and conveyance systems. The City of Portland Wastewater Capacity Application has been completed and forwarded to Mr. Brad Roland.

The overall project is anticipated to generate an average daily flow of approximately 1,440 gpd. Based on the existing sewer system in the area, there appears to be adequate capacity to handle these projected flow amounts.

### **11.4 ELECTRICITY SUPPLY**

CMP currently maintains overhead and underground utilities in the area. The proposed building will be served by a new underground feed from a new riser pole, which will be set on the east side of Brackett Street.

### **11.5 ATTACHMENTS**

Attachment 11-A – Correspondence with Utilities



**ATTACHMENT 11-A**

**Correspondence with Utilities**

March 30, 2017

MEANS  
means@pwd.org  
Portland Water District  
225 Douglass Street  
Portland, ME 04104

**Request for Ability to Serve Letter**  
**12-Unit Residential Development**  
**1 Joy Place, Portland, Maine**

Dear Sir or Madam:

**Terradyn Consultants LLC** has been retained by Renewal Housing Associates to assist with site design and permitting for a proposed 12-unit condominium development project located at 1 Joy Place in Portland, Maine. We are writing to request a letter confirming the Portland Water District's ability to serve the proposed development.

The 5,851 square foot parcel is identified as Block E, Lot 45 on the City of Portland Tax Map 49. The site is accessed off Bracket Street via Joy Place, a private right-of-way. An existing vacant house is located on the site. Water service for the house is located within the Joy Place right-of-way.

The proposed project includes the construction of a 2,600 square foot, 3-story building, including 12 condominium units. Joy Place will be reconstructed for vehicular and pedestrian access, and public water and sewer utilities will be installed to serve the project. It is anticipated that the existing water service will be retired, and a new parent/child service will be installed for fire protection and domestic water use for the new building.

Attached are a site location figure showing the property delineated on a USGS map and a preliminary site utility plan of the project, showing how the development may be served with water. A spreadsheet showing the total number of proposed plumbing fixtures is provided in a separate document.

Please provide our office with confirmation that the Portland Water District has the ability to serve the proposed development. As the design is refined, we will provide more detailed drawings of the project for your review.

If you have any questions or need more information to make your determination on ability to serve, please contact me at (207) 632-9010 or [mtw@terradynconsultants.com](mailto:mtw@terradynconsultants.com).

Sincerely,

**TERRADYN CONSULTANTS LLC**

A handwritten signature in black ink that reads "Michael E. Tadema-Wielandt". The signature is written in a cursive, flowing style.

Michael E. Tadema-Wielandt, P.E.  
Vice President

cc: Todd Alexander, Renewall Housing Associates  
David Lloyd, Archetype

Enc.



## Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

April 19, 2017

Michael Tadema-Wielandt  
Teradyn Consultants LLC  
565 Congress Street, Suite 310  
Portland, ME 04101

Re: 1 Joy Place, PO  
Ability to Serve with PWD Water

Dear Mr. Tadema-Wielandt:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on March 30, 2017. Based on the information provided per plans dated 3/7/17, 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 does not constitute approval of this project from the District. Review and approval of final plans is required.**

### Conditions of Service

The following conditions of service apply:

- A new 6-inch fire service with 2-inch domestic service tapped off from it may be installed from the water main in Brackett Street. The service should enter through the properties frontage on Brackett Street at least 10-feet from any side property lines. Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.
- The existing building 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 per PWD standards.
- If necessary, proper easement documentation must be obtained from any properties that the new service line will cross. The easement(s) should specifically cite the right to install and maintain utilities. A copy of the deed for each of the proposed parcels must be provided to the District prior to completing new service applications.
- Water District approval of water infrastructure plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our current standards.
- Once the project is ready for construction, the owner or contractor will need to make an appointment to come in and complete a service application form and pay the necessary fees.





### Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper water service line provides water service to this 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 6-inch diameter cast iron water main in Brackett Street and a public fire hydrant located 150 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 54 psi on January 27, 2016.

### 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 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.

### 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](mailto: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 "Gordon S. Johnson", with a long, sweeping horizontal line extending from the end of the signature.

Gordon S. Johnson, P.E.  
Engineering Services Manager

April 25, 2017

Bradley Roland, P.E.  
Wastewater Resources Division  
Department of Public Services  
55 Portland Street  
Portland, ME 04101

**Onejoy Place Condominium**  
**1 Joy Place, Portland, Maine**  
**Wastewater Capacity Application**

Dear Brad:

**Terradyn Consultants LLC** has been retained by Onejoy Place, LLC and Renewal Housing Associates to assist with site design and permitting for a proposed 12-unit condominium development project located at 1 Joy Place in Portland. We are writing to request confirmation that the City of Portland has the ability to provide sanitary sewer service for the proposed development.

The 5,851 square foot parcel is identified as Block E, Lots 48 & 49 on the City of Portland Tax Map 45. The site is accessed off Bracket Street via Joy Place, a private right-of-way. An existing vacant house is located on the site. Existing sewer service for the house is located within the Joy Place right-of-way.

The proposed project includes the construction of a 2,600 square foot, 3-story building, including 12 condominium units. Joy Place will be reconstructed for vehicular and pedestrian access, and public water and sewer utilities will be installed to serve the project. It is anticipated that the existing sewer service will be removed, and a new 6" service will be installed to serve the new building.

The project is expected to generate approximately 1,440 gallons of wastewater per day based on the Maine Subsurface Wastewater Disposal Rules.

Attached are a site location figure showing the property delineated on a USGS map, preliminary site and utility plans of the project showing how the development may be served with sewer service, and a City of Portland Wastewater Capacity Application form.

Please provide our office with confirmation that the City of Portland has the ability to provide sanitary sewer service to the proposed development and any comments you may have on the attached drawing.

If you have any questions or need more information, please contact me at (207) 632-9010 or [mtw@terradync consultants.com](mailto:mtw@terradync consultants.com).

Sincerely,

**TERRADYN CONSULTANTS LLC**

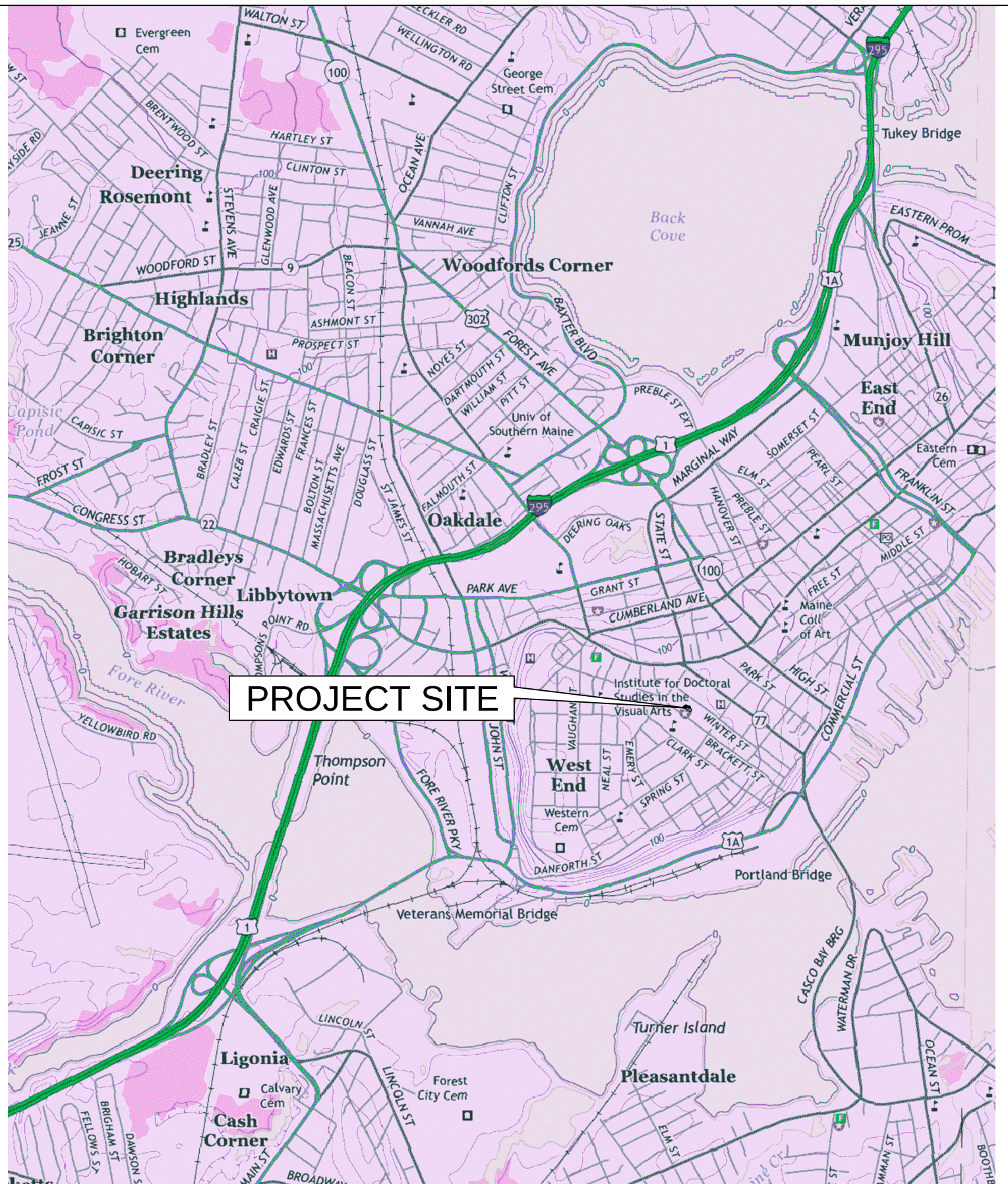
A handwritten signature in black ink, reading "Michael E. Tadema-Wielandt". The signature is written in a cursive, flowing style.

Michael E. Tadema-Wielandt, P.E.  
Vice President

cc: Todd Alexander, Renewal Housing Associates  
David Lloyd, Archetype

Enc.





SHEET DESCRIPTION  
JOY PLACE  
U.S.G.S. QUADRANGLE MAP  
PORTLAND WEST

PREPARED FOR  
RENEWALL HOUSING ASSOCIATES  
THREE CANAL PLAZA, SUITE 501  
PORTLAND, MAINE 04101



Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

P.O. Box 339  
111 Elderberry Lane  
New Gloucester, ME 04260  
Office: (207) 926-5111  
Fax: (207) 221-1317  
www.terradynconsultants.com

JOB NO.  
1704

DATE  
3/30/2017

SCALE  
1"=2,000'

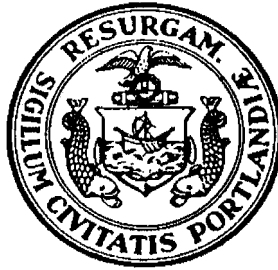
FIGURE  
1

OF  
2



# CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,  
55 Portland Street,  
Portland, Maine 04101-2991



Bradley Roland, P.E.  
Water Resources Division

Date: 4/25/2017

## 1. Please, Submit Utility, Site, and Locus Plans.

Site Address: One Joy Place, Portland

Chart Block Lot Number: 45/E/48, 45/E/49

Proposed Use: Residential

Previous Use: Residential

Existing Sanitary Flows: N/A GPD

Existing Process Flows: N/A GPD

Description and location of City sewer that is to receive the proposed building sewer lateral.

12" combined sewer in Brackett Street

Site Category

|                                    |                                     |
|------------------------------------|-------------------------------------|
| Commercial (see part 4 below)      | <input type="checkbox"/>            |
| Industrial (complete part 5 below) | <input type="checkbox"/>            |
| Governmental                       | <input type="checkbox"/>            |
| Residential                        | <input checked="" type="checkbox"/> |
| Other (specify)                    | <input type="checkbox"/>            |

*Clearly, indicate the proposed connections, on the submitted plans.*

## 2. Please, Submit Contact Information.

City Planner's Name: Not assigned yet Phone: \_\_\_\_\_

Owner/Developer Name: Onejoy Place LLC, c/o Renewal Housing Associates, LLC

Owner/Developer Address: 2 Union Street, 5th Floor, Portland, ME 04101

Phone: 207 347-3018 Fax: \_\_\_\_\_ E-mail: talexander@renewalhousing.com

Engineering Consultant Name: Terradyn Consultants, LLC, Michael Tadema-Wielandt, P.E.

Engineering Consultant Address: 565 Congress Street, Suite 310, Portland, ME 04101

Phone: 207-632-9010 Fax: \_\_\_\_\_ E-mail: mtw@terradyconsultants.com

*Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.*

## 3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 1,440 GPD

Peaking Factor/ Peak Times: x6

Specify the source of design guidelines: (i.e. "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify) State of Maine Subsurface Wastewater Disposal Rules

*Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.*

12 x 1 Bedroom Units x 120 GPD/Unit = 1,440 GPD

#### 4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A

Size of External Grease Interceptor: \_\_\_\_\_

Retention Time: \_\_\_\_\_

Peaking Factor/ Peak Times: \_\_\_\_\_

*Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.*

#### 5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: N/A GPD

Do you currently hold Federal or State discharge permits? Yes \_\_\_\_\_ No \_\_\_\_\_

Is the process wastewater termed categorical under CFR 40? Yes \_\_\_\_\_ No \_\_\_\_\_

OSHA Standard Industrial Code (SIC): \_\_\_\_\_  
(<http://www.osha.gov/oshstats/sicser.html>)

Peaking Factor/Peak Process Times: \_\_\_\_\_

*Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.*

*Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.*

\_\_\_\_\_

## **12. SOLID WASTE**

### **12.1 OVERVIEW**

The project will generate solid waste both during construction and on an on-going basis after construction is complete. Estimates of solid waste generation, recycling rates, and procedures for the transport and disposal of solid waste that will be generated by the operation of the proposed development are provided below.

The following amount of solid waste associated with the construction and operation of the development have been estimated:

- 53 cubic yards of construction debris related to the new building construction activities (excluding volume of recycled materials).
- 408 pounds per week of solid waste will be generated by the operation of the development. Assuming that 50% of the waste is recycled, it is estimated that the project will generate 5.3 tons of recyclable waste and 5.3 tons of non-recyclable waste per year.

### **12.2 SOLID WASTE GENERATED DURING THE BUILDING CONSTRUCTION**

Approximately 53 cubic yards of construction debris is expected to be generated during construction. Assuming that 80% of construction debris is recycled, construction of the project will generate approximately 26.5 c.y. of non-recyclable waste.

The waste stream will be transported and disposed of at the following locations:

|                                     |                                                                                                                                                         |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazardous Materials:                | WMI Crossroads Facility in Norridgewock, Maine                                                                                                          |
| Mixed Construction Material:        | Riverside Recycling Facility in Portland, Maine; WMI Crossroads Facility in Norridgewock, Maine or Juniper Ridge in Old Town, Maine (Contractor option) |
| Separated Wood Construction Debris: | KTI Biofuels in Lewiston, Maine                                                                                                                         |
| Separated Metal/Ferrous Material:   | One Steel Recycling Inc. in Arundel or Oakland, Maine                                                                                                   |

The collection, transfer, disposal, and payment of all fees for solid wastes shall be the responsibility of the Contractor, with all waste transferred by a licensed non-hazardous waste transporter.

### **12.3 SOLID WASTE GENERATED FROM THE OPERATION OF THE DEVELOPMENT**

Approximately 408 pounds of solid waste and recyclable material is expected to be generated every week by the residents of the project. The operational solid waste and recyclable material will be collected by the City of Portland in accordance with Chapter 12 of the City Code.

### **12.4 ATTACHMENTS**

Attachment 12-A – Computations of Types and Volumes of Solid Wastes for Construction Project



**ATTACHMENT 12-A**

**Computations of Types of Volumes of Solid Wastes**

## ATTACHMENT 12-A

### **SOLID WASTES COMPUTATIONS AND DISPOSAL**

#### **A. NEW BUILDING CONSTRUCTION:**

Basis of Estimate: 10 c.y./1,500 s.f. of finished space

Area: Approximately 7,845 square feet of finished space

Solid Waste: Approximately 53 c.y.

Other Wastes Associated with Other Site Construction: Cardboard from packaging etc.: Limited Quantity

Total: 53 c.y. before recycling

Net: 11 c.y. if 80% of the material is recycled

#### Disposition:

Assume 10 percent is concrete which can be sent to the approved aggregate recycling facilities operated by Shaw Bros. or R.J. Grondin and Sons for processing into recycled aggregate.

Assume 70 percent is wood or metal which can be transported to KTI Biofuels in Lewiston (for wood) or One Steel Recycling in Oakland, Maine for metals.

Approximately 11 cubic yards of mixed construction debris that will be hauled to the Riverside Recycling Facility in Portland, WMI Crossroads facility in Norridgewock, Maine or the Juniper Ridge Facility in Old Town, Maine.

The contractor should provide dumpsters designated by material type and identify recycling methods and disposal sites prior to construction. All haulers must have a current non-hazardous waste haul license.

#### **B. OPERATIONAL SOLID WASTE:**

##### **RESIDENTIAL USE:**

Basis of Estimate: 17 pounds/wk per individual. Estimate of 2 individuals per residential unit. From Table 14-1 of the CEQR Technical Manual from January 2014 Edition; Source: New York City Department of Sanitation.

Number of individuals: 24

Solid Waste: Approximately 408 pounds/week

## **13. FIRE SAFETY**

### **13.1 OVERVIEW**

The applicant and project team will provide the Portland Fire Department with the information required in the PFD Site Review Checklist, as well as a basic review of NFPA 1 and City of Portland Technical Standards related to public safety.

The project site will be accessed from Joy Place, which will be improved with a 22.5' wide paved surface. A 6" cast iron water main owned by the Portland Water District currently exists in Brackett Street, and the closest fire hydrant is located on the west side of Brackett Street, approximately 25 feet south of the intersection of Brackett Street and Joy Place.

Joy Place will provide access to two sides of the proposed building, which will be fully sprinkled in compliance with all applicable codes.

---

## 1 Joy Place Site Plan Application:

1 message

---

**Todd Alexander** <TAlexander@renewalhousing.com> Thu, Jun 29, 2017 at 5:34 PM

To: Jean Fraser <jf@portlandmaine.gov>

Cc: Michael Tadema-Wielandt <mtw@terradynconsultants.com>, David Lloyd <lloyd@archetypepa.com>, Matt Maiello <matt@archetypepa.com>, "Richard A. Shinay" <RShinay@dwmlaw.com>, "Barhydt, Barbara" <bab@portlandmaine.gov>, "O'Brien, Stuart" <sgo@portlandmaine.gov>

Jean:

Thank you for your email and follow up phone call to discuss emergency access at 1 Joy Place. As we discussed, I am sending you this email to provide background on the Joy Place private way and to outline certain steps that can be taken to ensure that access to 1 Joy Place is maintained after the project is developed.

### Background:

Joy Place is private way. This is consistent with the Public Works Department's records.

There are four (4) property owners that have frontage on Joy Place. Each of the owners has rights in Joy Place to ensure that access to their property from Joy Place is maintained in perpetuity. These owners are; 1 Joy Place (the applicant), 167 Brackett (single family attached residence. Backyard abuts rear portion of Joy Place alley), 165 Brackett (3 unit apartment building along the northwest boundary of Joy Place) and 157 Brackett (the City of Portland).

Each property owner's deed contains a provision granting an easement to use Joy Place for access to their respective property. The easement language further clarifies that Joy Place shall remain "....open and unobstructed forever...." From a pure legal position, we believe each property owner's deed ensures that Joy Place cannot be used for parking. In addition, because one of the abutters is the City of Portland, there is a



mechanism in place (I think) to allow the City to enforce this standard (no parking). Attached is our deed as a reference.

**Past Use:** I am aware that the previous owner of 1 Joy Place utilized the private way for parking. Obviously, they are no longer in the picture. I am also aware that the previous tenants of 167 Brackett (prior to the fire) occasionally parked in the private way after the 1 Joy Place property was vacant and abandoned. I have a very good relationship with the owner of 167 Brackett and he is fully aware that his current tenants should not be parking in the alley. He has notified all of his residents that they cannot park in the alley and that this standard will be regularly enforced once our project begins.

**Future Use:** To ensure that Joy Place is not used for parking by the Onejoy condominium owners, we have the following options to consider;

- a. The Condominium Declaration, the Recorded Site Plan/Plat and the Condominium By-Laws will each specify that i) Joy Place is a private driveway not owned by the condominium association or individual unit owners, ii) that parking is not allowed on Joy Place and iii) the no parking standard can be enforced by the city, since the city has an interest in Joy Place through its easement/ownership of 157 Brackett (our counsel, copied here, will review this and can coordinate with corporation counsel when appropriate on how to best capture this in the recorded documents)
- b. We are open to appropriate signage (either posted or striped into the driveway itself) identifying 'No Parking' and/or 'Fire Lane'.
- c. The declarant (and condominium association) could enter into a management and maintenance agreement with the city that stipulates, among other things, that Joy Place shall not be used for parking. I don't think we can require the other abutters to be a party to the agreement, but I'm certainly comfortable asking them to consider it. If we keep it relatively simple, I think they will be open to such an agreement. It will benefit them to more clearly articulate their rights of use and interest in Joy Place – which can be recorded with their deeds.

We are also open to any other suggestions that you might have. Bottom line, we recognize -- and the other abutters are aware of -- the standard that there will be no parking on the Joy Place private way. And, we are happy to codify that in an

appropriate way to ensure that future owners at onejoy recognize and maintain that standard.

Please let me know if you, or any members of the Fire Department's review team, require any additional information at this time.

Respectfully,

Todd

Todd M. Alexander

**PLEASE NOTE OUR NEW ADDRESS**

**Renewal Housing Associates, LLC | Leon N. Weiner & Associates, Inc.**

**2 Union Street, 5<sup>th</sup> Floor**

**Portland, ME 04101**

**p. 207 347-3018 | c. 207 749-7257**

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## **14. CONFORMITY WITH APPLICABLE DESIGN STANDARDS**

### **14.1 OVERVIEW**

This project conforms to all applicable Site Plan Standards of Section 14-526 of the city's Land Use Ordinance as described in the following narrative.

#### **(a) Transportation Standards**

1. Impact on Surrounding Street Systems:

The project will not have a significant impact on the surrounding street system. Vehicles will access the site and parking areas from existing access points and the estimated number of new vehicle trips generated by the project is insignificant compared to existing trips on surrounding streets.

2. Access and Circulation:

a. Site Access and Circulation

(i) Pedestrian access to the site will be provided via a new sidewalk along Joy Place, connecting to the existing sidewalk on Brackett Street. Door controlled access will be provided at each of the building entry locations.

(ii) The project will use existing points of access.

(iii) Drive up features are not proposed

(iv) Site access has been designed so as not to impede potential future connection to adjacent streets.

b. Loading and Servicing

(i) Delivery or service vehicles are expected to be infrequent and may temporarily use on-street parking on Brackett Street or access the site from Joy Place.

c. Sidewalks.

(i) A new sidewalk will be constructed along the Joy Place right-of-way and will connect to the existing city sidewalk on Brackett Street. All sidewalk improvements shall conform to the City of Portland Technical Manual as shown on the project drawings.

(ii) The sidewalk ramp at Joy Place will be reconstructed in accordance with City of Portland Technical Design Standards.

- (iii) The proposed sidewalk along Joy Place will connect directly to the existing city sidewalk on Brackett Street.

3. Public Transit Access:

Metro Bus Route 8 runs east on Spring Street. The nearest bus stop to the project is at the intersection of Spring Street and Brackett Street, approximately 450' south of Joy Place. The project does not meet the minimum threshold to require a new transit facility.

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

- (i) The project requires one parking space per unit, or 12 total spaces. Four (4) spaces will be provided on site, south of the building, and will be accessed from Joy Place. One of the on-site spaces will be accessible, and two will be compact spaces. The applicant is currently negotiating with the city to provide 10 additional off-street parking spaces within the city owned surface parking lot directly south of the project site via a lease parking agreement.
- (ii) A parking study is not required for this project.
- (iii) Not applicable
- (iv) Of the 14 proposed parking spaces, 12 will meet the dimensional requirements for a "Standard Parking Space" (9' x 18'), and 2 will meet the requirements for a "Compact Parking Space" (8' x 15') as defined in the City of Portland Technical Manual. Approximately (14%) of the parking spaces will be compact spaces.
- (v) The proposed on-site parking area, as well as the existing city owned parking lot, will be paved with bituminous concrete.

b. Location and Required Number of Bicycle Parking Spaces:

- (i) The project requires 2 bicycle parking spaces for every 5 dwelling units, or 5 spaces. A minimum of 5 bicycle parking spaces will be provided in the basement storage area.

c. Motorcycles and Scooter Parking:

- (i) Dedicated motorcycle/scooter parking is not provided.

d. Snow Storage:



- (i) Because of the unique characteristics of the site and the Joy Place right-of-way, there is limited area available for snow storage. Landscaped areas in front of the proposed building and north of the entrance will be available for snow storage. A snow removal plan will be implemented as required.
- (ii) Snow will not be stored in parking areas, and no bio-retention is proposed.

5. Transportation Demand Management (TDM):

- a. A TDM plan is not required for this project.

**(b) Environmental Quality Standards**

1. Preservation of Significant Natural Features:

- a. The development site has been entirely developed and does not contain any significant natural features including wetlands, vernal pools or other protected resources or wildlife habitats.
- b. Not applicable
- c. Not applicable

2. Landscaping and Landscaping Preservation:

a. Landscape Preservation.

- (i) The only two trees on the project site are in the northwest corner of the parcel. One tree is located less than 3' from the brick structure on the abutting property and has exposed roots. The other onsite tree is located along the western property boundary is damaging the existing fence in this location. Both trees will be removed as part of the project.
- (ii) The existing trees are not within required setback areas
- (iii) Not applicable.
- (iv) A waiver is not required from this standard.
- (v) The project is not in the Shoreland Zone

b. Site Landscaping.

- (i) Landscaped Buffers:

(a) The proposed solid waste containers will be enclosed in a cedar enclosure. No other storage or service areas are proposed.

(b) Not applicable.

(c) Not applicable.

(d) Not applicable.

(ii) Parking Lot Landscaping:

(a) Not applicable. The onsite parking area will only have 4 parking spaces.

(b) Not applicable.

(c) Not applicable.

(d) Not applicable

(e) Not Applicable

(iii) Street Trees

(a) Two street trees are proposed along the private Joy Street Right of Way. The trees will be located within the proposed sidewalk located on the abutting city-owned parcel.

(b) Not Applicable.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

The existing project site, including the Joy Place right of way, contains approximately 5,550 square feet of impervious surface.

Redevelopment of the project site will result in an increase of approximately 820 square feet of impervious area and a total impervious surface of 6,365 square feet. This level of development is not required to meet the General or Flooding Standards.

Post development stormwater runoff will follow existing patterns. Runoff from Joy Place, the four proposed parking spaces, and the proposed building will drain to Brackett Street, where it will enter the city's combined storm sewer. Runoff from the remainder of the site will drain overland across the eastern property boundary, as it does today.

(i) The project will not result in flooding of adjacent lots.

- (ii) Runoff volumes and rates will not increase onto adjacent lots.
  - (iii) Volumes and rates of stormwater runoff into the Brackett Street right of way are expected to decrease. The project will not create ponding, flooding, or other drainage problems within Brackett Street.
  - (iv) Volumes and rates of stormwater runoff into the city's storm drain network are expected to be similar to existing volumes and rates. The project will not create problems downstream or exceed the capacity of the system.
- b. The project will result in less than 1,000 square feet of new impervious surface and less than 5,000 square feet of non-roof redeveloped impervious surface and is not required to meet the General or Flooding Standards.
  - c. Not Applicable. The project is not located in a watershed of an urban impaired stream.
  - d. Not applicable.
  - e. The project will be served by both a public wastewater system and public drainage system. The project will not pose a risk of groundwater contamination.
  - f. Wastewater will flow to the public sewer system, which is adequately sized for the project flows.

**(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 of Portland Land Use Ordinance and off-premises infrastructure.
- b. Not applicable.

2. Public Safety and Fire Prevention:

- a. The site has been designed to promote safety and security for residents and their guests. Access to the common yard area will be restricted using a key pad operated locked gate at the northwest corner of the proposed building. Site lighting will provided added security.

- b. Emergency vehicle access will be via Joy Place, which will feature a 22.5' wide paved surface.
- c. An existing fire hydrant is located on the west side of Brackett Street, across from the project site. The proposed building will also feature sprinklers for fire suppression.

3. Availability and Adequate Capacity of Public Utilities:

- a. The project will be served by new water, sewer, and storm drain utilities. The Portland Water District has indicated that their system has capacity to serve the project, and a Wastewater Capacity Application has been forwarded to Brad Roland at the City of Portland.
- b. Overhead electrical and telecommunications utilities exist in Brackett Street. The project site will be served by underground utilities.
- c. All new utility infrastructure will meet the provisions of the Technical Manual.
- d. The project will be connected to the public sewer system within Brackett Street.
- e. The sanitary sewer and stormwater collection systems were designed to comply with City standards.
- f. An exterior solid waste storage area will be located on the north side of the building, accessible to only residents. The solid waste containers will be screened and protected with a cedar enclosure, and will not be visible from public areas or adjacent properties.

**(d) Site Design Standards**

1. Massing, Ventilation and Wind Impact:

- a. The bulk, location and height of the proposed building will not result in adverse impacts to abutting properties.
- b. The bulk, location and height of the proposed building will not substantially reduce the value or utility of adjacent structures.
- c. HVAC systems will be located on the roof of the proposed building. Venting is proposed to be directed away from public spaces and adjacent residential sites.

2. Shadows:



- a. The project is not expected to cause shadows on publically available open space, or have an adverse effect on vegetation as a result of shadows cast from the proposed building.

3. Snow and Ice Loading:

- a. The proposed building will have a flat roof. Accumulated snow and ice will not fall onto adjacent properties or public ways.

4. View Corridors:

- a. The project site is located outside the Downtown Vision View Corridor Protection Plan.

5. Historic Resources:

- a. The development subject to a Certificate of Appropriateness under article IX (historic preservation) of the Land Use Ordinance.
- b. Not Applicable
- c. There are no known archaeological resources on the site.

6. Exterior Lighting:

a. Site Lighting

- (i) Exterior site lighting will be provided by building mounted lights, including recessed canopy and wall packs, and two pole mounted lights along the proposed sidewalk adjacent to Joy Place. All fixtures will feature full cut-off optics to prevent unintended light pollution. Proposed lighting is shown on the Lighting Photometric Plan (Sheet P-1).

b. Architectural and Specialty Lighting:

- (i) No architectural or specialty lighting is proposed.
- (ii) No up-lighting is proposed.

c. Street Lighting

- (i) No street lighting is proposed

7. Noise and Vibration:

Noise levels are expected to meet the permitted levels for the B-1 Zone.

- a. HVAC and Mechanical Equipment
  - (i) HVAC equipment will be located on the roof of the proposed building and will meet all applicable state and federal emissions requirements. The units will not be visible from Brackett Street or adjacent sites.
  - (ii) Not Applicable. No emergency generator is proposed.

8. Signage and Wayfinding:

- a. All signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.
  - (i) The project is subject to a Certificate of Appropriateness.
  - (ii) Not applicable. No commercial or directional traffic signage is proposed as part of the project.
  - (iii) Not applicable. No on-site directional traffic signage is proposed as part of the project.
  - (iv) Not applicable. No waiver is required.

9. Zoning Related Design Standards:

- a. The project is located within a historic zone and is subject to the City of Portland Historic Preservation standards.

## **15. VERIFICATION OF PROPOSED HVAC EQUIPMENT**

### **15.1 OVERVIEW**

The following manufacturer cut sheets verify that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

### **15.2 ATTACHMENTS**

Attachment 15-A – HVAC Equipment Cut Sheets

**ATTACHMENT 15-A**

**HVAC Equipment Cut Sheets**



# System 12RLFCD Submittal

**AOU12RLFC, ARU12RLF**

## Compact Duct

Job Name: \_\_\_\_\_ Approval: \_\_\_\_\_ Date: \_\_\_\_\_  
 Location: \_\_\_\_\_ Construction: \_\_\_\_\_  
 Engineer: \_\_\_\_\_ Unit #: \_\_\_\_\_  
 Submitted to: \_\_\_\_\_ Drawing #: \_\_\_\_\_  
 Submitted by: \_\_\_\_\_ Reference: \_\_\_\_\_

**Outdoor Unit Power** 208-230/VAC-1Ph-60Hz  
 Available Voltage Range 187-253VAC  
 Fuse Size, Max. 15A  
 MCA 13.4A

**Compressor** Inverter Driven Variable Speed DC Rotary  
 No. used 1  
 Output 850W  
 Lubricant Oil POE (RB68)

**Fan type** Propeller  
 Motor Output 115W  
 Airflow Rate Cooling/Heating (High) 1206 / 1083CFM

**Refrigerant** 410A  
 Outdoor Unit 2lbs 10oz  
 Control Electronic Expansion Valve  
 O.D. Discharge (in) 1/4"(Flare)  
 O.D. Suction (in) 3/8"(Flare)

**Dimensions** H x W x D  
 Uncrated (in) 24-1/2 x 31-3/32 x 11-11/32  
 (mm) (620 x 790 x 290)  
 Crated (in) 28-1/16 x 37-7/32 x 15-9/16  
 (mm) (713 x 945 x 395)

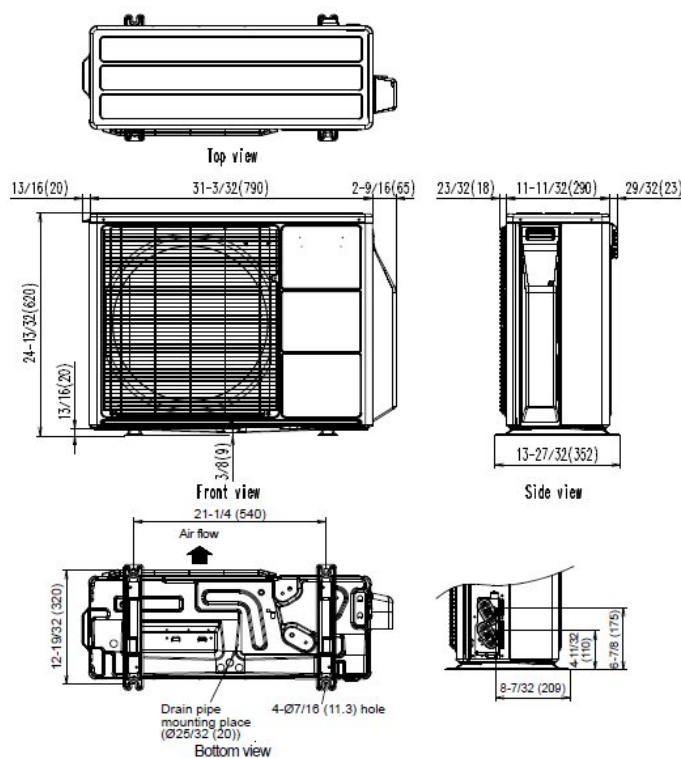
**Weight** Outdoor  
 Net 84lbs (38kg)  
 Gross Shipping 93lbs (42kg)

**Cooling**  
 Rated Capacity 12,000BTU/h  
 Min-Max Capacity 3,100~13,600BTU/h  
 Rated Power Input 0.94kw  
 Max. Power Input 1.45kw  
 SEER 20.0  
 Outdoor Sound Rating 49dB

**Heating**  
 Rated Capacity 16,000BTU/h  
 Min-Max Capacity 3,100~19,400BTU/h  
 Rated Power Input 1.30kw  
 Max. Power Input 2.00kw  
 HSPF 11.5  
 Outdoor Sound Rating 50dB

**Piping Lengths**  
 Max. Piping Length (Total) 66ft  
 Max. Pipe Height Difference 49ft  
 Connection method (Flared)

**Operating Range**  
 Cooling 14°F~115°F DB  
 Heating -5°F~75°F DB



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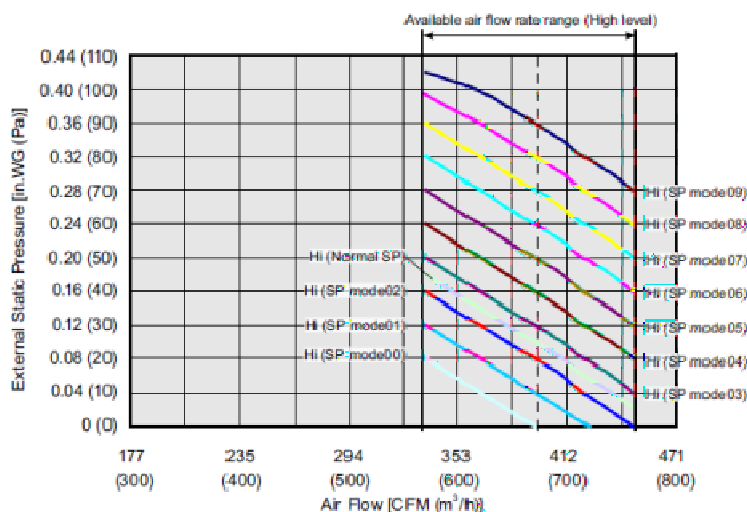
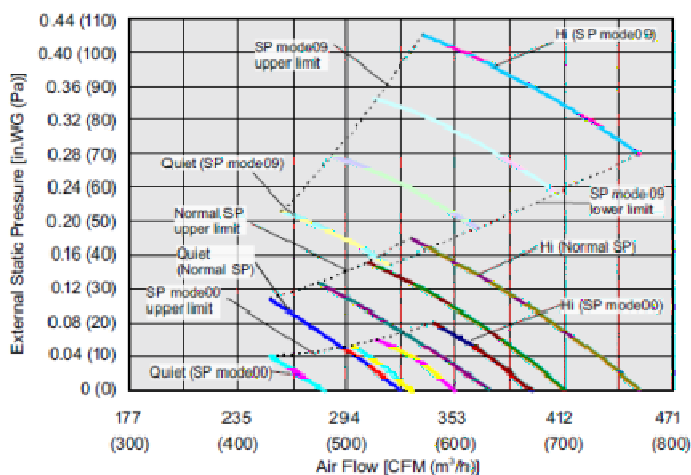


|                      |                  |                              |
|----------------------|------------------|------------------------------|
| <b>Power</b>         | V/Hz/P           | 230/60/1                     |
| <b>Fan type</b>      |                  | Sirocco                      |
| No. Motors           | (W)              | 2 (81)                       |
| CFM [1.10 in.WG]     | (Hi,Me,Lo,Qu)    | 383/353/324/283              |
| Sound Pressure Level | db (Hi,Me,Lo,Qu) | 29/28/27/26                  |
| F.L. A.              | (A)              | .37                          |
| <b>Refrigerant</b>   |                  | 410A                         |
| O.D. Discharge       | in (mm)          | Ø1/4" (6.35)                 |
| O.D. Suction         | in (mm)          | Ø3/8" (9.52)                 |
| <b>Dimensions</b>    |                  | H x W x D                    |
| Uncrated             | (in)             | 7-25/32 × 27-9/16 × 24-13/32 |
|                      | (mm)             | (198 × 700 × 620)            |
| Crated               | (in)             | 10-7/8 × 38-1/8 × 29-3/4     |
|                      | (mm)             | (276 × 968 × 756)            |
| <b>Weight</b>        |                  |                              |
| Net                  | lbs. (kg)        | 41 (19)                      |
| Gross Shipping       | lbs. (kg)        | 55 (25)                      |

|                                  |            |                  |
|----------------------------------|------------|------------------|
| <b>Cooling Capacity</b>          | (BTU/h)    | 12,000           |
| <b>Moisture Removal</b>          | pt/h (l/h) | 2.7 (1.3)        |
| <b>Heating Capacity</b>          | (BTU/h)    | 13,500           |
| <b>Temperature Setting Range</b> |            |                  |
| Cooling                          | °F(°C)     | 64~90 (18~32)    |
| Heating                          | °F(°C)     | 60~88 (16~31)    |
| <b>Drain Pipe Size**</b>         | OD in      | Ø1-1/16          |
|                                  | ID in      | Ø3/4             |
| <b>Remote Control Type</b>       |            | Wired            |
| <b>Electrical Connection*</b>    | AWG        | 14/3 with ground |

\*Power and communication are fed from the outdoor unit.

\*\*Adapter to 3/4" PVC included with unit.



**Note:**

Specifications are based on the following conditions.

Power source of specifications : 230V

Cooling: Indoor temperature of 80°F(26.67°C)DB / 67°F(19.44°C)WB, and outdoor temperature of 95°F(35°C)DB/75°F(23.89°C)WB.

Heating: Indoor temperature of 70°F(21.11°C)DB / 60°F(15.56°C)WB, and outdoor temperature of 47°F(8.33°C)DB/43°F(6.11°C)WB.

Standard Static Pressure: 0.10in.WG (25Pa)

Pipe length : 16.4ft. (5m) [Outdoor unit - Branch box], 9.8ft. (3m) [Branch box - Indoor unit]

Height difference : 0 ft.(0m) [Outdoor unit - Indoor unit]

Fujitsu General America, Inc.  
Fairfield, NJ 07004  
Toll Free: 1-888-888-3424  
Fax: (973) 836-0447  
www.fujitsugeneral.com

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## Submittal Data: 18RLFCD Inverter Driven Heat Pump

18,000 BTU Slim Compact Duct

Job Name: \_\_\_\_\_

Date: \_\_\_\_\_

Location: \_\_\_\_\_

Approval: \_\_\_\_\_

Engineer: \_\_\_\_\_

Construction: \_\_\_\_\_

Submitted to: \_\_\_\_\_

Unit #: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Drawing #: \_\_\_\_\_

Reference: \_\_\_\_\_

### General Features

- Wired remote controller
- Weekly timer
- Dry mode
- Auto louver: up/down
- Auto mode
- Auto changeover
- Low ambient cooling
- Cold prevention
- Daisy chain
- Condensate pump
- Standard Warranty: 5 years parts, 7 years compressor. Applies to systems purchased before June 1<sup>st</sup> 2015\*
- Extended Warranty: 10 years parts, 10 years compressor. Systems that have been installed on or after June 1<sup>st</sup> 2015 by licensed contractors and the online Product Registration has been submitted.\*\*
- Elite Contractor Extended Warranty: 12 years parts, 12 years compressor. Systems that have been installed on or after June 1<sup>st</sup> 2015 by contractors who have met requirements and have been approved for elite contractor status plus, the online Product Registration has been submitted. \*\*\*

### Model Information

Condenser..... AOU18RLFC  
Evaporator..... ARU18RLF

**Electrical**..... 208/230V AC 1ph-60Hz

Available voltage range..... 208/230 +/- 10%

Minimum circuit ampacity..... 17.3 A

Max fuse size..... 20 A

Rated Current

Cooling..... 6.6 A

Heating..... 7.3 A

Input Power

Cooling..... 1.50 kW

Heating..... 1.67 kW

**Capacity**

Nominal cooling..... 18,000 Btu/h

Min-max cooling..... 3,100 – 20,100 Btu/h

Nominal heating..... 21,600 Btu/h

Min-max heating..... 3,100 – 25,600 Btu/h

**Compressor**

Motor output..... 1,000 W

Refrigerant..... R410a

Charge..... 2 lbs. 14 oz.

Oil..... FREOL α68SZ

**Fan Motor**

(Condenser) Type: DC..... Propeller fan x1

(Condenser) Motor Output..... 115 W

(Evaporator) Type..... Sirocco fan x3

(Evaporator) Motor Output..... 96 W

**Heat Exchanger**

Condenser

(H x W x D) in. (mm)..... 23-5/32 x 34-11/16 x 1-7/16 (588x881x36.4)

Fin Pitch..... 20 FPI

Rows x stages..... 2 x 28

Pipe type (Material)..... Copper

Type (Material)..... Aluminum



### Temperature Setting Range

Cooling..... 14°F - 115°F (-10°C – 46°C)

Heating..... -5°F - 75°F (-21°C - 24°C)

### Efficiency

SEER..... 19.7

EER (cooling)..... 3.52 kW/kW

COP (heating)..... 3.79 kW/kW

HSPF (heating)..... 11.3 Btu/hW

Moisture Removal..... 4.2 pints/h / 2.0 liters/h

### Enclosure

(Condenser) Material..... Steel

(Condenser) Color..... Beige (approximate color or Munsell 10 YR 7.5/1.0)

(Evaporator) Material..... Galvanized steel sheet

### Sound Pressure Level

Condenser..... 55 dB (A)

Evaporator..... 32 dB (A)

### Dimensions

H x W x D

Condenser in. (mm)..... 24-1/2 x 31-3/32 x 11-11/32 (620x790x290)

Evaporator in. (mm)..... 7-25/32 x 35-7/16 x 24-13/32 (198x900x620)

### Connection Pipe

Liquid..... 1/4" in. (6.35 mm)

Gas..... 1/2" in. (12.7 mm)

Method (Liquid/Gas)..... Flare

Internal Drain Pump Lift..... 27-9/16"

### Weight

Condenser..... 86 lbs. (39 kg)

Evaporator..... 50 lbs. (23 kg)

### Accessories

UTY-RNNUM..... Wired remote controller

UTY-RVNUM..... Wired remote controller (backlit, shows room temp.)

UTY-RSNUM..... Wired remote controller (simple)

UTY-XSZX..... Remote sensor

UTY-LRHUM..... Receiver unit

UTD-ECS5A..... Slim duct connector kit

UTD-GXSA-W..... Auto louver grille kit

### Intertek® ETL Number

AOU18RLFC..... 91986

ARU18RLF..... 3170288

Fujitsu General America, Inc.

353 Route 46 West

Fairfield, NJ 07004

Toll Free: 1-888-888-3424

Fax: (973) 836-0447

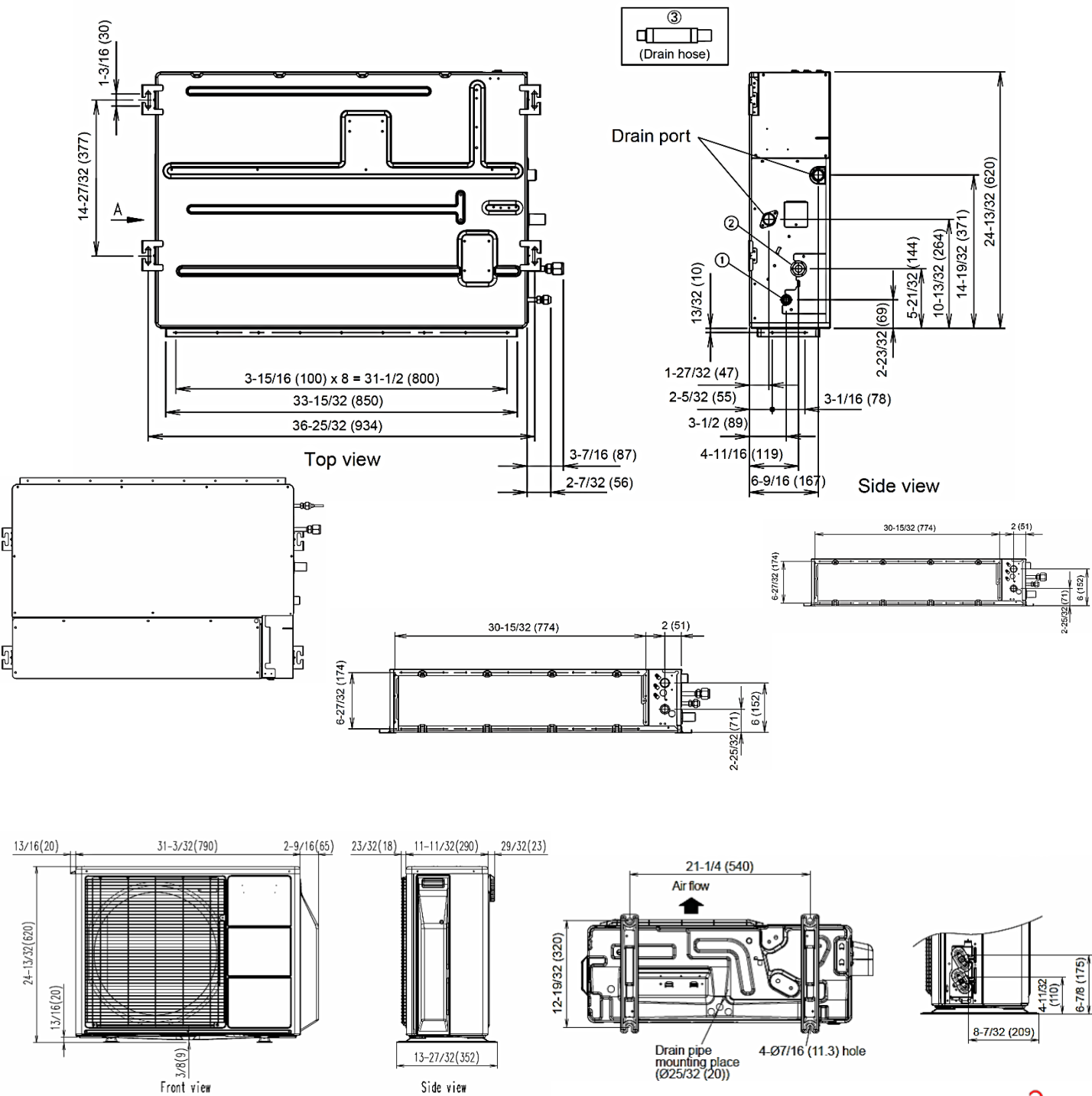
www.fujitsugeneral.com



Note: Specifications are based on the following conditions:  
Cooling: Indoor temperature of 80°F (26.7°C) DB/67°F (19.44°C) WB, and outdoor temperature of 95°F (35°C) DB/75°F (23.9°C) WB.  
Heating: Indoor temperature of 70°F (21.11°C) DB/59°F (15°C) WB, and outdoor temperature of 47°F (8.33°C) DB/43°F (6.11°C) WB.  
Pipe length: 24ft. 7in. (7.5m), Height difference: 0ft. (0m) (Outdoor unit – indoor unit)  
(\*Standard warranty / \*\*10 year warranty / \*\*\*12 year warranty)

## Dimensions: 18RLFCD

[Unit: in. (mm)]





## Neighborhood Meeting Notes

### 1 Joy Place

June 28, 2017

---

Presenter: Todd Alexander, Renewal Housing Associates

Todd Alexander and Michael Tadema-Wielandt, Civil Engineer give overview of project, following were questions asked by attendee.

1. What was on the site prior? **Answer:** *A barn, a 3-4 unit house and garage. The structure was vacant and has fallen into disrepair.*
2. Will this be condominiums? **Answer:** *Yes, this will be a for sale property.*
3. What parking is guaranteed on site? **Answer:** *Four spaces are provided (two blocks of double spaces) with the possibility of working with the city for parking on site beside project in exchange for parking lot improvements.*
4. Is there an elevator? **Answer:** *There is no elevator, the building is designed efficiently to keep costs low for buyers and give quality finishes back to units and exterior of the building.*
5. How many parking spaces exist on the city lot beside the project? **Answer:** *24 Parking spaces are in the municipal lot beside the project but nothing is striped. If the parking lot is improved and striped properly, the site can yield 28 parking spaces. Attendee was hopeful that the city would come to agreement with developer to see the proposed sidewalk, trees and striped parking on the city lot.*
6. How many spaces would be used in the adjoining lot at night by the project? **Answer:** *10 spaces would be used at night by the project. There are other options if this is not approved by the city. Shared parking in a private parking lot nearby is also a possibility.*

End of Notes

# SIGN UP SHEET

1 Joy Place

28-Jun-17

|    | Name         | Address      |
|----|--------------|--------------|
| 1  | Ed Resnaisky | 115 CLARK ST |
| 2  |              |              |
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| 26 |              |              |

ONEJOY PLACE, LLC  
C/O RENEWAL HOUSING ASSOCIATES, LLC  
2 UNION STREET, 5TH FLOOR  
PORTLAND, MAINE 04101

## CITY OF PORTLAND TAX ASSESSOR'S MAP, BLOCK, &amp; LOT NUMBERS

|            |              |             |
|------------|--------------|-------------|
| <u>MAP</u> | <u>BLOCK</u> | <u>LOTS</u> |
| 45         | E            | 48 & 49     |

|       |                                          |
|-------|------------------------------------------|
| C-1.0 | COVER SHEET                              |
| C-1.1 | GENERAL NOTES & LEGEND                   |
| C-2.0 | BOUNDARY & TOPOGRAPHIC SURVEY            |
| C-2.1 | RECORDING PLAT                           |
| C-2.2 | EXISTING CONDITIONS & DEMOLITION PLAN    |
| C-2.3 | CONSTRUCTION MANAGEMENT PLAN             |
| C-3.0 | SITE LAYOUT PLAN                         |
| C-4.0 | GRADING, DRAINAGE & EROSION CONTROL PLAN |
| C-5.0 | UTILITY PLAN                             |
| C-6.0 | SITE DETAILS                             |
| C-6.1 | UTILITY & DRAINAGE DETAILS               |
| L-1   | LANDSCAPE PLAN                           |
| P-1   | LIGHTING PHOTOMETRIC PLAN                |



SCALE: 1"=500

## PERMITS

| TYPE OF PERMIT                 | GOVERNING BODY                                                                                                       | STATUS                                 |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SITE PLAN/SUBDIVISION APPROVAL | CITY OF PORTLAND PLANNING AUTHORITY<br>CITY HALL, 389 CONGRESS STREET<br>PORTLAND, ME 04101<br>TEL. 207.874.8722     | SUBMITTED 4/25/2017                    |
| BUILDING PERMIT                | CIT OF PORTLAND CODE ENFORCEMENT OFFICE<br>CITY HALL, 389 CONGRESS STREET<br>PORTLAND, ME 04101<br>TEL. 207.874.8900 | TO BE SUBMITTED BY BUILDING CONTRACTOR |
| UTILITY / STREET OPENING       | CITY OF PORTLAND PUBLIC SERVICES DIVISION<br>55 PORTLAND STREET<br>PORTLAND, ME 04101<br>TEL. 207.874.8801           | TO BE FILED BY PERMIT SITE CONTRACTOR  |

**SEWER**  
**CITY OF PORTLAND**  
**PUBLIC SERVICES DIVISION**  
**55 PORTLAND STREET**  
**PORTLAND, MAINE 04102**  
**207.874.8850**

PORTLAND WATER DISTRICT  
22 DOUGLASS STREET  
P.O. BOX 3553  
PORTLAND, MAINE 04104  
207.774.5961

CENTRAL MAINE POWER COMPANY  
162 CANCO ROAD  
PORTLAND, ME 04103  
(207) 842-2367

FAIRPOINT COMMUNICATIONS  
5 DAVIS FARM ROAD  
P.O. BOX 11560  
PORTLAND, MAINE 04103  
888.984.1515

UNITIL  
376 RIVERSIDE INDUSTRIAL PARKWAY  
PORTLAND, MAINE 04103  
866.933.3821

DIG SAFE SYSTEM, INC.  
TEL. 1-888-DIG-SAFE (344-7233)  
WWW.DIGSAFE.COM

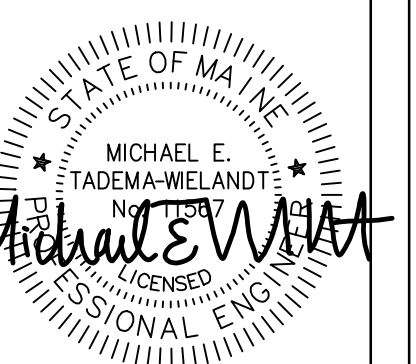
**CIVIL ENGINEER:**  
TERRADYN CONSULTANTS, LLC  
565 CONGRESS STREET, SUITE 310  
PORTLAND, MAINE 04101  
207.926.5111  
CONTACT: MICHAEL TADEMA-WIELANDT

ARCHETYPE ARCHITECTS  
48 UNION WARF  
PORTLAND, ME 04101  
207.772.6022  
CONTACT: DAVID LLOYD

OWEN HASKELL, INC.  
309 U.S. ROUTE ONE, UNIT 10  
FALMOUTH, MAINE 04105  
207.774.0424  
JOHN SWAN

**BENNETT ENGINEERING**  
P.O. BOX 297  
FREEPORT, MAINE 04032  
207.865.9475  
CONTACT: WILLIAM BENNETT

**SUMMIT GEOENGINEERING SERVICES**  
145 LISBON STREET, SUITE 601  
LEWISTON, MAINE 04240  
207.576.3313  
CONTACT: WILLIAM PETERLEIN



E.: MICHAEL E. TADEMA-WIELANDT

DATE: 4/25/17

[illegible]

365 CONGRESS STREET  
SUITE 310  
PORTLAND, ME 04102

P.O. BOX 339  
111 ELDERBERRY LANE  
NEW GLOUCESTER, ME 0

[www.terradyneconsultants.com](http://www.terradyneconsultants.com)

CONSULTANTS, LLC

Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

ONEJOY PLAY

COVER SHEET

ONEJOY F

2 UNION STREET, 5TH FLOOR  
PORTLAND, MAINE 04101

|       |          |
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| DATE: | 3/7/2017 |
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| SCALE: | AS NOTED |
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| DESIGNED: | MTW |
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| OB NO:            | 1704 |
| LE 1500 COVER BWS |      |

FILE: 1562-COVER.DWG

C-1.0

C-1.0

PRELIMINARY - NOT FOR CONSTRUCTION



1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF ALL REGULATIONS ADMINISTERED BY THE LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCES, EXITS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS.
3. ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL SERVICE CONNECTIONS.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE (1-888-DIGSAFE). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS, AT NO EXTRA EXPENSE TO THE OWNER.
5. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE OWNER AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.
6. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
7. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO PROJECT CONTRACT SPECIFICATIONS, AND THE CITY OF PORTLAND TECHNICAL MANUAL STANDARDS, WHICHEVER IS MORE STRINGENT.
8. TOPOGRAPHIC AND BOUNDARY SURVEY INFORMATION WAS PROVIDED BY OWEN HASKELL, INC. BENCHMARK = HYDRANT BONNET BOLT ON WEST SIDE OF BRACKETT STREET, ELEVATION 142.96, NGVD 1929 DATUM.
9. FEMA MAP COMMUNITY PANEL NUMBER 230051 0013 B. THE SITE IS LOCATED IN A C ZONE.
10. THE PROPERTY SHOWN ON THIS PLAN MAY BE DEVELOPED AND USED ONLY AS DEPICTED IN THIS APPROVED PLAN. ALL ELEMENTS AND FEATURES OF THE PLAN AND ALL THE PROPERTY WHICH APPEARS IN THE RECORD OF THE PLANNING BOARD PROCEEDINGS ARE CONDITIONS OF THE APPROVAL. NO CHANGE FROM THE CONDITIONS OF APPROVALS IS PERMITTED UNLESS AN AMENDED PLAN IS FIRST SUBMITTED TO AND APPROVED BY THE PLANNING AUTHORITY.
11. ALL SIGNAGE SHALL CONFORM TO THE STANDARDS FOR SIZE, HEIGHT, LOCATION AND REFLECTIVITY SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
12. ALL CURB SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AS NOTED ON THE PLANS: GRANITE CURB SHALL MEET THE REQUIREMENTS OF MaineDOT SPECIFICATIONS 609.03 AND CITY OF PORTLAND TECHNICAL STANDARDS.
13. ALL DIMENSIONING UNLESS OTHERWISE NOTED IS TO THE FACE OF CURB OR FACE OF BUILDING.
14. THE FACILITY IS SERVICED BY PUBLIC WATER, SEWER, AND UNDERGROUND POWER. THE PROJECT INCLUDES UPDATES TO THE POWER SERVICE INCLUDING THE INSTALLATION OF NEW UNDERGROUND SYSTEM. SEE SITE ELECTRICAL PLANS FOR DETAILS.
15. THE CONTRACTOR IS REQUIRED TO NOTIFY THE CITY OF PORTLAND PUBLIC WORKS INSPECTION SERVICES DIVISION (874-8300 EXT. 8838), CODE ENFORCEMENT OFFICE AND DEVELOPMENT REVIEW COORDINATOR IN WRITING THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING MAY BE REQUIRED TO INCLUDE THE PUBLIC WORKS AUTHORITY OR DEVELOPMENT REVIEW COORDINATOR.
16. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.
17. WARNING SIGNS, MARKERS, BARRICADES OR FLAGMEN MUST BE EMPLOYED ON ADJACENT STREETS AS NECESSARY. THE CONTRACTOR SHALL COORDINATE AND SEEK APPROVAL FROM THE PUBLIC SERVICE DIVISION FOR THE PLACEMENT/PARKING OF EQUIPMENT WITHIN THE PUBLIC RIGHT OF WAY.
18. CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED AND DISPOSED OF IN ACCORDANCE WITH THE CITY OF PORTLAND'S SOLID WASTE ORDINANCE CHAPTER 12. ALL DESTRUCTION MATERIAL FROM THE PROJECT SITES SHALL BE TAKEN TO THE RIVERSIDE RECYCLING FACILITY OR AS OTHERWISE DIRECTED PENDING THE RESULTS OF A HAZARDOUS BUILDING MATERIALS SURVEY AS AUTHORIZED AND COORDINATED BY THE OWNER. ALL SALVAGED MATERIAL WITHIN THE PUBLIC R.O.W. (SIDEWALKS, BRICKS, GRANITE CURBS) NOT REUSED SHALL BE DISPOSED OF AS DIRECTED BY THE PORTLAND PUBLIC SERVICES DEPARTMENT AT NO EXTRA COST TO THE OWNER.
19. ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
20. PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED AT ALL TIMES DURING CONSTRUCTION TO INSURE INTEGRITY. IF DISTURBED THEY SHALL BE REPLACED BY A SURVEYOR REGISTERED IN THE STATE OF MAINE AT THE CONTRACTOR'S EXPENSE.
21. THE OWNER SHALL BE RESPONSIBLE TO COORDINATE THE PERFORMANCE OF A HAZARDOUS MATERIALS INSPECTION OF THE PROPERTY.
22. A STREET OPENING PERMIT MUST BE OBTAINED FROM THE CITY OF PORTLAND PUBLIC WORKS DEPARTMENT PRIOR TO BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE COMPLETED IN CONFORMANCE TO THE CITY'S RULES AND REGULATIONS FOR EXCAVATION ACTIVITIES IN PUBLIC RIGHT OF WAYS.
23. CONTRACTOR MUST MAINTAIN THROUGH TRAFFIC ON ADJACENT STREETS AT ALL TIMES.
24. ALL METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE IMPROVEMENTS IDENTIFIED HEREIN SHALL CONFORM TO THE CITY OF PORTLAND CONSTRUCTION AND TECHNICAL STANDARDS AND SPECIFICATIONS AND/OR CURRENT MaineDOT STANDARDS AND SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
25. SITE WORK FOR BUILDING SHALL INCLUDE GRADING THE BUILDING PAD AREA (DEFINED AS THE BUILDING FOOTPRINT PLUS 5'-0" BEYOND THE EXTERIOR WALL) TO A GRADE 18" BELOW THE GROUND FLOOR FINISH ELEVATION. ALL WORK SHALL INCLUDE EXCAVATION (INCLUDING ROCK REMOVAL AND EXISTING FOUNDATION DEMOLITION) AND BACKFILL OF ALL FOOTINGS AND FOUNDATIONS, INSTALLATION OF PERIMETER FOUNDATION DRAINS, EXCAVATION AND BACKFILL OF ALL UNDERSLAB UTILITIES AND PLACEMENT OF ALL AGGREGATES BELOW THE FLOOR SLAB AND ADJACENT FOUNDATION WALLS IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. (SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL DETAILS PERTAINING TO ANY BUILDING RELATED FOUNDATION WORK).

11. SUBGRADE FILL PLACED BENEATH ALL PERMANENT PAVEMENT, SIDEWALK OR CONCRETE SURFACES EXCLUDING ANY BUILDING AREAS, SHALL BE GRANULAR BORROW. SUBGRADE FILL PLACED BENEATH ALL LANDSCAPE AREAS EXCEPT THOSE ADJACENT THE FOUNDATION SYSTEMS MAY BE A COMMON BORROW MATERIAL. SUITABLE FOR EMBANKMENT CONSTRUCTION, FREE FROM FROZEN MATERIAL, PERISHABLE RUBBLE, PEAT, ORGANIC OR ROCKS LARGER THAN 12" IN DIAMETER, VEGETATION AND OTHER MATERIAL UNSUITABLE FOR ROADWAY AND SUBGRADE CONSTRUCTION. EXCAVATED ON-SITE MATERIALS MAY BE USED FOR FILL PROVIDED THE MATERIAL IS FREE FROM UNSUITABLE MATERIAL DESCRIBED IN THIS NOTE AND UPON APPROVAL OF THE ENGINEER. EXCAVATED ONSITE MATERIALS MAY NOT BE USED AS COMPACTED STRUCTURAL FILL BENEATH THE BUILDING AREAS OR AS FOUNDATION BACKFILL. GRANULAR BORROW AND COMMON BORROW SHALL COMPLY WITH MaineDOT SPECIFICATIONS.
12. ALL FILLS SHALL BE PLACED IN LAYERS NOT MORE THAN 12" LOOSE DEPTH AND COMPACTED BY HEAVY COMPACTION EQUIPMENT. MINIMUM COMPACTION SHALL BE 95% OF MAXIMUM DENSITY ASTM 1557, MODIFIED AND FIELD DENSITY ASTM D2922 (NUCLEAR METHODS).
13. 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.

1. ALL CONSTRUCTION SHALL COMPLY WITH 2009 NFPA 1 CHAPTER 16 SAFE GUARDS DURING BUILDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS.
2. ANY CUTTING AND WELDING WORK PERFORMED ONSITE SHALL REQUIRE A "HOT WORK" PERMIT FROM THE PORTLAND FIRE DEPARTMENT.
3. THE GENERAL CONTRACTOR SHALL POST EMERGENCY CONTACT INFORMATION ON THE PROJECT SITE PROPERTY DURING CONSTRUCTION IN THE EVENT OF AN AFTER HOURS EMERGENCY. THIS CONTACT INFORMATION SHALL ALSO BE PROVIDED TO THE PORTLAND FIRE DEPARTMENT.
4. IF THE SITE IS SECURED BY TEMPORARY OR PERMANENT FENCING WITH LOCKED GATES, THEN THE APPLICANT OR ASSIGNED REPRESENTATIVE SHALL PURCHASE A KNOX PADLOCK FROM THE PORTLAND FIRE DEPARTMENT TO ALLOW ACCESS BY THE PORTLAND FIRE DEPARTMENT.
5. STREETS SHALL MAINTAIN A 20' WIDTH FOR FIRE DEPARTMENT ACCESS AT ALL TIMES.
6. FIRE HYDRANTS SHALL NOT BE BLOCKED OR ENCLOSED BY FENCING. A 3' CLEARANCE SHALL BE MAINTAINED AT ALL TIMES AROUND FIRE HYDRANTS.

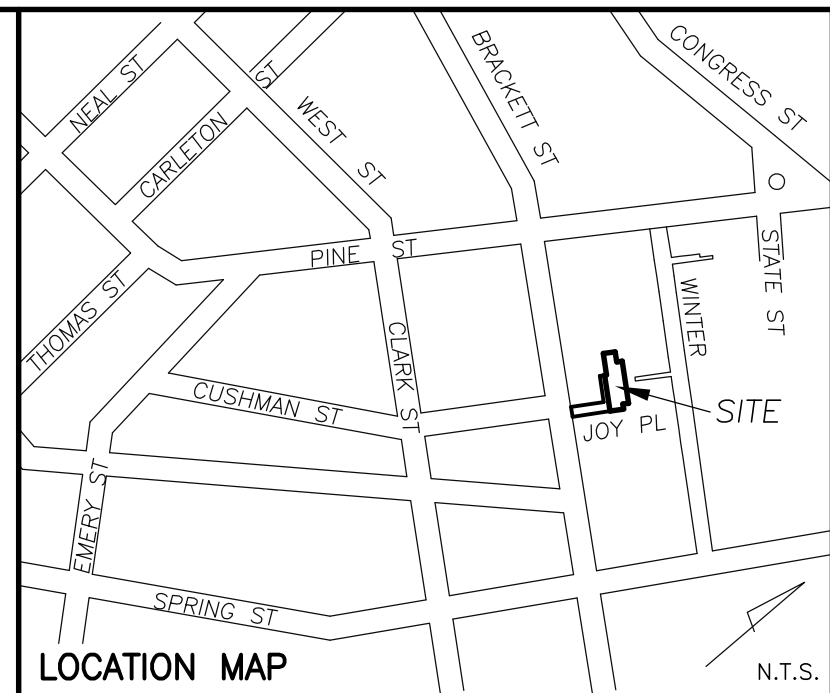
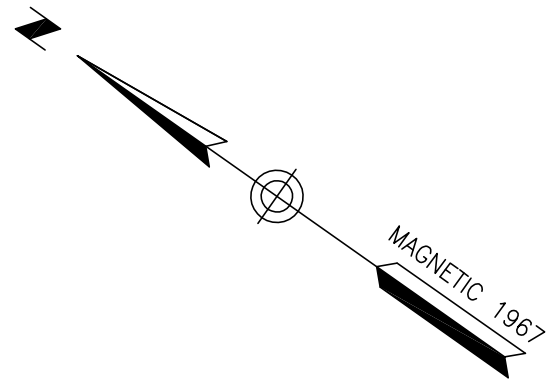
1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE SITE PLAN REVIEW PERMIT FROM THE CITY OF PORTLAND WHICH WILL BE MADE A PART OF THE CONTRACT BID DOCUMENTS. THE CONSTRUCTION WILL BE GOVERNED BY THE ZONING ORDINANCES WHICH ARE AVAILABLE FOR VIEWING AT THE OFFICE OF THE ENGINEER OR THE MUNICIPAL OFFICE.

| DIMENSIONAL REQUIREMENTS (B-1 ZONE) |                              |                                                                                                           |
|-------------------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------|
| STANDARD                            | REQUIRED                     | PROVIDED                                                                                                  |
| MIN. LOT SIZE                       | NONE                         | 5,851                                                                                                     |
| MIN. LOT AREA PER DWELLING UNIT     | 435 SF                       | 465 SF                                                                                                    |
| MIN. STREET FRONTAGE                | 20 FT                        | 87.90 FT                                                                                                  |
| MIN. LOT WIDTH                      | NONE                         | 87.90 FT                                                                                                  |
| MIN. FRONT YARD                     | NONE                         | 0 FT                                                                                                      |
| MAX. FRONT YARD                     | 10 FT                        | 0 FT                                                                                                      |
| MIN. REAR YARD                      | 10 FT                        | 10 FT                                                                                                     |
| MIN. SIDE YARD                      | NONE                         | 4 FT                                                                                                      |
| MAX. STRUCTURE HEIGHT               | 45 FT                        | 34 FT                                                                                                     |
| MAX. IMPERVIOUS SURFACE             | 90%                          | 62.2%                                                                                                     |
| PARKING                             | 1 SPACE PER UNIT (12 SPACES) | 14 TOTAL SPACES<br>4 ON SITE SPACES & 10 OFF SITE<br>SPACES THRU LEASE AGREEMENT<br>WITH CITY OF PORTLAND |

|  |                                           |
|--|-------------------------------------------|
|  | EXISTING PROPERTY LINE                    |
|  | PROJECT SITE BOUNDARY                     |
|  | EXISTING SETBACK LINE                     |
|  | PROPOSED EASEMENT                         |
|  | EXISTING MINOR CONTOUR                    |
|  | EXISTING MAJOR CONTOUR                    |
|  | PROPOSED CONTOUR                          |
|  | EXISTING STORMDRAIN                       |
|  | PROPOSED STORMDRAIN                       |
|  | EXISTING SANITARY SEWER                   |
|  | PROPOSED SANITARY SEWER                   |
|  | EXISTING WATER LINE                       |
|  | PROPOSED WATER LINE                       |
|  | EXISTING UNDERDRAIN                       |
|  | PROPOSED UNDERDRAIN                       |
|  | EXISTING OVERHEAD ELECTRIC & TELEPHONE    |
|  | PROPOSED OVERHEAD ELECTRIC & TELEPHONE    |
|  | EXISTING UNDERGROUND ELECTRIC & TELEPHONE |
|  | PROPOSED UNDERGROUND ELECTRIC & TELEPHONE |
|  | EXISTING EDGE OF PAVEMENT                 |
|  | PROPOSED EDGE OF PAVEMENT                 |
|  | EXISTING EDGE OF GRAVEL                   |
|  | PROPOSED EDGE OF GRAVEL                   |
|  | EXISTING CURB                             |
|  | PROPOSED CURB                             |
|  | PROPOSED FENCE                            |
|  | SILT FENCE                                |
|  | TEST PIT                                  |
|  | EXISTING VALVE                            |
|  | PROPOSED VALVE                            |
|  | EXISTING HYDRANT                          |
|  | EXISTING LIGHT POLE                       |
|  | PROPOSED LIGHT POLE                       |
|  | EXISTING UTILITY POLE                     |
|  | EXISTING CATCH BASIN                      |
|  | PROPOSED CATCH BASIN                      |
|  | EXISTING DRAIN MANHOLE                    |
|  | PROPOSED DRAIN MANHOLE                    |
|  | EXISTING SEWER MANHOLE                    |
|  | PROPOSED SEWER MANHOLE                    |
|  | EXISTING SPOT GRADE                       |
|  | PROPOSED SPOT GRADE                       |
|  | SURVEY CONTROL POINT                      |
|  | EXISTING MONUMENT                         |
|  | EXISTING IRON PIPE                        |
|  | EXISTING SIGN                             |
|  | PROPOSED SIGN                             |
|  | EXISTING BUILDING                         |
|  | PROPOSED BUILDING                         |
|  | PROPOSED CONCRETE                         |
|  | PROPOSED PAVEMENT                         |
|  | PROPOSED BRICK                            |

[illegible]





PLAN REFERENCES

- "STANDARD BOUNDARY SURVEY ON BRACKETT STREET, PORTLAND, MAINE MADE FOR PORTLAND WEST, INC." DATED DECEMBER 14, 2000 BY OWEN HASKELL, INC.
- CITY OF PORTLAND STREET SHEETS.
- "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR CITY OF PORTLAND SCHOOL DEPARTMENT" DATED FEB. 6, 1975 BY H.I. & E.C. JORDAN SURVEYORS.
- "CONDOMINIUM PLAT, BLUE SKYES CONDOMINIUM, 75 GRAY STREET & 103 BRACKETT STREET, PORTLAND, MAINE MADE FOR RECORD OWNER FRANCIS R. CLOUTIER" FEBRUARY 27, 2017 BY OWEN HASKELL, INC.
- "REICHE SCHOOL - BRACKETT STREET CROSSWALKS EXISTING CONDITIONS PLAN, PINE STREET TO SPRING STREET," BY CITY OF PORTLAND, MAINE, PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION DATED FEB. 18, 2016. PLAN NUMBER 882/49.

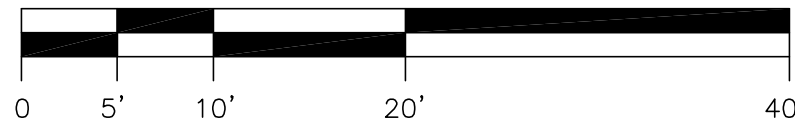
NOTES

- OWNER OF RECORD: ONEJOY PLACE LLC, C.C.R.D. 33404 PAGE 272.
  - PARCEL IS SHOWN AS LOT 48 & 49 BLOCK E ON CITY OF PORTLAND'S ASSESSORS MAP 45.
  - BASIS OF BEARINGS ARE MAGNETIC 1967 PER PLAN REFERENCE 1.
  - ELEVATIONS ARE BASED ON CITY PORTLAND VERTICAL DATUM.
  - COORDINATES ARE STATE PLANE COORDINATE SYSTEM, MAINE WEST ZONE, NAD 1983 BASED ON MONUMENT LOCATIONS PROVIDED BY THE CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION.
- CITY CONTROL POINTS USED:  
T104-24-1204 N: 297735.40 E:2926587.54  
T124-26-1269 N: 297422.56 E:2926942.98
- SEWER LATERALS TAKEN FROM PLAN REFERENCE 5.

LEGEND

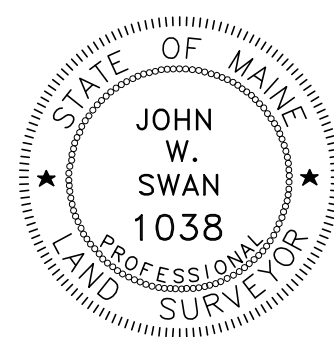
- IRON PIPE OR ROD FOUND
- UTILITY POLE
- WATER VALVE
- MANHOLE
- HYDRANT
- DECIDUOUS TREE
- FENCE
- CURB
- OVERHEAD WIRES
- WATER LINE
- GAS LINE

GRAPHIC SCALE



CERTIFICATE

OWEN HASKELL, INC. 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, WITH THE EXCEPTION OF MARKERS NOT SET AT ALL CORNERS.



APRIL 14, 2017  
DATE  
JOHN W. SWAN, PLS. NO. 1038

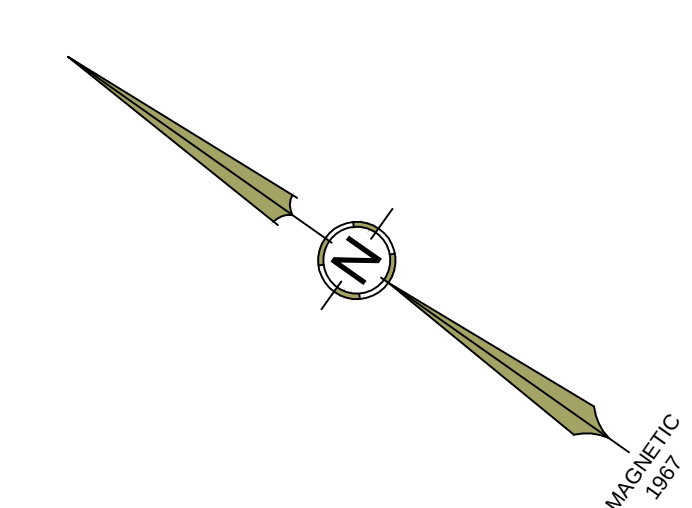
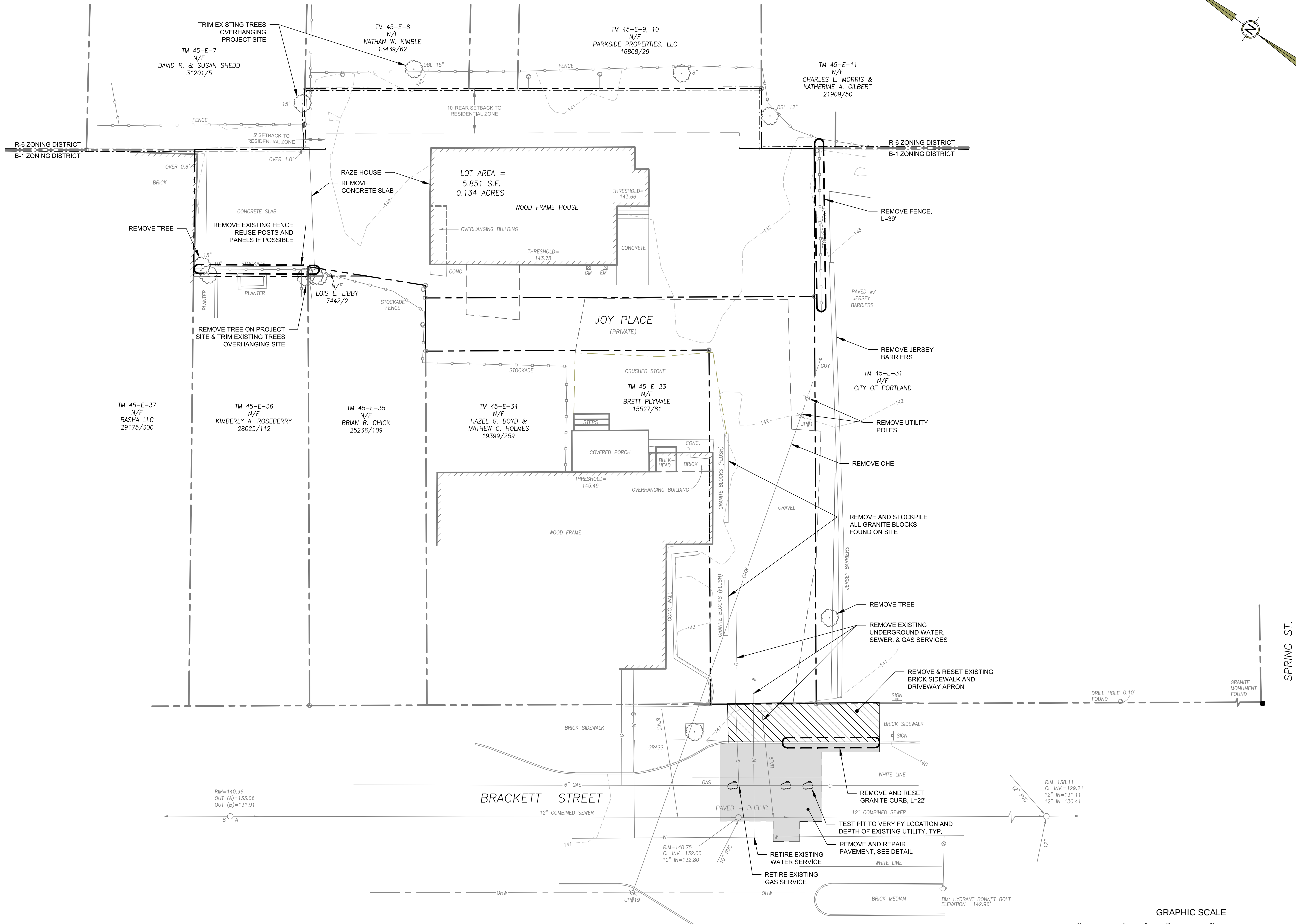
UTILITY NOTE

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 THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-800-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

SPRING ST.

|                                                                                                                             |        |                              |
|-----------------------------------------------------------------------------------------------------------------------------|--------|------------------------------|
| REV. 1                                                                                                                      | 3-6-17 | MISC. UPDATE, ADD TOPOGRAPHY |
| OWNER OF RECORD:<br>ONEJOY PLACE LLC<br>THREE CANAL PLAZA, SUITE 501, PORTLAND, MAINE 04101<br>C.C.R.D. BOOK 33404 PAGE 272 |        |                              |
| BOUNDARY SURVEY<br>AT<br>1 JOY PLACE, PORTLAND, MAINE<br>MADE FOR<br>ONEJOY PLACE LLC<br>3 CARROLL STREET, PORTLAND, MAINE  |        |                              |
| OWEN HASKELL, INC.<br>390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207) 774-0424<br>PROFESSIONAL LAND SURVEYORS                  |        |                              |
| Drawn By                                                                                                                    | RS     | Date                         |
| Trace By                                                                                                                    | JLW    | AUGUST 24, 2016              |
| Check By                                                                                                                    | JWS    | Scale                        |
| Book No.                                                                                                                    | FILE   | 1" = 10'                     |
|                                                                                                                             |        | Job No.<br>2014-086P         |
|                                                                                                                             |        | Drwg. No.<br>1               |

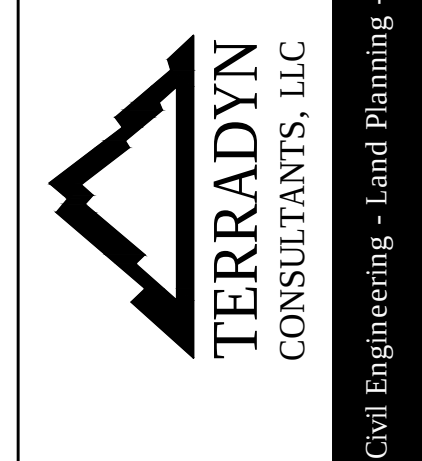




P.E.: MICHAEL E. TADEMA-WIELANDT  
DATE: 4/25/17

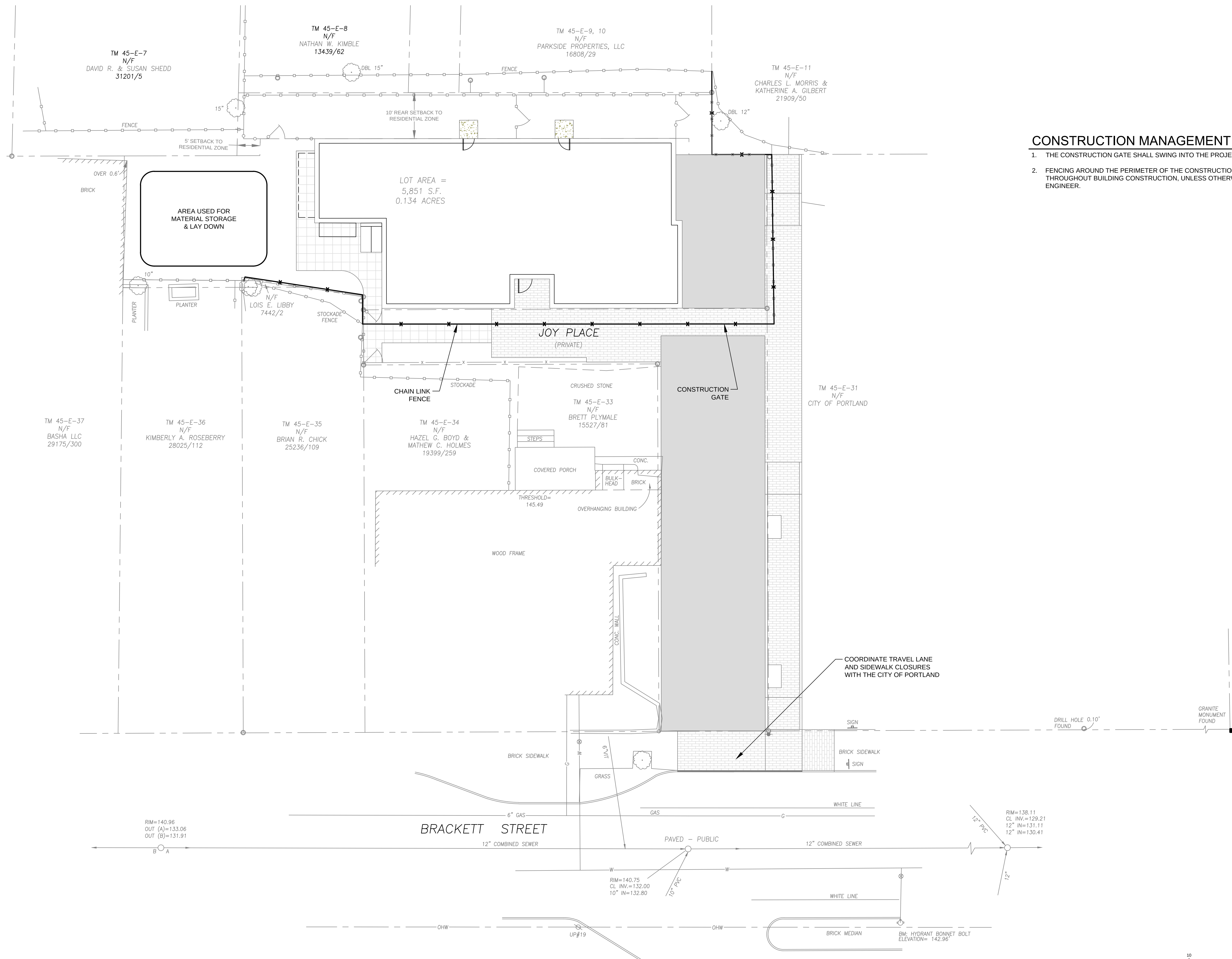
| NO. | DATE      | REVISIONS                                |
|-----|-----------|------------------------------------------|
| 1   | 4-25-2017 | SUBMITTED TO CITY OF PORTLAND FOR REVIEW |

545 CONGRESS STREET  
SUITE 310  
PORTLAND, ME 04102  
P.O. BOX 320  
111 ELDERRIDGE LANE  
NEW GLoucester, ME 04260  
OFFICE: (207) 926-5111 FAX: (207) 221-1317  
www.terradyconsultants.com



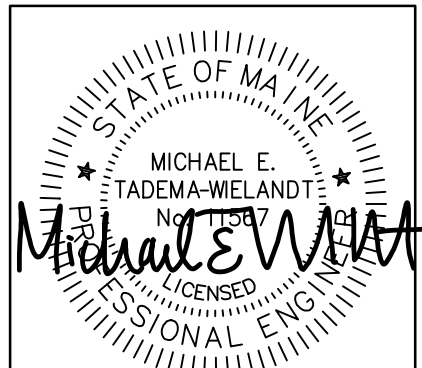
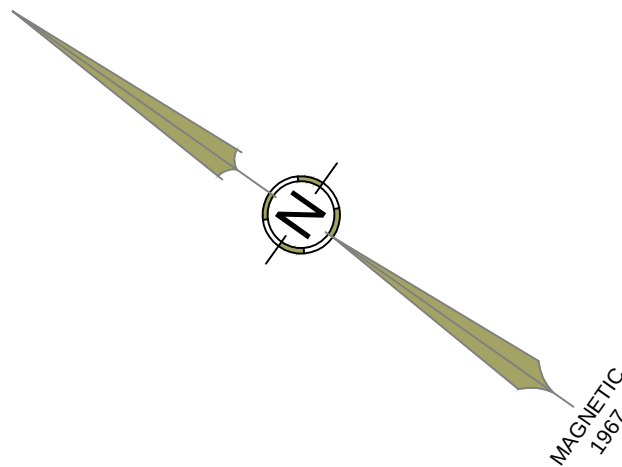
SHEET DESCRIPTION  
ONEJOY PLACE  
1 JOY PLACE, PORTLAND, MAINE 04102  
EXISTING CONDITIONS & REMOVALS  
PREPARED FOR  
ONEJOY PLACE, LLC  
C/O RENEWAL HOUSING ASSOCIATES, LLC  
2 UNION STREET, 5TH FLOOR  
PORTLAND, MAINE 04101  
DATE: 3/7/2017  
SCALE: 1"=10'  
DESIGNED: MTW  
JOB NO.: 1704  
FILE: 1704-EC.DWG  
SHEET C-2.2





CONSTRUCTION MANAGEMENT NOTES:

- 1. THE CONSTRUCTION GATE SHALL SWING INTO THE PROJECT SITE
- 2. FENCING AROUND THE PERIMETER OF THE CONSTRUCTION WORK ZONE WILL BE MAINTAINED THROUGHOUT BUILDING CONSTRUCTION, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

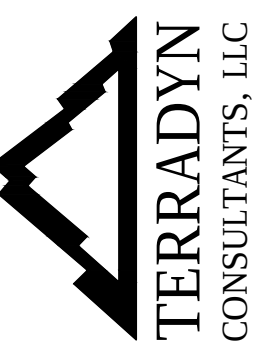


P.E.: MICHAEL E. TADEAMA-WIELANDT  
DATE: 4/25/17

| NO. | DATE      | REVISIONS                                | BY  |
|-----|-----------|------------------------------------------|-----|
| 1   | 4-25-2017 | SUBMITTED TO CITY OF PORTLAND FOR REVIEW | MTW |

565 CONGRESS STREET  
SUITE 310  
PORTLAND, ME 04102

P.O. BOX 339  
111 ELDERBERRY LANE  
NEW GLOUCESTER, ME 04260



OFFICE: (207) 926-5111 FAX: (207) 221-1317  
www.terradyndesign.com

Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

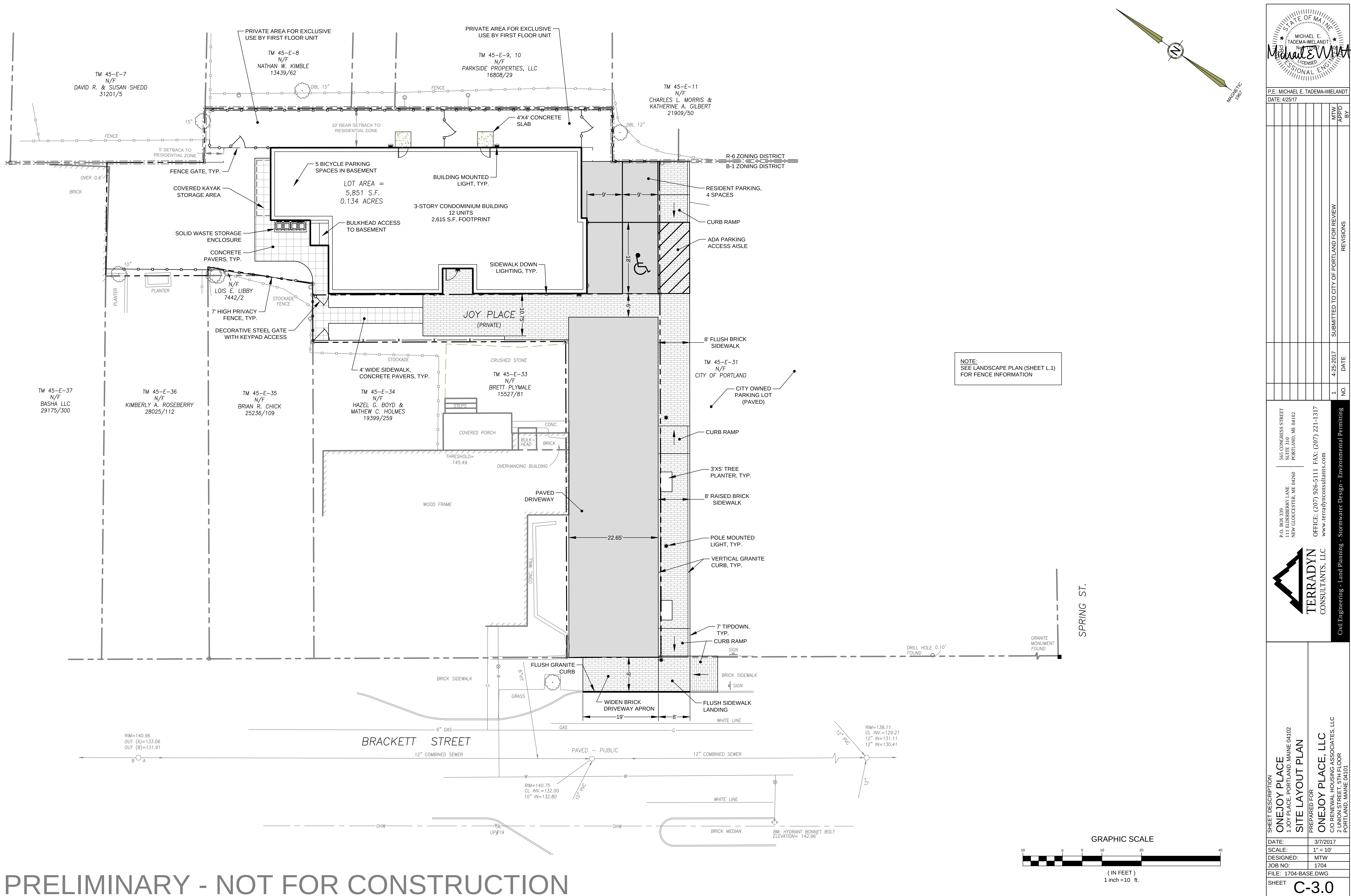
SHEET DESCRIPTION  
ONEJOY PLACE  
1 JOY PLACE, PORTLAND, MAINE 04102  
CONSTRUCTION MANAGEMENT PLAN

PREPARED FOR  
ONEJOY PLACE, LLC  
C/O RENEWAL HOUSING ASSOCIATES, LLC  
2 UNION STREET, 5TH FLOOR  
PORTLAND, MAINE 04101

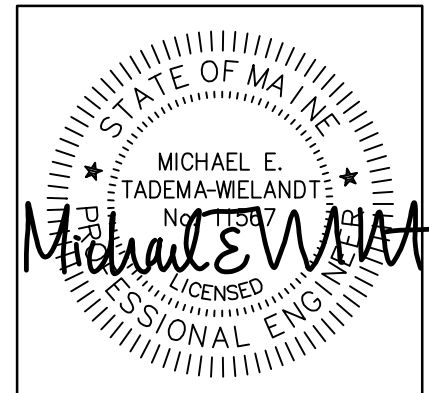
DATE: 3/7/2017  
SCALE: 1" = 10'  
DESIGNED: MTW  
JOB NO: 1704  
FILE: 1704-BASE.DWG  
SHEET C-2.3

PRELIMINARY - NOT FOR CONSTRUCTION





PRELIMINARY - NOT FOR CONSTRUCTION



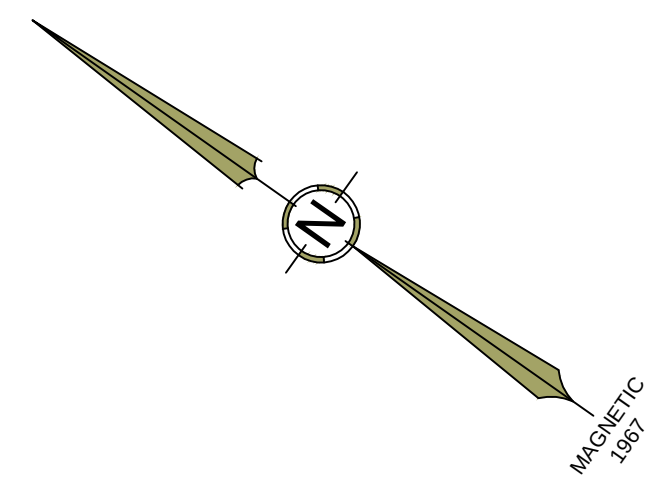
P.E.: MICHAEL E. TADEMAWIELAND  
DATE: 4/25/17

| NO. | DATE      | REVISIONS                                |
|-----|-----------|------------------------------------------|
| 1   | 4-25-2017 | SUBMITTED TO CITY OF PORTLAND FOR REVIEW |

565 CONGRESS STREET  
SUITE 310  
PORTLAND, ME 04102  
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TERRADYN  
CONSULTANTS, LLC  
Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

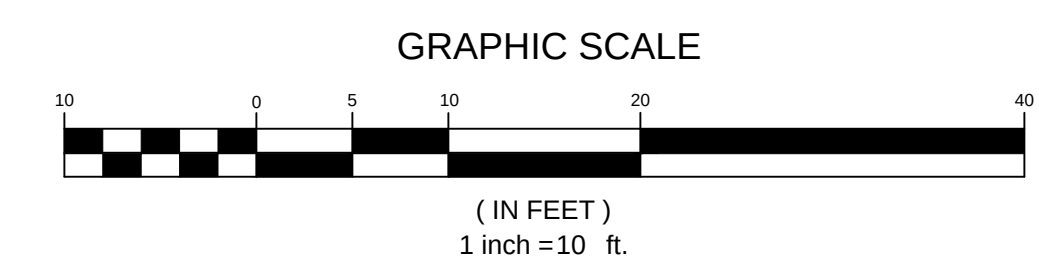
SHEET DESCRIPTION  
ONEJOY PLACE  
1 JOY PLACE, PORTLAND, MAINE 04102  
SITE LAYOUT PLAN  
PREPARED FOR  
ONEJOY PLACE, LLC  
C/O RENEWAL HOUSING ASSOCIATES, LLC  
2 UNION STREET, 5TH FLOOR  
PORTLAND, MAINE 04101  
DATE: 3/7/2017  
SCALE: 1" = 10'  
DESIGNED: MTW  
JOB NO: 1704  
FILE: 1704-BASE.DWG  
SHEET C-3.0



[illegible]

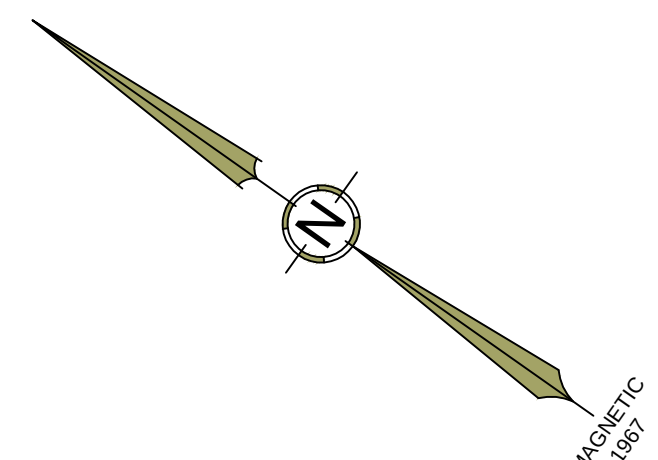

**TERRADYN**  
 CONSULTANTS, LLC

|                                                                                                                            |                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| SHEET DESCRIPTION<br><b>ONEJOY PLACE</b><br>1 JOY PLACE, PORTLAND, MAINE 04102<br>GRADING, DRAINAGE & EROSION CONTROL PLAN | PREPARED FOR<br><b>ONEJOY PLACE, LLC</b><br>C/O RENEWAL HOUSING ASSOCIATES, LLC<br>2 UNION STREET, 5TH FLOOR<br>PORTLAND, MAINE 04101 |
|                                                                                                                            | DATE: 3/7/2017<br>SCALE: 1" = 10'<br>DESIGNED: MTW<br>JOB NO: 1704                                                                    |
|                                                                                                                            | FILE: 1704-BASE.DWG                                                                                                                   |
|                                                                                                                            | SHEET                                                                                                                                 |
|                                                                                                                            | <b>C-4.0</b>                                                                                                                          |



PRELIMINARY - NOT FOR CONSTRUCTION



[illegible]

**TERRADYN**  
CONSULTANTS, LLC

P.O. BOX 339  
TERRADYN LANE  
NEW GLOUCESTER, ME 04260

565 CONGRESS STREET  
PORTLAND, ME 04102

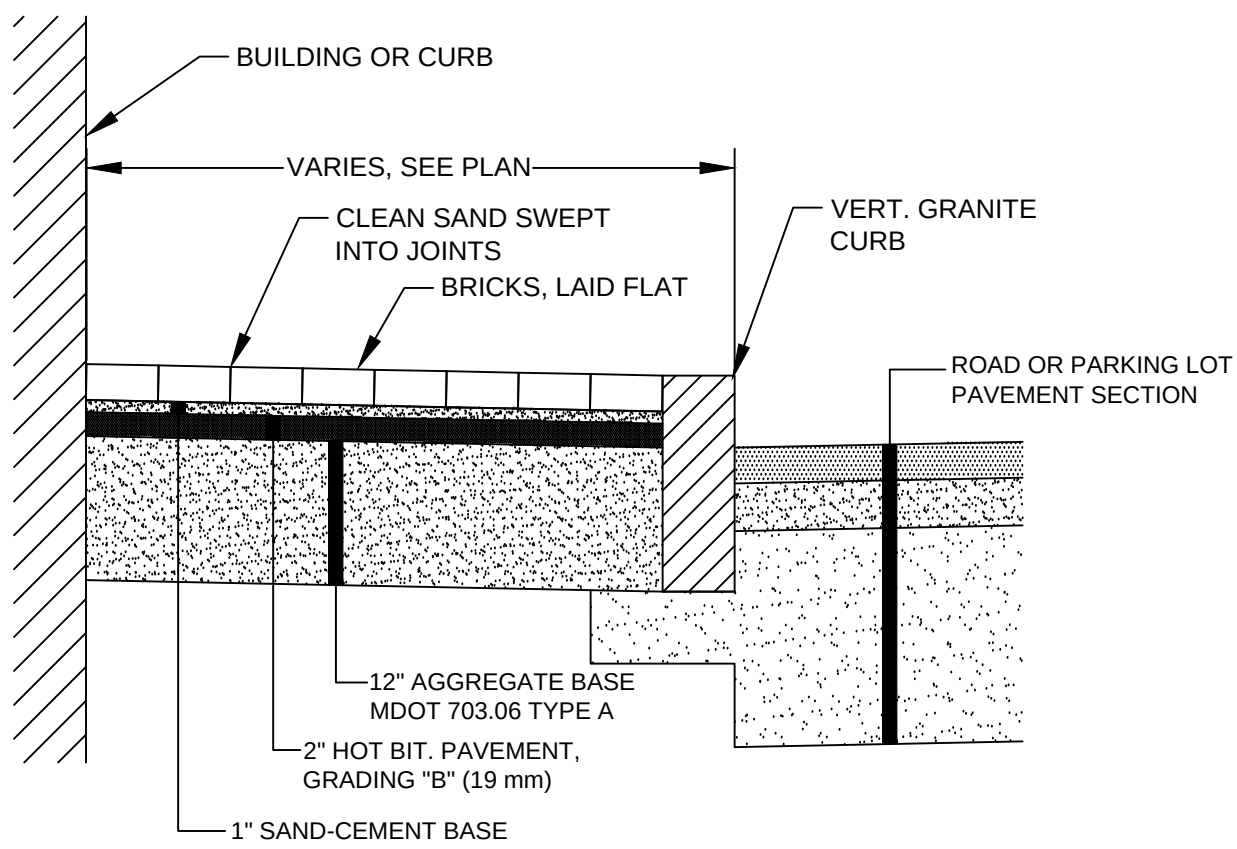
OFFICE: (207) 926-5111 FAX: (207) 221-1317  
[www.terradynconsultants.com](http://www.terradynconsultants.com)

Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

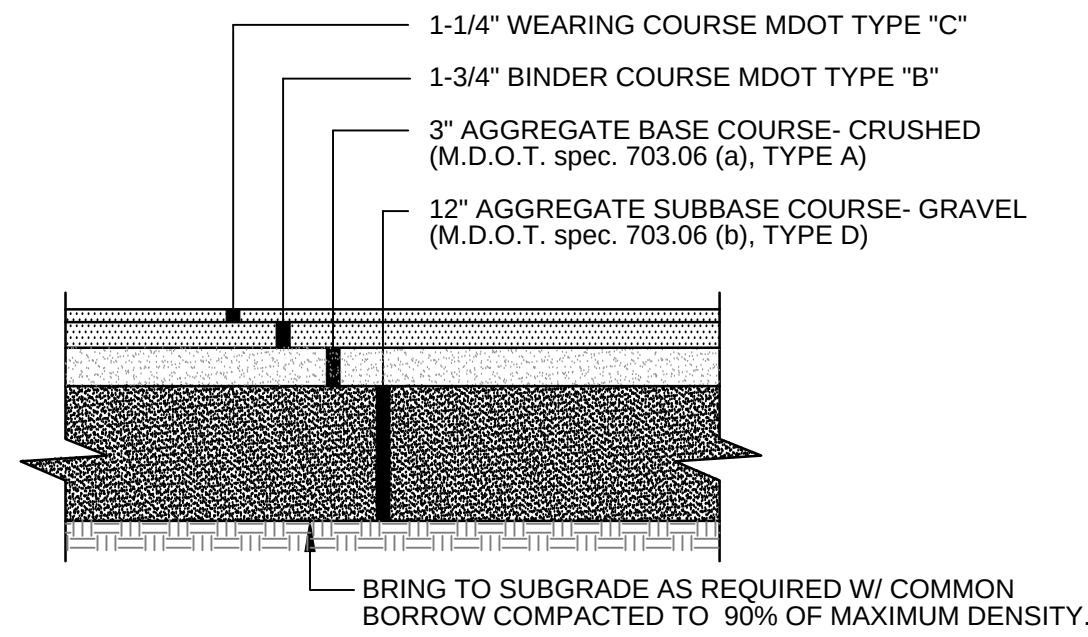
|                                                                                                           |                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| SHEET DESCRIPTION<br><b>ONEJOY PLACE</b><br>1 JOY PLACE, PORTLAND, MAINE 04102<br><br><b>UTILITY PLAN</b> | PREPARED FOR<br><br><b>ONEJOY PLACE, LLC</b><br>C/O RENEWAL HOUSING ASSOCIATES, LLC<br>2 UNION STREET, 5TH FLOOR<br>PORTLAND, MAINE 04101 |
|                                                                                                           | DATE: 3/7/2017<br>SCALE: 1" = 10'<br>DESIGNED: MTW<br>JOB NO: 1704                                                                        |
|                                                                                                           | FILE: 1704-BASE.DWG                                                                                                                       |
|                                                                                                           | SHEET                                                                                                                                     |
|                                                                                                           | <b>C-5.0</b>                                                                                                                              |

PRELIMINARY - NOT FOR CONSTRUCTION

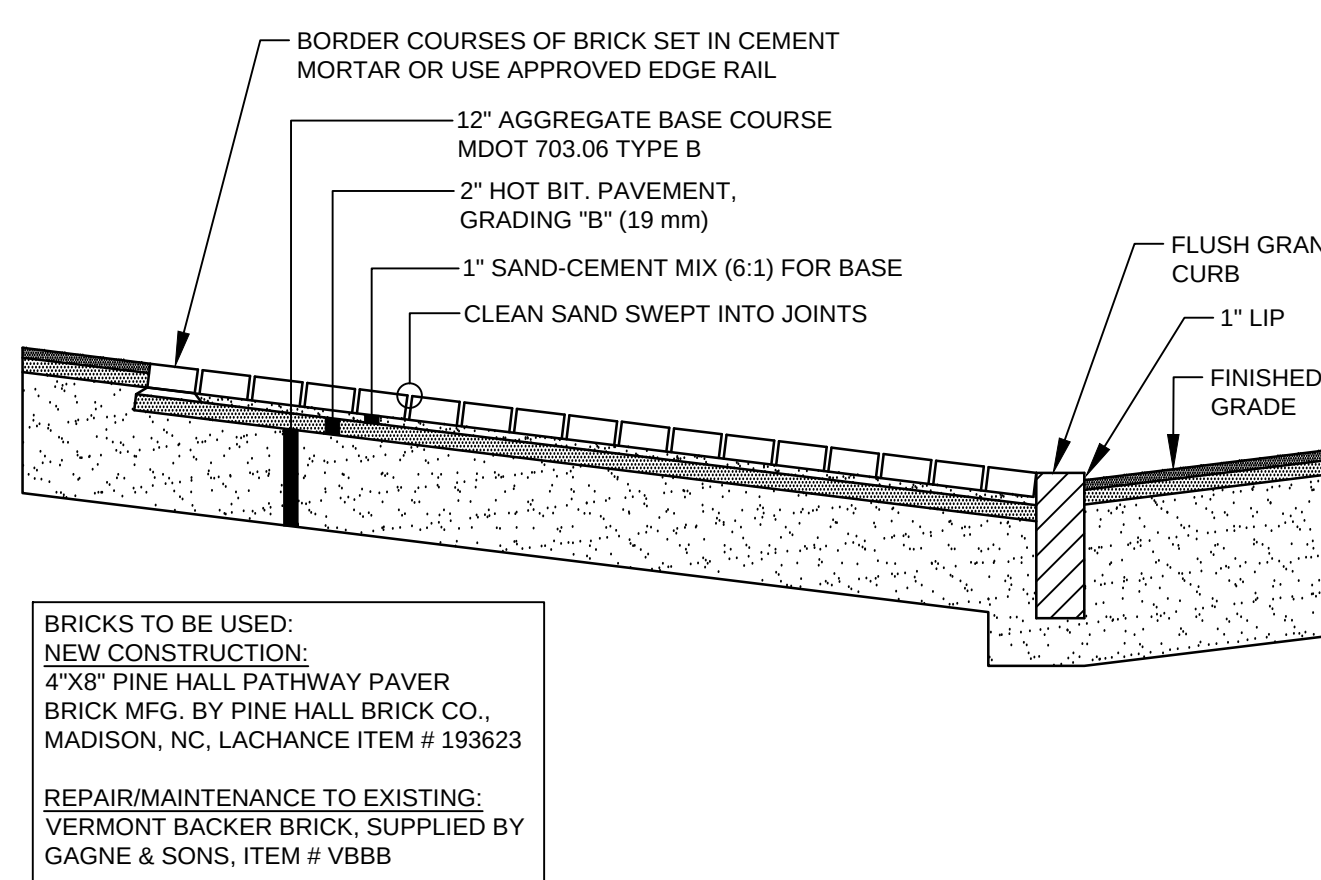




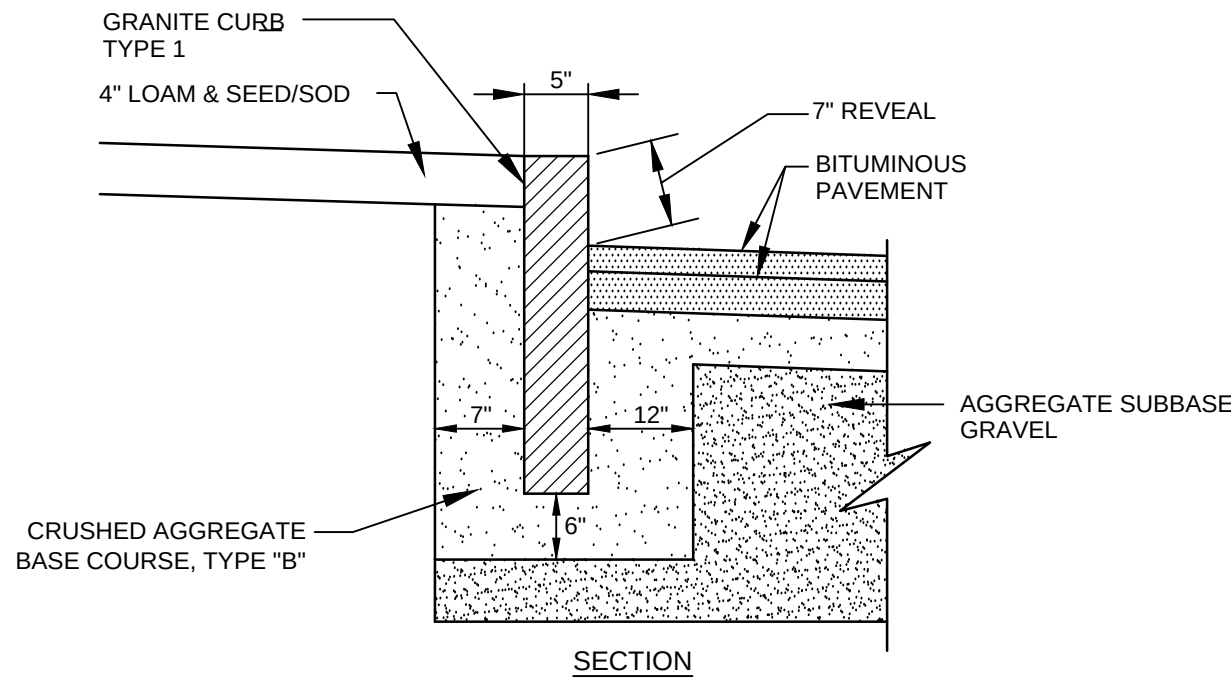
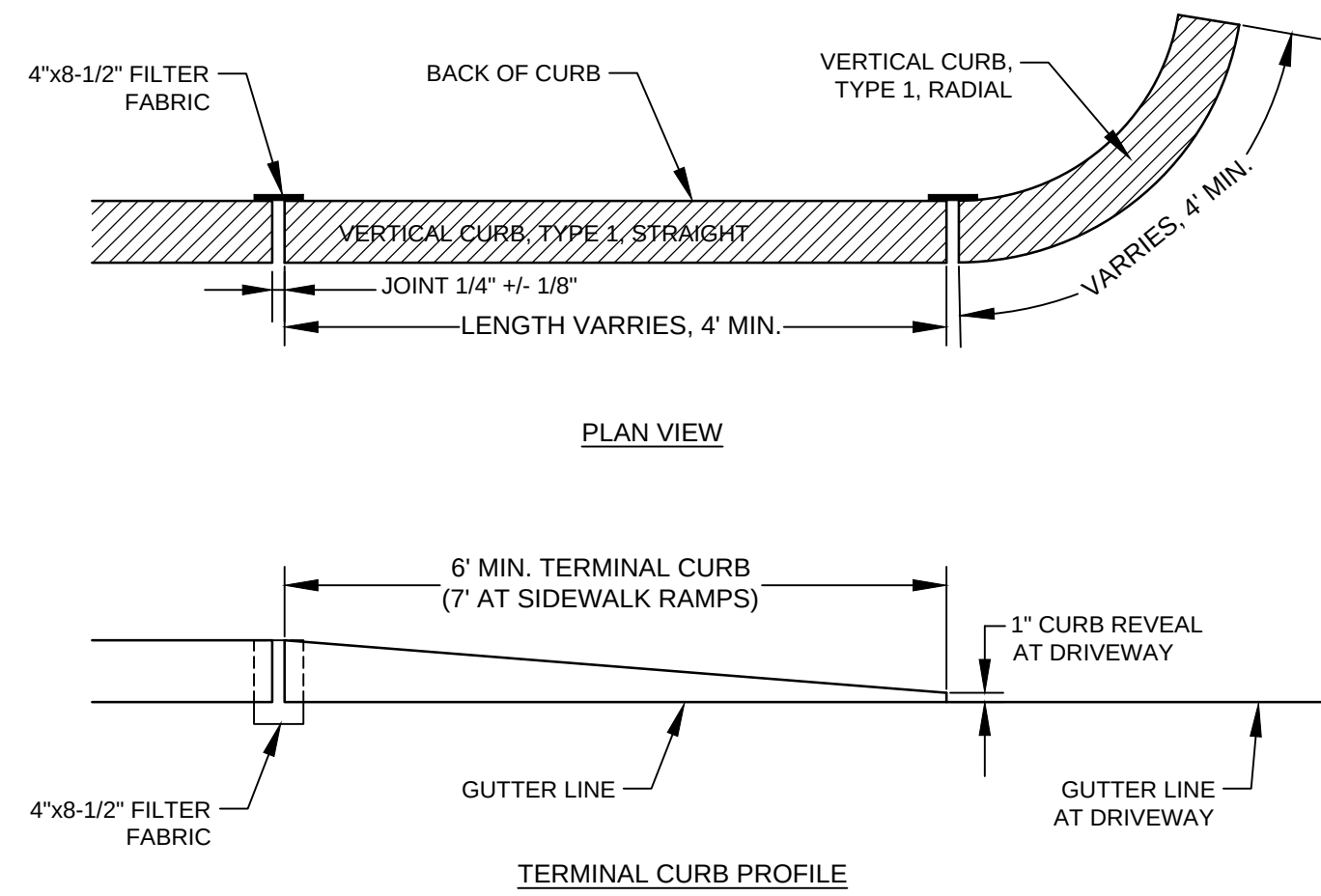
**BRICK SIDEWALK SECTION**  
NOT TO SCALE



**TYP. DRIVEWAY PAVEMENT SECTION**  
NOT TO SCALE

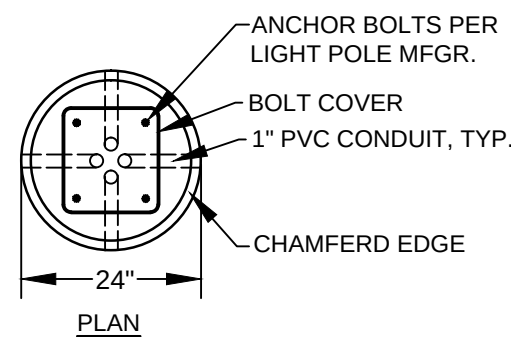
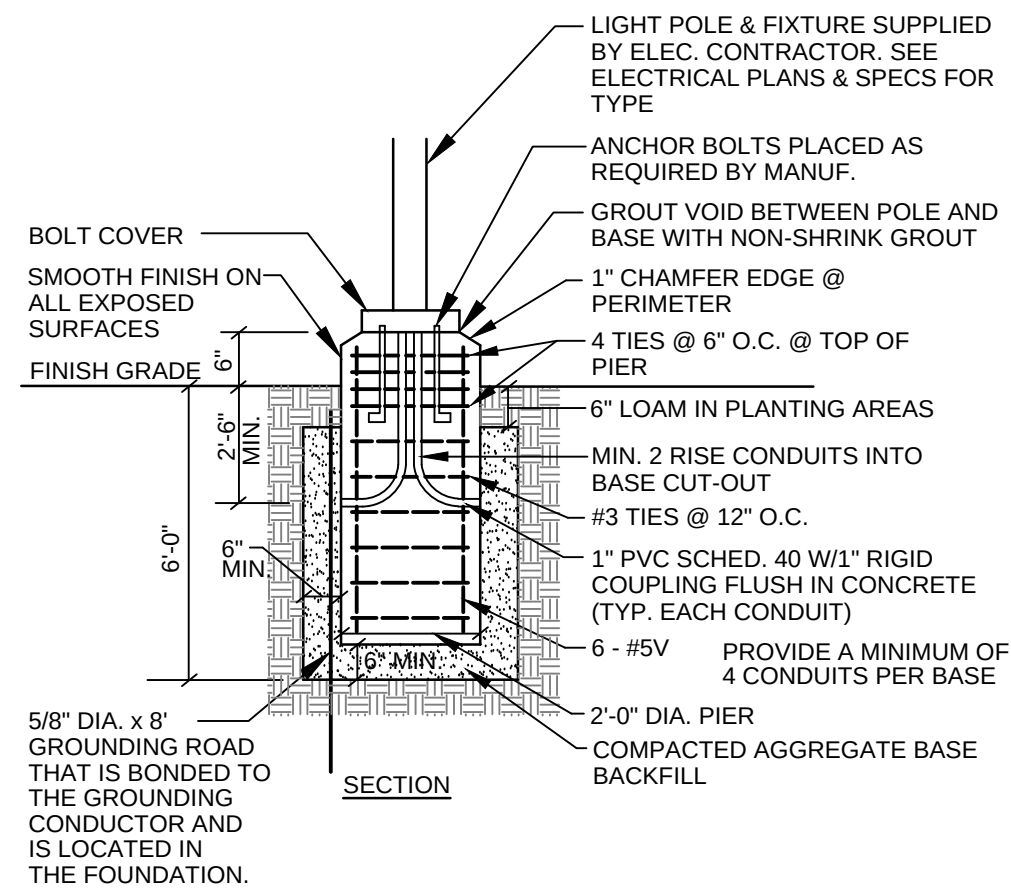


**BRICK DRIVEWAY APRON**  
NOT TO SCALE



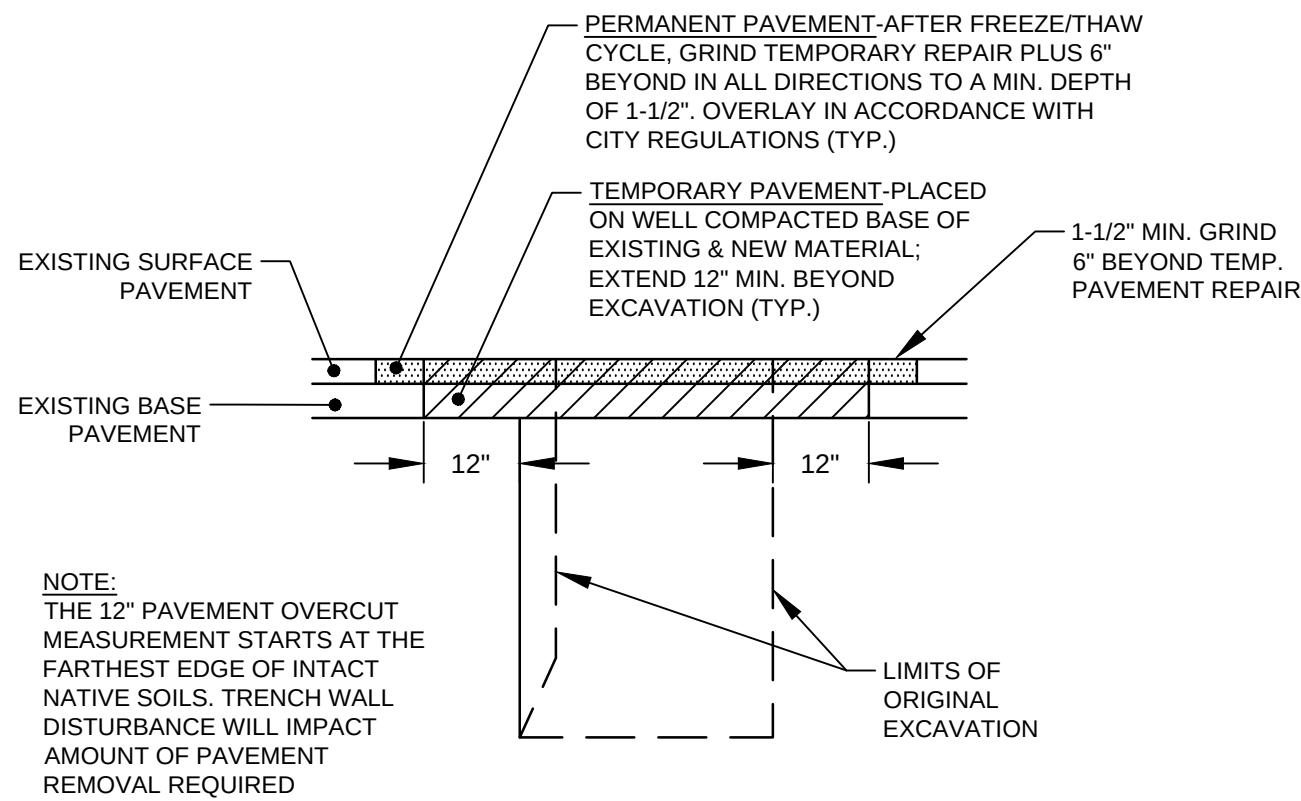
- NOTES:
1. MIN. LENGTH OF STRAIGHT CURB STONES: 4'. MAX. LENGTH: 8'
  2. CIRCULAR CURB REQ. FOR RADIUS LESS THAN 50'
  3. BASE GRAVEL SHALL BE COMPACTED TO A FIRM EVEN SURFACE PRIOR TO SETTING OF CURB.

**VERTICAL GRANITE CURB**  
NOT TO SCALE

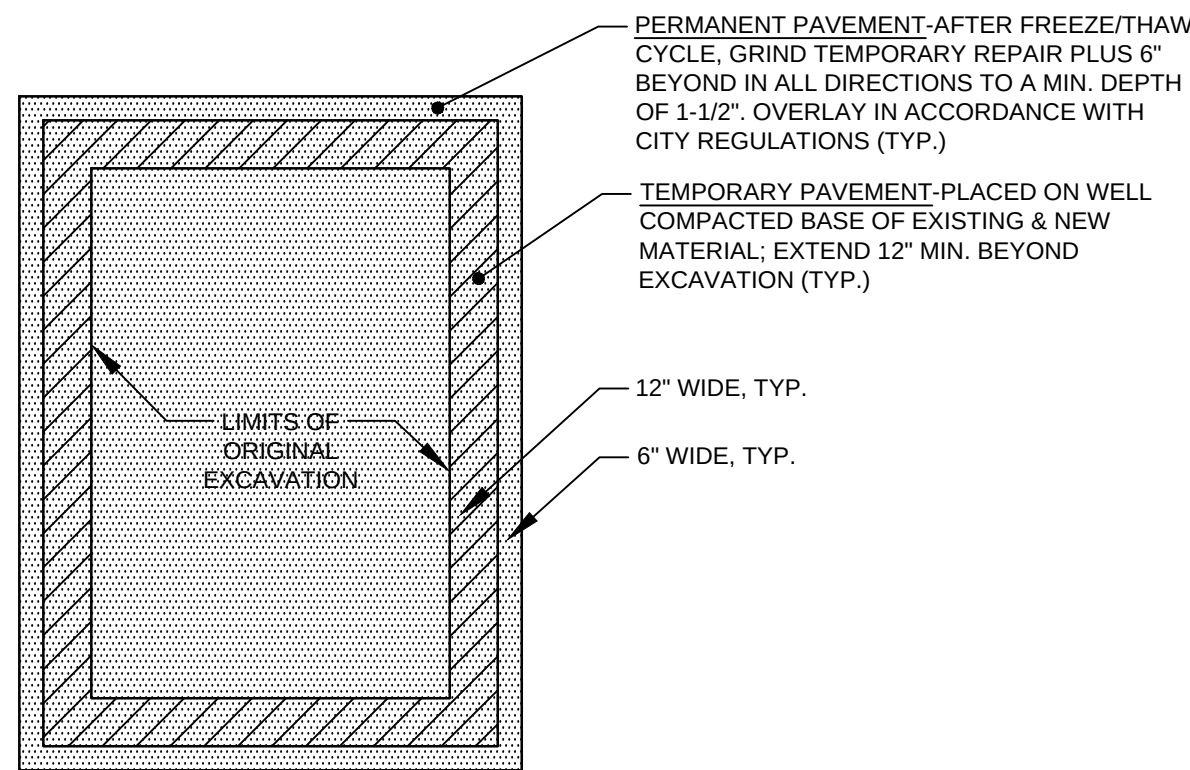


- NOTES:
1. CONCRETE  $f_c=4000$  psi.
  2. REINF. STEEL GRADE 60 NEW BARS.
  3. CONCRETE 3/4" AGG., 6 +/- 1% ENTRAINED AIR.
  4. PROVIDE 2 COATS BITUMINOUS DAMPROOFING FOR ALL CONCRETE BELOW GRADE.
  5. EXPOSED CONCRETE TO BE PAINTED WITH 2 COATS OF ACRYLIC PAINT. COLOR TO MATCH POLE COLOR.
  6. INSTALL BASE 3'-0" ABOVE FINISH GRADE IN LOCATIONS WHERE POLES ARE IN PARKING LOT PAVEMENT.

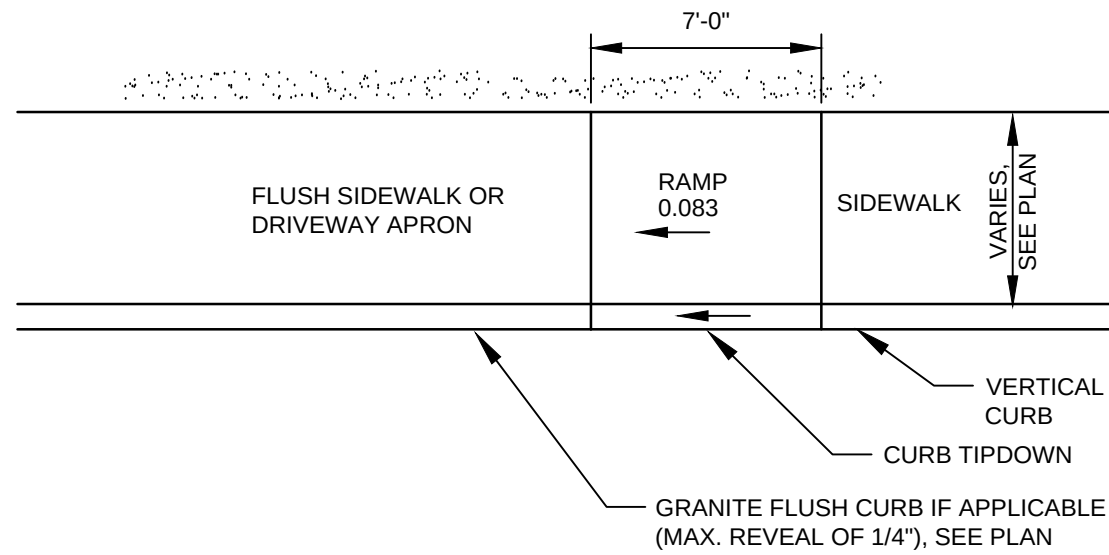
**LIGHT POLE BASE**  
NOT TO SCALE



**TYP. EXCAVATION IN CITY RIGHT OF WAY**  
NOT TO SCALE

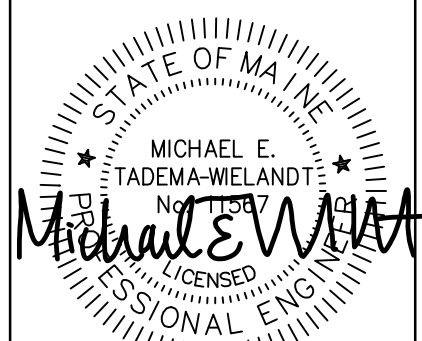


**PLAN VIEW OF MINOR EXCAVATION PAVEMENT REPAIR**  
NOT TO SCALE



- NOTES:
1. RAMP SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
  2. A TACTILE WARNING STRIP IS REQUIRED WHERE RAMP ABUTS AN AREA USED BY VEHICLES.

**CURB RAMP**  
NOT TO SCALE



P.E.: MICHAEL E. TADEAMA-WELANDT  
DATE: 4/25/17

| NO. | DATE      | REVISIONS                                | MTW | BY |
|-----|-----------|------------------------------------------|-----|----|
| 1   | 4-25-2017 | SUBMITTED TO CITY OF PORTLAND FOR REVIEW |     |    |

565 CONGRESS STREET  
SUITE 310  
PORTLAND, ME 04102  
P.O. BOX 339  
111 ELDERBERRY LANE  
NEW GLOUCESTER, ME 04260



OFFICE: (207) 926-5111 FAX: (207) 221-1317  
www.terradynconsultants.com

Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

SHEET DESCRIPTION  
ONEJOY PLACE  
1 JOY PLACE, PORTLAND, MAINE 04102

SITE DETAILS

PREPARED FOR  
ONEJOY PLACE, LLC  
C/O RENEWAL HOUSING ASSOCIATES, LLC  
2 UNION STREET, 5TH FLOOR  
PORTLAND, MAINE 04101

DATE: 3/7/2017  
SCALE: N.T.S.  
DESIGNED: MTW  
JOB NO: 1704  
FILE: XXXX-DETAILS.DWG  
SHEET

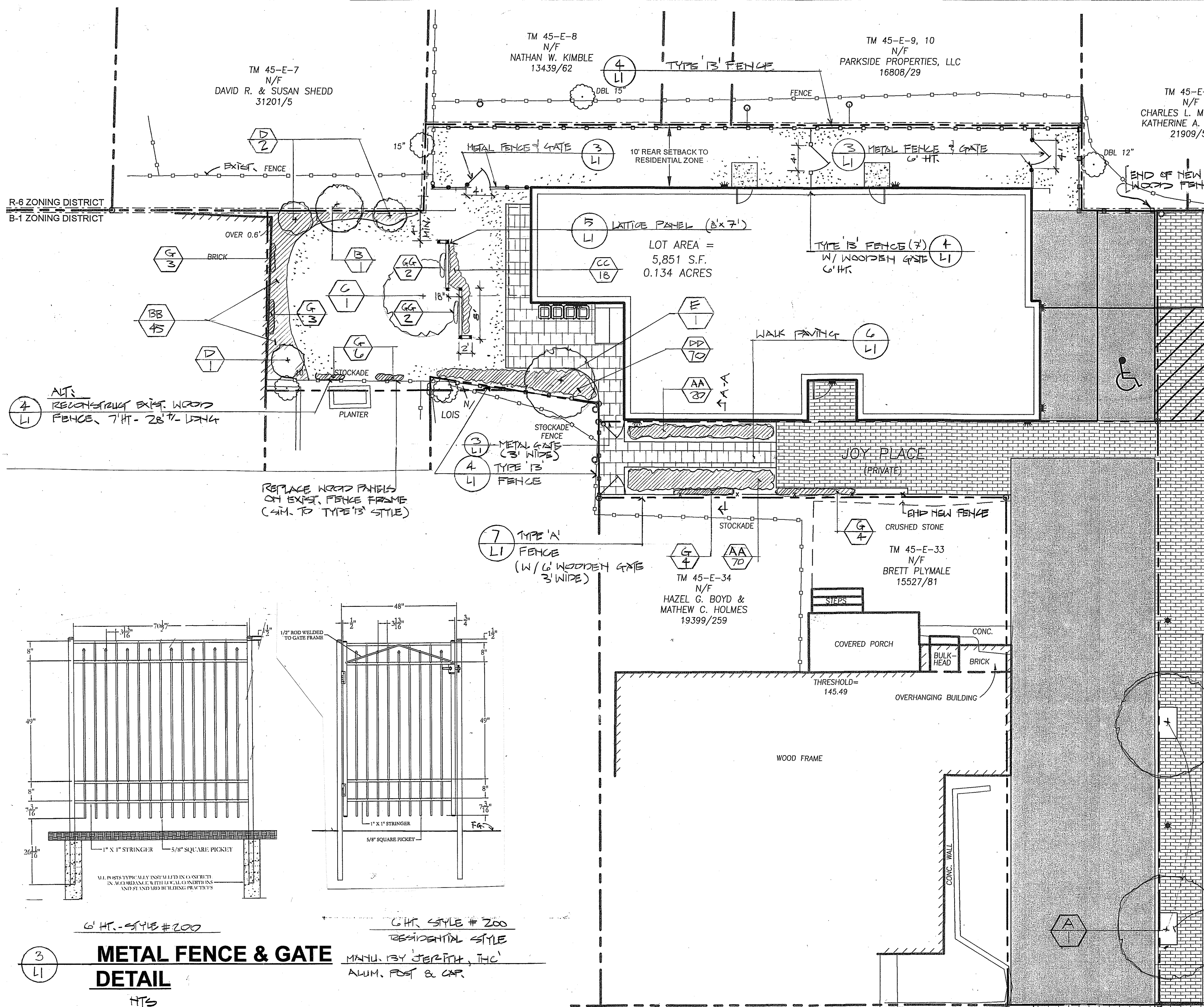
C-6.0

PRELIMINARY - NOT FOR CONSTRUCTION









## PLANTING NOTES

- The contractor shall supply all plants in quantities sufficient to complete the work shown on plan. Any discrepancies between quantities shown on plant list and those required by this drawing shall not entitle contractor to additional remuneration.
- Any plant substitutions must be approved by the owner.
- Any tree or shrub which comes over or under any utility shall be relocated on the site by the landscape architect.
- All lawn areas to have 6" of topsoil unless noted otherwise.
- All trees and shrubs shall be placed in the designated areas as shown on the plan and before planting shall be approved by the landscape architect.
- The contractor shall relocate any tree or shrub as directed by the landscape architect.
- All plant material installed shall meet the specifications of the American Standard for Nursery Stock (latest edition) as set forth by the American Association of Nurserymen.
- The landscape contractor shall replace or repair to original condition any and all utilities, paving, curbing, etc., damaged as a result of their operations at no additional cost to the owner.

### NOTES:

- TREE SHALL BEAR SAME RELATION TO GRADE AS PRIOR TO PLANTING.
- NEVER CUT A LEADER, THIN BRANCHES & FOLIAGE BY 1/3 RETAINING NORMAL TREE SHAPE.

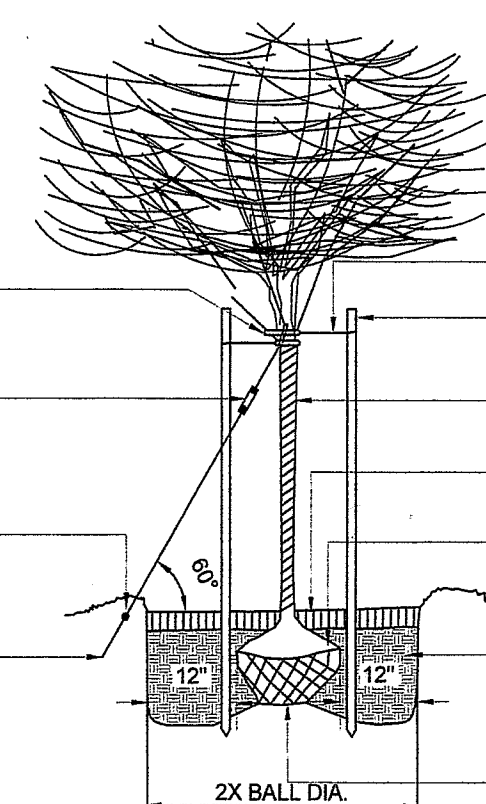
### NOTE 'B':

- SECURE GUYS W/ RUBBER HOSE & #12 GALV. WIRE SIM. TO STAKING NOTE 'A'.

- 2" GALV. TURNBUCKLE (3 GUYS/TREE)
- CLAMP FOR GUY REMOVAL
- TO METAL DEADMAN ANCHORS DRIVEN INTO SUBGRADE

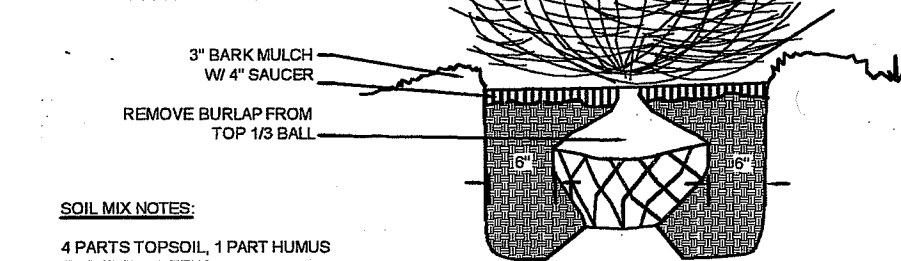
### NOTE 'A':

- FOR ALL TREES UP TO 2 1/2" CAL. USE 2"x2" OR 2 1/2" Ø STAKES W/ 2-#12 GALV. WIRE ENCASED IN 2 PLY REINF. RUBBER HOSE. 1/2" INSIDE DIA. GUY ALL TREES OVER 2 1/2" DIA. NOTE 'B', GUY ALL EVERGREEN TREES.
- #12 GALV. ANNEALED WIRE IN RUBBER HOSE (SEE NOTE 'A').
- WOOD STAKES - DARK WALNUT OIL STAIN - ONE COAT, 3 STAKES/TREE.
- APPROVED TREE WRAP. LAP ENDS DO NOT STAPLE. WRAP TO HT. OF 2ND BRANCH.
- 3" SHREDDED BARK MULCH (EXCEPT AS NOTED).
- REMOVE BURLAP FROM TOP 1/3RD OF BALL.
- 6" TEMP. SAUCER
- SOIL MIX NOTES: FOR DECIDUOUS TREES USE 4 PARTS TOPSOIL, 1 PART HUMUS. FOR EVERGREEN TREES USE 4 PARTS TOPSOIL, 1 PART PEAT HUMUS.
- 4" MOUND FOR DRAINAGE



## TREE PLANTING DETAIL

NOTE: SHRUBS SHALL BEAR SAME RELATION TO GRADE AS PRIOR TO PLANTING.



## SHRUB PLANTING DETAIL

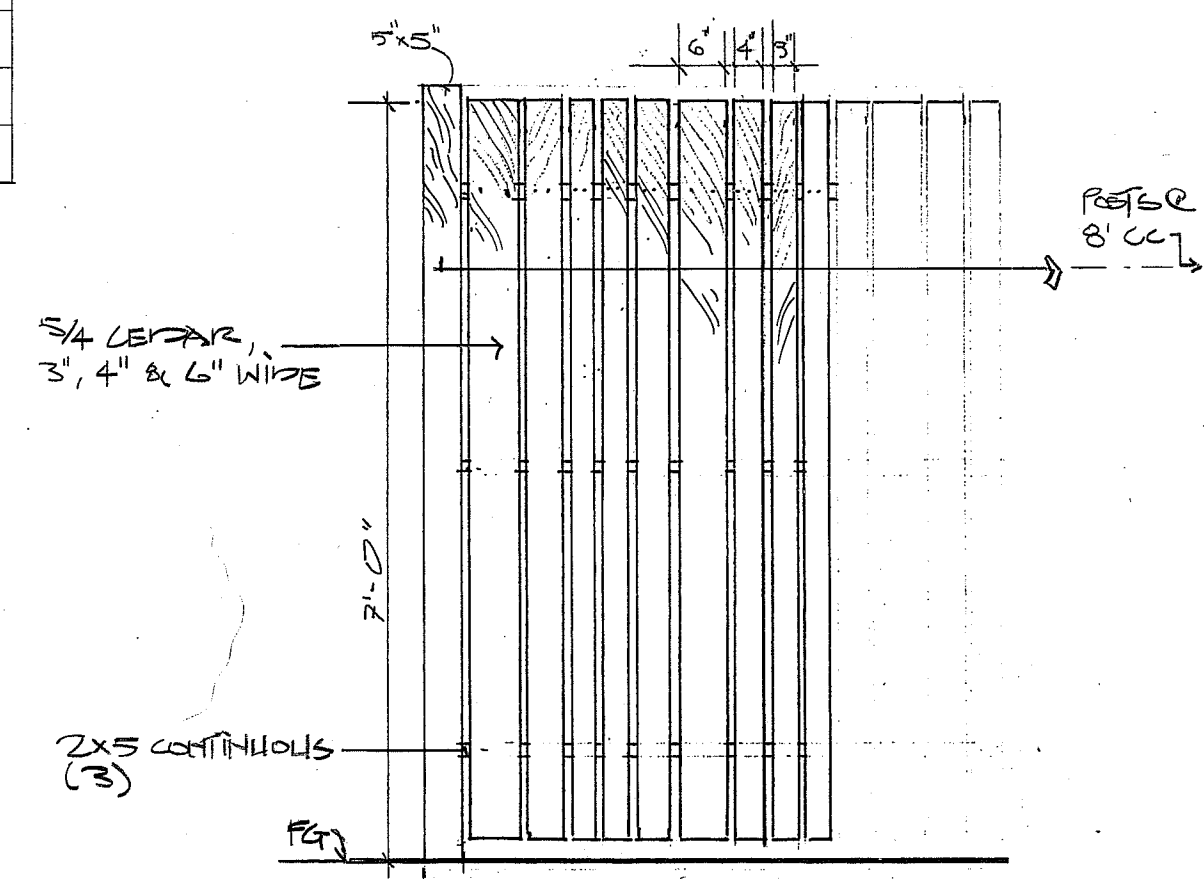
## PLANT LIST

### TREES, SHRUBS & VINES

| KEY | COMMON & BOTANICAL NAME                                                         | SIZE        | ROOT  | QTY | NOTES       |
|-----|---------------------------------------------------------------------------------|-------------|-------|-----|-------------|
| A   | NEW BRADFORD PEAR<br>PYRUS C. HELMIFROND                                        | 2" CAL.     | B&B   | 2   |             |
| B   | COCKSPUR THORNLESS HAWTHORNE<br>C. CRUZGALLI 'NERMIS'                           | 1 1/2" CAL. | B&B   | 1   |             |
| C   | AMUR MAPLE<br>A. GINNALA 'FLAME'                                                | 6" HT.      | B&B   | 1   | SINGLE STEM |
| D   | SHASTA VIBURNUM<br>V. FLICATUM VAR. 'TOMENTOSUM' 'SHASTA'                       | 4-5' HT.    | B&B   | 3   | 3 CANES     |
| E   | CORNELIAN CHERRY<br>C. MAS                                                      | 4-5' HT.    | B&B   | 1   | 3 TRUNK     |
| F   | 'SUMMER SNOWFLAKE' VIBURNUM<br>V. FLICATUM VAR. 'TOMENTOSUM' 'SUMMER SNOWFLAKE' | #5          | CONT. | 2   |             |
| G   | VIRGINIA CREEPER<br>Parthenocarpus Quinquifolia                                 |             | CONT. | 16  | Vine        |

### PERENNIALS

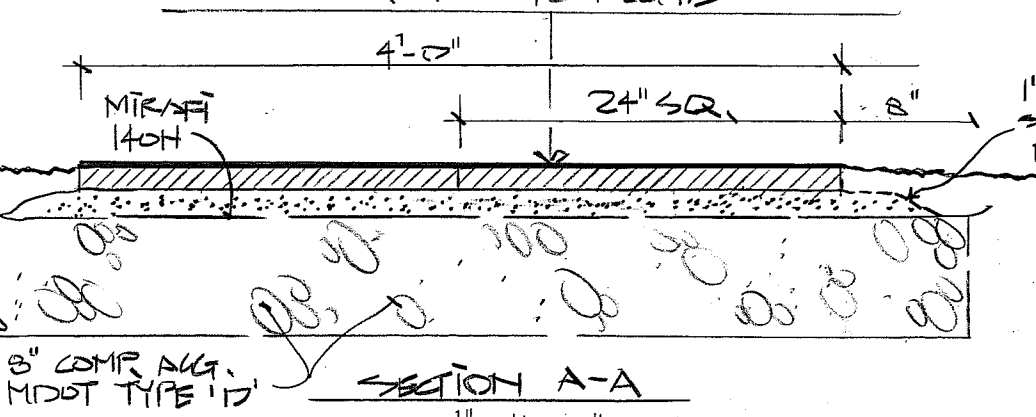
|    |                                                |       |       |    |                         |
|----|------------------------------------------------|-------|-------|----|-------------------------|
| AA | PERIWINKLE<br>VINCA MINOR 'Alba'               |       | CONT. | 90 |                         |
| BB | DAYLILY VAR.<br>HEMEROCALLIS                   | PTD   | 45    |    | BLOOM IN JULY THRU SEPT |
| CC | ASTILBE<br>ASTILBE X ARENDSENSIS 'WHITE GLORY' | PTD   | 18    |    |                         |
| DD | WILD GINGER<br>ASARUM EUROPEUM                 | CONT. | 70    |    | @ 9" OC                 |



## WOOD FENCE DETAIL

[TYPE 'A'] HTS

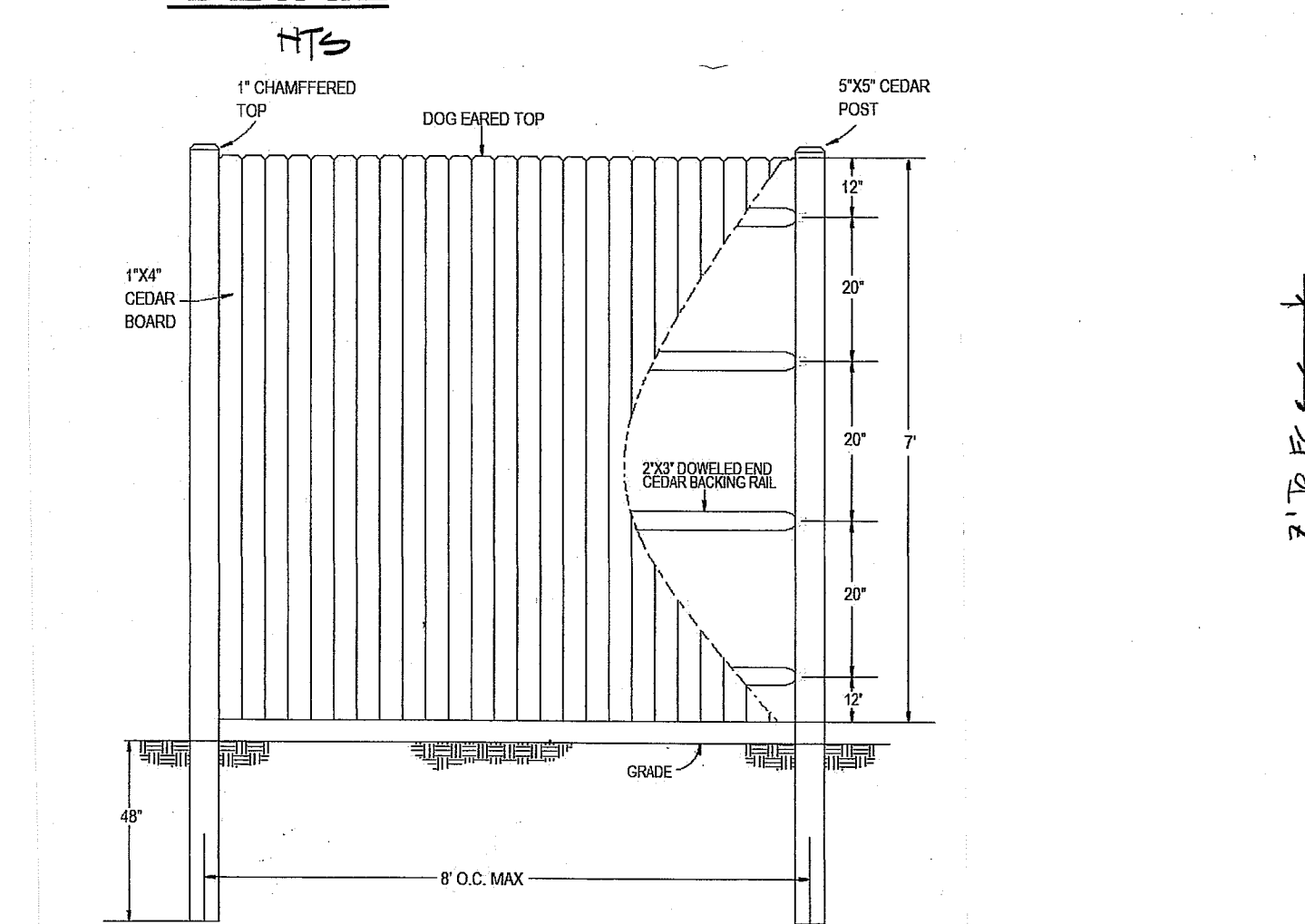
PAVING: CONCRETE TILES, MANU. BY GENEST CONG.  
STYLE: LEXINGTON PINK  
COLOR: GREYHIDE BLEND



## WALK PAVING DETAIL

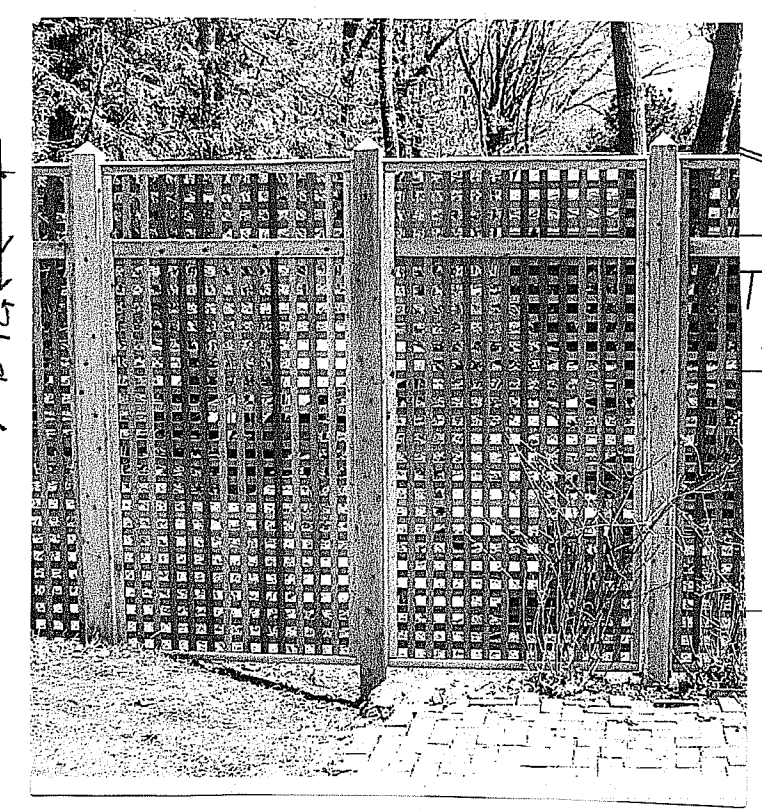
SCALE: AS SHOWN

## METAL FENCE & GATE DETAIL



## WOOD FENCE DETAIL [TYPE 'B']

HTS

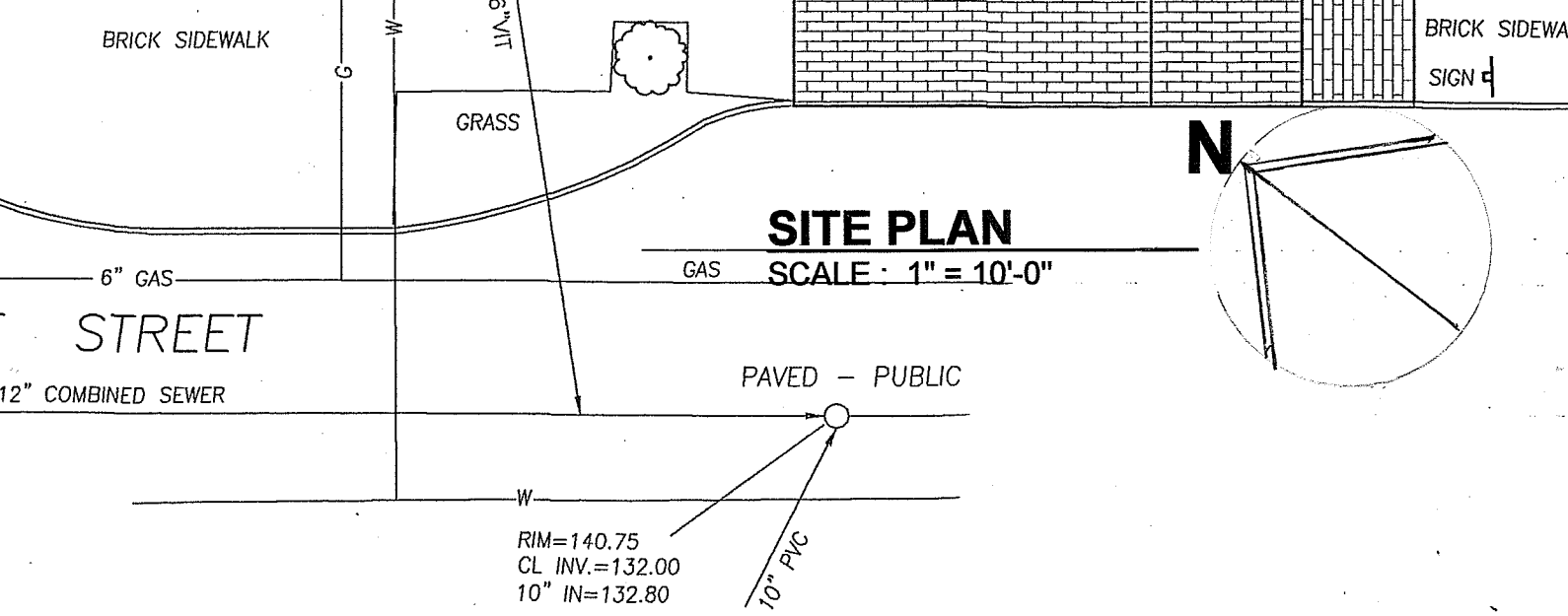


## WOOD LATTICE PANEL

HTS

## SITE PLAN

SCALE: 1" = 10'-0"



NOT FOR CONSTRUCTION

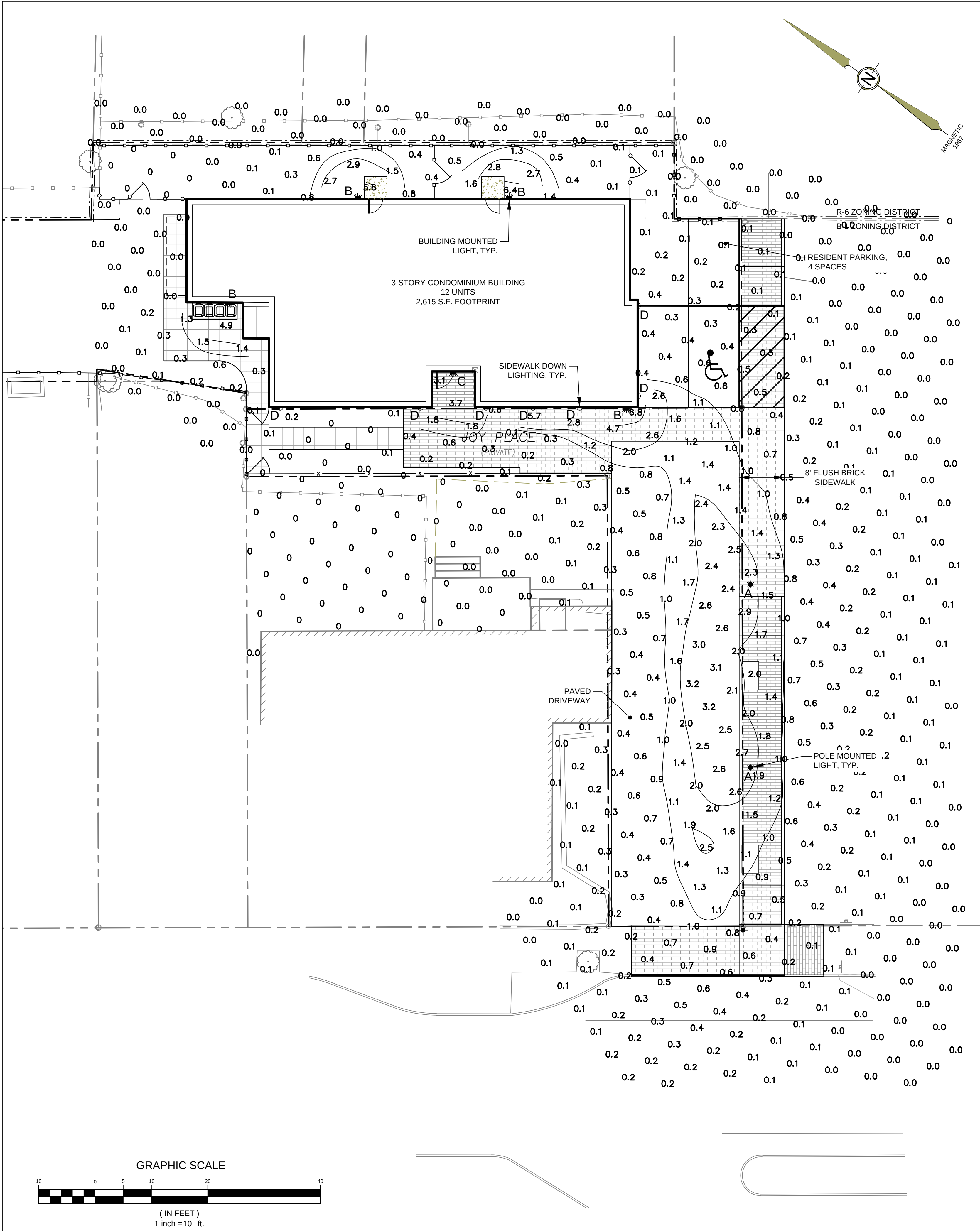
ONEJOY PLACE CONDOMINIUM  
1 JOY PLACE, PORTLAND, MAINE

4.25.17

LANDSCAPE PLAN

L.1





### Cimarron CL15

Pedestrian Site Lighting

Stylish vertically finned die-cast solid top housing and lower heat sink optimize heat dissipation.

Decorative integral arm houses two stage rings mechanism.

Features quick-mount plate and quick-connect wiring for easy installation.

Drivers have greater than 90% power factor and less than 20% THD.

0-10V dimming driver standard, order CD option to have dimming leads extended.

Automatic thermal self protection.

20KA surge protection with an end of life LED indicator.

<40 deg C to 40 deg C ambient operation.

Leakproof TGC polyester powder coat finish.

Stainless steel bezel mechanically compresses gas-filled light engine for IP60 rating.

Normal 3000K, 40 CRI, 4000K, 70 CRI, 5000K, 67 CRI, Turbo Friendly Amber.

Choice of 120 high brightness LED configurations with individual acrylic lenses aimed to produce IES type II, III, IV and V distribution.

Backlight control option reduces spill light behind pole 85%, doesn't change fixture appearance or EPA.

DesignLight Consortium (DLC) qualified, consult DLC website for more details: <http://www.designlights.org/DLC>.

Listed to UL1598 and CSA C22.2#250.0 24 for wet locations.

MADE-TO-ORDER ORDERING INFORMATION

| SERIES | NO. OF LEPS                | VOLTAGE                         | CCT             | DRIVE CURRENT                      | OPTIONS                                                                    |
|--------|----------------------------|---------------------------------|-----------------|------------------------------------|----------------------------------------------------------------------------|
| CL15   | 16L 16 High brightness LED | U1 Universal 120V-277V 50/60 Hz | 3K 3000K, 8000L | Lowest Blank for 7000mA (Standard) | BC1 Backlight control                                                      |
|        | 32L 32 High brightness LED | 1 120V                          | 4K 4000K, 7000L | 035P 350mA (32L, 48L)              | CD Continuous dimming                                                      |
|        | 48L 48 High brightness LED | 2 240V                          | 5K 5000K, 6700L | 053P 525mA (32L, 48L)              | FOV1 Fixing fixture's beam with ages: 120V, 2-240V, 2-277V, 5-480V, 2-240V |
|        | 48L 48 High brightness LED | 3 240V                          | 5 4800, 60 Hz   | 053P 525mA (32L, 48L)              |                                                                            |
|        |                            | 5 4800, 60 Hz                   |                 |                                    |                                                                            |
|        |                            | F 247V, 50 Hz                   |                 |                                    |                                                                            |
|        |                            | G 240V, 50 Hz                   |                 |                                    |                                                                            |
|        |                            |                                 |                 |                                    |                                                                            |

Notes: 1 - Base option not available with universal voltage.  
2 - Refer to fixture data for 120V.  
3 - Recommended for Type II and III distribution only.  
4 - 0-10V dimming driver with automatic daylight calibration and different from daylight settings, not order extension of one (1) foot.  
5 - Not available with 48L or 60L.  
6 - Not available with 32L, 36L, 36L or 36L.

Catalog Number: SCP-BEMOTE Remote control for SCP option. Must order at least one per project to program and control.

ADDITIONAL ACCESSORIES ON PG. 226-227

Example: WS-W2504-GH

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. OCT 2016

### RUBIX - model: WS-W2504, WS-W2505

LED Wall Mount

Available in single and twin-light configurations, this die-cast aluminum LED wall luminaire is wet location listed for a broad range of exterior lighting applications. Designed with a square profile, this version of Rubix mounts upwards or downwards.

PRODUCT DESCRIPTION

Energy Star® rated.

CEC Title 24 Compliant.

Mounts up or down.

IP65 Rated, ETL & cETL Wet Location Listed.

Die-Cast Aluminum Construction.

Universal Voltage Input (120V - 277V).

Dimming: ELV (120V) or 0-10V.

Specifications

Construction: Aluminum with etched glass.

Power: Integral driver in luminaire. 120V - 277V input.

Light Source: High output LED.

Mounting: Mounts directly to junction box.

Dimming: 0-10V (Dimming: 100%-10% ELV Dimming: 100%-15% (120V only).

Finish: Brushed Aluminum (AL), Black (BK), Bronze (BZ), Graphite (GH), White (WT).

Color Temp: 3000K.

CRI: 90.

Rated Life: 70,000 hours.

Standards: Energy Star® rated, IP65 Rated, ETL & cETL Wet Location Listed, CEC Title 24 Compliant, Dark Sky Friendly.

Example: WS-W2504-GH

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. OCT 2016

### RUBIX - model: FM-W2505, FM-W2510

LED Ceiling/Wall Mount

Energy Star rated and CEC Title 24 compliant, this versatile Rubix model is available for both wall and ceiling mounting. Die-cast aluminum constructed with etched glass for durability in exterior environments, Rubix delivers a substantial lumen output with a minimalist design.

PRODUCT DESCRIPTION

Energy Star® rated.

CEC Title 24 Compliant.

Wall or Ceiling Mount.

IP65 Rated, ETL & cETL Wet Location Listed.

Die-Cast Aluminum Construction.

Universal Voltage Input (120V - 277V).

Dimming: ELV (120V) or 0-10V.

Specifications

Construction: Aluminum with etched glass.

Power: Integral driver in luminaire. 120V - 277V input.

Light Source: High output LED.

Mounting: Mounts directly to junction box.

Dimming: 0-10V (Dimming: 100%-10% ELV Dimming: 100%-15% (120V only).

Finish: Brushed Aluminum (AL), Black (BK), Bronze (BZ), Graphite (GH), White (WT).

Color Temp: 3000K.

CRI: 90.

Rated Life: 70,000 hours.

Standards: Energy Star® rated, IP65 Rated, ETL & cETL Wet Location Listed, CEC Title 24 Compliant, Dark Sky Friendly.

Example: FM-W2510-WT

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. OCT 2016

### Model: WL-LED200

LEDme® Step Light

Vertical rectangle LEDme® Step Light. Designed for safety and style on stairways, patios, decks, balcony areas, walkways and building perimeters.

Features an architectural design. Energy efficient for long lasting indoor and outdoor lighting solutions. Creates an attractive, romantic impression at night.

PRODUCT DESCRIPTION

Energy Star® rated.

CEC Title 24 Compliant.

Wall or Ceiling Mount.

IP65 Rated, ETL & cETL Wet Location Listed.

Die-Cast Aluminum Construction.

Universal Voltage Input (120V - 277V).

Dimming: ELV (120V) or 0-10V.

Specifications

Construction: Die-cast aluminum or 316 marine grade cast stainless steel.

Power: Direct wiring, no remote driver needed. Input voltage: 120V or 277V AC 50/60Hz.

Light Source: 3000K CCT Samsung Hi-AC High Power LED, CRI: 85. Optional color lenses. Total power consumption of 3.9W.

Mounting: Fits into 2" x 4" J-Box with minimum inside dimensions of 3" x 2" x 2". Fits into 2" x 4" J-Box with minimum inside dimensions of 3" x 2" x 2". Fits into 2" x 4" J-Box with minimum inside dimensions of 3" x 2" x 2".

Dimming: Dip to 10% with electronic low voltage (ELV) dimmer. Approved dimmers: Lutron Nova-T NTELV-300 & NTELV-600, Lutron Nova-T NTELV-300 & NTELV-600, Lutron Nova-T NTELV-300 & NTELV-600.

Standards: IP65, UL & cUL listed for wet locations.

FINISHES

SS Stainless Steel

BK Black

WT White

BN Bronze

BZ Bronze

Example: WL-LED200F-AM-BZ

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. MAR 2016

| LIGHT FIXTURE TABLE |                         |              |                  |                  |                 |                   |
|---------------------|-------------------------|--------------|------------------|------------------|-----------------|-------------------|
| LABEL               | LIGHT FIXTURE           | MANUFACTURER | MANUFACTURERS ID | NUMBER OF LIGHTS | MOUNTING HEIGHT | MOUNTING LOCATION |
| A                   | PEDESTRIAN SITE LIGHT   | CIMARRON     | CL15-16L-3K-2    | 2                | 15'             | POLE              |
| B                   | RUBIX LED WALL MOUNT    | WAC LIGHTING | WS-W2504         | 4                | 8'              | WALL              |
| C                   | RUBIX LED CEILING MOUNT | WAC LIGHTING | FM-W2505         | 1                | 9'              | CANOPY CEILING    |
| D                   | LEDme STEP LIGHT        | WAC LIGHTING | WL-LED200-C-WT   | 7                | 1.5'            | WALL AT SIDEWALK  |

NOTES:

1. LIGHTING PLAN PREPARED USING DESIGN MASTER PHOTOMETRICS SOFTWARE

2. ONLY PROPOSED LIGHTING FIXTURES ARE MODELED

3. DEPRECIATION FACTOR FOR LED IS 0.90

STATE OF MAINE

MICHAEL E. TADEMA-WELANDT

PROFESSIONAL ENGINEER

P.E.: MICHAEL E. TADEMA-WELANDT

DATE: 4/25/17

REVISIONS

DATE

NO.

1

4-25-2017

SUBMITTED TO CITY OF PORTLAND FOR REVIEW

MTW

APPD

BY

565 CONGRESS STREET

SUITE 310

PORTLAND, ME 04102

P.O. BOX 339

111 ELDERBERRY LANE

NEW GLOUCESTER, ME 04260

OFFICE: (207) 926-5111 FAX: (207) 221-1317

www.terradynconsultants.com

TERRADYN CONSULTANTS, LLC

Civil Engineering - Land Planning - Stormwater Design - Environmental Permitting

PREPARED FOR

ONEJOY PLACE

1 JOY PLACE, PORTLAND, MAINE 04102

PHOTOMETRIC LIGHTING PLAN

ONEJOY PLACE, LLC

C/O RENEWAL HOUSING ASSOCIATES, LLC

2 UNION STREET, 5TH FLOOR

PORTLAND, MAINE 04101

DATE: 3/7/2017

SCALE: 1" = 10'

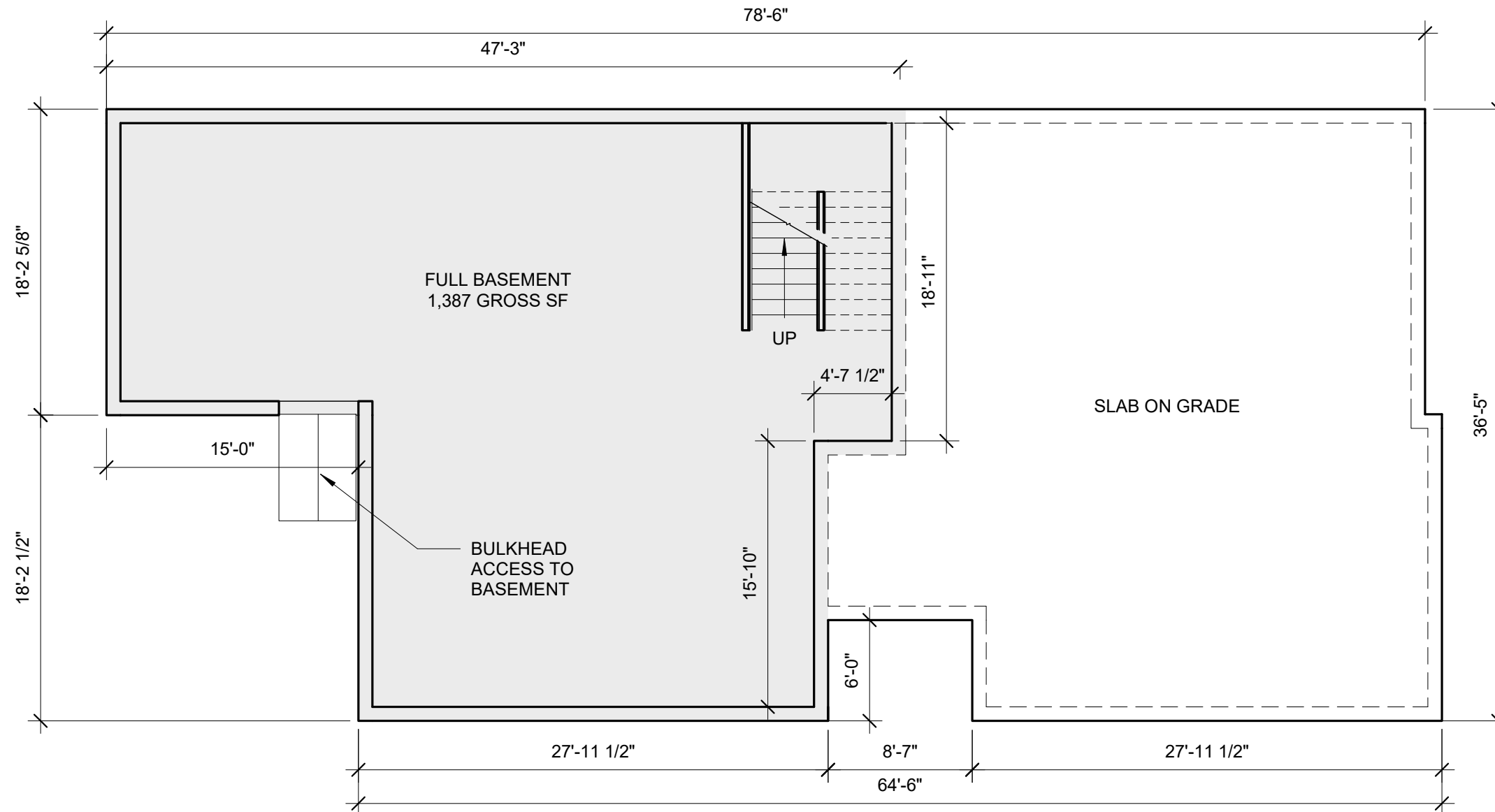
DESIGNED: MTW

JOB NO: 1704

FILE: 1704-PHOTOMETRICS

SHEET P-1.0



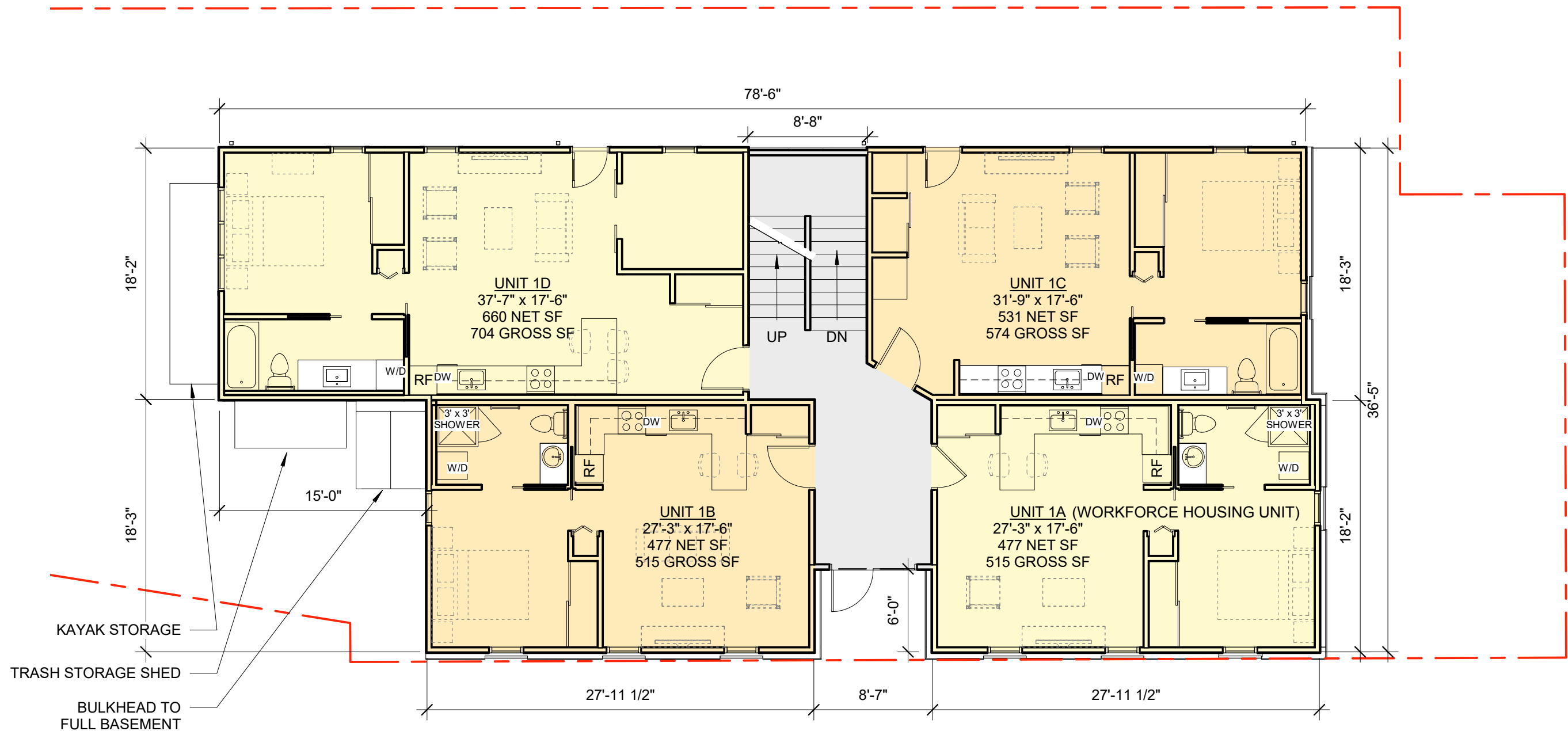


# 1 | BASEMENT

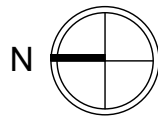
1/8" = 1'-0"



1 | 1ST FLOOR  
1/8" = 1'-0"



2,615 GROSS SF  
PROJECT NORTH



Architect:  
**ARCHETYPE**  
**A**rchitects  
48 Union Wharf Portland, Maine 04101  
(207) 772-6022 Fax (207) 772-4056

Date: 05/30/2017  
Scale: 1/8" = 1'-0"  
1ST FLOOR PLAN

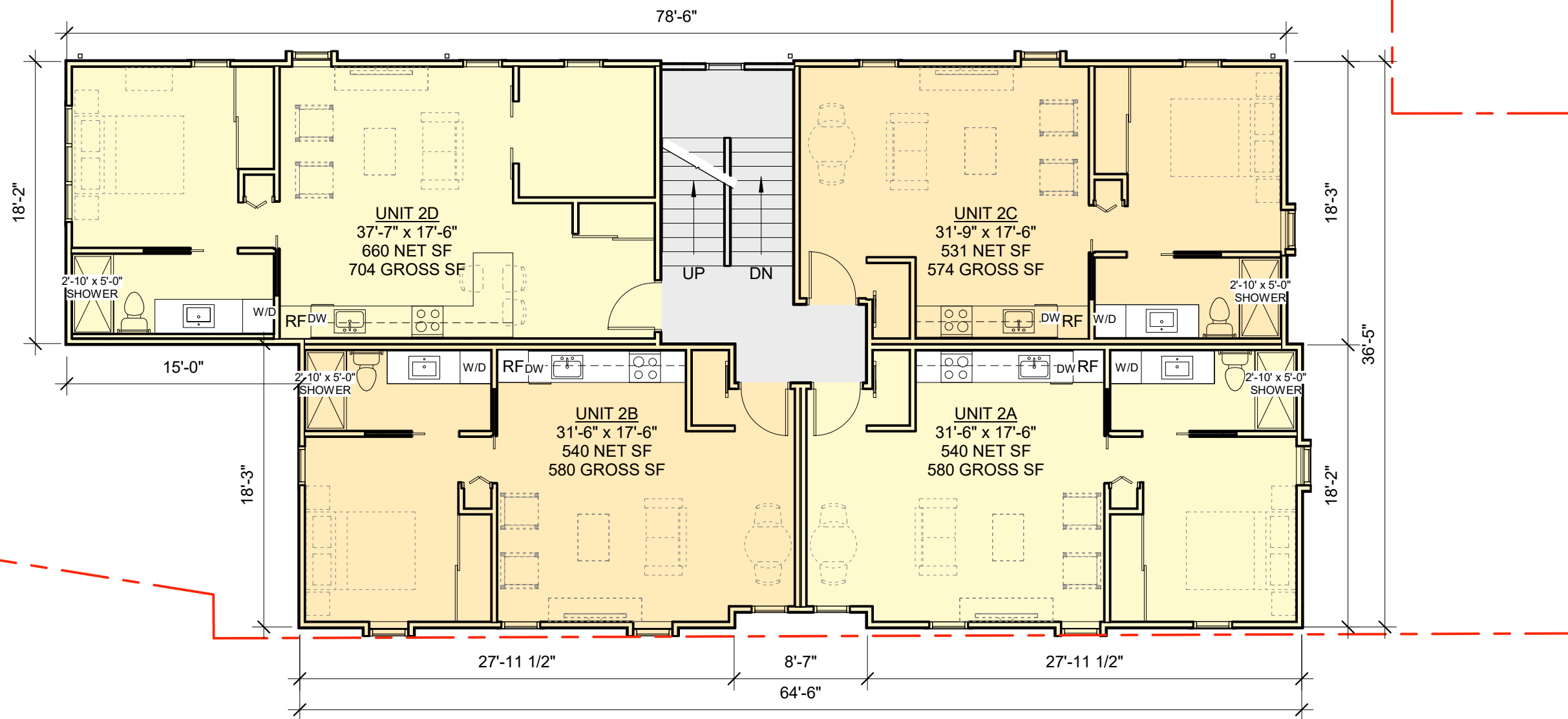
Project: JOY PLACE

A1.01



1 | 2ND FLOOR  
1/8" = 1'-0"

2,618 GROSS SF  
PROJECT NORTH

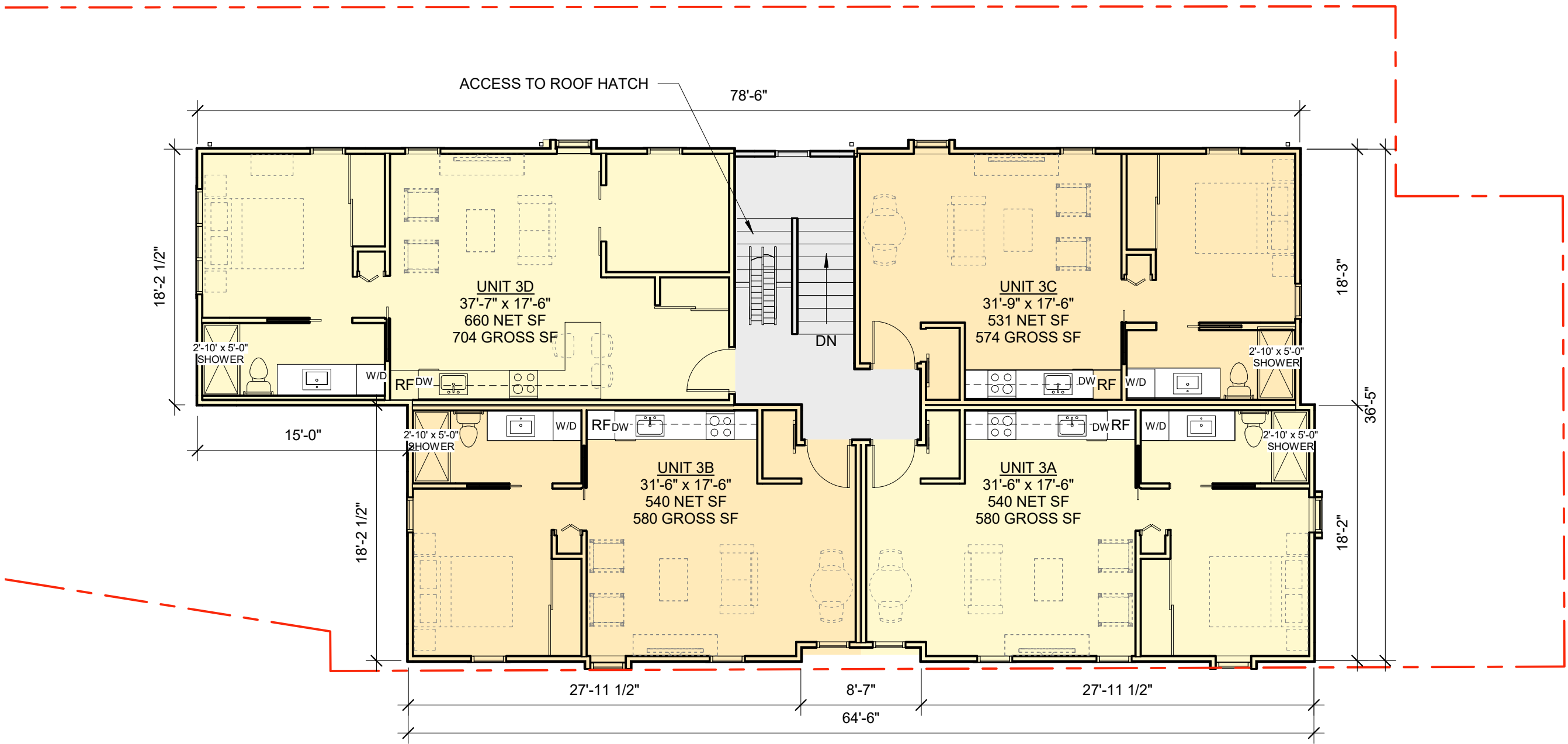


Architect:  
**ARCHETYPE**  
**architects**  
48 Union Wharf Portland, Maine 04101  
(207) 772-6022 Fax (207) 772-4056

Date: 05/19/2017  
Scale: 1/8" = 1'-0"  
2ND FLOOR PLAN

Project: JOY PLACE

A1.02

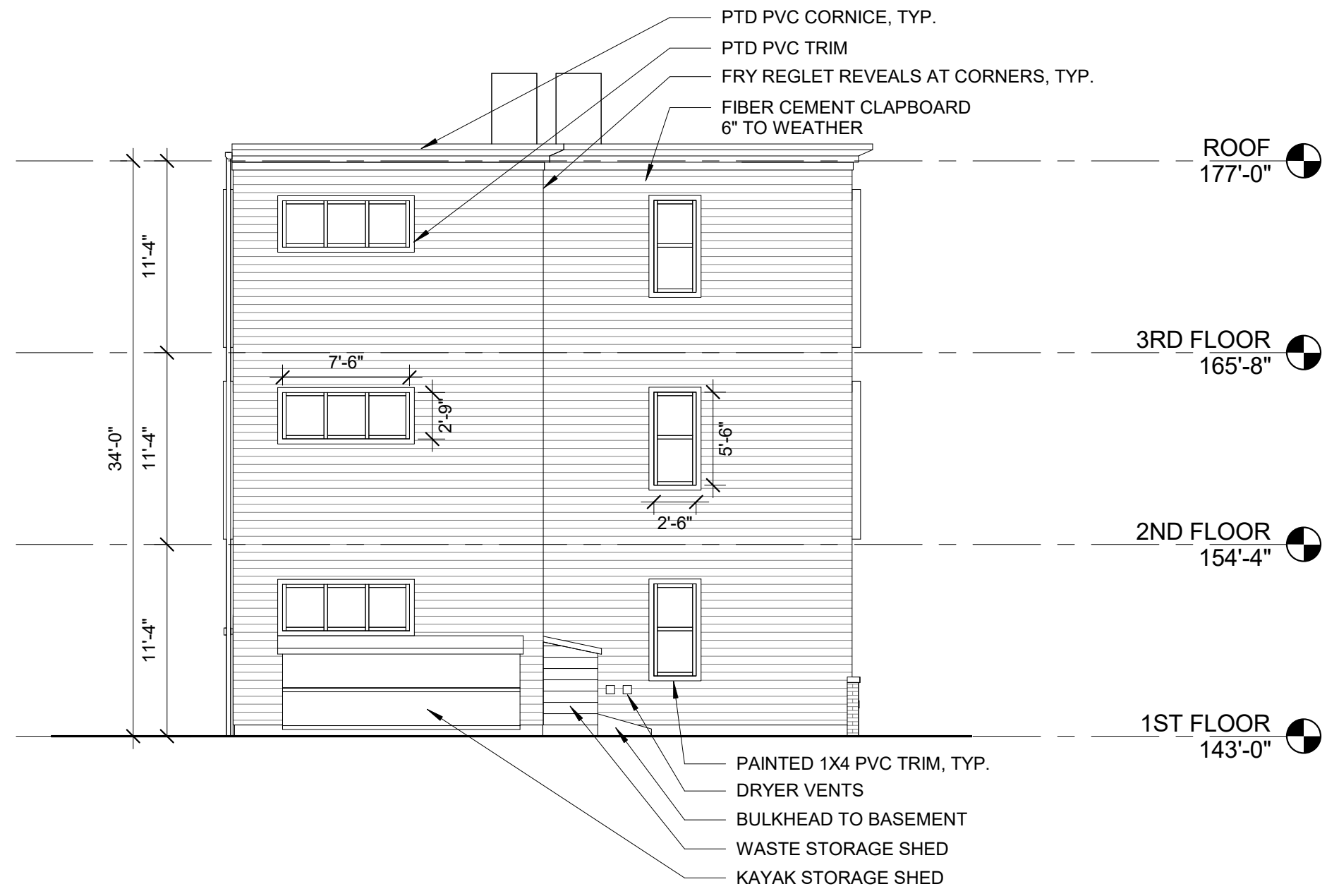


1 | 3RD FLOOR  
1/8" = 1'-0"

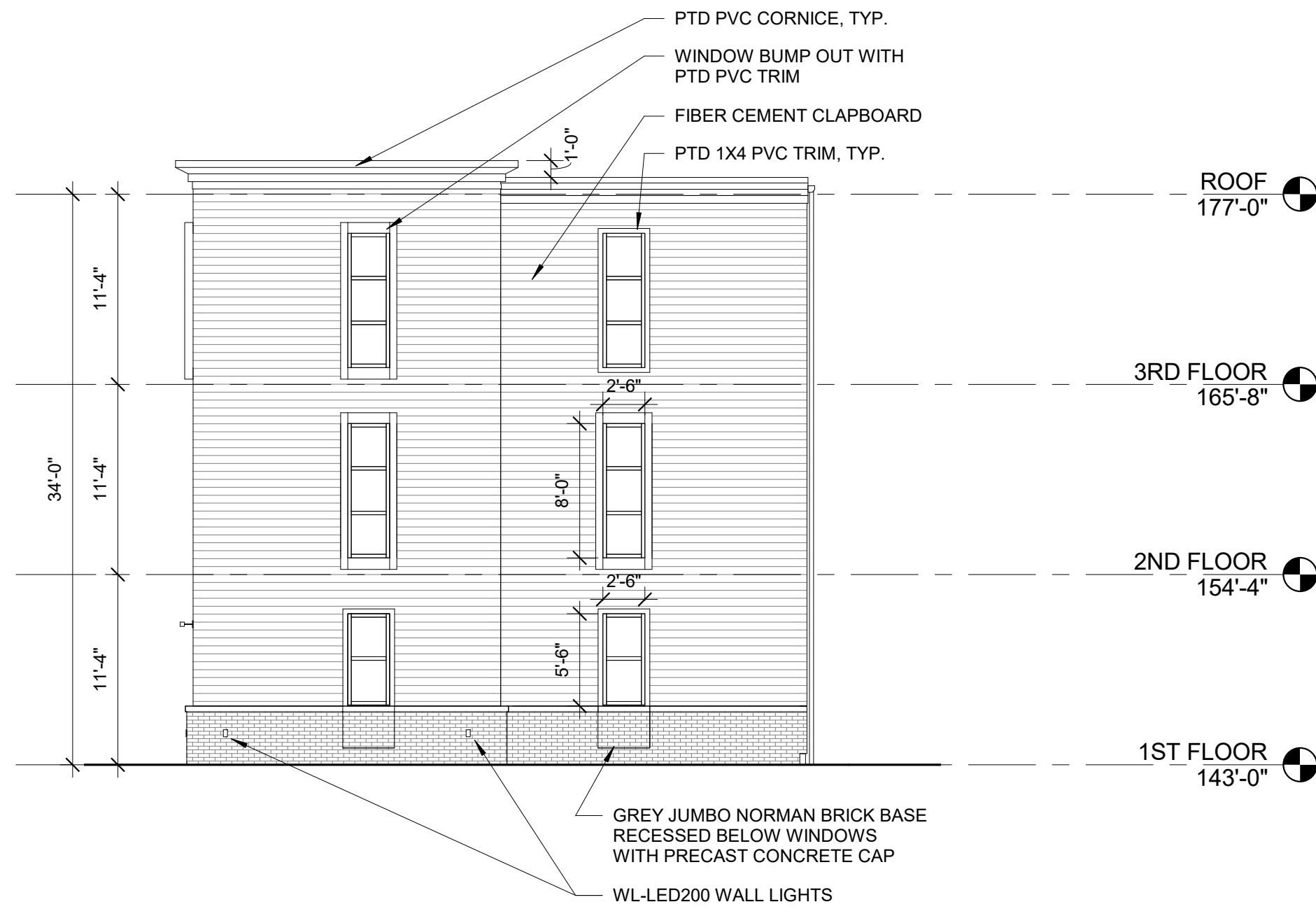
2,618 GROSS SF  
PROJECT NORTH



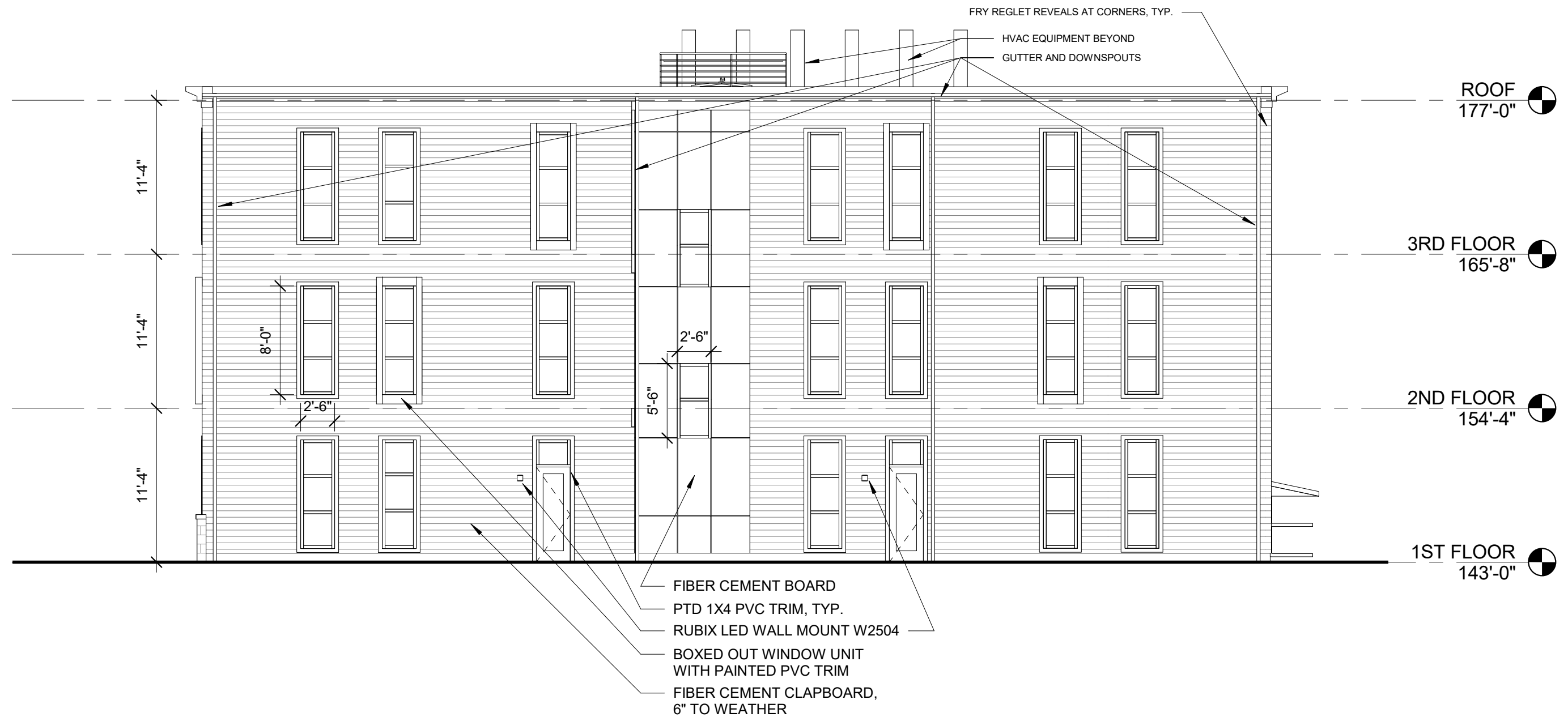




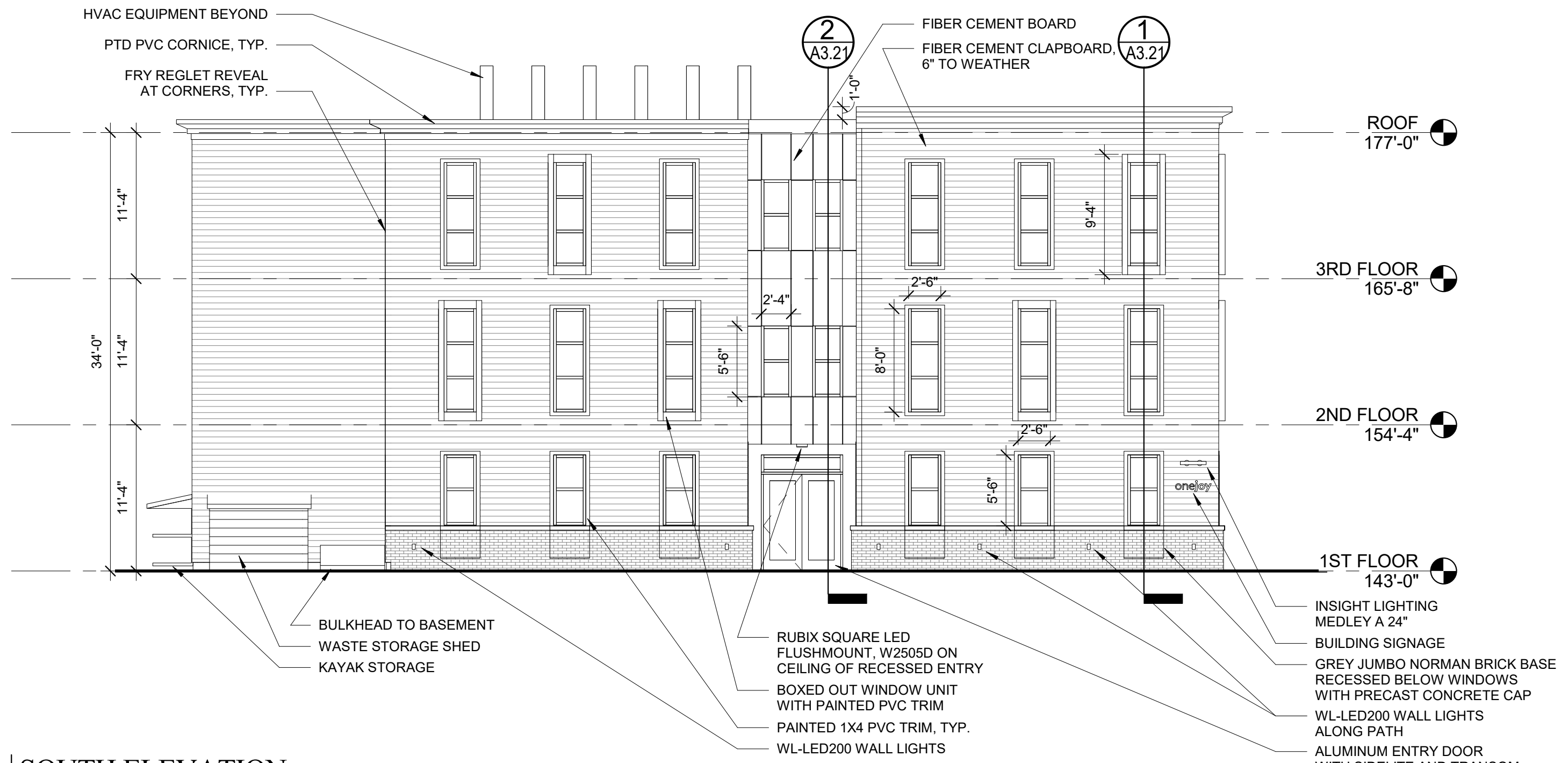
4 | WEST ELEVATION  
1/8" = 1'-0"



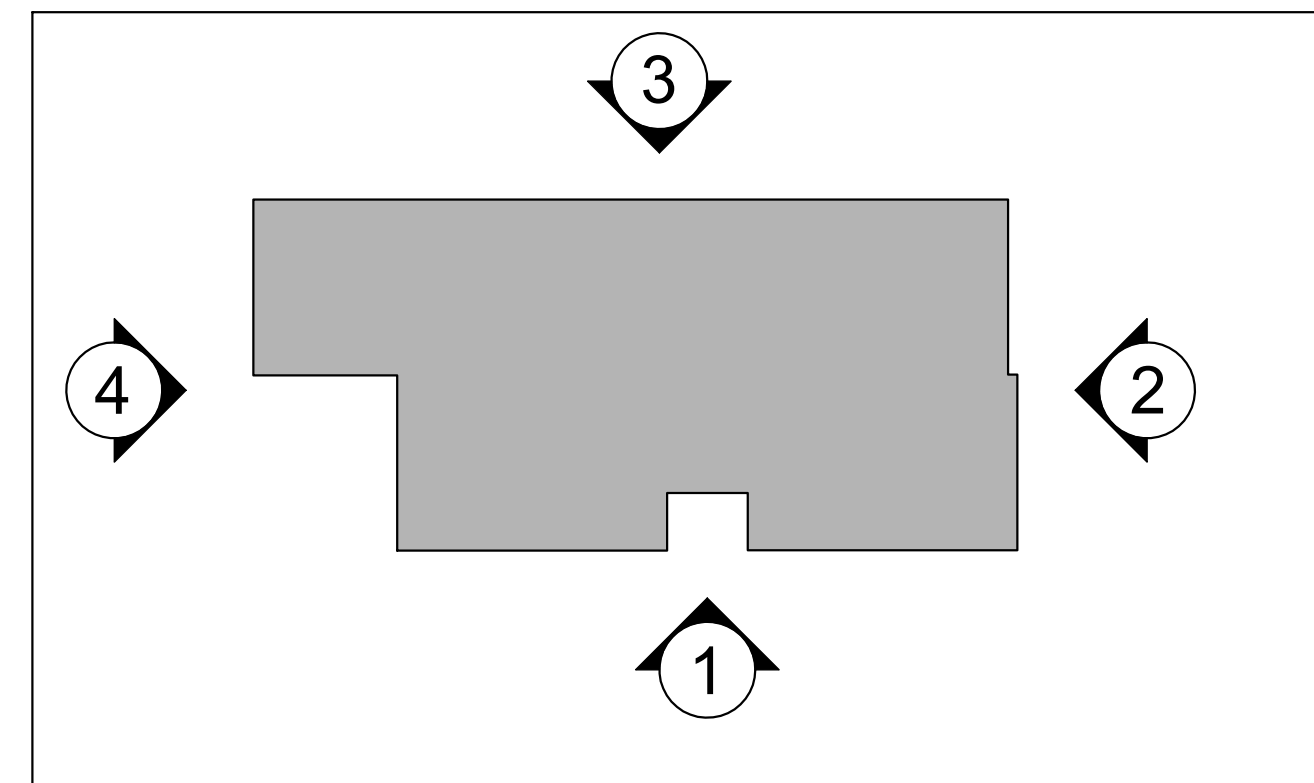
2 | EAST ELEVATION  
1/8" = 1'-0"



3 | NORTH ELEVATION  
1/8" = 1'-0"



1 | SOUTH ELEVATION  
1/8" = 1'-0"



Prepared For:

Onejoy Place LLC  
c/o Renewal Housing  
Associates LLC  
2 Union Street, 5th Floor  
Portland, ME 04101

Consultant:

ARCHETYPE  
architects  
48 Union Wharf Portland, Maine 04101  
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Architect:

onejoy  
WEST END • PORTLAND

Project:

Revisions:

Date: 13 JUNE 2017  
Scale: As indicated

BUILDING  
ELEVATIONS

A2.01



# PLANNING BOARD REPORT PORTLAND, MAINE

Division 30 Affordable Housing Text Amendments  
City of Portland, Applicant

|                                                                                 |                                                                                            |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Submitted to:<br>Portland Planning Board:<br>Public Hearing Date: July 11, 2017 | Prepared by: Barbara Barhydt, Development<br>Review Services Manager<br>Date: July 5, 2017 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|

## I. INTRODUCTION

The Housing Committee has been evaluating regulatory tools to encourage and support the creation of affordable housing in Portland. The Housing Committee reviewed proposed amendments to Division 30. Affordable Housing and voted at their March 30th meeting to forward the proposed amendments to the Planning Board for review and a recommendation to City Council.

The Planning Board held workshops on this item on May 9, 2017 and June 22nd. The draft amendments have been revised to reflect public comment and Board guidance. The draft amendments offer incentives for affordable housing, which include density bonuses, building height increases, setback reductions in the B-1, B-1b, B-2, B-2b, B-2c, B-3, B-3b, B-3c, B-5, R-7<sup>1</sup>, and R-P Zones. Planned Residential Unit Developments (PRUD) are allowed in R-3, R-5 and R-5A zones. The proposed incentives for PRUDS include a density bonus, reduced setbacks, flexibility for the number of units per building and building length to be reviewed during site plan review, allow land on both sides of a street to count toward minimum lot size requirements, and set the minimum recreation space at 200 square feet per unit. Other proposed amendments require that the unit size and affordability provisions meet the City's current inclusionary zoning requirements, that a public meeting must be held prior to submitting an application, and bonuses cannot be applied cumulatively.

The noticing for the public hearing appeared in the Portland Press Herald on July 3<sup>rd</sup> and July 4<sup>th</sup>. A news flash was sent to all individuals and organizations through Notify Me. Public comments have been received at the workshops and written public comments are included in the public comments attachment along with the public outreach material.

## II. BACKGROUND

### A. Current Provisions in Section 14-488

The current density, parking and dimensional bonuses for affordable housing contained in Division 30, Section 14-488 ([Attachment 9](#)) are applicable in all zones, but the incentives are more limited in scope. For example, the maximum density bonus allowed is a 25% increase for projects with 25% or more of the units as affordable units. There is a cross reference to the parking regulations, which states:

*...no more than one (1) parking space shall be required. The planning board may establish a parking requirement for affordable housing units for rent or sale within an*

<sup>1</sup> The legal ad for the July 11<sup>th</sup> hearing inadvertently omitted the R-7 from the list of eligible zones for these bonuses, although it had been included in all discussions prior. A second public hearing for this item will be scheduled for July xx to rectify this omission and hold a final Planning Board vote on whether to allow bonuses in the R-7 zone.



*eligible project that is less than one (1) parking space per affordable housing unit, regardless of the size of the structure.*

Height bonuses are available for projects in the B-2 or B-b zone that contain more than 5 affordable housing units and where 20% or more of the units are affordable, but the heights cannot exceed recommended heights from an applicable height study in the comprehensive plan.

## **B. Housing Committee Goals**

Consistent with the policies of Portland's adopted comprehensive plan, Portland's Plan 2030, the Housing Committee sought to support the development of housing along Portland's transportation corridors and at significant nodes. The March 30, 2017 memo from Jeff Levine, Director of Planning and Urban Development, and from Mary David, Division Director of Housing and Community Development is included as Attachment 2.

As noted in the March 30 memo:

*[T]hese amendments would incentivize the creation of significant new affordable housing options for a wide range of households in need. ... [They] would also allow for developers of affordable housing to be more competitive with other developers for site acquisition and more competitive for public funding subsidies. The amendments would be designed to sensitively balance site context with modest height bonuses and small building setback reductions. These small forms of flexibility and zoning relief would provide developers of affordable housing greater project feasibility while also proactively providing clear rules for supporting more affordable housing in a consistent manner.*

The proposed text amendments also provide incentives for increased density and more flexible dimensional standards for Planned Residential Unit Developments, which are permitted uses in the R-3, R-5, and R-5A zones.

## **C. Affordable Housing Definitions in Division 30**

Division 30 Affordable Housing defines affordable housing for low and workforce housing as follows:

- Affordable means that the percentage of income a household is charged in rent and other housing expenses or must pay in monthly mortgage payments (including insurance and taxes), does not exceed 30% of a household's income, or other amount established in city regulations that does not vary significantly from this amount.
- Low income housing for rent means a dwelling unit for which the rent is affordable to a household earning 80% or less of Area Median Income (AMI) as defined by the United States Department of Housing and Urban Development (HUD)
- Low income housing unit for sale means a dwelling unit for which the sale price is affordable to a household earning 80% or less of the HUD AMI
- Workforce Housing unit for rent means a dwelling unit which is affordable to a household earning less than 100% of the HUD AMI.
- Workforce Housing unit for sale means a dwelling unit for which the purchase price is affordable to a household at 120% of HUD AMI.

Mary Davis, Housing and Community Development Division Director, submitted a memorandum dated Jun 15, 2017 (Attachment 3), which provides a chart of the 2017 income limits for 30, 50, 60, 80, 100, and 120 % of the Area Median Income (AMI) for households based upon the number of persons (single to a family of 8) within a household. These figures are developed by HUD and apply to the Portland metropolitan area. In addition, HUD's 2017 Fair Market Rents and Workforce Housing Sale prices are listed in the memo. The Fair Market Rents (FMR) by bedroom size for the Portland metro area range from \$911 for an efficiency to \$1,906 for a four-bedroom rental unit. Sale price estimates for Workforce housing are included in the memo and the figures incorporate estimates

for mortgage insurance, condo fee, taxes, insurance and other housing costs. The purchase prices with 5% down range from \$169,474 to \$287,368 for an efficiency to a four-bedroom condo.

### III. SUMMARY OF REVISIONS FROM THE ORIGINAL DRAFT

The changes in the draft amendments from the original version forwarded to the Planning Board from the Housing Committee include the following:

1. Addition of B-2c to the list of eligible zones. The B-2c zone is located along portions of the Forest Avenue corridor between Woodfords and Morrill's Corners. It is also found along a portion of Bishop Street.
2. Removal of B-4 from the list of eligible zones. The B-4 zone is along Warren Avenue and Riverside Street. The zone does not permit residential uses and while these are transportation corridors, there is limited or no public transit service currently. At the June workshop, the Board suggested that this could be re-evaluated as part of a node study of Morrill's Corner.
3. Height bonus limited to 15 feet in B-1 and R-P. The height bonuses for B-1 and Residence Professional is capped at 15 feet rather than the original proposal of 25 feet. The massing analysis suggested that the limited increase would be more compatible with the context of the adjoining residential development patterns.
4. Added maximum structure height is 50 feet near Observatory. At the June workshop, the Deb Andrews, Historic Preservation Manager, submitted an evaluation of the proposed amendments on the city's historic districts and landmarks (Attachment 5). At the workshop, Julie Larry, Portland Landmarks, noted the sensitivity of development near the Portland Observatory. As part of the note on maximum height incentives, the maximum structure height of 50 feet is proposed within 750 feet of the Portland Observatory.
5. Cross reference to off-street parking regulations. The cross reference to the parking provisions for affordable housing units was retained. In the early version, it had been omitted.
6. Neighborhood meeting prior to submission of an application changed to 30 days. The draft includes a requirement for a neighborhood meeting to be held prior to the submission of an development review application. The time frame for this meeting was changed from 60 days to 30 days prior to submission based upon the comments received at both workshops. Public comments were received suggesting that this should be applied to all projects. At this time, the proposal is to focus this requirement on affordable housing projects that are taking advantage of additional development incentives and it serves a good test for future consideration for review processes.
7. Clarify standards for low-income and workforce housing units. At the June workshop, the draft amendments included a provision under Unit Size and Term of Affordability that stated low income and workforce housing units must be comparable size and layout as market rate units and to be affordable for the longest time permitted under all applicable laws. The Board asked for greater clarity on this provision. The proposal now states:

*Unit Size and Term of Affordability. In order to be eligible for this section, the low income and workforce housing units must:*

1. Meet Section 14-487 Ensuring Workforce Housing, subsection (e) Standards 1,2 and 3; and
2. Be affordable for the longest term permitted under federal, state and local laws.

The standards from section 14-487 are as follows:

(e) Standards.

1. *Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.*
  2. *Workforce units are encouraged to be integrated with the rest of the development, should use a common entrance and should provide no indications from common areas that these units are workforce housing units.*
  3. *Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be 10 percent of the total number of bedrooms in the development. For the purposes of this section, for every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.*
8. Bonuses are not cumulative. Subparagraph f of Section 14-488 has been clarified that the bonuses are not cumulative. The eligible chart also states that a project that is providing both low-income and workforce housing shall have the option of utilizing only one applicable incentive.

#### IV. PROPOSED TEXT AMENDMENTS

Following are the proposed text amendments, without the changes tracked, in order for the Board to have a clean version to consider. Attachment 1 contains the same amendments with all of the revisions to Section 14-488 tracked for the Board's consideration.

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**Sec. 14-488. Density, parking, dimensional bonuses and reductions, and public process.**

Notwithstanding any other provision of this chapter to the contrary, in order to encourage low income and workforce units in designated growth areas, eligible projects may avail themselves of the following options.

- (a) *Density bonuses.* The maximum number of units that would otherwise be allowed under this chapter shall be increased for an eligible project in the manner described in the following table:

Eligible projects in all B-1, B-1b, B-2, B-2b, B-2c, B-3, B-3b, B-3c, B-5, R-7, and R-P Zones

| Percentage Low Income Units for Sale/Rent | Percentage Workforce Units for Sale/Rent | Density Permitted* | Additional Height Permitted*** | Setback Reductions** |
|-------------------------------------------|------------------------------------------|--------------------|--------------------------------|----------------------|
| 10%                                       | 20%                                      | 1.1 x base         | N/A                            | N/A                  |
| 20%                                       | 40%                                      | 1.2 x base         | 10 feet                        | N/A                  |
| 30%                                       | 60%                                      | 1.3 x base         | 10 feet                        | 5'                   |
| 50%                                       | 100%                                     | 2.0 x base         | 15 feet                        | 5'                   |
| 75%                                       | N/A                                      | 2.5 x base         | 25 feet                        | 10'                  |

*\*: "Base" is the number of units allowed under the zoning without this bonus but with any other bonuses applied. In R-P zones, multifamily is permitted with a "base" no less than 1 unit per 1,500 sf. of land area. If an eligible project is providing both workforce and affordable housing units, the applicant shall have the option of utilizing applicable incentives, but not cumulatively.*

*\*\* : Setback reductions are absolute reductions in front, side and/or rear yard setback requirements. The maximum setback reductions in the B-1, B-1b and R-P zones shall be 5 feet.*

*\*\*\* The maximum additional height permitted in the B-1 zones and the R-P zone shall be 15 feet. In addition, the maximum structure height is 50 feet within 750 feet of the Portland Observatory.*

(b) *Off-street parking.* Off-street parking is required as provided in Division 20 (off-street parking) of this article.

(c) *Planned Residential Unit Developments.* In order to promote orderly development of low- and moderate-income development as PRUDs, any project in which more than 50% of the units are low-income or workforce units for rent or for sale may utilize the following dimensional bonuses and changes:

- a. Minimum lot area per dwelling unit is reduced by 50%;
- b. Maximum number of units and maximum length of buildings do not apply but may be set through site plan review; and
- c. Minimum building setbacks may be reduced to 10'
- d. The PRUD may cross public rights of way provided that the right of way does not count towards minimum lot size nor towards any open space requirements
- e. Minimum Recreation Open Space Area is reduced to 200 sf per dwelling unit of common area designated for recreational purposes by the residents. Minimum contiguous size and setbacks do not apply and shall be set through site plan review.

(d) *Unit Size and Term of Affordability.* In order to be eligible for this section, the low income and workforce housing units must:

1. Meet Section 14-487 Ensuring Workforce Housing, subsection (e) *Standards* 1,2 and 3; and
2. Be affordable for the longest term permitted under federal, state and local laws.

(e) *Required Public Process.* The developer of the project must also commit to a good faith effort to communicate openly with affected properties as their process moves forward. At a minimum, no less



than 30 days prior to application for site plan review, any project that wishes to take advantage of this section must (1) hold a public meeting noticed to all properties within 500 feet of their site and (2) post a sign on the property in question describing the proposed project; intent to submit an application to the city in 30 days (cite anticipated submission date), and contact information for the developer and the Planning Authority (Department of Planning and Urban Development website link). The Planning Board may adopt regulations regarding the content and processes for noticing as part of the Technical Manual.

- (f) *Projects under 14-487.* Projects that are subject to 14-487 that choose to provide the required workforce housing units on site are eligible for a 25% increase in total permitted units. If an eligible project is also subject to 14-487, the applicant shall have the option of utilizing either this bonus or any bonuses they are eligible for under 14-488.1 but not both.

## **V. ZONING COMPARISON AND DISCUSSION**

### **A. Density:**

In general, the proposed density bonuses are based upon the applicable underlying density for each zone and the graduated incentives are based upon the percentage of affordable housing units that are either low income or workforce housing. A chart of the current density requirements for the eligible zones is presented below (Table 1) and Map of the zones is included as Attachment 8.

In some zones, the density is dependent upon whether the zone is on or off-peninsula. For example, the B-1 zone states the allowable density for a residential project is the same as the adjoining or nearest residential zone. The B-1 zone does allow a higher density for multi-family units (1,000 sf/unit) above first floor commercial. Similarly, residential density for the R-P zone is determined by the adjoining residential zone and RP does not have a designated density for multifamily housing. Thus, the proposed text amendments establish a base density of 1,500 sf per unit for multifamily units in the RP zone, which is the same density as the allowable off-peninsula density for the B-2 zone. Please note that the off-peninsula B-2 density can be reduced to 435 sf per unit where a building has active street frontage, but this is not applicable to B-1 or R-P. The B-1, and B-2 zones require a minimum of 435 square feet per residential unit on the peninsula. The B-3 zones and B-5 zone do not set any density limitations.

Jeff Levine, Director, Planning and Urban Development prepared a memo on the land value impacts of the proposed amendments to Division 30, which is included as Attachment 6. Mr. Levine's memo was in response to Board questions. In general, he concluded that the changes would not significantly impact land values. His reasoning included the following;

1. The number of projects likely to take advantage of these changes, while hopefully significant in terms of new housing production, will be small with respect to the total number of parcels within the eligible zones.
2. The projects would take advantage of these changes are inherently less profitable than entirely market-rate developments. Therefore, these changes are more likely to simply allow developers of workforce housing to pay a comparable land cost as market rate developers.
3. Land values respond to zoning changes. However, the rate of that response is slow and often based on the most lucrative use of the land-which in this case would still be market rate development.

Table 1 Density Comparison

Table 1 Density Comparison

| EXISTING                                         |                                                         |              |                           |                  |                                                  |                      |      | Proposed                                                           |                             |                   |
|--------------------------------------------------|---------------------------------------------------------|--------------|---------------------------|------------------|--------------------------------------------------|----------------------|------|--------------------------------------------------------------------|-----------------------------|-------------------|
| Zones                                            | Current Density                                         |              | Minimum Required Lot Size | Example Lot Size | Current Density Calculated upon example lot size |                      |      | Range of Units with Density Bonus calculated upon example lot size |                             |                   |
|                                                  | Off Peninsula                                           | On Peninsula |                           |                  | Off-Adjoining Residential                        | Off-Penn. Above comm | on   | Off Peninsula All resid.                                           | Off Peninsula - above comm. | On Peninsula      |
| B-1                                              | adjoining residential or 1000 sf above 1st floor retail | 435          | 0 or nearest resid.       | 5,000            | 2                                                | 5.0                  | 11.5 | 2.2 to 5.0                                                         | 5.5 to 12.5                 | 12.65 to 28.75    |
| B-1b                                             | adjoining residential or 1000 sf above 1st floor retail | 435          | 0 or nearest resid.       | 5,000            | 2                                                | 5.0                  | 11.5 | 2.2 to 5.0                                                         | 5.5 to 12.5                 | 12.65 to 28.75    |
| B-2                                              | 1500 *                                                  | 435          | 0                         | 5,000            | 3.34                                             | 3.34                 | 11.5 |                                                                    | 3.68 -8.35                  | 12.65 to 28.75    |
| B-2b                                             | 1500 *                                                  | 435          | 0                         | 5,000            | 3.34                                             | 3.34                 | 11.5 |                                                                    | 3.68 -8.35                  | 12.65 to 28.75    |
| B-2c                                             | 1500 *                                                  | 435          | 0                         | 5,000            | 3.34                                             | 3.34                 | 11.5 |                                                                    | 3.68 -8.35                  | 12.65 to 28.75    |
| B-3                                              | no density requirements                                 |              |                           |                  |                                                  |                      |      |                                                                    |                             | Unlimited Density |
| B-3b                                             | no density requirements                                 |              |                           |                  |                                                  |                      |      |                                                                    |                             | Unlimited Density |
| B-3c                                             | no density requirements                                 |              |                           |                  |                                                  |                      |      |                                                                    |                             | Unlimited Density |
| B-5                                              | no density requirements                                 |              |                           |                  |                                                  |                      |      | Unlimited Density                                                  |                             |                   |
| R-7                                              | 435                                                     | 0            | 5,000                     |                  |                                                  |                      |      | 12.65 to 28.75                                                     |                             |                   |
| R-P                                              | adjoining residential                                   |              | 6,000                     | 6,000            | 2                                                |                      |      | 1,500/unit with density bonus 3.68 to 8.35                         |                             |                   |
| * Exception for active street frontage, then 435 |                                                         |              |                           |                  |                                                  |                      |      |                                                                    |                             |                   |

## B. Building Height Incentives:

The proposed incentives include building height increases that range from 10 feet to 25 feet depending upon the percentage of low or moderate-income housing proposed within a project. The proposed height increases are as follows:

- 10 ft for projects with 20% low-income housing or 40% workforce units
- 15 ft for projects with 50% low-income housing and 100% workforce units
- 25 ft for projects with 75% low-income housing

The height incentives for the B-1 and R-P zones are capped at 15 feet, which is presented in the third note on the chart of the proposed text amendments. In addition, a maximum structure height of 50 feet is proposed within 750 feet of the Portland Observatory.

## C. Reduced Setbacks:

The dimensional modifications include reduced setbacks, which are absolute reductions in front, side and/or rear yard setback requirements of 5 and 10 feet. Table 2 presents the current dimensional standards in the selected zones. Many of the zones have no or minimal setback requirements, but relief would be

provided for those residential projects (100% residential) in the business zones that must apply the adjoining residential zone standards for housing projects, such as in the B-1 and RP zones.

Caitlin Cameron, Urban Designer, developed a series of exhibits (Attachments 10-15) that she presented at the June 22<sup>nd</sup> workshop, which depict examples of the existing and proposed maximum building envelope and building height for both on and off-peninsula zones. The birds eye views of the building massing and the maximum building footprints show the general context of the built environment of the zones along the corridors and the adjoining neighborhoods.

*Table 2 Existing Dimensional Requirements*

|                       | Existing Dimensional Requirements |                                          |                           |                                           |                                 |                                                                                             |                                         |                                 |                                 |
|-----------------------|-----------------------------------|------------------------------------------|---------------------------|-------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------|---------------------------------|---------------------------------|
|                       | Minimum Setbacks                  |                                          |                           |                                           | Maximum Setback                 | Maximum Height                                                                              |                                         | Structure Stepbacks             |                                 |
|                       | front                             | side                                     | side on side street       | rear                                      | Front                           | On Peninsula                                                                                | Off Peninsula                           | Side                            | Rear                            |
| <b>B-1</b>            | 0                                 | 0 unless abutting a residential zone -5' | 10, applies to one street | 0 unless abutting a residential zone, 10' | 10                              | 45', 50' along Congress if 1st fl comm                                                      | 35' except where abutting R-6, then R-6 | 10' at 35' when abut resid zone | 15' at 35' when abut resid zone |
| <b>B-1b</b>           | 0                                 | 0 unless abutting a residential zone -5' | 10, applies to one street | 0 unless abutting a residential zone, 10' | 10                              | 45', 50' along Congress if 1st fl comm                                                      | 35' except where abutting R-6, then R-6 | 10' at 35' when abut resid zone | 15' at 35' when abut resid zone |
| <b>B-2 &amp; B-2c</b> | 0                                 | 0                                        | 0                         | 10                                        | 10                              | 45', 50' if 1st fl commercial, 65 ft in B-2 and B-2 with 5 Acre lot, and 65' along Franklin |                                         | 5' at 35' when abut resid zone  | 15' at 35' when abut resid zone |
| <b>B-2b</b>           | 0                                 | 0                                        | 0                         | 10                                        | 10                              | 45', 50' if 1st fl commercial, 65 ft in B-2 and B-2 with 5 Acre lot, and 65' along Franklin |                                         | 5' at 35' when abut resid zone  | 15' at 35' when abut resid zone |
| <b>B-3</b>            | 0                                 | 0                                        | 0                         | 0                                         | 5                               | Height Overlay Map                                                                          |                                         | Height Overlay Map              |                                 |
| <b>B-3b</b>           | 0                                 | 0                                        | 0                         | 0                                         | 5                               | Height Overlay Map                                                                          |                                         | Height Overlay Map              |                                 |
| <b>B-3c</b>           | 0                                 | 0                                        | 0                         | 0                                         | 5                               | Height Overlay Map                                                                          |                                         | Height Overlay Map              |                                 |
| <b>B-5</b>            | 0                                 | 0                                        | 0                         | 0                                         | 10' between Franklin and Forest | 65', except Thompson's Point with MDP -120'                                                 |                                         |                                 |                                 |
| <b>R-7</b>            | 0                                 | 5                                        | 5                         | 5                                         |                                 | 50                                                                                          |                                         |                                 |                                 |
| <b>R-P</b>            | 20 (or average depth)             | 10-14' up to 3 stories                   | 10-14' up to 3 stories    | 20                                        |                                 | 45 ft or R-6, if abut R-6                                                                   | 45 ft or R-6, if abut R-6               |                                 |                                 |

#### **D. Planned Residential Unit Development (PRUD):**

Planned Residential Unit Developments are permitted uses in the R-3, R-5 and R-5A zones, which are located off the peninsula (see map, Attachment 9). To determine the allowable density for a PRUD, the net land area must be calculated as defined in the zoning code:

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

- (a) Reserved.
- (b) Existing watercourses, as defined in this section, measured by the area between the top of the banks at the normal high water mark, as defined in this section.
- (c) Reserved.
- (d) Wetlands, as defined in this section;
- (e) Reserved.
- (f) Slopes of twenty-five (25) percent or greater. Where a slope of twenty-five (25) percent or greater was altered to less than twenty-five (25) percent within the two (2) years immediately preceding the submission of the application for development, such slope shall also be subtracted from the gross area.

In the R-3 zone, a minimum gross land area of 3 acres is required for a PRUD and 6,500 sf is the required land area per unit based upon the net land area calculation. Similarly, the R-5 and R-5A zones require a minimum lot area of 2 acres. The minimum net land area per unit in R-5 is 3,000 sf and in R-5A it is 1,600 sf. The proposed amendments would reduce the required land area per unit by half of the current requirements. Thus, the land area per unit would be 3,250 sf in R-3, 1,500 sf in R-5 and 800 sf in R-5A. Below is a chart of the PRUD dimensional standards and proposed affordable housing incentives.

Relief is also proposed from dimensional standards that set a maximum number of units or maximum length of building and instead allow the building design and layout to be reviewed at the time of site plan review. The setbacks are proposed to be reduced from 25 feet to 10 feet and the minimum recreation open space is reduced to 200 sf per unit. There are no proposed building height increases for PRUDs. Another proposed modification is to allow the minimum parcel size to cross a city street, thus the 2 or 3 acres minimum lot sizes, as applicable, could be met with land on both sides of a street instead of one contiguous parcel. The street area may not be used toward meeting the minimum land area nor to meet the recreation calculations.

Planned Residential Unit Development Standards Chart

| Dimensional Standards                        | R-3  | R-3 w/50% or more affordable | R-5  | R-5 w/50% or more affordable |
|----------------------------------------------|------|------------------------------|------|------------------------------|
| Lot size needed (acres)                      | 3    | 3                            | 1    | 1                            |
| Max height (feet)                            | 35   | 35                           | 35   | 35                           |
| Lot Area/Unit (sf)                           | 6500 | 3250                         | 3000 | 1500                         |
| Max Length of Bldg (no garage) - feet        | 100  | Set through site plan review | 140  | Set through site plan review |
| Max Length of Bldg (garage) - feet           | 140  | Set through site plan review | 140  | Set through site plan review |
| Max # units in a building (<5 acre site)     | 2    | Set through site plan review | 12   | Set through site plan review |
| Max # units in a building (>5 acre site)     | 6    | Set through site plan review | 12   | Set through site plan review |
| Min setback (<4 units in a building) - feet  | 25   | 10                           | N/A  | N/A                          |
| Min setback (>43 units in a building) - feet | 35   | 10                           | N/A  | N/A                          |
| Min setback (<100 feet long) - feet          | N/A  | N/A                          | 25   | 10                           |
| Min setback (>100 feet long) - feet          | N/A  | N/A                          | 35   | 10                           |
| Distance between buildings - feet            | 16   | 16                           | N/A  | N/A                          |
| Min recreational open space (sf/du)          | 300  | 200                          | 300  | 200                          |
| Large recreational open space required (sf)  | 6000 | Set through site plan review | 6000 | Set through site plan review |

Public comment has been received raising concerns about the increased density and neighborhood compatibility of the proposed changes to PRUD's in the R-3, R-5, and R-5A zones. The proposed changes are intended to support new housing in locations off the peninsula and to encourage quality and sustainable designs. At the June workshop, there was also public comment that additional incentives should be considered for affordable housing in these zones. The proposed amendments presented in this draft are from the Housing Committee and no changes have been incorporated since the original referral.

#### **E. Unit Size and Terms of Affordability:**

The revised section on unit size and the terms of affordability contain the following:



- (c) *In order to be eligible for this section, the low income and workforce housing units must:*
- i. *Meet Section 14-487 Ensuring Workforce Housing, subsection (e) Standards 1,2 and 3; and*
  - ii. *Be affordable for the longest term permitted under federal, state and local laws.*

This section now cross references the standards of review in Division 30 for the required affordable housing units rather than the previous language that required comparable size and layout for both the affordable and market rate units. The applicable standards of Section 14-487 are as follows:

(e) Standards.

1. *Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.*
2. *Workforce units are encouraged to be integrated with the rest of the development, should use a common entrance and should provide no indications from common areas that these units are workforce housing units.*
3. *Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be 10 percent of the total number of bedrooms in the development. For the purposes of this section, for every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.*

**F. Required Public Process:**

The proposal from the Housing Committee called for an enhanced public process in order to be eligible for the incentives. In the first draft, a neighborhood meeting was required to be held at least 60 days before an application is submitted to the city for review and that a sign be posted on the property announcing the proposed project. The 60-day notice period was questioned at the workshop by housing providers. This language has been revised to require a 30-day notice period. In addition, the process calls for a sign to be posted regarding the pending application and allows the Planning Board to adopt regulations regarding the content and process for noticing as part of the Technical Manual.

## **VI. COMPREHENSIVE PLAN ANALYSIS**

### **A. Excerpts from Portland's Plan 2030**

The Vision Statement of Portland's Plan 2030 has a vision statement with the six themes of Equitable, Sustainable, Dynamic, Secure, Authentic and Connected. Within the vision statement there are specific statements that apply to affordable housing:

- We will remain an open and inclusive City, celebrating diversity and providing a welcoming and safe place for residents and visitors alike.
- The benefits and costs of our City will be born fairly across the entire City.
- We will incorporate the needs of all our residents in planning for our future.
- We will be committed to accessible housing and healthy food for all our residents.
- We will foster accessible linkages between where we live, work, shop, and play.

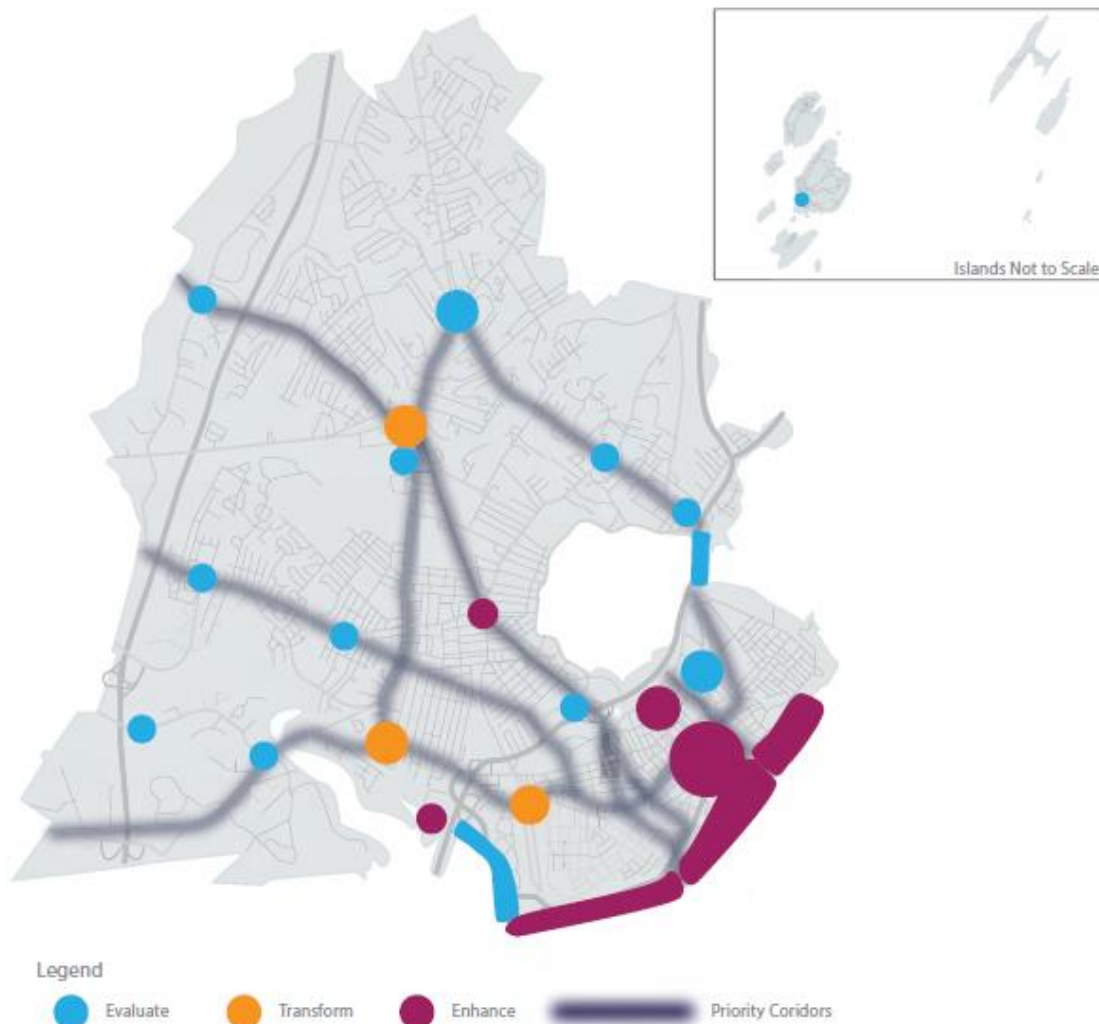
The Local Goals under the Policy Guide for Housing include the following:

- Increase, preserve, and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households.

- Encourage additional contextually- appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.
- Pursue policies to enable people who work in Portland to have the option to live in Portland.
- Collaborate with surrounding communities on regional housing solutions.
- Encourage quality, sustainable design in new housing development.

The Future Land Use plan calls for focusing future land use on those areas to be prioritized for change or evaluation. The plan states that the “Priority nodes and corridors indicate areas that would be appropriate for new development to provide needed housing, businesses, and services proximate to transit, or areas that otherwise warrant some examination of potential for positive change in form and/or function.” The plan of priority nodes and corridors is below and Attachment 7 has the zoning map with the proposed eligible zones highlighted with overlay of the nodes and corridors on the map:

Priority Nodes & Corridors



## B. Comprehensive Plan Analysis

The proposed Division 30 Affordable Housing text amendments are intended to meet the City’s goal of increasing, preserving and modifying the overall supply of housing City-wide in order to meet the needs,

preferences and financial capabilities of all Portland households. Portland has an aging housing stock, so the proposed incentives for affordable housing address the goal to encourage quality, sustainable design in new housing development. As articulated in Jeff Levine's memo of June 16<sup>th</sup>, the proposal seeks to increase the viability of affordable housing projects to compete in the real estate market for properties for new construction or rehabilitation. In addition, the proposed density incentives and dimensional modifications within eligible zones and PRUDs addresses the housing goal to provide more opportunities for households to live and work in Portland, specifically low-income and workforce households.

The emphasis on significant density bonuses and height incentives targeted for zones along priority nodes and corridors is consistent with the future land use plan and the goal to promote greater housing density, in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors, as a means of supporting complete neighborhoods. These amendments are intended to follow as close as possible those priority nodes and corridors, given the existing zoning districts. The proposed affordability bonuses to the PRUD districts are similarly designed to meet the local goals by adding housing in a contextually sensitive way proximate to neighborhood centers, for people who work in Portland. The massing models and footprint analysis prepared by Caitlin Cameron, Urban Designer, depict how the proposed changes work in context with the existing built environment along and adjacent to the corridors.

## **VII. STAFF RECOMMENDATION**

The staff recommends that the Planning Board find the proposed text amendments to be consistent with the Comprehensive Plan and recommend to the City Council adoption of the proposed text amendments.

## **VIII. PROPOSED MOTION**

On the basis of the material provided in this report, public testimony, a review of applicable policies, and other information, the Planning Board finds that the proposed text amendments to Division 30. Affordable Housing, Section 14-488 **[are or are not]** consistent with the Comprehensive Plan and **[recommends or does not recommend]** adoption of the proposed amendment to the City Council.

### **Attachments:**

1. Proposed Text Amendments- Redlined Version, dated June 30
2. Memo, Jeff Levine and Mary Davis, dated March 30, 2017
3. Memo from Mary Davis, dated June 15, 2017
4. Memo, Jeff Levine, Director, dated June 16, 2017, R-7 Zones & Division 30 Changes with map of R-7 zones
5. Memo, Deb Andrews, Historic Preservation Program Manager, June 8, 2017
6. Memo, Jeff Levine, Director, dated June 16, 2017, Land Values & Division 30 Changes
7. Map of Zones Eligible for Affordable Housing Incentives with Nodes and Corridors
8. Map of PRUD Potential Locations
9. Current Section 14-488 of Land Use Code
10. Portland Affordable Housing Map
11. Through 16. Exhibits Prepared by Caitlin Cameron, Urban Designer

### **Public Comment and Outreach:**

- PCA- Letter to Neighborhood Organization
- PCB Division 30 – One Page description
- PCC Press Release Division 30
- PC1 Amy Gallant – 6-22-17
- PC2 Chriss Sutherland 6-22-17
- PC3 Cynthia Cochran 3-30-17
- PC4 Dana Totman (Avesta) 6-8-16
- PC5 Jan Bindas Tenney 6-22-17

PC6 Karen Snyder 5-9-17  
PC7 Karen Snyder 5-10-17  
PC8 Marc Lamontagne 6-22-17  
PC9 Presentation Affordable Housing PortlandMe  
PC10 Quincy Hentzel 6-22-17  
PC11 Zack Barowitz 6-20-17  
PC12 Karen Snyder 6-23-17  
PC13 Cheryl Leeman 6-27-17  
PC14 Donna Warren 6-27-17  
PC15 Zachary Barowitz 7-7-17



Draft - 6-30-2017

**Sec. 14-488. Density, parking, ~~and~~ dimensional bonuses and reductions, and public process.**

Notwithstanding any other provision of this chapter to the contrary~~÷~~, in order to encourage low income and workforce units in designated growth areas, eligible projects may avail themselves of the following options.

- (a) *Density bonuses.* The maximum number of units that would otherwise be allowed under this chapter shall be increased for an eligible project in the manner described in the following table:

| <del>Percentage of new units that are low-income or workforce units</del> | <del>Percentage increase in maximum number of units allowed</del> |
|---------------------------------------------------------------------------|-------------------------------------------------------------------|
| <del>5% up to but not including 10%</del>                                 | <del>5% increase</del>                                            |
| <del>10% up to but not including 15%</del>                                | <del>10% increase</del>                                           |
| <del>15% up to but not including 20%</del>                                | <del>15% increase</del>                                           |
| <del>20% up to but not including 25%</del>                                | <del>20% increase</del>                                           |
| <del>25% or more</del>                                                    | <del>25% increase</del>                                           |
| <del>Projects Under Section 14-487</del>                                  | <del>25% increase</del>                                           |

Eligible projects in all B-1, B-1b, B-2, B-2b, B-2c, B-3, B-3b, B-3c, , B-5, and R-P Zones

| <u>Percentage Low Income Units for Sale/Rent</u> | <u>Percentage Workforce Units for Sale/Rent</u> | <u>Density Permitted*</u> | <u>Additional Height Permitted***</u> | <u>Setback Reductions**</u> |
|--------------------------------------------------|-------------------------------------------------|---------------------------|---------------------------------------|-----------------------------|
| <u>10%</u>                                       | <u>20%</u>                                      | <u>1.1 x base</u>         | <u>N/A</u>                            | <u>N/A</u>                  |
| <u>20%</u>                                       | <u>40%</u>                                      | <u>1.2 x base</u>         | <u>10 feet</u>                        | <u>N/A</u>                  |
| <u>30%</u>                                       | <u>60%</u>                                      | <u>1.3 x base</u>         | <u>10 feet</u>                        | <u>5'</u>                   |
| <u>50%</u>                                       | <u>100%</u>                                     | <u>2.0 x base</u>         | <u>15 feet</u>                        | <u>5'</u>                   |
| <u>75%</u>                                       | <u>N/A</u>                                      | <u>2.5 x base</u>         | <u>25 feet</u>                        | <u>10'</u>                  |

\*: "Base" is the number of units allowed under the zoning without this bonus but with any other bonuses applied. In R-P zones, multifamily is permit with a "base" no less than 1 unit per 1,500 sf. of land area. If an eligible project is providing both workforce and affordable housing units, the applicant shall have the option of utilizing applicable incentives, but not cumulatively.

\*\*: Setback reductions are absolute reductions in front, side and/or rear yard setback requirements. The maximum setback reductions in the B-1, B-1b and R-P zones shall be 5 feet.

\*\*\* The maximum additional height permitted in the B-1 zones and the R-P zone shall be 15 feet. In addition, the maximum structure height is 50 feet within 750 feet of the Portland Observatory.

(b) *Off-street parking.* Off-street parking is required as provided in Division 20 (off-street parking) of this article.

~~(c) *Building height bonus.* The maximum structure height for an eligible project building:~~

- ~~1. That is located in a B-2 or B-2b community business zone;~~
- ~~2. That contains five (5) or more dwelling units; and~~
- ~~3. Of which 20% or more of new dwelling units created are affordable units for rent or sale, is an additional ten feet above the maximum structure height that would otherwise apply to the building pursuant to this chapter.~~

~~The total height of the eligible project, including any bonus received pursuant to this subsection, may not exceed the maximum height recommended for the location of the project pursuant to a height study that has been adopted as part of the city's comprehensive plan.~~

(c) *Planned Residential Unit Developments.* In order to promote orderly development of low- and moderate-income development as PRUDs, any project in which more than 50% of the units are low-income or workforce units for rent or for sale may utilize the following dimensional bonuses and changes:

1. Minimum lot area per dwelling unit is reduced by 50%;
2. Maximum number of units and maximum length of buildings do not apply but may be set through

site plan review; and

3. Minimum building setbacks may be reduced to 10'

4. The PRUD may cross public rights of way provided that the right of way does not count towards minimum lot size nor towards any open space requirements

5. Minimum Recreation Open Space Area is reduced to 200 sf per dwelling unit of common area designated for recreational purposes by the residents. Minimum contiguous size and setbacks do not apply and shall be set through site plan review.

(d) Unit Size and Term of Affordability. In order to be eligible for this section, the low income and workforce housing units must:

1. Meet Section 14-487 Ensuring Workforce Housing, subsection (e) Standards 1,2 and 3; and

2. Be affordable for the longest term permitted under federal, state and local laws.

(e) Required Public Process. The developer of the project must also commit to a good faith effort to communicate openly with affected properties as their process moves forward. At a minimum, no less than 30 days prior to application for site plan review, any project that wishes to take advantage of this section must (1) hold a public meeting noticed to all properties within 500 feet of their site and (2) post a sign on the property in question describing the proposed project; intent to submit an application to the city in 30 days (cite anticipated submission date), and contact information for the developer and the Planning Authority (Department of Planning and Urban Development website link). The Planning Board may adopt regulations regarding the content and processes for noticing as part of the Technical Manual.

(f) Projects under 14-487. Projects that are subject to 14-487 that choose to provide the required workforce housing units on site are eligible for a 25% increase in total permitted units. If an eligible project is also subject to 14-487, the applicant shall have the option of utilizing either this bonus or any bonuses they are eligible for under 14-488.1 but not both.

Portland, Maine



Yes. Life's good here.

Mary Davis

Division Director, Housing &amp; Community Development Division

**TO:** Councilor Duson, Chair  
Members of the Housing Committee

**FROM:** Jeff Levine, Planning & Urban Development Director  
Mary Davis, Division Director  
Housing and Community Development Division

**DATE:** March 30, 2017

**SUBJECT:** An outline of proposed amendments to Division 30 to support the creation of affordable housing in Portland.

Over the past year the City has actively engaged in a number of discussions involving a wide range of stakeholders in an attempt to address concerns related to Portland's housing market. One of the themes that evolved from these discussions was the need for greater housing supply particularly for households earning low and moderate incomes. In conjunction with this discussion and work being done for the new Comprehensive Plan, there appeared to be growing interest in further developing housing along Portland's transportation corridors and business nodes. Staff has developed a proposed framework for amending Division 30 of the City's Land Use code to bridge these two concepts with the aim of creating more affordable housing in areas appropriate for additional development.

The goal of these amendments would incentivize the creation of significant new affordable housing options for a wide range of households in need. It would also allow for developers of affordable housing to be more competitive with other developers for site acquisition and more competitive for public funding subsidies. The amendments would be designed to sensitively balance site context with modest height bonuses and small building setback reductions. These small forms of flexibility and zoning relief would provide developers of affordable housing greater project feasibility while also proactively providing clear rules for supporting more affordable housing in a consistent manner. The following bullet points express some ways in which the Committee could achieve these goals and structure amendments to Division 30 that would provide real opportunity for creating more affordable housing in Portland:

- Amendments would impact certain zones along and within transportation corridors, and business nodes;
  - For example, B-1, B-1b, B-2, B-2b, B-3, B-3b, B-3c, B-4, B-5, R-7, and R-P zones may be areas worthy of consideration;
- Escalating density bonuses, height, and setback reductions based on the percentage of low income and moderate income units in an overall project;





Mary Davis

Division Director, Housing &amp; Community Development Division

- Planned Residential Unit Developments should be amended to allow for reductions in minimum lot areas per dwelling unit, setbacks, and building dimensions.

Attached to this memo is draft language that spells out in detail the proposed changes to Division 30 of Chapter 14 of the City Code that would allow for the outlined incentives to go into effect in the proposed zones. In addition, there is a zoning map highlighting the location of the zones to be impacted by these amendments. Large maps will be provided at the meeting and interested parties will be able to zoom in on electronic copies of the map made available as part of the Housing Committee packet on the City's website.

Following the Committee's deliberation and any related revisions, staff is requesting that the Committee take action on this item to send it to the Planning Board for their review. The City will conduct a robust public outreach for the Planning Board review of these amendments, including use of social media and on-line publicity. The item will ultimately require approval by the full Council who will have the additional benefit of feedback provided by the Committee, Planning Board, and general public to aid in any future decisions.

Portland, Maine



Yes. Life's good here.

Planning &amp; Urban Development Department

TO: Planning Board  
FROM: Mary Davis, Housing and Community Development Division Director  
DATE: June 15, 2017

Portland City Code (Division 30 Affordable Housing) § 14-485 (3-21-2016) defines affordable as "... the percentage of income a household is charged in rent and other housing expenses, or must pay in monthly mortgage payments (including insurance and taxes), does not exceed 30% of a household's income, or other amount established in city regulations that does not vary significantly from this amount."

The ordinance goes on to define a "*low-income housing unit for rent*" as "...rent is affordable to a household earning 80% or less of Area Median Income (AMI) as defined by ... (HUD)" and a "*low-income housing unit for sale*" as "... sale price is affordable to a household earning 80% or less of the HUD AMI;"

The ordinance defines a "*workforce housing unit for rent*" as "... affordable to a household earning less than 100% of the HUD AMI;" and a "*workforce housing unit for sale*" as "... purchase price is affordable to a household at 120% of HUD AMI;"

The proposed changes to Division 30 do not include any changes to these definitions.

### **2017 Income Limits and Corresponding Housing Expense**

Income limits are calculated by the U.S. Department of Housing and Urban Development (HUD) and used to determine eligibility for several HUD-funded programs including the Community Development Block Grant and HOME programs. HUD develops income limits based on Median Family Income estimates and Fair Market Rent area definitions for each metropolitan area. The City of Portland is included in the Portland, ME HUD Metro FMR Area. (<https://www.huduser.gov/portal/datasets/il/il2017/2017summary.odn>)

HUD determines the median family income amount and the income limits for 30%, 50%, 60%, 80% and 120% of area median income (AMI). The income limits for 100% AMI are calculated by staff utilizing the HUD median family income amount.

Effective April 14, 2017 (updated 6/13/2017)

| FY 2017 Income Limit Area          | Median Income | FY 2017 Income Limit Category            | # Persons in Family |          |          |          |           |           |           |           |
|------------------------------------|---------------|------------------------------------------|---------------------|----------|----------|----------|-----------|-----------|-----------|-----------|
| Portland, ME<br>HUD Metro FMR Area | \$83,400      | 30% Income Limits                        | \$17,300            | \$19,750 | \$22,200 | \$24,650 | \$28,780  | \$32,960  | \$37,140  | \$41,320  |
|                                    |               | Monthly Housing Expense @ 30 % of Income | \$433               | \$494    | \$555    | \$616    | \$720     | \$824     | \$929     | \$1,033   |
|                                    |               | 50% Income Limits                        | \$28,750            | \$32,850 | \$36,950 | \$41,050 | \$44,350  | \$47,650  | \$50,950  | \$54,200  |
|                                    |               | Monthly Housing Expense @ 30 % of Income | \$719               | \$821    | \$924    | \$1,026  | \$1,109   | \$1,191   | \$1,274   | \$1,355   |
|                                    |               | 60% Income Limits                        | \$34,500            | \$39,420 | \$44,340 | \$49,260 | \$53,220  | \$57,180  | \$61,140  | \$65,040  |
|                                    |               | Monthly Housing Expense @ 30 % of Income | \$863               | \$986    | \$1,109  | \$1,232  | \$1,331   | \$1,430   | \$1,529   | \$1,626   |
|                                    |               | 80% Income Limits                        | \$46,000            | \$52,600 | \$59,150 | \$65,700 | \$71,000  | \$76,250  | \$81,500  | \$86,750  |
|                                    |               | Monthly Housing Expense @ 30 % of Income | \$1,150             | \$1,315  | \$1,479  | \$1,643  | \$1,775   | \$1,906   | \$2,038   | \$2,169   |
|                                    |               | 100% Income Limits                       | \$58,380            | \$66,720 | \$75,060 | \$83,400 | \$90,072  | \$96,744  | \$103,416 | \$110,088 |
|                                    |               | Monthly Housing Expense @ 30 % of Income | \$1,460             | \$1,668  | \$1,877  | \$2,085  | \$2,252   | \$2,419   | \$2,585   | \$2,752   |
|                                    |               | 120% Income Limits                       | \$68,950            | \$78,800 | \$88,650 | \$98,500 | \$106,400 | \$114,300 | \$122,150 | \$130,050 |
|                                    |               | Monthly Housing Expense @ 30 % of Income | \$1,724             | \$1,970  | \$2,216  | \$2,463  | \$2,660   | \$2,858   | \$3,054   | \$3,251   |

## **HUD 2017 Fair Market Rents**

Fair Market Rents (FMRs) are calculated by the U.S. Department of Housing and Urban Development annually. They are used in a variety of different programs including the Housing Choice Voucher Program, project-based Section 8 contracts, housing assistance payment (HAP) contracts in the Moderate Rehabilitation Single Room Occupancy program, and the HOME Program. The HUD estimates FMRs for 530 metropolitan areas and 2,045 nonmetropolitan county FMR areas.

| FY 2017 Fair Market Rents by Bedroom Size<br>Portland, ME HUD Metro FMR Area |             |             |               |              |
|------------------------------------------------------------------------------|-------------|-------------|---------------|--------------|
| Efficiency                                                                   | One-Bedroom | Two-Bedroom | Three-Bedroom | Four-Bedroom |
| \$911                                                                        | \$1,028     | \$1,301     | \$1,755       | \$1,906      |

\*The FY 2017 Fair Market Rents for Portland, ME HUD Metro FMR Area are based on the results of a local rent survey.

[https://www.huduser.gov/portal/datasets/fmr/fmrs/FY2017hypo\\_code/2017summary.odn](https://www.huduser.gov/portal/datasets/fmr/fmrs/FY2017hypo_code/2017summary.odn)

**Inclusionary Zoning – 2017 Workforce Housing Condo Sale Price Estimates**  
**120% area median income**

| 2017 Workforce Condo Sale Price Estimates<br>120% AMI |           |           |           |           |           |
|-------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|
| Expenses, Revenues & Prices                           | Studio    | 1 Bed     | 2 Bed     | 3 Bed     | 4 Bed     |
| Annual Income                                         | \$68,950  | \$68,950  | \$78,800  | \$88,650  | \$98,500  |
| Housing Related Costs @ 30%<br>per Month              | \$1,465   | \$1,724   | \$1,970   | \$2,216   | \$2,463   |
| P&I Estimate                                          | \$851     | \$1,008   | \$1,154   | \$1,303   | \$1,450   |
| Mortgage Insurance Estimate                           | \$107     | \$127     | \$145     | \$163     | \$182     |
| Condo Fee Estimate                                    | \$125     | \$150     | \$175     | \$200     | \$225     |
| Tax Estimate                                          | \$298     | \$352     | \$404     | \$454     | \$506     |
| Insurance Estimate                                    | \$84      | \$88      | \$92      | \$96      | \$100     |
|                                                       |           |           |           |           |           |
| Mortgage Amount @4.92%                                | \$161,000 | \$190,000 | \$218,000 | \$245,000 | \$273,000 |
| Purchase Price w/5% Down                              | \$169,474 | \$200,000 | \$229,474 | \$257,895 | \$287,368 |



Portland, Maine



Yes. Life's good here.

Jeff Levine, AICP  
Director, Planning & Urban Development Department

## Memorandum

**To:** Planning Board

**From:** Jeff Levine, Director

**Date:** June 16, 2017

**Re:** R-7 Zones and Division 30 Changes

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At the last workshop, we discussed whether there should be some cleanup of the R-7 zones as part of the proposed changes to Division 30. The updates to the R-6 zone have made the R-7 somewhat obsolete, although it retains value for uses on public housing campuses and in other limited instances. There was a concern that, should these Division 30 changes pass, there may be unintended consequences in some of the older R-7 zones. While this concern may be more theoretical than real – since most of these sites were recently redeveloped and unlikely to be redeveloped in the near future – it is worth thinking through.

Attached is a map of the existing R-7 zones. There are 12 individual zones, ranging in size from one parcel to several parcels. The parcels behind City Hall, and the parcels on the Portland Housing campus in East Bayside, represent a coherent zone and existing affordable housing. Those zones should remain R-7 for now.

The smaller R-7 zones could be rezoned to the predominant surrounding zoning districts. Those zones – primarily the R-6 zone, but also the India Street Form Based Zone and others – have been recently created or updated and allow more housing than they did when the R-7 zones were adopted.

Staff is seeking feedback about whether to move forward with such changes in the short term – generally parallel to the Division 30 changes – or wait until the overall code rewrite. Based on our analysis, we don't feel there is a rush to change these zones, and such changes would benefit from being part of a more comprehensive approach.





Existing R-7 Zones

- R-7 Residential
- Open Space



**MEMORANDUM**

**TO:** Chair Boepple and Members of the Planning Board

**FROM:** Deborah Andrews, Historic Preservation Program Manager

**DATE:** June 8, 2017

**SUBJECT:** Proposed Text Amendments to Division 30. Affordable Housing, Historic Preservation Considerations

During the Planning Board's May 9 workshop on proposed text amendments to Division 30 that would provide density and dimensional bonuses for affordable housing, members of the Board requested additional analysis of the potential impacts of the amendments on affected business zones that also fall within a designated historic district. It is my understanding that the Board was particularly interested to know how height would be regulated in these areas.

In all but two of the city's historic districts, the Historic Preservation Board has the authority to require a lower building height if the Board determines it is necessary to achieve compatibility with the surrounding context. In other words, the historic preservation ordinance's height standards supersede the otherwise applicable height allowances. Unless the proposed text amendments provided otherwise, this would be the case for affordable housing developments within historic districts.

Only in the India Street Historic District and the B3 portion of the Congress Street Historic District do the zoning height limits rule. In these areas, the Historic Preservation Board may not impose conditions more restrictive than the dimensional requirements of the zone. In each case, there were specific factors that led to the decision to defer to the underlying zone's height allowance.

In the case of the B3 portion of the Congress Street Historic District, one of the key visual characteristics of the downtown core is its eclecticism—not only in terms of period of construction and architectural style, but also *building scale*. Also, when historic district designation was being considered in 2009, the height limits for Congress Street had only recently been revised following a careful analysis of existing heights. For these reasons, the Historic Preservation Board determined that the height limits established by zoning were appropriate for the nature of the corridor and that it was unlikely the Board would have cause to require a lower height to achieve compatibility. Note that this deference to the zone's dimensional standards does *not* apply within the B2 portion of the Congress Street Historic District (the portion west of

State Street). Here, the historic preservation ordinance height standards supersede the otherwise applicable height allowances.

In the case of the India Street Historic District, creation of the historic district was concurrent with the adoption of the India Street Form-based Code. Given the fact that existing building heights were carefully studied as part of the form-based code analysis and that the Code's height allowances reflected the Planning Board's goals for future development as regards scale, the Planning Board elected to have height determined by zoning. Note that the India Street FBC is *not* within the zoning classifications affected by the proposed Division 30 amendments.

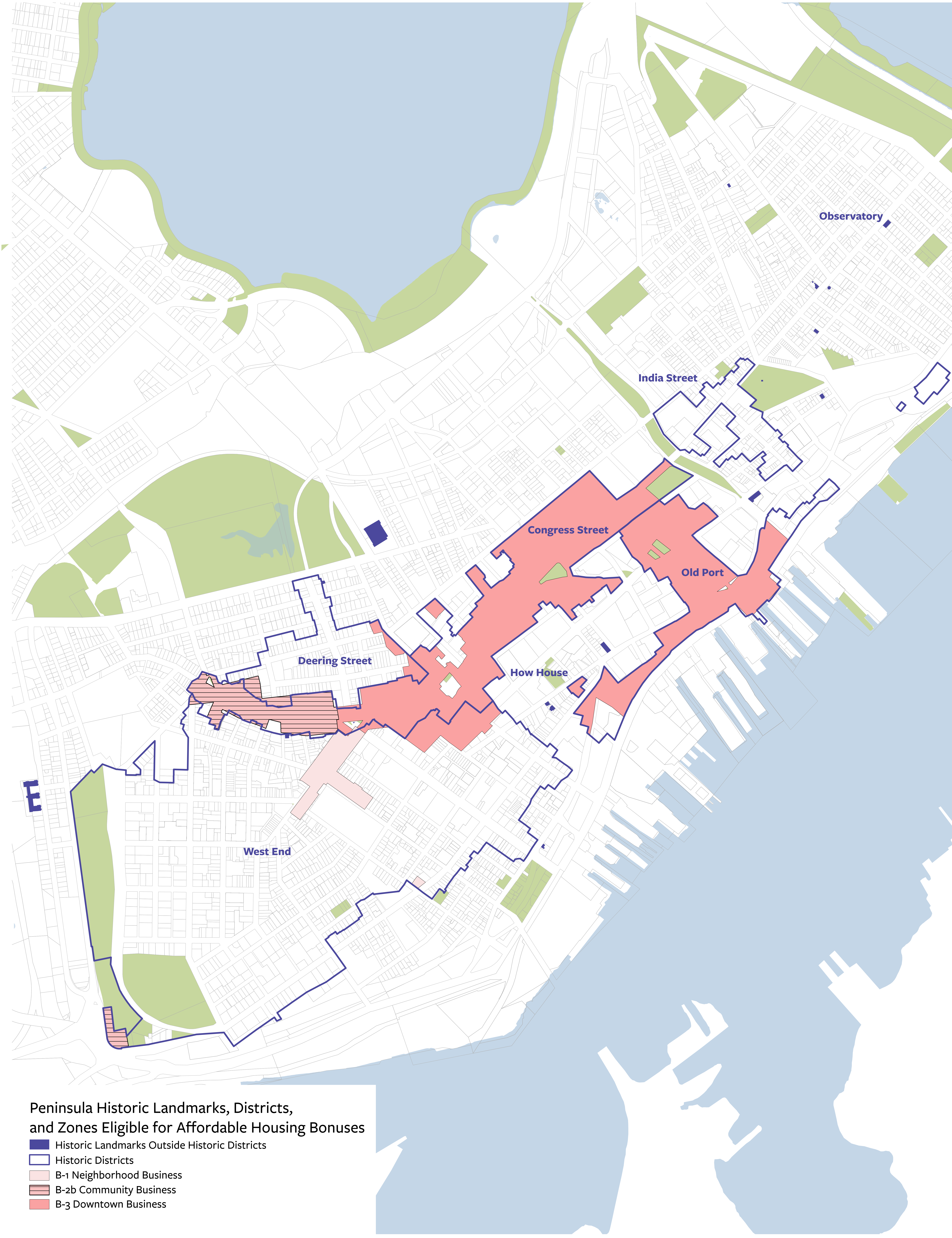
I have reviewed the zoning map to identify areas where the Division 30 text amendments would apply within the context of a historic district overlay zone. The following historic districts include one or more business zones:

|                                    |                                                                                                                            |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Congress Street Historic District: | B3 (downtown blocks) <i>Height governed by zoning</i><br>B2b (west of State Street) <i>Height governed by HP ordinance</i> |
| Old Port Historic District:        | B3 (entire district) <i>Height governed by HP ordinance</i>                                                                |
| West End Historic District:        | B1 (Pine Street from State to Clark, intersection of Danforth and Clark) <i>Height governed by HP ordinance</i>            |
| Stroudwater Historic District:     | B1 (Congress St. across from Waldo) <i>Height governed by HP</i>                                                           |

In reviewing the zoning map and historic district overlay map, it appears that the only designated historic area that might be impacted by the Division 30 amendments—in terms of building height—would be the B3 portion of the Congress Street Historic District—see attached map. This would affect the section of Congress Street between Franklin Arterial and State Street as well as Free Street and the side streets between Cumberland and Free. The proposed amendments would come into play were an affordable housing project proposed for a vacant parcel within the district or one where the existing structure is classified as noncontributing and could be replaced. Theoretically, additional floors could be added to contributing historic structures as well.

It should be noted that the proposed amendments might result in impacts on individually designated landmarks located in areas outside contiguous historic districts. The Portland Observatory, for example, is located within a B1 zone. If height bonuses were available for projects in this area, resulting developments would likely materially impact this landmark structure, the original function and significance of which is understood by the relationship of its height with the buildings around it.





Peninsula Historic Landmarks, Districts,  
and Zones Eligible for Affordable Housing Bonuses

- Historic Landmarks Outside Historic Districts
- Historic Districts
- B-1 Neighborhood Business
- B-2b Community Business
- B-3 Downtown Business



Portland, Maine



Yes. Life's good here.

Jeff Levine, AICP  
Director, Planning & Urban Development Department

## Memorandum

**To:** Planning Board  
**From:** Jeff Levine, Director  
**Date:** June 16, 2017  
**Re:** Land Value Impacts of Division 30 Changes

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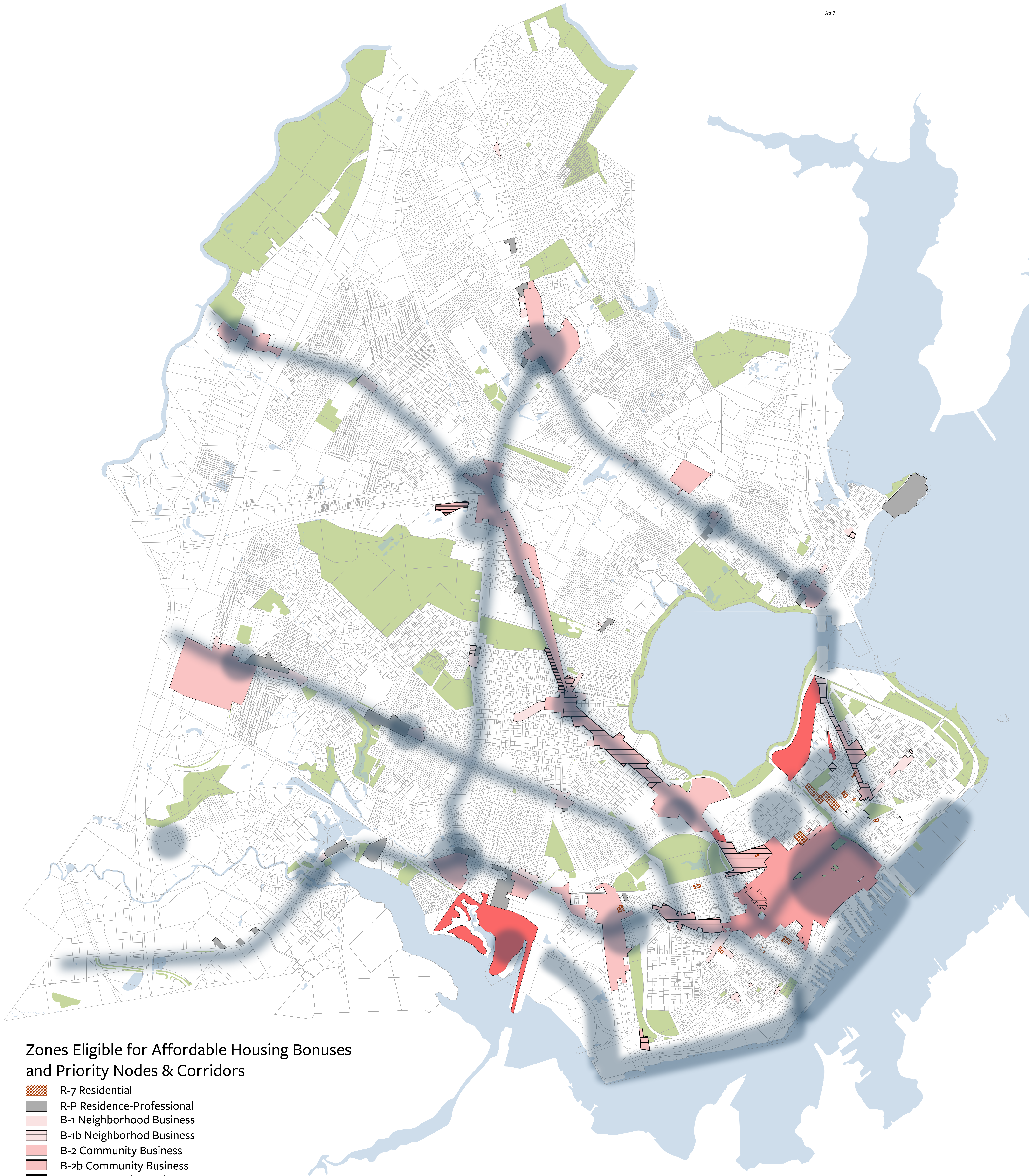
At your last workshop, the question was raised as to what impact these proposed changes might have on land values in the areas where they apply. While we have not done extensive research on this question, we have done some analysis. Generally, I don't believe these changes will significantly impact land values.

The reasons I came to this conclusion are as follows:

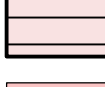
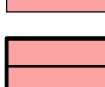
1. The number of projects likely to take advantage of these changes, while hopefully significant in terms of new housing production, will be small with respect to the total number of parcels within the eligible zones.
2. The projects that would take advantage of these changes are inherently less profitable than entirely market-rate developments. Therefore, these changes are more likely to simply allow developers of workforce housing to pay a comparable land cost as market rate developers.
3. Land values do respond to zoning changes. However, the rate of that response is slow and often based on the most lucrative use of the land – which in this case would still be market rate development.

I hope these responses are helpful.

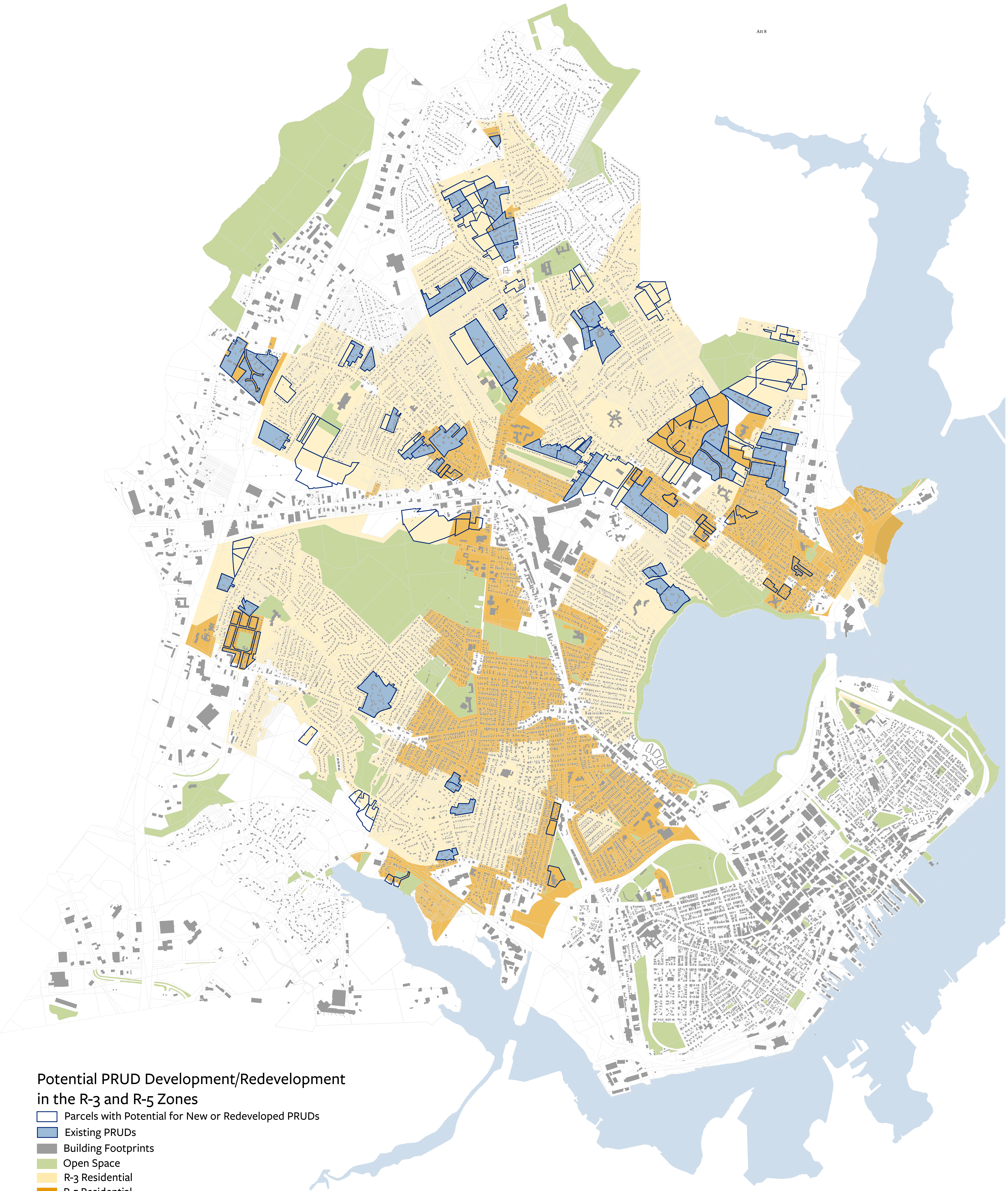




# Zones Eligible for Affordable Housing Bonuses and Priority Nodes & Corridors

-  R-7 Residential
-  R-P Residence-Professional
-  B-1 Neighborhood Business
-  B-1b Neighborhood Business
-  B-2 Community Business
-  B-2b Community Business
-  B-2c Community Business
-  B-3 Downtown Business
-  B-3c Downtown Business
-  B-5 Urban Commercial Business
-  Open Space
-  Priority Node
-  Priority Corridor







**Sec. 14-488. Density, parking and dimensional bonuses and reductions.**

Notwithstanding any other provision of this chapter to the contrary:

- (a) *Density bonuses.* The maximum number of units that would otherwise be allowed under this chapter shall be increased for an eligible project in the manner described in the following table:

| <b>Percentage of new units that are low-income or workforce units</b> | <b>Percentage increase in maximum number of units allowed</b> |
|-----------------------------------------------------------------------|---------------------------------------------------------------|
| 5% up to but not including 10%                                        | 5% increase                                                   |
| 10% up to but not including 15%                                       | 10% increase                                                  |
| 15% up to but not including 20%                                       | 15% increase                                                  |
| 20% up to but not including 25%                                       | 20% increase                                                  |
| 25% or more                                                           | 25% increase                                                  |
| Projects Under Section 14-487                                         | 25% increase                                                  |

- (b) *Off-street parking.* Off-street parking is required as provided in Division 20 (off-street parking) of this article.
- (c) *Building height bonus.* The maximum structure height for an eligible project building:
1. That is located in a B-2 or B-2b community business zone;
  2. That contains five (5) or more dwelling units; and
  3. Of which 20% or more of new dwelling units created are affordable units for rent or sale, is an additional ten feet above the maximum structure height that would otherwise apply to the building pursuant to this chapter.

The total height of the eligible project, including any bonus received pursuant to this subsection, may not exceed the maximum height recommended for the location of the project pursuant to a height study that has been adopted as part of the city's comprehensive plan.



# City of Portland: Housing Units Assisted with Public Funds

# of UNITS

< 25

26 - 50

51 - 100

101 - 200

TYPE

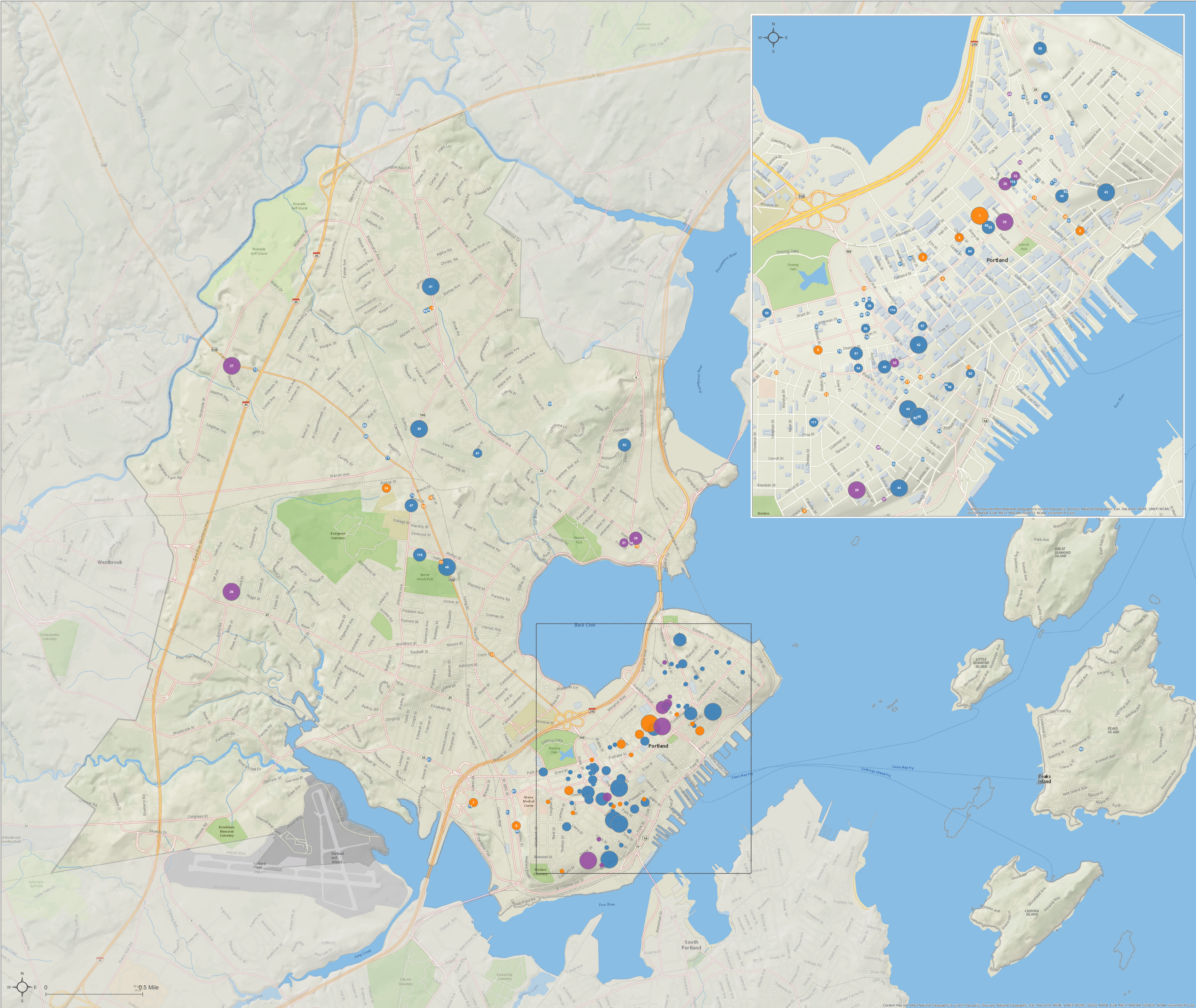
Subsidized

Public Housing

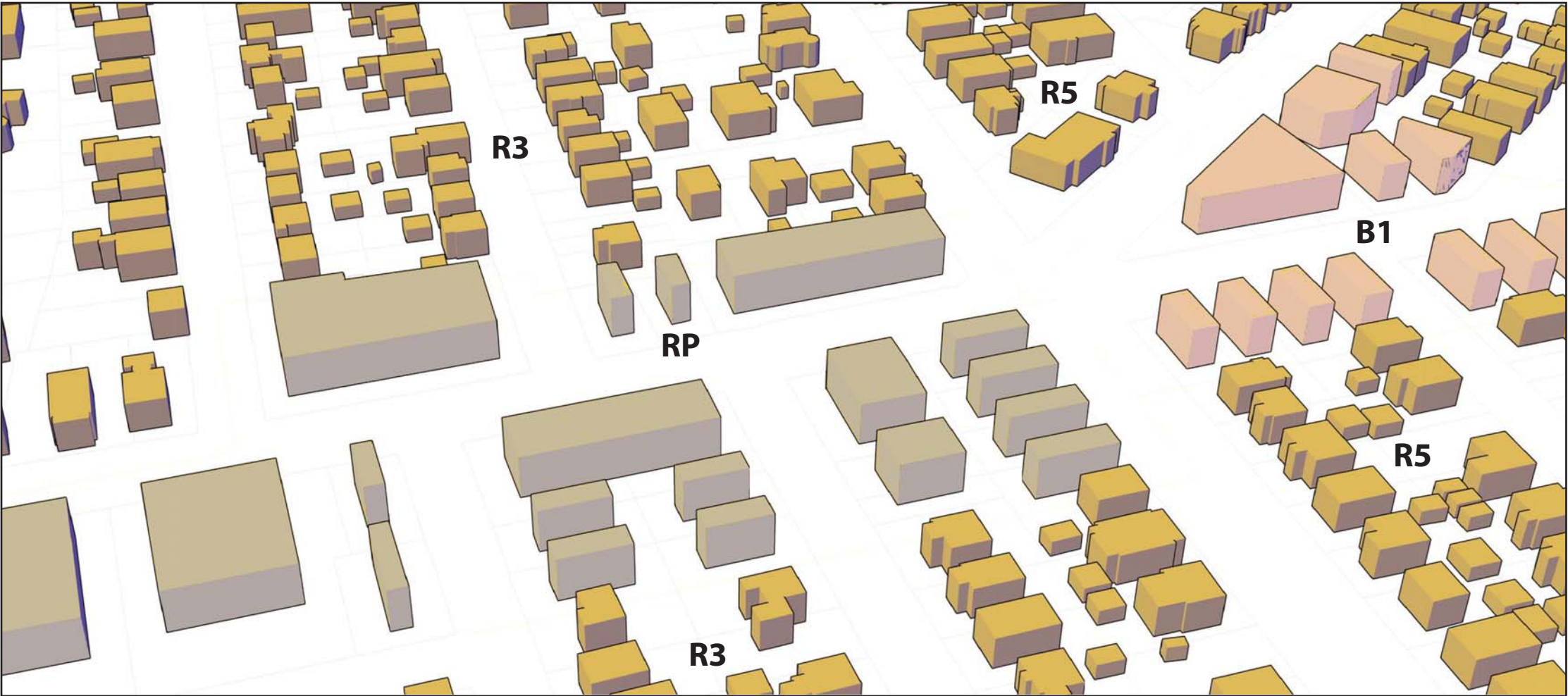
Homeless

| REF # | PROPERTY                                | TYPE           | # of UNITS |
|-------|-----------------------------------------|----------------|------------|
| 1     | Oxford Street Shelter                   | Homeless       | 129        |
| 2     | Milestone                               | Homeless       | 50         |
| 3     | Salvation Army                          | Homeless       | 48         |
| 4     | Portland Family Shelter                 | Homeless       | 45         |
| 5     | Florence House                          | Homeless       | 40         |
| 6     | Serenity House                          | Homeless       | 30         |
| 7     | Logan Place                             | Homeless       | 30         |
| 8     | Teen Shelter                            | Homeless       | 24         |
| 9     | Family Crisis Shelter                   | Homeless       | 16         |
| 10    | Randall Place                           | Homeless       | 12         |
| 11    | Auburn House                            | Homeless       | 12         |
| 12    | Maine Stay                              | Homeless       | 12         |
| 13    | The Bridge                              | Homeless       | 12         |
| 14    | Crossroads Back Cove                    | Homeless       | 12         |
| 15    | Bell Street                             | Homeless       | 12         |
| 16    | My Choice                               | Homeless       | 10         |
| 17    | Park Street                             | Homeless       | 9          |
| 18    | Spring Street                           | Homeless       | 8          |
| 19    | Park Avenue                             | Homeless       | 7          |
| 20    | Read Street                             | Homeless       | 6          |
| 21    | Brackett Street                         | Homeless       | 6          |
| 22    | Vaughan Street                          | Homeless       | 6          |
| 23    | Holly Street                            | Homeless       | 2          |
| 24    | 72 Bishop Street                        | Homeless       | 30         |
| 25    | Franklin Towers                         | Public Housing | 200        |
| 26    | Sagamore Village                        | Public Housing | 198        |
| 27    | Riverton Park                           | Public Housing | 150        |
| 28    | Harbor Terrace                          | Public Housing | 119        |
| 29    | Washington Gardens                      | Public Housing | 100        |
| 30    | Bayside East                            | Public Housing | 98         |
| 31    | Front Street                            | Public Housing | 50         |
| 32    | Kennedy Park                            | Public Housing | 46         |
| 33    | Burnham Arms                            | Public Housing | 45         |
| 34    | Bayside Terrace                         | Public Housing | 24         |
| 35    | Peninsula Housing                       | Public Housing | 13         |
| 36    | Dermot Court                            | Public Housing | 4          |
| 37    | 88 Salem Street                         | Public Housing | 3          |
| 38    | Liberty Square                          | Public Housing | 200        |
| 39    | Northwest Green Building                | Subsidized     | 1          |
| 40    | 100 State Street                        | Subsidized     | 168        |
| 41    | Auburn Terrace                          | Subsidized     | 164        |
| 42    | Congress Square Plaza                   | Subsidized     | 160        |
| 43    | Munjay South Townhouse Apartments       | Subsidized     | 140        |
| 44    | Danforth Heights                        | Subsidized     | 137        |
| 45    | 75 State Street                         | Subsidized     | 120        |
| 46    | Deering Pavilion                        | Subsidized     | 110        |
| 47    | The Park Danforth                       | Subsidized     | 70         |
| 48    | Lafayette Square Apartments             | Subsidized     | 65         |
| 49    | North School                            | Subsidized     | 60         |
| 50    | Bayview Heights                         | Subsidized     | 59         |
| 51    | Butler/Payson                           | Subsidized     | 56         |
| 52    | Ocean East                              | Subsidized     | 55         |
| 53    | Pearl Place II                          | Subsidized     | 54         |
| 54    | Longfellow Commons                      | Subsidized     | 44         |
| 55    | Cumberland Park Place                   | Subsidized     | 43         |
| 56    | Elm Terrace                             | Subsidized     | 38         |
| 57    | Oak Street Lofts                        | Subsidized     | 37         |
| 58    | YMCA Apartments                         | Subsidized     | 32         |
| 59    | Iris Park Apartments                    | Subsidized     | 30         |
| 60    | Pearl Place                             | Subsidized     | 30         |
| 61    | Yale Courts                             | Subsidized     | 30         |
| 62    | Danforth Street                         | Subsidized     | 30         |
| 63    | Island View Apartments                  | Subsidized     | 29         |
| 64    | Unity Village at Bayside                | Subsidized     | 26         |
| 65    | Florence House Apartments               | Subsidized     | 25         |
| 66    | Chom Scattered Sites Supportive Housing | Subsidized     | 24         |
| 67    | Valley Apartments                       | Subsidized     | 24         |
| 68    | Walker Terrace                          | Subsidized     | 22         |
| 69    | Carleton Court                          | Subsidized     | 21         |
| 70    | Sherman Street Project                  | Subsidized     | 21         |
| 71    | PROP Family Housing Phase II            | Subsidized     | 20         |
| 72    | Bayside East                            | Subsidized     | 20         |
| 73    | Fore River Apartments                   | Subsidized     | 20         |
| 74    | Pleasant Street Housing                 | Subsidized     | 20         |
| 75    | Wesley Estates                          | Subsidized     | 19         |
| 76    | Burnham Court                           | Subsidized     | 18         |
| 77    | Forest Avenue Apartments                | Subsidized     | 16         |
| 78    | Beckett Green                           | Subsidized     | 16         |
| 79    | Deering Place                           | Subsidized     | 16         |
| 80    | PROP Family Housing Phase II            | Subsidized     | 16         |
| 81    | Landmarks on Whitney                    | Subsidized     | 15         |
| 82    | 229-231 Congress Street                 | Subsidized     | 14         |
| 83    | Munjoy Commons                          | Subsidized     | 13         |
| 84    | Casco Terrace                           | Subsidized     | 13         |
| 85    | St. Dominic's School Apartments         | Subsidized     | 12         |
| 86    | Ingraham House                          | Subsidized     | 12         |
| 87    | 13 Grant Street                         | Subsidized     | 11         |
| 88    | Meadowbrook                             | Subsidized     | 11         |
| 89    | Shalom Apartments                       | Subsidized     | 10         |
| 90    | Fay Garman House                        | Subsidized     | 11         |
| 91    | 1 Sherman Street                        | Subsidized     | 10         |
| 92    | PROP II                                 | Subsidized     | 10         |
| 93    | Shaler Commons (Munjay Commons)         | Subsidized     | 10         |
| 94    | Shalom Apartments                       | Subsidized     | 11         |
| 95    | Shalom House                            | Subsidized     | 10         |
| 96    | 38-44 Alder Street                      | Subsidized     | 9          |
| 97    | PROP Family Housing I                   | Subsidized     | 9          |
| 98    | 60 Emerson Street                       | Subsidized     | 9          |
| 99    | Rosa True School                        | Subsidized     | 8          |
| 100   | Sacred Heart School/ Parkside Studios   | Subsidized     | 8          |
| 101   | 98 India Street                         | Subsidized     | 7          |
| 102   | 214-216 Danforth Street                 | Subsidized     | 6          |
| 103   | 232 High Street                         | Subsidized     | 6          |
| 104   | 236 High Street                         | Subsidized     | 6          |
| 105   | Parkside Court                          | Subsidized     | 5          |
| 106   | 48-50 Brackett Street                   | Subsidized     | 5          |
| 107   | PROP Phase I                            | Subsidized     | 2          |
| 108   | 45 Hammond Street                       | Subsidized     | 4          |
| 109   | Dennet Street Homes                     | Subsidized     | 4          |
| 110   | PROP Phase I                            | Subsidized     | 4          |
| 111   | Sheridan Street                         | Subsidized     | 2          |
| 112   | 253 St. John Street                     | Subsidized     | 2          |
| 113   | Thomas Heights                          | Subsidized     | 18         |
| 114   | 409 Cumberland Avenue                   | Subsidized     | 46         |
| 115   | Bayside Anchor                          | Subsidized     | 36         |
| 116   | Motherhouse Apartments                  | Subsidized     | 66         |
| 117   | 17 Carleton Street                      | Subsidized     | 37         |

All locations are approximate.  
Prepared by the Greater Portland Council of Governments for the City of Portland (June, 2017).  
For more information contact the City of Portland's Planning and Urban Development Department.







Existing Zoning max bldg envelope

R-P Residence-Professional

For residential buildings, dimensional standards of abutting residential zone should be used.

R3 minimums

Front Yard = 25'  
Side Yard = 16'  
Side Yard on Side Street = 20'  
Rear = 25'  
Lot Coverage = 35%\*  
Height max = 35'

R5 minimums

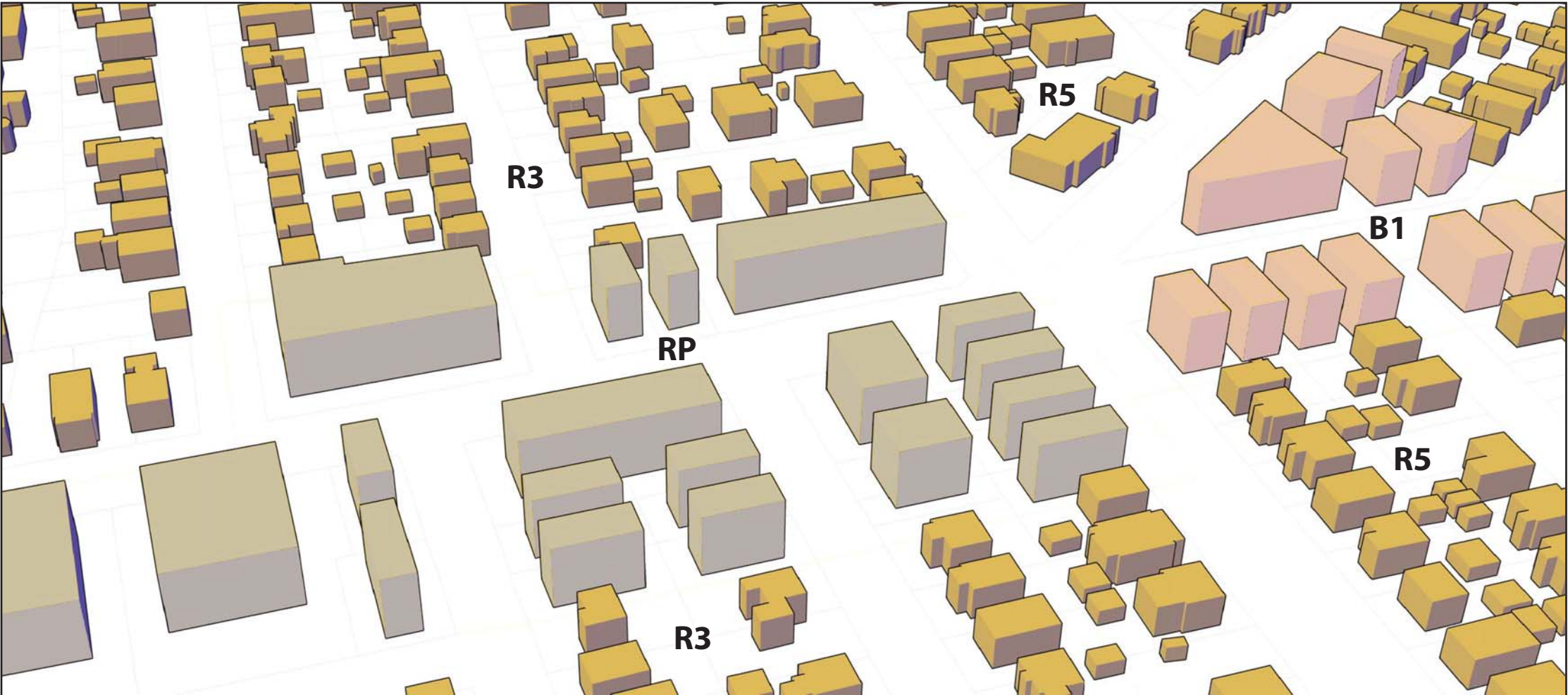
Front Yard = 20'  
Side Yard = 14'  
Side Yard Side Street = 15'  
Rear = 20'  
Lot Coverage = 40%\*  
Height max = 35'

B-1 - Neighborhood Business

For residential buildings, dimensional standards of abutting residential zone should be used.

R5 minimums

Front Yard = 20'  
Side Yard = 14'  
Side Yard Side Street = 15'  
Rear = 20'  
Lot Coverage = 40%\*  
Height max = 35'



Density Bonus +15' height, -5' setback

R-P Residence-Professional

For residential buildings, dimensional standards of abutting residential zone should be used.

R3 minimums

Front Yard = 20'  
Side Yard = 11'  
Side Yard on Side Street = 15'  
Rear = 20'  
Lot Coverage = 35%\*  
Height max = 50'

R5 minimums

Front Yard = 15'  
Side Yard = 9'  
Side Yard Side Street = 10'  
Rear = 15'  
Lot Coverage = 40%\*  
Height max = 50'

B-1 Neighborhood Business

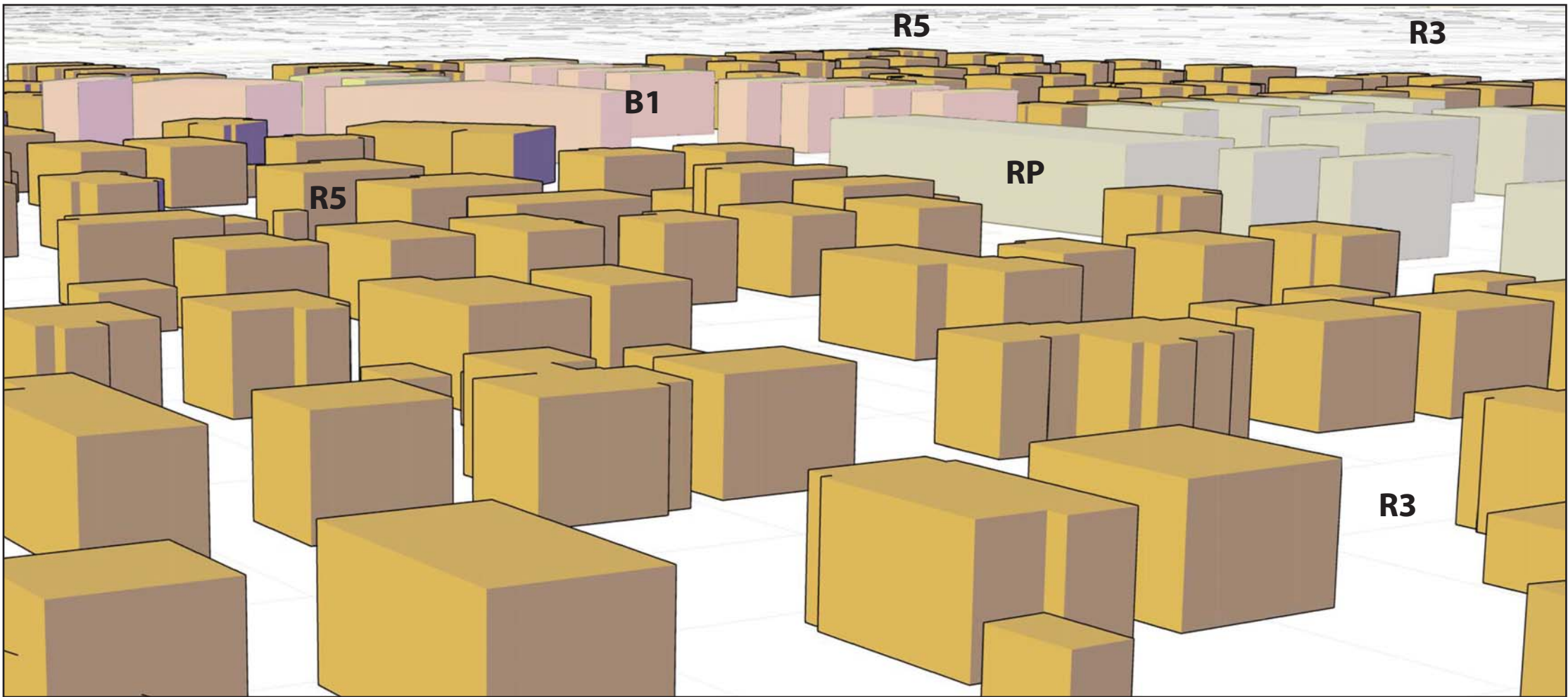
For residential buildings, dimensional standards of abutting residential zone should be used.

R5 minimums

Front Yard = 15'  
Side Yard = 9'  
Side Yard Side Street = 10'  
Rear = 15'  
Lot Coverage = 40%\*  
Height max = 50'

\*In most cases, the lot coverage maximum is the limiting dimensional requirement for building footprints rather than the yard setbacks





Existing Zoning max bldg envelope

R-P Residence-Professional

For residential buildings, dimensional standards of abutting residential zone should be used.

R3 minimums

Front Yard = 25'  
Side Yard = 16'  
Side Yard on Side Street = 20'  
Rear = 25'  
Lot Coverage = 35%\*  
Height max = 35'

R5 minimums

Front Yard = 20'  
Side Yard = 14'  
Side Yard Side Street = 15'  
Rear = 20'  
Lot Coverage = 40%\*  
Height max = 35'

B-1 - Neighborhood Business

For residential buildings, dimensional standards of abutting residential zone should be used.

R5 minimums

Front Yard = 20'  
Side Yard = 14'  
Side Yard Side Street = 15'  
Rear = 20'  
Lot Coverage = 40%\*  
Height max = 35'



Density Bonus +15' height, -5' setback

R-P Residence-Professional

For residential buildings, dimensional standards of abutting residential zone should be used.

R3 minimums

Front Yard = 20'  
Side Yard = 11'  
Side Yard on Side Street = 15'  
Rear = 20'  
Lot Coverage = 35%\*  
Height max = 50'

R5 minimums

Front Yard = 15'  
Side Yard = 9'  
Side Yard Side Street = 10'  
Rear = 15'  
Lot Coverage = 40%\*  
Height max = 50'

B-1 Neighborhood Business

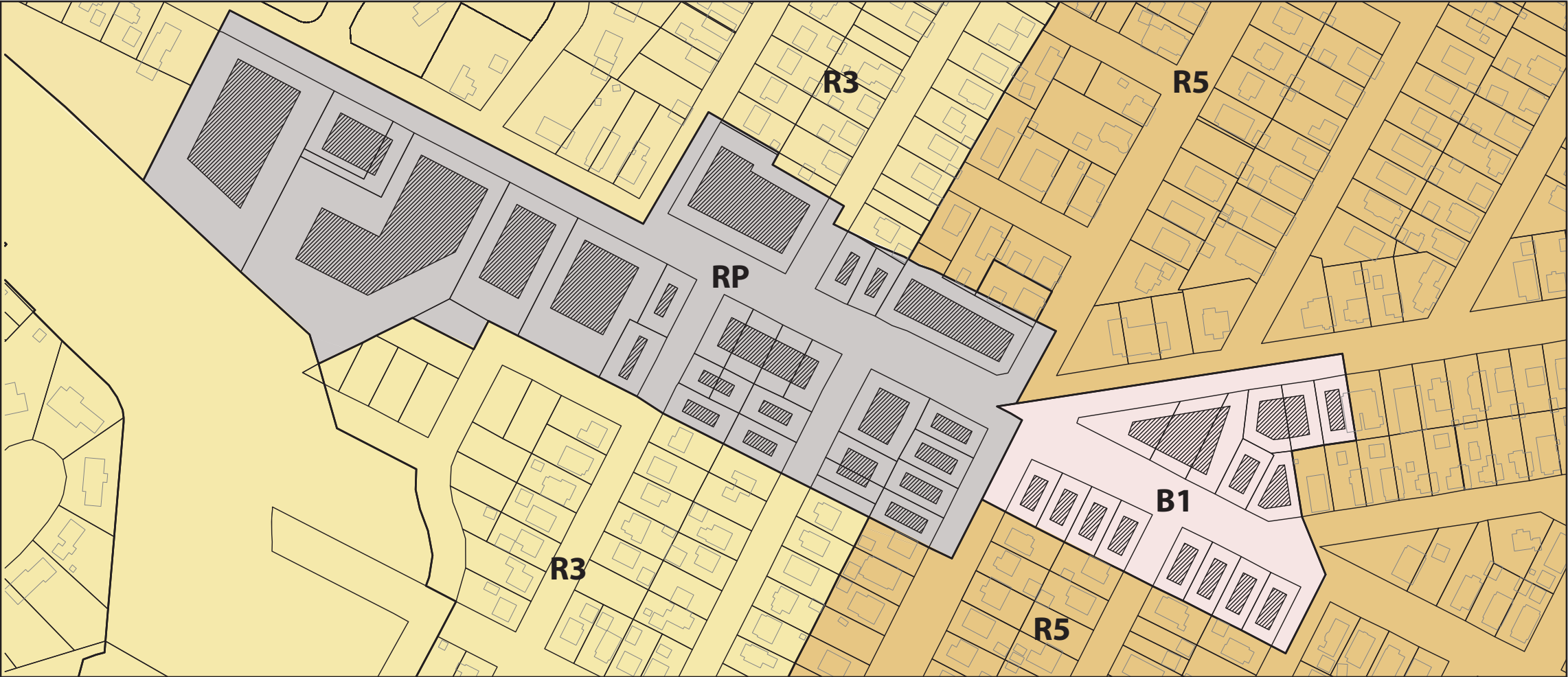
For residential buildings, dimensional standards of abutting residential zone should be used.

R5 minimums

Front Yard = 15'  
Side Yard = 9'  
Side Yard Side Street = 10'  
Rear = 15'  
Lot Coverage = 40%\*  
Height max = 50'

\*In most cases, the lot coverage maximum is the limiting dimensional requirement for building footprints rather than the yard setbacks

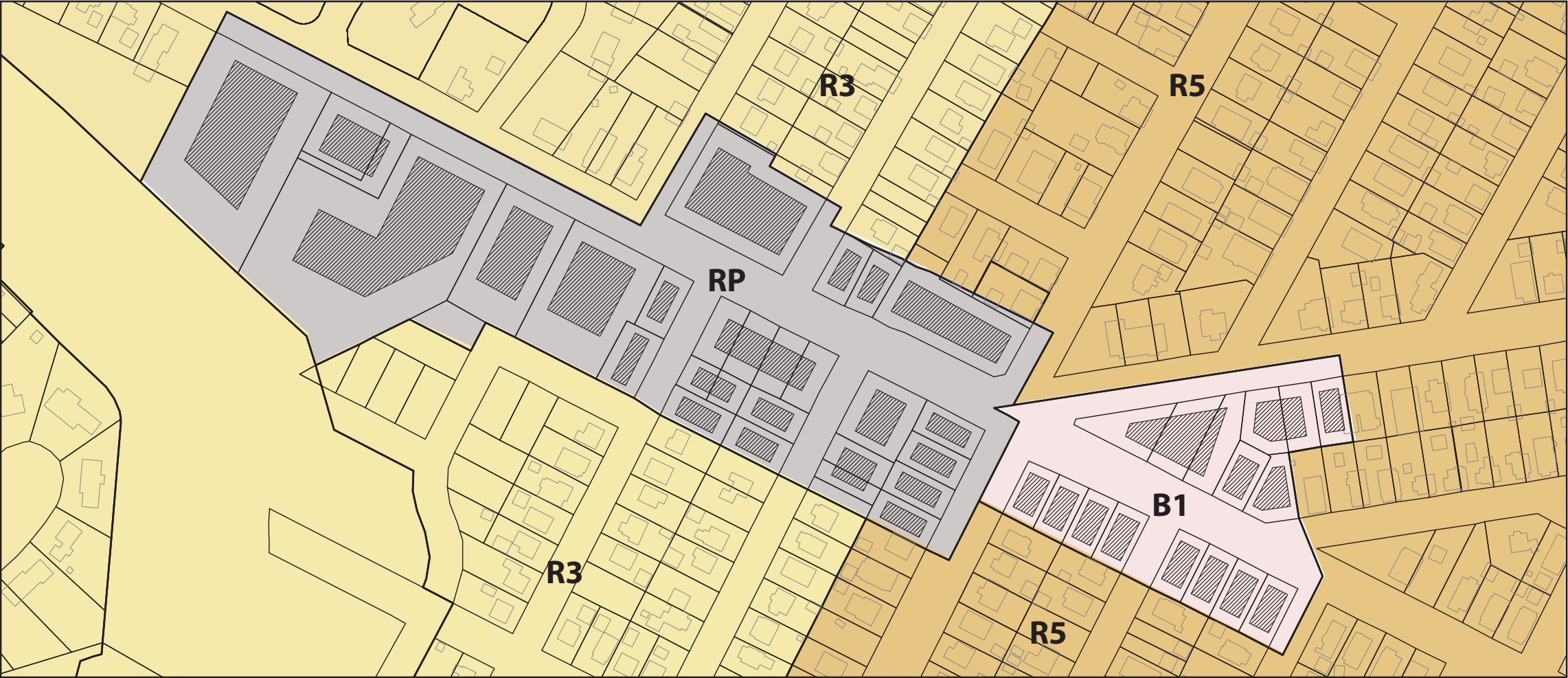




Existing Zoning max bldg envelope

| R-P Residence-Professional                                                                    |                             |
|-----------------------------------------------------------------------------------------------|-----------------------------|
| For residential buildings, dimensional standards of abutting residential zone should be used. |                             |
| R3 minimums                                                                                   | R5 minimums                 |
| Front Yard = 25'                                                                              | Front Yard = 20'            |
| Side Yard = 16'                                                                               | Side Yard = 14'             |
| Side Yard on Side Street = 20'                                                                | Side Yard Side Street = 15' |
| Rear = 25'                                                                                    | Rear = 20'                  |
| Lot Coverage = 35%*                                                                           | Lot Coverage = 40%*         |
| Height max = 35'                                                                              | Height max = 35'            |

| B-1 - Neighborhood Business                                                                   |  |
|-----------------------------------------------------------------------------------------------|--|
| For residential buildings, dimensional standards of abutting residential zone should be used. |  |
| R5 minimums                                                                                   |  |
| Front Yard = 20'                                                                              |  |
| Side Yard = 14'                                                                               |  |
| Side Yard Side Street = 15'                                                                   |  |
| Rear = 20'                                                                                    |  |
| Lot Coverage = 40%*                                                                           |  |
| Height max = 35'                                                                              |  |



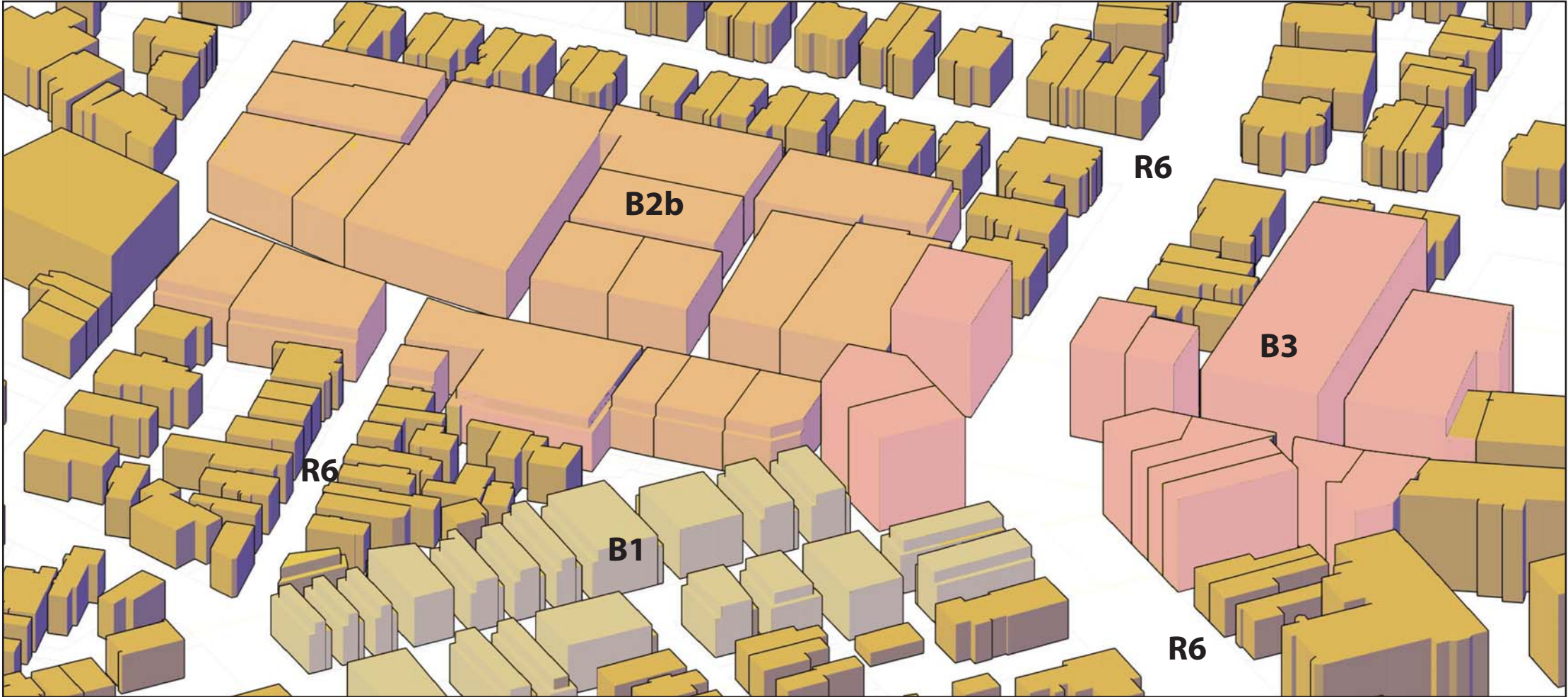
Density Bonus +15' height, -5' setback

| R-P Residence-Professional                                                                    |                             |
|-----------------------------------------------------------------------------------------------|-----------------------------|
| For residential buildings, dimensional standards of abutting residential zone should be used. |                             |
| R3 minimums                                                                                   | R5 minimums                 |
| Front Yard = 20'                                                                              | Front Yard = 15'            |
| Side Yard = 11'                                                                               | Side Yard = 9'              |
| Side Yard on Side Street = 15'                                                                | Side Yard Side Street = 10' |
| Rear = 20'                                                                                    | Rear = 15'                  |
| Lot Coverage = 35%*                                                                           | Lot Coverage = 40%*         |
| Height max = 50'                                                                              | Height max = 50'            |

| B-1 Neighborhood Business                                                                     |  |
|-----------------------------------------------------------------------------------------------|--|
| For residential buildings, dimensional standards of abutting residential zone should be used. |  |
| R5 minimums                                                                                   |  |
| Front Yard = 15'                                                                              |  |
| Side Yard = 9'                                                                                |  |
| Side Yard Side Street = 10'                                                                   |  |
| Rear = 15'                                                                                    |  |
| Lot Coverage = 40%*                                                                           |  |
| Height max = 50'                                                                              |  |

\*In most cases, the lot coverage maximum is the limiting dimensional requirement for building footprints rather than the yard setbacks





Existing Zoning max bldg envelope

B-2b Comm. Business & B-3 Dwntn Business  
Dimensional Requirements

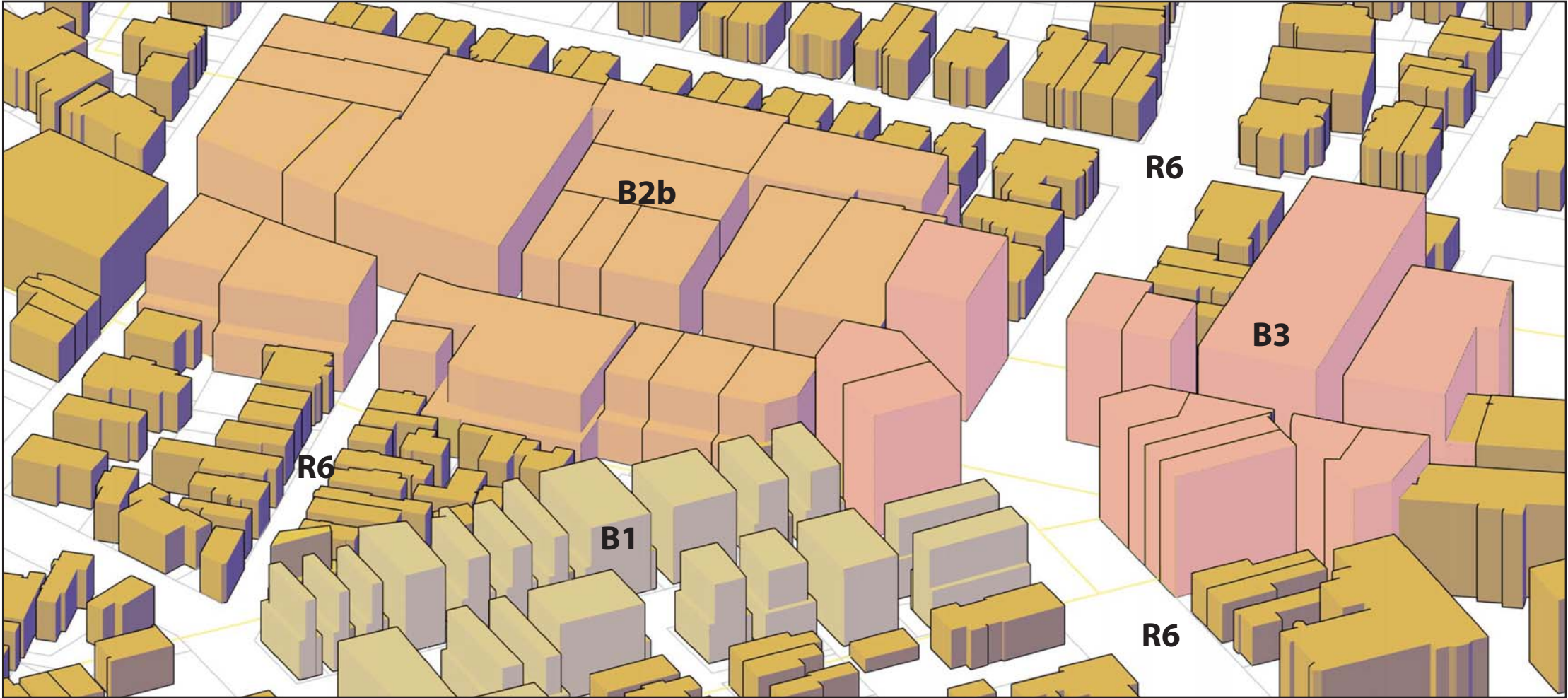
- Front Yard min = 0'
- Side Yard min = 0'
- Side Yard on Side Street = 0'
- Rear min B-2b = 10' B-3 = 0'
- Lot Coverage = 100%
- Height max B-2b = 45' B-3 = 85' (height overlay)
- Stepback side B-2b = 5' above 35' (abutting residential)
- Stepback rear B-2b = 15' above 35' (abutting residential)

B-1 - Neighborhood Business

For residential buildings, dimensional standards of abutting residential zone should be used.

R6 minimums

- Front Yard = 5'
- Side Yard = 5'
- Side Yard Side Street = 0'
- Rear = 10'
- Lot Coverage = 60%\*
- Height max = 45'
- Stepback side = 10' above 35'
- Stepback rear = 15' above 35'



Density Bonus +25' height -10' setback

B-2b Comm. Business & B-3 Dwntn Business  
Dimensional Requirements

- Front Yard min = 0'
- Side Yard min = 0'
- Side Yard on Side Street = 0'
- Rear min = 0'
- Lot Coverage = 100%
- Height max B-2b = 70' B-3 = 110' (height overlay)
- Stepback side B-2b = 5' above 35' (abutting residential)
- Stepback rear B-2b = 15' above 35' (abutting residential)

B-1 Neighborhood Business

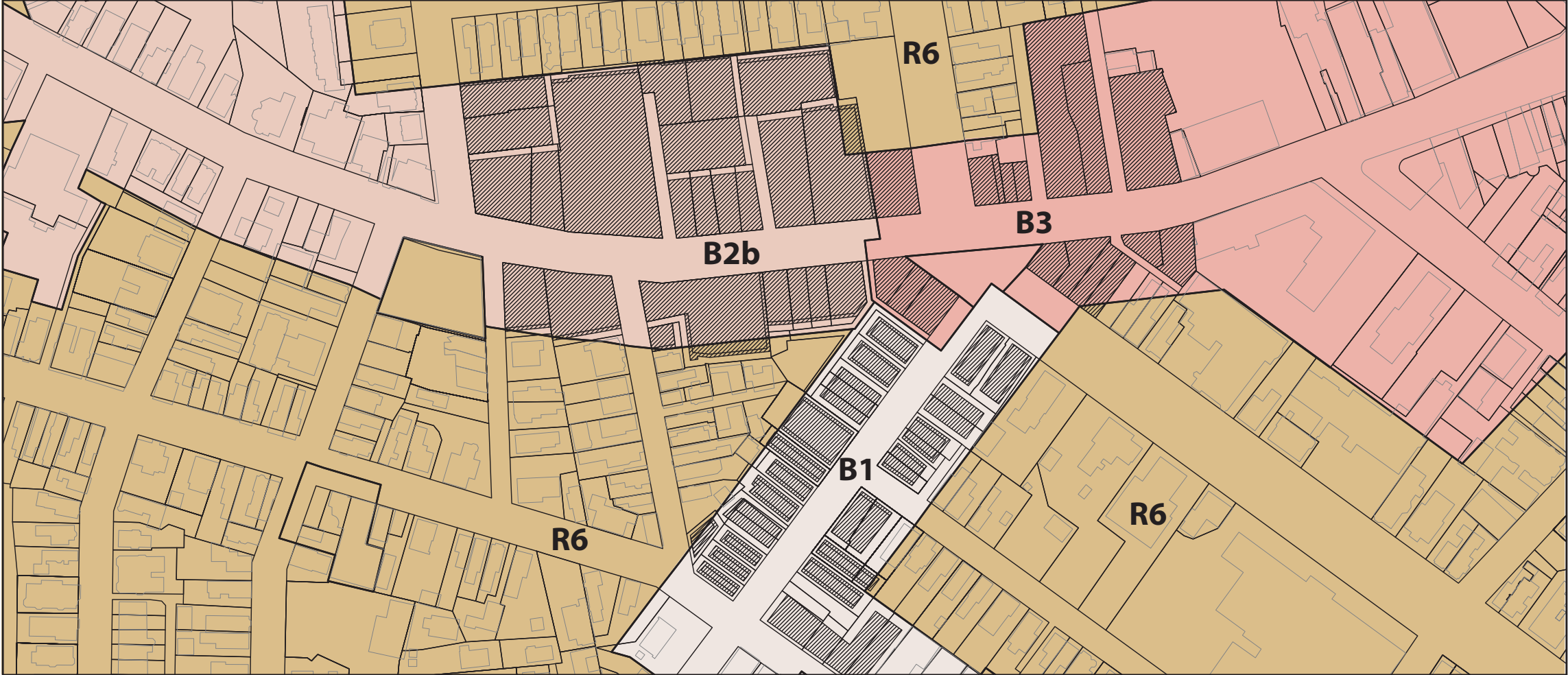
For residential buildings, dimensional standards of abutting residential zone should be used.

R6 minimums

- Front Yard = 0'
- Side Yard = 0'
- Side Yard Side Street = 0'
- Rear = 0'
- Lot Coverage = 60%\*
- Height max = 70'
- Stepback side = 10' above 35'
- Stepback rear = 15' above 35'

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Existing Zoning max bldg envelope

B-2b Comm. Business & B-3 Dwntn Business  
Dimensional Requirements

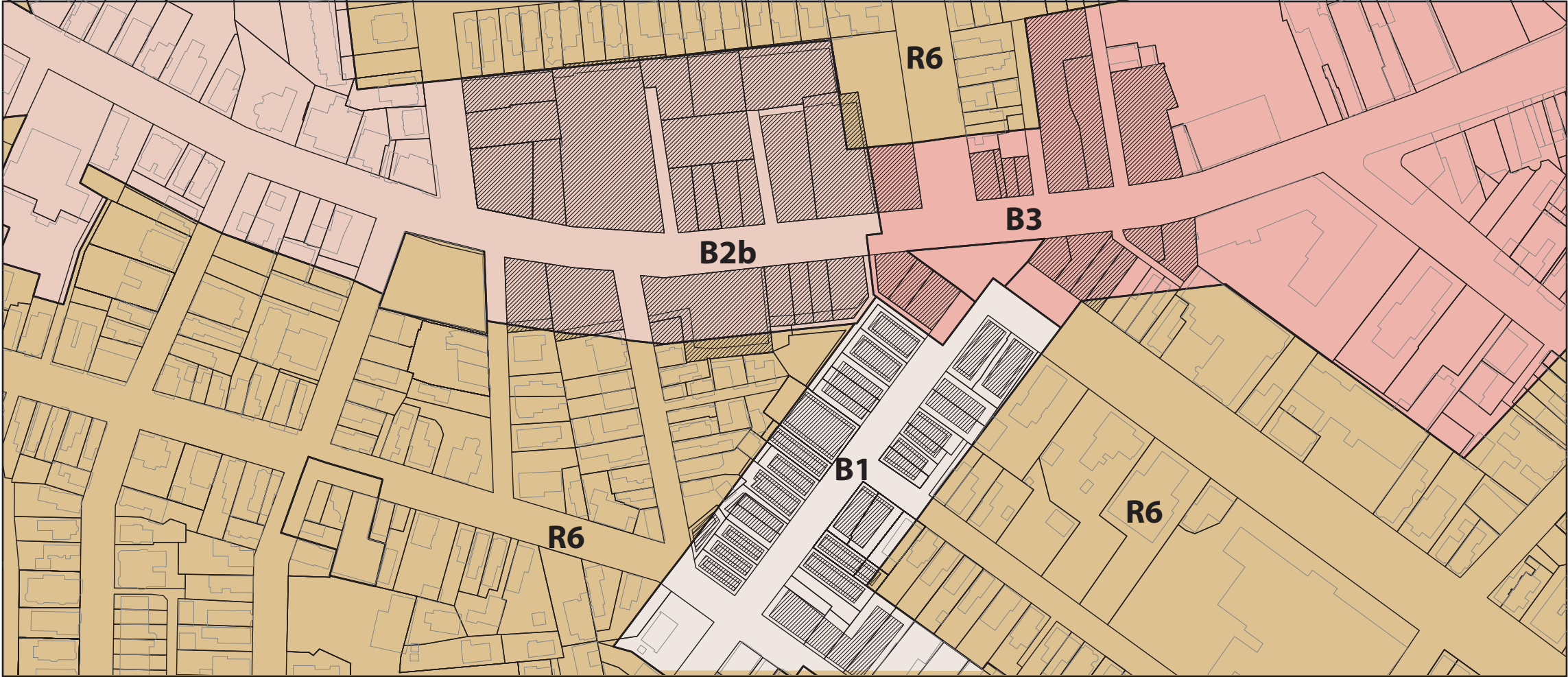
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- Stepback side B-2b = 5' above 35' (abutting residential)
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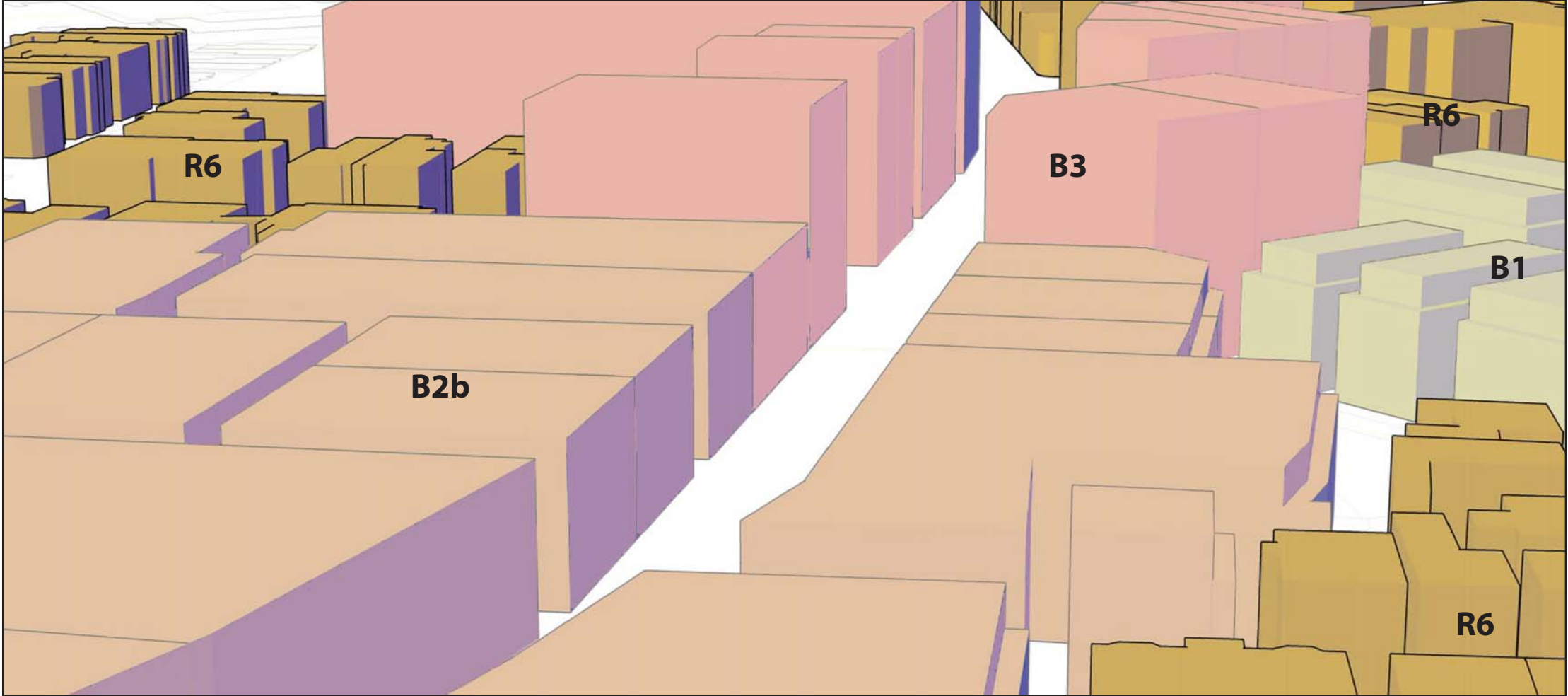
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Existing Zoning max bldg envelope

B-2b Comm. Business & B-3 Dwntn Business  
Dimensional Requirements

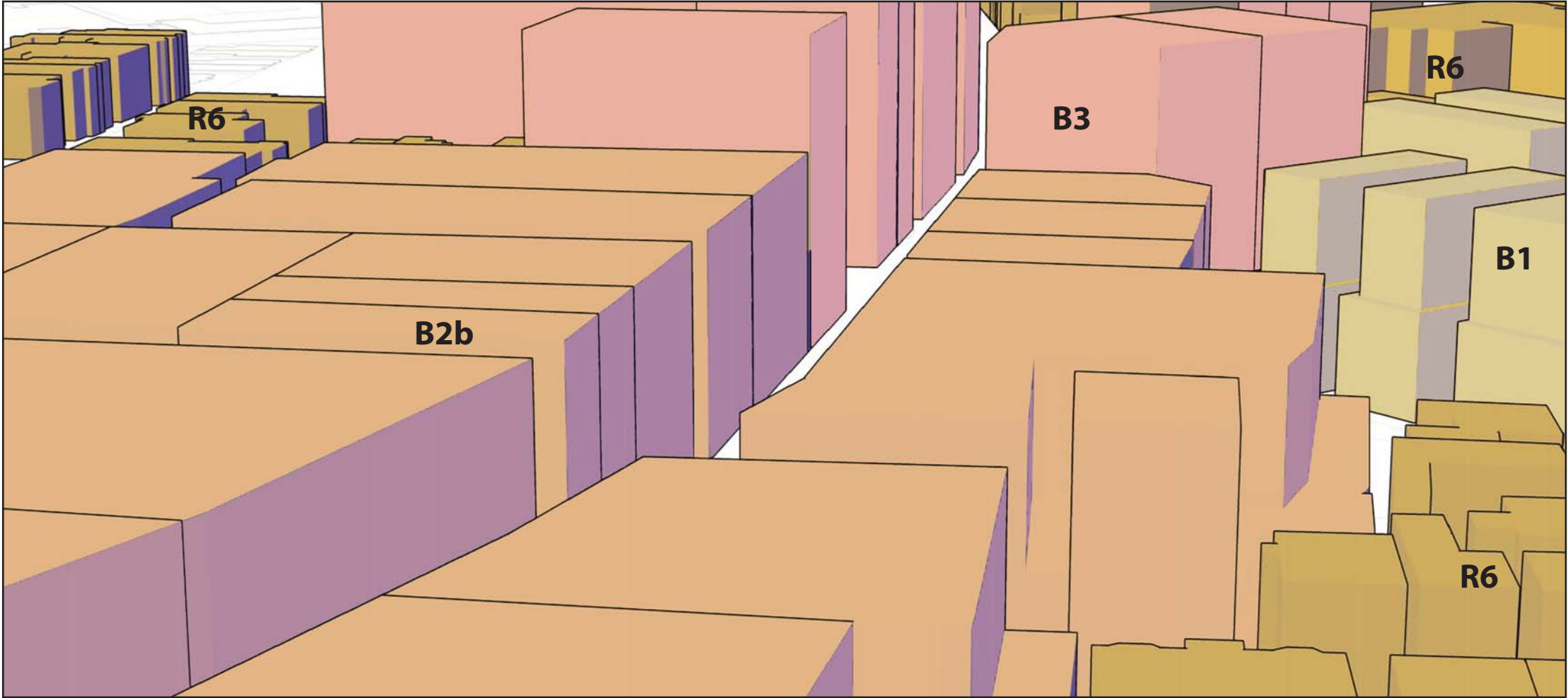
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- Stepback side = 10' above 35'
- Stepback rear = 15' above 35'

\*In most cases, the lot coverage maximum is the limiting dimensional requirement for building footprints rather than the yard setbacks



Portland, Maine



Yes. Life's good here.

Jeff Levine, AICP  
Director, Planning & Urban Development Department

June 15, 2017

**Re: Initiative to Encourage Housing For Portland Workers**

Dear Neighborhood Leaders (and residents):

I am writing to give you some information about an effort to address a key challenge facing Portland: the housing shortage. In the new Comprehensive Plan, many raised the issue of how to produce housing that average Portland residents and workers can afford, in a way that builds on the existing. After guidance from the City Council's Housing Committee, city staff has been working with the Planning Board on code changes that would encourage workforce housing production in commercial corridors and squares.

The changes being developed would take our current housing incentives section and focus them on the areas that people said they wanted to see new development, such as along Franklin Street and existing public housing campuses. At the same time, density bonuses in most residential zones would be scaled back, to address the idea that new growth should focus on key corridors and nodes.

The changes are in a section of the zoning code called Division 30. They would provide additional density incentives for developments that include certain percentages of units priced for average incomes or below. In developing these bonuses, we spoke to both residents and those who produce workforce housing. We wanted to make sure we provided incentives that could actually produce more housing, yet were consistent with the Comprehensive Plan and based on the existing zoning requirements.

The Portland Housing Authority recently completed a plan for development of more housing on their existing campuses. The need to renovate existing buildings and the desire to produce additional affordable housing drove that process, which resulted in conceptual plans for each of their sites in Portland. The Division 30 changes would also allow the Housing Authority more flexibility on their campus sites to produce more housing as part of a "Planned Residential Unit Development (PRUD)" process. The PRUD process is designed to allow each site to propose a redevelopment plan and, in return, get some the additional development density needed to finance investment – as well as produce needed housing.

The Planning Board held one workshop on this proposal, and will hold a second workshop on Thursday, June 22<sup>nd</sup> at City Hall at 7 pm. The City Council would potentially take up these items in July.

For more information on this effort, visit the project web page at:

<http://www.portlandmaine.gov/Division30>

The Comprehensive Plan can be viewed at:

<http://tinyurl.com/PortlandsPlan>

Also, attached is a one page information sheet on this effort. Feel free to distribute.

I would be happy to arrange a meeting with your organization, or any other group that wishes to learn more about this proposal. Feel free to contact me via email at [jlevine@portlandmaine.gov](mailto:jlevine@portlandmaine.gov).

Best,

A handwritten signature in blue ink, appearing to read 'JL', is positioned above the printed name and title.

Jeff Levine  
Planning & Urban Development Director

# Chapter 14 Land Use Code Division 30 Revisions: Low-Income & Workforce Housing Bonuses

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## Incentivizing Affordable Housing Development in Priority Growth Areas

*Portland's Plan*, the City's new comprehensive plan, identifies affordability and supply of housing as one of the city's most challenging issues. As part of a broad effort to address this challenge, the City has recently developed a set of proposed changes to the affordable housing ordinance, Division 30. The City Council's Housing Committee originally developed these amendments in the early spring of 2017. They are now being reviewed by the City's Planning Board.

### Why amend Division 30?

The City's existing land use ordinance provides some incentives for affordable housing development, including density and dimensional bonuses, and reductions in parking requirements and review fees. However, these incentives have had modest effect on the city's supply of affordable housing. The proposed amendments to Division 30 are designed to encourage further housing creation, particularly in the city's priority growth areas, by increasing density, dimensional, and height bonuses for affordable housing projects in certain zones. These bonuses should make affordable housing developers more competitive in terms of purchasing sites and securing funding.

### How Can You Get Involved?

Whether you are a neighbor, a developer, or an advocate, the City of Portland wants your input on these proposed affordable housing incentives.

There are several ways to get involved:

1. Listen or speak up at a public meeting – the next Planning Board workshop will be Thursday, June 22
2. Send us your comments via email [planningboard@portlandmaine.gov](mailto:planningboard@portlandmaine.gov)

### What are the amendments?

The proposed amendments encourage the creation of affordable housing with two incentives:

1. Residential projects in certain commercial and mixed-use zones (the B-1 and B-1b; B-2 and B-2b; B-3, B-3b, and B-3c; B-4; B-5; R-7; and R-P zones) with affordable housing components would qualify for:
  - Density bonuses of up to 2.5 times the base density = *more residential units per lot*
  - Increased building heights of up to 25 feet = *taller buildings to accommodate more housing*
  - Decreased front, side, and/or rear yard setbacks = *larger buildable area*

The bonuses would depend on the proportion of low-income or workforce housing proposed.

2. Planned Residential Unit Developments (PRUDs) in the R-3 and R-5 zones in which half of the units are designated as low-income or workforce housing would be eligible for:
  - Density bonus of 2 times the base density
  - Decreased setbacks

Projects taking advantage of any of these incentives would be required to keep the units as affordable for the longest term permitted under federal, state, and local law.

**Stay up to date with the proposed amendments and meeting schedule by visiting the City's website: [www.portlandmaine.gov/Division30](http://www.portlandmaine.gov/Division30)**



# Chapter 14 Land Use Code Division 30 Revisions: Low-Income & Workforce Housing Bonuses

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  - Density bonus of 2 times the base density
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**Stay up to date with the proposed amendments and meeting schedule by visiting the City's website: [www.portlandmaine.gov/Division30](http://www.portlandmaine.gov/Division30)**

## **EFFORT UNDER WAY TO ENCOURAGE HOUSING FOR PORTLAND WORKERS**

Following the recent City Council approval of Portland’s new Comprehensive Plan, there is an effort to address a key concern raised by many: producing housing that average Portland residents and workers can afford. City staff is working with the Planning Board, after getting guidance from the Council’s Housing Committee, on zoning changes that would encourage additional workforce housing production in commercial corridors and squares.

“The issue of housing affordability and production was raised consistently during the Comprehensive Plan,” says Jeff Levine, Director of Planning & Urban Development. “The changes being developed would take our current housing incentives section and focus it on the areas that people said they wanted to see new development, such as along Franklin Street and existing public housing campuses. At the same time, we are proposing eliminating the ability to use these incentives in many residential zones, to address the idea that new growth should focus on key corridors and nodes.”

The changes are in a section of the zoning code called Division 30. They would provide additional density incentives for developments that include certain percentages of units priced for average incomes or below. “In developing these bonuses, we spoke to both residents and those who produce workforce housing,” said Levine. “We wanted to make sure we provided incentives that could actually produce more housing, yet were based on the existing zoning requirements.”

The Portland Housing Authority recently completed a plan for development of more housing on their existing campuses. The need to renovate existing buildings and the desire to produce additional affordable housing drove that process, which resulted in conceptual plans for each of their sites in Portland. The Division 30 changes would also allow the Housing Authority more flexibility on their campus sites to produce more housing as part of a “Planned Residential Unit Development (PRUD)” process. The PRUD process is designed to allow each site to propose a redevelopment plan and, in return, get some the additional development density needed to finance investment – as well as produce needed housing.

The Housing Committee voted to forward these concepts to the Planning Board, which has held one workshop on them to date. The Planning Board will hold a second workshop on Thursday, June 22<sup>nd</sup> at City Hall at 7 pm. The City Council would take up these items in July.

For more information on this effort, visit the project web page at:

<http://portlandmaine.gov/Division30>

The Comprehensive Plan can be reviewed at:

<http://tinyurl.com/PortlandsPlan>

Any group interested in learning more about these proposed changes should contact the Planning & Urban Development Department. Staff will be available to answer questions and hear residents’ ideas and thoughts as the process continues.



53 Baxter Boulevard, Suite 202 | Portland, ME 04101  
 1-866-554-5380 | Fax: 207-775-5727 | TTY: 1-877-434-7598  
[aarp.org/me](http://aarp.org/me) | [aarpme@aarp.org](mailto:aarpme@aarp.org) | twitter: @aarpmaine  
[facebook.com/AARPMaine](https://facebook.com/AARPMaine)

June 22, 2017

Testimony of Amy Gallant, AARP Maine Advocacy Director, in support of the proposed amendments to Division 30 to support the creation of affordable housing in Portland.

Good afternoon members of the City of Portland Planning Board. My name is Amy Gallant and I am the Advocacy Director for AARP in Maine, representing more than 230,000 members 50+ statewide. AARP is a non-profit, non-partisan member organization representing the interests of 50+ Mainers and their families.

As you know, Maine is the oldest state in the nation with among the oldest housing stock in the nation. Mainers want to remain in their homes as they grow older. Many existing homes, however, have structural barriers that make it difficult for older adults and people with physical limitations to stay safe and well in their homes. Still others struggle with the rent, mortgage, and property taxes, heating expenses, necessary repairs and other housing costs that make staying home cost prohibitive.

Older adults and millennials alike are moving to communities just like Portland. The cost of housing is simply too high for many older Mainers on a low, fixed income. Very few affordable housing developments for older Mainers have been built in Portland in recent years. As HUD diminishes its role in creating affordable housing for all ages, including older renters and home-owners, it is timely for Age-Friendly Communities such as Portland to evaluate current policies and address the creation of affordable housing.

A 2014 AARP survey of 50+ Mainers found that:

- 79% of Mainers 50+ say it is extremely or very important to remain in their home or community.
- Nearly three-quarters of Maine registered voters age 50 and older think funding services that enable seniors to remain in their homes for as long as possible should be a top or high priority for elected officials in the state.
- Nearly seven out of ten think it should be a top or high priority for Maine elected officials to support age-friendly communities by funding services, programs, or infrastructure changes that enable residents to age in place.

For these reasons, AARP Maine supports the proposed amendments to Division 30 to support the creation of affordable housing in Portland. Given the increase in housing costs in Portland, and given that seniors often live on fixed incomes, it is critical that the City take action to address the impediments to building affordable housing. The amendments to Division 30 seem thoughtfully crafted to address the issues that affordable housing developers have identified. However, we are concerned with Section 4 that requires an extra public meeting for



affordable housing developments but no other. Public input is an integral part of any development proposal, but requiring an additional meeting for affordable housing and not all developments is unfair and unnecessary.

AARP urges the Planning Board to keep the needs of those members of the community who are in desperate need of affordable housing in the forefront of their minds as you consider these proposed amendments.

Thank you,

Amy Gallant  
AARP Maine Advocacy Director  
AGallant@aarp.org / 207-776-6303



Jennifer Munson &lt;jmy@portlandmaine.gov&gt;

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## Division 30

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**'cerberus shoal' via Planning and Urban Development** <planning@portlandmaine.gov>

Thu, Jun 22, 2017 at 7:18 PM

Reply-To: cerberus shoal &lt;cerberus\_shoal@yahoo.com&gt;

To: "planning@portlandmaine.gov" &lt;planning@portlandmaine.gov&gt;

Dear Portland City Council Planning Board,

My name is Chriss Sutherland and I'm a resident of South Portland. I have been working and making art and music in Portland for some 25 years. During that time I have watched as many of my friends and colleagues have found themselves unable to remain in Maine's greatest city due to incessant rent increases and the utter unfeasibility of home ownership. Many of these individuals were part of the artistic work force that created Portland's current cool and cutting edge small urban culture. These specific individuals and the many others that I haven't had the chance to know are the very people that have made and make Portland attractive, unique, and special. What kind of city forces it's personality to leave? Not a city like Portland, Maine. Therefore, I want to commend you on the proposed changes to Division 30. It's a given that in this case, and most cases for that matter, the free market needs some Keynesian guidance and the proposed incentives for both affordable housing and workforce housing are a welcome measure to slow the hemorrhaging that has been taking place over the past decade.

Sincerely,

Chriss Sutherland

To: Housing Committee Councilors:  
 Jill Duson (Chair), David Brenerman (Co-Chair), and Brian Batson  
 From: Cynthia Cochran, East Bayside resident/home owner since 2000  
 Date: March 30, 2017  
 Re: Proposed Amendments to Division 30 to support affordable housing in Portland

I have three main concerns with the broad outlines of this proposal, at this time:

#### ONE

It does not do what it is claiming to do, which is to support the creation of affordable housing along Portland's transportation corridors in conjunction with the discussions and concerns, many arising over the past year/s in this Housing Committee, about the growing scarcity of housing supply for households earning low and moderate incomes and the most often repeated recommendation regarding housing to arise from discussions pertaining to the City's work on its Comprehensive Plan, "to increase housing density along Portland's transit corridors." Instead, the proposed policy restricts the focus of its recommendations to "escalate density bonuses, height, and setback reductions" to just a few, selected zones, within the City. The existing ordinances, pertaining to these selected zones, already allow for greater height, density, density bonuses, and setback reductions than those for all other zones in the City. In addition, many of these zones include areas in the City that are not along the City's major transit corridors, as delineated in the future land use section of the City's new, still in-draft form, Comprehensive Plan. (Please see the attached map from the draft plan with my added labels). It is clear from this map that the "priority" transit corridors are the following: Washington, Forest, Allen, Stevens, and Brighton Avenues, Franklin, High, State, and Congress Streets. I do not know why Auburn Street and Washington Extension are not included in this designation, as they are included in the Metro Line that serves Washington Avenue.

I personally attended many, many of these housing/comp plan discussions, and can attest that the "to increase housing density along Portland's transit corridors" was likely the most popular recommendation of any to arise in these venues. Credit is due to Alex Landry, resident of West Bayside, for being its most prolific supporter.

I believe that this policy idea is popular because it would support two similarly supported goals: 1) development of more housing to help address the housing supply shortage in Portland, and 2) support expansion of the City's transit service area and the frequency and reliability of that transit service. Restricting this policy to the currently proposed zones, would not achieve either of these goals as effectively as a wider, more-inclusive application to all the zones abutting these identified transit corridors. Having researched the corridors, and related zones, it is clear that they include a wide range of the City's zoning designations. (See attached listing). In addition, land parcels that are not located along these transit corridors, should not be swept up in this proposed amendment to Division 30 (See ZONING (Selected Districts) Portland, Maine map included with this amendment proposal to find these unrelated parcels).



## TWO

Unlike the consensus surrounding the "increase density along transit corridors" policy, there is no consensus about what the word "affordable" means, nor to the question of "affordable to whom"? This proposed amendment states that its purpose is to "support the creation of affordable housing in Portland" and "particularly for households earning low and moderate incomes," and yet, it does not define any of these terms. How can we assess the effectiveness of this policy approach, until its desired results are clearly, and unequivocally, defined. Would extending the application of the increased density, density bonuses, and setback reductions to a wider, more-inclusive number of City zones abutting these identified transit corridors be a more effective means of achieving these desired results?

I have repeatedly stated, in all related public forums, hearings, workshops, and other meetings, that the lack of housing for working class individuals, (making approximately \$30,000 to \$69,000 annually) has not been addressed by any of the City's housing policy efforts to date. As you know, the recently initiated, inclusionary zoning policy does not address this income level. Its definition of "affordable" is 100% of the area-median income for rental housing, and 120% for housing ownership. The 2015 5-yr American Community Survey (ACS) estimates the area-median income (Cumberland County) for Portland is currently \$78,038. The fact that the policy states "up to 100% and 120%" does not mean that units are built for those of lower incomes. We all see the mass exodus from the City of the people who actually provide most of the services to City residents and to visitors of our City. And yet, so many of our transportation goals relate to reducing the number of vehicles, coming, going, and living in the City. If Portland continues to export its service workers, tradespeople, and small businesses, we are actively undermining many of our stated goals.

## THREE

I do not believe that the above two broad policy definitions, targets, decisions, and discussions should be conducted under the auspices of the Portland Planning Board. The volunteer members of this board are unelected, and therefore, unaccountable to the stakeholders of the City of Portland. I also believe that this approach leaves too many, policy-related decisions in the hands of unelected, and therefore, unaccountable, City Staff members. I believe it the responsibility of the elected City Counselors to establish broad, and sufficient, policy direction for implementation by City Staff. I do not think that sufficient policy direction has been achieved at this time, from this Council Committee. Therefore, I am strongly opposed to the staff's request "that the Committee take action on this item to send it to the Planning Board for their review." I strongly believe that the place for these policy discussions, with all City stakeholders, is here, in the Housing Committee meeting format. You took admirable and careful responsibility for the Short-Term Rental policy decision-making and discussions. I ask that you do the same for this proposed policy.

Thank you.

## References to City's Draft Comprehensive Plan Re "TRANSIT"

**What We Heard:** "Strong support for transit-oriented development" PDF pg 15, Plan pg 9

**Neighborhood Plans:** Applying the Comprehensive Plan Locally:

"Neighborhood plans refer to documents that make recommendations for an area across a host of issues important to that neighborhood's future development, which may include some combination of design, zoning, historic preservation, environmental, transit, or economic development recommendations, for example." PDF pg 16, Plan pg 10

**Subject Policy Area Plans: Expansion of Community Policy Snapshots:**

"... City partners may work with the City on an economic development plan or a regional transit plan." PDF pg 17, Plan pg 11

**Snapshot: Environment: A Healthy City**

"Over the past decade, the City has also made a concerted effort to adapt policy to reflect a 21st century approach to sustainability. Since 2014, the City has made a series of zoning changes to promote greater residential density and infill development, coordinate this development with existing and anticipated transit service expansions, reduce parking requirements, and support alternative transportation options." PDF pg 217, Plan pg 15

Future Strategies #7. "Coordinate future land use policy changes with long-range regional transportation planning, including planning for transit, pedestrian, and bicycle improvements, to reduce local and regional vehicle miles traveled." PDF pg 25, Plan pg 19

**Snapshot: Economy: A Vibrant City**

"The City's exceptional urban form is integral to the health of its economy - its compact, walkable downtown and neighborhood centers, strong transit connections..." PDF pg 42, Plan pg 36

"Remote workers also represent a growing sector of the City's economy, drawn here for Portland's distinct quality of place, and enabled by sound transit and communications systems." PDF pg 15, Plan pg 9

**Future Strategies #3. Invest in Infrastructure**

"Make physical improvements and expansions to below- and above-grade infrastructure, including utilities, stormwater, transit, parking, and streets, to maintain and accommodate new growth." PDF pg 47, Plan pg 41

**Future Strategies #5. Target Areas for Job Growth:**

"Evaluate zoning and the condition of existing infrastructure in priority areas - downtown, in identified neighborhood nodes, and along transit corridors - to ensure that employment and housing growth can be supported." PDF pg 47, Plan pg 41



## Snapshot: Housing: A Livable City

### Density By Design:

"Density is a numerical measure of the number of people or buildings per acre of land. Because it is so often used to illustrate levels of crowding, density has often acquired a negative connotation. However, this connotation fails to take into account the positive contribution that well-designed, dense developments can make to quality of life. Density can provide numerous advantages over the alternative - it can be more environmentally friendly, it can promote transit use, and it can benefit the health of a community by providing customers for local businesses and opportunities for social interaction." PDF pg 52, Plan pg 46

### Local Goals:

"Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods." PDF pg 53, Plan pg 47

## Snapshot: Transportation – An Accessible City

"The City benefits from a dense development pattern which, when coupled with changing demographics and evolving market trends toward more urban living, allows for a high level of reliance on active transportation – bicycling, walking, and transit use – to meet growing alternative transportation demand. Portland is well-positioned to support a robust bicycle and pedestrian network, and viable transit that effectively links jobs, housing, and services." PDF pg 73, Plan pg 67

"By managing growth in automobile traffic demand, Portland will enable more transportation choices, such as public transit, bicycling, and walking. Our transportation investments and policy choices strive to preserve vehicular capacity and regional mobility while enhancing the diverse functions of our streets for all users and multiple modes." PDF pg 73, Plan pg 67

"Over the past ten years, the City's long-range transportation planning has focused largely on developing a more integrated and multi-modal transportation network through public transit enhancements, sidewalk and streetscape improvements, and bikeway network planning, as well as work to the underlying street network. For example, in 2009, the City approved the *Peninsula Transit Study*, with the expressed goals of reducing the number of single occupancy vehicle trips to and from the Portland peninsula and improving the City's livability." PDF pg 74, Plan pg 68

"The City's transportation planning has expanded beyond the peninsula as well, though. In 2012, the City adopted *Transforming Forest Avenue*, a plan designed to modernize this important transportation and retail-commercial corridor via place-based, multi-modal investments. In 2016, the City developed a plan to more effectively link its major



transportation centers and downtown with express bus service through the *Hub Link Transit Study*.” PDF pg 74, Plan pg 68

“... better integrate land use and transportation planning to ensure that density is aligned with transit and bicycle infrastructure.” PDF pg 75, Plan pg 69

#### **Future Strategies #10. Invest in Public Transit**

“Support initiatives to strategically increase the frequency and span of service, on-time reliability, and geographic scope of transit service.” PDF pg 79, Plan pg 73

“Develop transit centers, enhance bus stops, and improve transit stop and transit corridor operations and accessibility.” PDF pg 79, Plan pg 73

“Create incentives to spur transit-oriented, mixed use development on corridors and in areas that can support high quality transit service.” PDF pg 79, Plan pg 73

### **Future Land Use**

#### **Priority Nodes & Corridors**

“Priority nodes and corridors indicate areas that would be appropriate for new development to provide needed housing, businesses, and services proximate to transit . . .” PDF pg 86, Plan pg 80

#### **Priority Corridors:**

“Priority corridors are major arterials that often see heavy vehicular traffic, but also have the capacity to improve mobility by capitalizing on their potential for increased walking, bicycling, and transit use. Priority corridors can also serve as areas of additional mixed-use, higher density growth to take advantage of the transit benefits and services that well-designed, diverse corridors can offer.” PDF pg 86, Plan pg 80

### **Regional Coordination:**

#### **Summary of Regional Coordination Goals, and Strategies #1. Environment:**

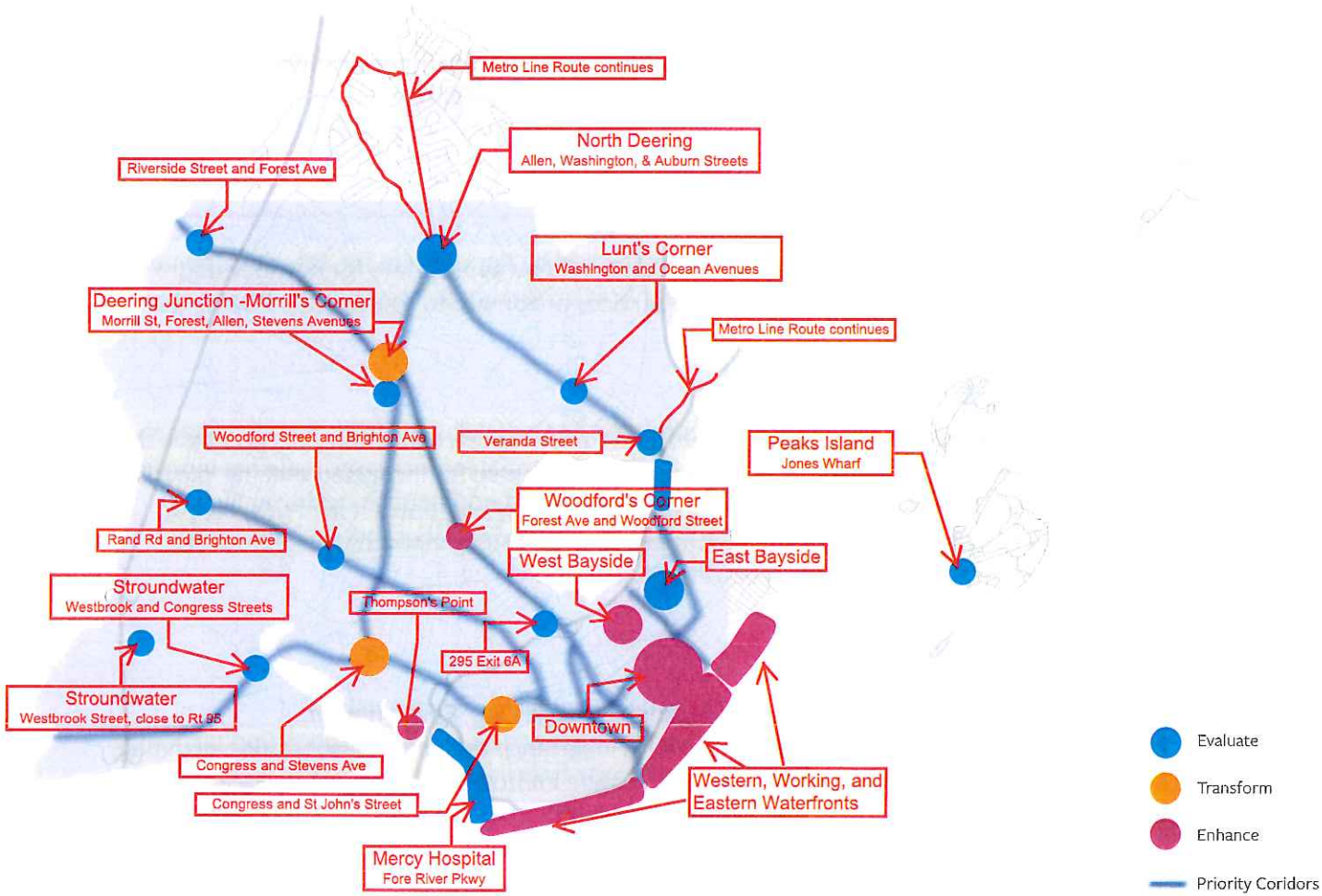
“Coordinate future land use policy changes with long-range regional transportation planning, including planning for transit, pedestrian, and bicycle improvements, to reduce local and regional vehicle miles traveled.” PDF pg 90, Plan pg 84

### **Implementation**

#### **Infrastructure: Invest in Public Transit:**

“The City has been actively working with METRO to enhance public transit in the region by expanding the service to new client bases to utilize the service . . .” PDF pg 93, Plan pg 87

**Priority Nodes & Corridors**



## Zones along transit corridors

### Washington Ave: Congress outward

IS-FBC  
B2b  
B4  
B1  
R6  
B1b  
R5  
RP  
C56  
R3  
C28  
C30  
R2

### Auburn Street

B2  
B1  
C28  
C59  
RP  
R3  
C62  
R2  
R5

### Forest Avenue

B3c  
C32  
R6  
B2b  
B5  
B2  
B2c  
R6-A  
RP  
IL  
R5  
R3  
B1  
IM

### Brighton Avenue

R5  
R3  
B1  
RP  
B2  
B4

### Congress Street - from East End

R6  
B1b  
C58  
B1  
IS-FBC  
B3  
B2b  
C33  
C41  
B2  
IL  
R5  
B1  
C53  
RP  
C7  
RPZ  
C14  
R2  
C8  
OP  
R1  
B4  
IM  
C60

### Stevens Ave - Congress outward

RP  
R3  
R5  
B1  
B1b  
R5-A  
R6-A  
B2

### Franklin St - Commercial outwards

IS-FBC  
B2b  
B3  
R6  
B7  
R7  
Ilb

### High Street - Commercial outwards

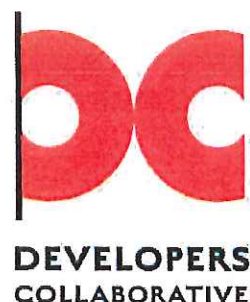
B5b  
B3  
R6  
B3  
C32  
C5

Division 30 amendment (3/30/2017):

Proposed zones to support affordable housing: B1, B2, B3, B4, B5, R7, RP







June 8, 2016

City Councilor Jill C. Duson, Chair  
and Members of the Housing Committee  
City Hall  
389 Congress Street  
Portland, Maine 04101

Re: Housing Policy Priorities

Dear Councilor Duson and Members of the Housing Committee:

The organizations signing this letter want to express our strong support and appreciation for the work undertaken by the City Council's Housing Committee to address the housing crisis that Portland is currently facing. As developers of affordable housing in Portland with the mission to serve a wide range of low and moderate income groups, like you, we're committed to solving this issue, and want to help your efforts in any way we can.

In regard to the long list of housing policy options discussed at the meeting on May 25<sup>th</sup>, many of them, across all policy areas, hold promise to help create badly needed new housing and to improve housing security for those whose housing may be in jeopardy. We feel the expansion of the City's housing inventory should be the highest priority. More housing means more choice, more opportunity, reasonable rents, and higher quality energy-efficient buildings. The list of policy options provides some of the important tools needed to make this happen, of which we suggest a focus on zoning, parking, transit-oriented development and use of City resources. We believe this can be done without sacrificing the value and desirability of Portland's traditional neighborhoods.

Portland's zoning ordinance should be modified to:

- Locate higher density/larger/taller buildings along neighborhood edges and transit corridors;
- Encourage the creation of denser village centers/nodes off-peninsula;
- Eliminate parking and height requirements in zones within walking distance of downtown;

- Allow for greater density and height while lowering parking requirements to encourage more affordable housing development;
- Allow more Accessory Dwelling Units (ADUs), in all residential zones; and
- Expand the use of Form Based Codes to other parts of the City.

City Resources:

- Continue to promote and provide tax increment financing (TIF) to housing development projects, to help financially support and encourage the development of housing that is affordable to those with more low and moderate incomes;
- Encourage creative use of city-owned properties, including old schools, as affordable housing opportunities; and
- Develop more revenue sources for the Housing Replacement Fund, which could become an important layer of financing for affordable housing development.

These policy changes are key to addressing some of the city's most pressing housing problems. Again, thank you for your efforts, and please don't hesitate to contact any of us if we can help in any way.

Sincerely,



Dana Totman, President & CEO  
Avesta Housing



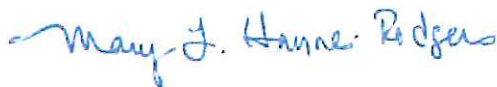
Cullen Ryan, Executive Director  
Community Housing of Maine



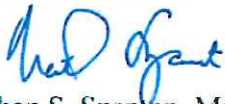
Kevin Bunker, Principal  
Developers Collaborative



Mark B. Adelson, Executive Director / President  
Portland Housing Authority / Portland Housing Development Corp.



Mary Haynes-Rodgers, Executive Director  
Shalom House Inc.



Nathan S. Szanton, Managing Principal  
The Szanton Company





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Avesta Housing



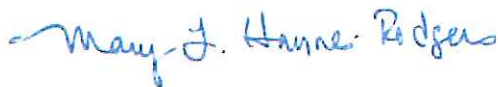
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Portland Housing Authority / Portland Housing Development Corp.



Mary Haynes-Rodgers, Executive Director  
Shalom House Inc.



Nathan S. Szanton, Managing Principal  
The Szanton Company

## Google Groups

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### Division 30

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**Jan Bindas-Tenney** <jbindastenney@preblestreet.org>

Jun 22, 2017 2:10 PM

Posted in group: **Planning Board**

To the City of Portland Planning Board:

I am writing to submit comments in support of the proposed revisions to the Affordable Housing Ordinance, Division 30.

Please see the attached.

Thank you for your consideration.

best,  
Jan

--

Jan Bindas-Tenney  
Advocacy Director  
**Preble Street**  
38 Preble Street  
Portland, ME 04101  
207-775-0026 x1166  
207-420-0303 (cell)



[www.preblestreet.org](http://www.preblestreet.org)

*The mission of Preble Street is to provide accessible barrier-free services to empower people experiencing problems with homelessness, housing, hunger, and poverty, and to advocate for solutions to these problems.*







# Preble Street

*Turning Hunger and Homelessness into Opportunity and Hope*

*Florence House*

*Logan Place*

*Veterans Housing Services*

*Maine Hunger Initiative*

*Advocacy*

*Food Programs*

*Clinical Intervention Program*

*Anti-Trafficking Coalition*

*First Place*

*Teen Center*

*Joe Kreisler Teen Shelter*

*Resource Center*

*MMC-Preble Street Learning*

*Collaborative*

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*Executive Director*

38 Preble Street  
Portland, ME 04101  
207.775.0026  
info@preblestreet.org  
www.preblestreet.org



June 22, 2017

Dear City of Portland Planning Board:

My name is Jan Bindas-Tenney and I am the Advocacy Director at Preble Street. I am writing to you in strong support of the proposed revisions to the Affordable House Ordinance, Division 30.

As you know, Preble Street is a social work organization founded on the principles of access for everyone and unconditional positive regard. Since 1975, Preble Street has served some of the most vulnerable people in Maine, working to turn hunger and homelessness into opportunity and hope through 14 low-barrier programs throughout the state. Preble Street provides round-the-clock services 365 days a year to not only meet urgent needs, but to empower people to move beyond the crises in their lives, and to build and advocate for solutions to homelessness, hunger, and poverty.

We are living in an affordable housing crisis in Portland. Preble Street's two overnight shelters: Florence House shelter for women and the Joe Kreisler Teen Shelter must frequently turn people away because our limited emergency beds are full. As the de facto day shelter for the City's Oxford Street Shelter, the Preble Street Resource Center strains to meet a growing need. The lines to use our bathrooms, showers, and laundry are interminable. We serve over 1,200 soup kitchen meals per day and up to 200 Portland households are served at our weekly food pantry.

Too many people experience homelessness in Portland and too many struggle with housing instability. People working service jobs and people with extremely low-incomes, or with disabilities, cannot find stable, permanent places to live. Take for example a woman who has a serious mental health disability: she was evicted from her Grant Street apartment last year at no fault of her own when the building was bought by a developer. She went on to live in a rooming house in East Bayside where her housing situation is not safe and secure and she may need to move again.

It costs a great deal to keep people in homelessness.

At Preble Street we are so glad that the City is pursuing new and creative ways to encourage affordable housing development. It makes a lot of sense to us that the City would prioritize new development in priority growth areas and that the City would take measures to increase housing density in Portland. This is a step in the right direction. It also makes sense to us to curb the affordable housing crisis with development of permanent, stable, housing for workers and people with low-incomes.

I'm thinking of a man who works evenings in the kitchen at a local restaurant and has been unable to find an apartment he can afford. He doesn't get off work until midnight, then heads to the Oxford Street Shelter for a few hours of sleep before he

has to vacate his bed in the morning and the shelter closes for the day. It's not enough sleep. He needs a stable apartment.

Ten years ago, when people experiencing homelessness gained access to a housing voucher it was a fast track out of the shelter. In 2017, on any given day, dozens of people with housing vouchers are in our Resource Center scrambling and working with our caseworkers to find a rental with a monthly price tag under the maximum voucher threshold, *and* with a landlord that will rent to someone coming out of homelessness, *and* within reach of family and community.

Encouraging affordable housing will maintain Portland's best quality: its rich cultural and economic diversity.

We are in support of all the proposed changes, however we'd like to point one place of serious concern in Section 4, which reads: "At a minimum, no less than 60 days prior to application for site plan review, any project that wishes to take advantage of this section must hold a public meeting noticed to all properties within 500 feet of their site."

It seems contrary to good public policy to place additional process requirements *only* on affordable housing developments. We worry that this measure is discriminatory. We ask that you eliminate the requirement for an additional public meeting merely because it is considered an- affordable housing development.

Thank you for your consideration.



## Concerns of Proposed Amendments to Chapter 30 to Support Affordable Housing in Portland

Karen Snyder <karsny@yahoo.com>

May 9, 2017 2:30 PM

Posted in group: **Planning Board**

Dear Planning Board and Housing Committee members,

I would appreciate the below concerns be addressed in regards to proposed amendments to Chapter 30 regarding Affordable Housing in Portland:

1) The definition of "Affordable" is vague and should have specific numbers applied. The proposed amendment states that it's purpose is to "support the creation of affordable housing in Portland" and "particularly for households earning low and moderate income". Yet, there are no specific values applied to these words. So that everyone is on the same page, specific numbers need to be applied. For example, low income is a family of 3 where the combined income is less than 35,000 annual income/ year (example only).

This leads to the next point...

2) The Current Inclusionary Zoning Ensure Work Force Housing Requirement is Inadequate Needs Revision

- On October 19, 2015, the City of Portland voted 7-2 to become one of the 200 and more communities in the United States to require a portion of the housing units in new developments to be affordable for the middle class.

<http://www.pressherald.com/2015/10/19/portland-council-approves-requirement-for-affordable-housing-units/>

- The criteria is the development has to be > 10 units, only 10% of Units are required to be "affordable housing" based on median income of 120% but any developer can be opt out with a fine of \$100,000/unit.
- This is clearly not an effective housing policy for the City of Portland because the majority of developers are opting out.
- The City of Portland Maine should revise this policy and require that all new development should have at least 33% affordable housing based on a median income of 70% and a very substantial fine for wanting to opt out. This revised policy should also be retro-active back to when this policy was voted upon.

3) Why is this Proposed Amendment Chapter 30 Change To Support Affordable Housing Addressed in front of the Portland Planning Board?

- The planning board is made up of volunteers that are not accountable to the city of Portland local residents. This issue should only be addressed by city councilors who are accountable to the local residents.
- This issue should remain with the Housing Committee city council members who represent the local residents and not should be addressed with the Portland Planning Board.

In conclusion, I have also developed an Affordable Housing presentation that I would hope provide affordable housing options for the Housing Committee and the Planning Board to consider for future affordable workforce housing developments to encourage affordable workforce/middle class residents.

Because if it is not considered, this is how Portland city government and planning board will effective kill the Portland's all ready disappearing community and neighborhoods...

.

Regards,

Karen Snyder  
Munjoy Hill Resident

## Last Night Workshop on Proposed Amendments to Division 30 to Support Affordable Housing with Planning Board

Karen Snyder <karsny@yahoo.com>

May 10, 2017 10:51 AM

Posted in group: **Planning Board**

Hi Jeff,

As I attended last night's workshop on the Portland Planning Departments proposed changes that the Housing Committee sent to the Planning Board to review, I was aligned with most of the comments made by the Planning Board members feedback to the planning department proposed amendments to Division 30 to Support Affordable housing:

1) 3 of the 6 Planning Board Members commented that this proposed affordable houses changes are quite complex and are hard to understand. *I agree.*

2) Additional concern was over the combination of height x setback x density permitted and how that calculation really works. *I agree.*

3) Planning Board also commented that these proposed affordable houses changes don't seem to promote any development in the traffic corridors outside of District 1. *I agree.*

4) Planning board comments were concerned with the extra 25 feet of height and suggest at max it should only be 15 feet. *I agree.*

5) Agree that parking requirements should stay as is. 1 unit = 1 parking space *I agree.*

6) Planning board suggested that the Planning department should provide graphics in the next workshop meeting for the following: *I agree.*

- a) By District, show where the zones are located that would be impacted by this.
- b) The current allocation of affordable housing percentages by District.
- b) There was other graph requests....forgot what they were.

Additionally, I did the exercise to exactly understand what low and middle income is defined by Portland planning department since there wasn't specifics in the proposed changes.

\*\*Jeff Levine explained to one of the Planning Board members as to where on the Planning Department website these income level are located. However, this Portland website link then refers to HUD AMI to find the latest low-middle class Cumberland County income level numbers in which I had to find the HUD AMI link on my own. So, based on the HUD link states the below statistics:

<https://www.huduser.gov/portal/datasets/il/il2017/2017ILCalc3080.odn>

a) Middle Class Income for Cumberland county is \$83,000/year.

b) Low Income Range for Cumberland county is between: \$28,000 to 86,000 depending on number in family.

I am really not sure how realistic these income levels for Portland's working class and middle class income levels. Because it appears Maine nurses and teachers would be considered low income.



Some additional suggestions that I have are:

- 1) Make the Affordable Housing rules less complex. Why isn't the city of Portland just saying simply, to any developer that flat 25 to 33% of proposed new development should be to available for affordable housing for working class/middle income?
- 2) There needs to be more focus on building affordable housing for working class and middle class in the traffic corridors and not just District 1 which is becoming priced out and only rabbit size units would be available to someone considered middle class income making \$83,000/year
- 3) Why isn't the City using the city owned properties such as the 7 West Bayside properties or outside of District 1 city owned to focus only on affordable housing for the Portland working class and middle class rather than development dedicated to subsidized and high end rentals?
- 4) Please see attached powerpoint that provides additional ideas for Portland Planning department to consider and approach ideas with.

In conclusion, This is indeed a complex issue but ultimately it seems that the focus is stilled geared towards providing financial incentive for developers. Developers are coming to just make a profit.

It is up to City of Portland city government to equalize the inequality with straightforward housing policy guidelines and not complex formulas pushing heights up with unrealistic pre-calculated income levels for supposed Portland working and middle income class. Ultimately, people that work in Portland can't even live in Portland any longer and this is not right.

Regards,  
Karen Snyder  
72 Waterville

## Google Groups

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proposed rule changes to PRUDs

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Marc Lamontagne &lt;mlamontagne@littlesebagolake.net&gt;

Jun 22, 2017 12:03 PM

Posted in group: **Planning Board**

Dear planning board members,

I am writing to voice my interest and concerns over the proposed rule changes to PRUDs and, specifically, the potential impact it will have on my neighborhood. My family and I own several units at the Galvin Street end of Front Street and along Baxter BLVD. I was lucky to raise my kids there and, now, my son is raising his two children. So we are intimately familiar with the Front Street project. My kids had many close friends who lived in the Front Street projects and, today, we travel through it regularly on our way to Payson Park.

I am pleased that the PHA is exploring redevelopment of these buildings. The buildings are at the end of their useful lives and the residents deserve better. As an aside that may or may not be appropriate in regards to the PRUDs discussion, the PHA has a mixed past of stewardship. This was made obvious recently by their allowing the landscaping go without mowing for months this calendar year. The grass was nearing 3 feet high when it was finally taken care of. It's hard to support a new project when I've witnessed their treatment of current facilities.

This is not, however, the point of my writing. I will miss this week's workshop but do plan to attend the June 27<sup>th</sup> public meeting. I have dire concerns that these proposed rule changes are being written specifically with the Front Street redevelopment in mind. It is tailoring to precisely what the PHA wants to do in this neighborhood. Without any public vetting or consideration of IF the neighborhood can even support a project the size of which PHA is proposing, these rule changes would basically give them the green light. To double the amount of units in an off-peninsula, quiet neighborhood is irresponsible and insulting to nearby property owners and residents of the projects. Jeff Levine's memo suggests that such changes are in keeping with existing zoning requirement, I respectfully but strongly disagree given the magnitude of the changes which are not in keeping with the character of the existing neighborhood.

We are lucky to live where we do and have purchased homes here precisely to avoid the type of congestion and traffic the PHA is potentially creating. And the city and planning board should not consider rule changes that are so clearly written in the favor of one project. The rule changes in regards to PRUD crossing a public street seems clearly written with PHA Front Street in mind. It's bothersome that PHA has already created significant plans and renderings based on these PRUDs rule changes. They clearly are working on the presumption it's a done deal. I hope that's not the case.

To be clear, I do not oppose redevelopment of the Front Street projects. But I don't support a city-wide rule change that could grossly impact several neighborhoods just so PHA can get additional units on Front Street.

Thank you for your consideration and all the good work you do for the city of Portland.

Marc Lamontagne

**It is a Long Road.....**  
**Additional Efforts are Needed by Portland, ME City**  
**Government for Affordable Workforce/Middle Class**  
**Housing/Businesses**  
**March 07, 2017**

Presented by: Ian Jacob, Chair of Advocacy Committee and Board Member  
of West End Neighborhood Association and Karen Snyder, Portland Resident  
and Owner of Next Stage Consulting, LLC



# Today's Agenda on Portland, ME's Affordable Housing Crises

1. What Does Affordable Mean?
2. Example that Portland, ME's Affordable Housing Crises is NOT new.
3. Examples of Portland, ME's Affordable Housing Crises Frustrations
4. Graph Showing The Middle Class Segment of Population Not Given A Chance for Portland Housing
5. Examples of City of Portland, ME Government Giving Breaks to Developers That Do Not Help Affordable Housing
6. Examples of Successful Implementations of Affordable Housing All Ready Implemented in Portland, ME
7. Potential Solutions for Portland, ME's Affordable Housing Crises
8. Next Steps for Portland, ME To Take in Affordable Housing Crises
9. Conclusion
10. Other Issues and Further Implications
11. Questions
12. Appendix

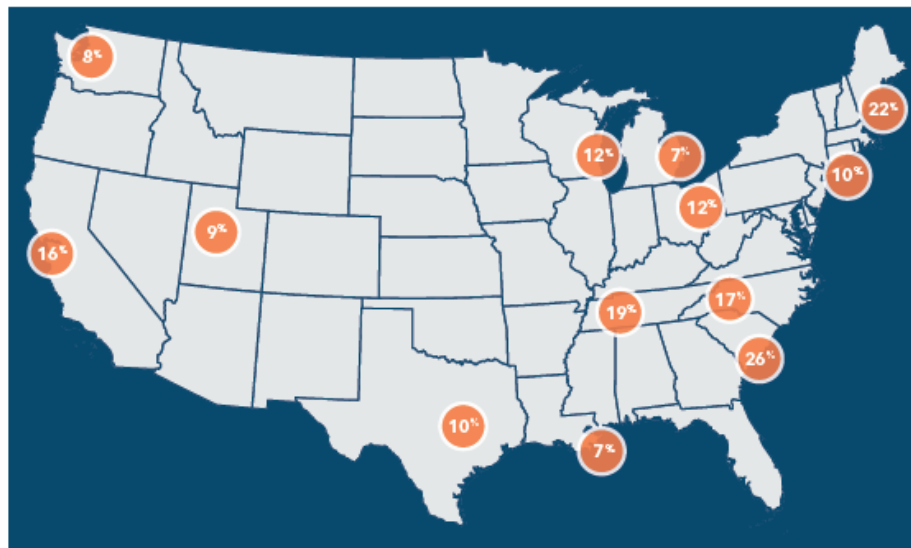
# What Does Affordable Mean?

ISLR (Institute for Local Self Reliance) recognizes and researches the affordable commercial rental market as well to provide examples of different policies enacted across the country. <https://ilsr.org/>

## What's Affordable?

An apartment is generally considered affordable if the rent is less than 25 percent of the tenants' household income. In the commercial market, affordability is not quite as clearcut, and varies by the type of business, but a rough rule-of-thumb is that rent and other occupancy costs should total less than 10 percent of a business's gross sales. As an example, the average hardware store in the U.S. does about \$150 in sales per square foot annually, and therefore should aim to keep its rent and other occupancy costs at no more than \$15 a square foot. Businesses in better locations can often generate higher sales per square foot and afford higher rents. But a problem arises when a combination of speculative investment, high demand, and limited supply of space sends rents climbing faster than sales growth. Grocers and other businesses that serve the basic needs of a neighborhood are particularly vulnerable, because they often have low gross margins and therefore need to keep their occupancy costs even lower to remain viable.

## Mapping Rising Retail Rents



Finding and keeping affordable space is a growing challenge for local businesses in cities across the country. Here are some of the numbers that business owners are facing citywide, and these rates are often higher in the business districts best suited to locally owned enterprises.

Percentage figures are the increase in the cost of space in the last year. All dollar figures are asking lease rates per square foot per year. For comparison, over the last year, median per capita income rose 1% and retail sales grew just 1%. Inflation was 0%.

### PORTLAND, MAINE: 22%

Retail lease rates in Greater Portland jumped 22% to an average of \$18. In the city's historic core, lease rates for small retail spaces are now in the \$25-\$35 range.

### NEW YORK, NEW YORK: 10%

Retail lease rates in Manhattan shot up 10%. Some neighborhoods saw larger increases. On the Upper West Side, ground-floor rents rose 37% to an average of \$30. In the West Village,

### CHARLESTON, SOUTH CAROLINA: 26%

Citywide retail lease rates have skyrocketed 26%, to \$27. In downtown Charleston, the average asking price is now \$38.

### CLEVELAND, OHIO: 12%

The trend isn't limited to coastal cities. In Cleveland, lease rates are up 12%, to \$14.

### MEMPHIS, TENNESSEE: 10%

### DETROIT, MICHIGAN: 7%

In Detroit the average retail rent is a lower \$13, but that figure is still a 7% year-over-year increase, more than rate at which retailers are generally able to grow their revenue.

### MILWAUKEE, WISCONSIN: 12%

The average asking rental rate for retail space jumped 12% in Milwaukee, to nearly \$15.

### SALT LAKE CITY, UTAH: 8%

### AUSTIN, TEXAS: 10%

The average rent for retail space rose 10% in Austin, to \$20, and is forecast to rise an additional 8% this year.

### OAKLAND, CALIFORNIA: 14%

Oakland is one of the cities under the most pressure. Retail rents have soared 16% in the last year, to \$27 per square foot, and are up 42% since 2013.

### SEATTLE, WASHINGTON: 8%

<https://ilsr.org/tag/affordable-space/>

# Portland, ME's Affordable Housing Issue is NOT a New Issue...

***In 1971, Portland City Manager, Joe Menario, gave eminent domain to several hundred poor Italian residents to create Spring Street and the Holiday Inn. Below is an email written by the residences that were evicted from their houses by the City of Portland.***

Statement from citizens group regarding the proposed Holiday Inn as printed in the *Portland Evening Express*, February 26, 1971:

"We the residents of the block bounded by Spring, High, Pleasant and Oak Streets, resolve to fight eviction from our homes by Harper Hotels. We resist eviction in City Hall, in the courts, and in our doorways, if necessary.

We take this stand because we feel that the city government and Harper Hotels are putting business concerns over the concerns for human beings.

In doing so, we recognize the legal right of Harper Hotels to buy properties in the free market.

Furthermore, we understand the need for Portland to have new commercial development to increase the tax base of the city.

However, the legal rights of corporations do not justify financial gain at the cost of human suffering. Nor does the need for more tax money give the city administration the right to put Harper Hotels' interest above the human concerns of low income people, not only on this block but throughout the city.

In a normal situation we might consider relocating, but in good conscience we can't because, even if Harper Hotels could relocate us, we know that we would only be dislocating another needy family and there are needy families living in dilapidated, substandard houses. The Portland Housing Authority has committed itself to building over 400 new units of housing but it has been absurdly slow in producing them.

Furthermore, even the renewal authority admits it cannot relocate people into decent homes and must settle for substandard housing.

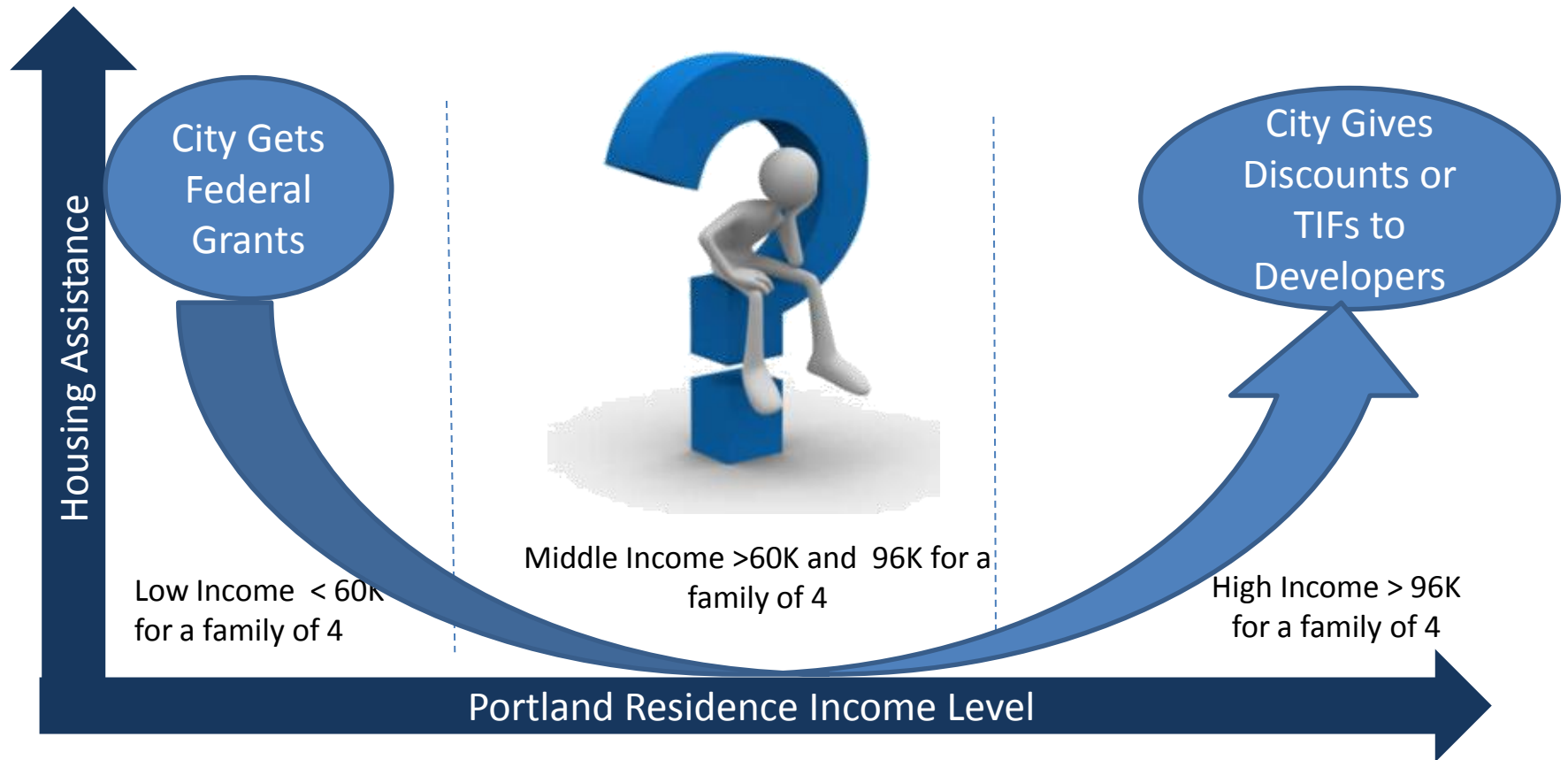
The City Manager has openly admitted to a housing crisis, but even he has been negligent in hiring a housing coordinator, as authorized by the City Council months ago. The case for old and new low income housing is clear, and opposition is clear. We will not leave our homes."



## Example of Portlander's Frustration with Out of State Developers Building High End Condos



# Portland, ME City Government's Housing Incentive



## Basic Conclusion:

- City of Portland, ME does not have any financial incentive to assist the working or middle class local citizens and put business incentive ahead of their local citizens.
- The last time the city assisted middle class citizens was with the “Good Neighbor” Policy back in 1999 on Munjoy Hill. This gave tax incentives to property owners who lived and/or renovated their property. This city effort revived Munjoy Hill which made it the popular place to live today.

## Examples of City of Portland, ME Giving Discounts/TIFs to High End Developers that do not help Affordable Housing

| Project                                                        | Description of Portland, ME's Discount for Developers                                                                                                                                                        |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MidTown Project                                                | The City told Developer that the City will build a parking garage.                                                                                                                                           |
| Thames Street Triangle Property –Part 1                        | The City sold the property at a value of \$400,000 even though the property is appraised at \$900,000 to CPB2 developer.                                                                                     |
| Thames Street - Part 2                                         | The City told the CBP2 developer that the city will pay for the \$1.2 million extension of sewer on Thames St to the development with a final total of over \$2 million funded by local tax paying citizens. |
| Pearl Street Garage, Next to City Hall (Section of Wilmont St) | City sold the through section of Wilmont street of this property at a discount to the developer and closed the street.                                                                                       |
| Regency Hotel- Milk Street                                     | The City basically sold this section of public street to the Developer of old Armory building. The Developer then gave the city a public easement over parts of the road and street.                         |



# Examples of Successful Implementations of Affordable Housing All Ready Implemented in Portland, ME

## 1. 1999 Good Neighbor Policy

- Portland assisted middle class citizens was with the “Good Neighbor” Policy back in 1999 on Munjoy Hill. This gave tax incentives to property owners who lived and/or renovated their property. This city effort revived Munjoy Hill which made it the popular place to live today.

## 2. 65 Munjoy Street

- 8 units on a former Adams School parking lot. The units can only be sold by the developer to purchasers qualifying as having an income no more than 120% of the area median income. AND when the purchasers (first AND subsequent) resell, for 90 years, they can only sell to purchasers who are also certified as having an income that is no more than 120% of the area median income. Within that constraint, the market dictates the resale price.

## 3. 83 Sherman Street – Old Sacred Heart School

- It was acquired by the City and sold following a RFP process to a developer to create 8 loft apartments in the individual classrooms plus individual studio spaces on the bottom floor for low and moderate income visual artists. The purchasers have to qualify as a person who makes a living from the visual arts (as judged according to detailed criteria, I believe by the Public Arts Committee) and as meeting the City's income and resource guidelines. There is a limited equity component, with only a portion of the equity going to the artist when the unit is sold, I believe consistent with the change in the Consume Price Index from time of purchase until time of sale.

# Potential Solutions for Portland, ME's Affordable Housing Crises

## 1) Revise the Inclusionary Zoning-Ensure Workforce Housing Requirement

- On October 19, 2015, the City of Portland voted 7-2 to become one of the 200 and more communities in the United States to require a portion of the housing units in new developments to be affordable for the middle class.

<http://www.pressherald.com/2015/10/19/portland-council-approves-requirement-for-affordable-housing-units/>

- The criteria is the development has to be > 10 units, only 10% of Units are required to be “affordable housing” based on median income of 120% but any developer can be opt out with a fine of \$100,000/unit.
- This is clearly not an effective housing policy for the City of Portland because the majority of developers are opting out.
- **The City of Portland Maine should revise this policy and require that all new development should have at least 33% affordable housing based on a median income of 70% and a very substantial fine for wanting to opt out. This revised policy should also be retro-active back to when this policy was voted upon.**

# Potential Solutions for Portland, ME's Affordable Housing Crises

## Cont'd

### 2) Benchmark other Cities Affordable Housing Policies-

**City Makes An Concentrated Effort to Focus on Affordable Housing Developers with getting Federal Grants:**

#### **A) Boston, MA Affordable Housing Initiatives**

<http://www.dotnews.com/2017/dot-housing-starts-get-city-funding>

- Boston Mayor Martin Walsh on Tuesday 2/14/2017 announced funding for 10 affordable housing developments across Boston, a nearly \$22 million investment to preserve or produce 602 housing units. Dorchester and Mattapan projects account for half of these approvals, bolstering several longstanding large mixed-income developments.
- Preserving Boston's affordability is key to ensuring everyone who wants to live here can afford to do so, and I'm particularly pleased this funding will both preserve and add to our existing affordable housing stock," Walsh said. "This will help us continue to build a pipeline of affordable housing, and put us one step closer towards reaching the ambitious goals laid out in our housing plan."
- Funding for these and five other projects is facilitated by more than \$13 million from **the Department of Neighborhood Development (DND)**, and more than \$8 million of linkage funds awarded through **Boston's Neighborhood Housing Trust.**



# Potential Solutions for Portland, ME's Affordable Housing Crises Cont'd

## 2) Benchmark other Cities Affordable Housing Policies

City Makes An Concentrated Effort to Focus on Affordable Housing  
Developers with getting Federal Grants:

### B) San Francisco, CA -Sponsoring pioneering initiatives

<http://sfmayor.org/housing>

- In 2012, Mayor Lee pushed for the landmark approval of the Housing Trust Fund which invested \$1.5 billion in affordable housing production and housing programs until 2042.

- In 2014, Mayor Lee pledged to construct 30,000 new and rehabilitated homes throughout the City by 2020, with half available to low, working and middle income San Franciscans.



# Potential Solutions for Portland, ME's Affordable Housing Crises

## Cont'd

### 2) Benchmark other Cities Affordable Housing Policies

**City Makes An Concentrated Effort to Focus on Affordable Housing Developers with getting Federal Grants:**

#### **B) San Francisco, CA -Sponsoring pioneering initiatives (cont'd)**

- . Continuing to expand San Francisco's homeownership downpayment loan programs, which helps recipients address the upfront hurdles of becoming a homeowner, and create more middle income homeownership opportunities, particularly on land under public control.**

Mayor Lee had replenished the Teacher Next Door Loan Program, and working with outside partners to double downpayment loans for moderate income families in San Francisco.

He secured \$80 million of new revenue to help educators and middle-income residents who are paying rent or are buying their first home.

- Mayor Lee created a Teacher Housing Initiative in partnership with SFUSD, which will create affordable housing opportunities for over 500 teachers and educator households.

# Potential Solutions for Portland, ME's Affordable Housing Crises

## Cont'd

### 3) The City uses Non-Profit (REIT) Real Estate Investment Trust that builds Affordable Housing without Public Financing.

- Example: Housing Partnership Network

<http://www.housingpartnership.net/>

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**Housing Partnership Network** is a member-driven business collaborative of nearly 100 of the leading housing and community development nonprofits in the country. It was founded 20 years ago by a new breed of entrepreneurial nonprofit that combines social mission with private enterprise to develop solutions to the most challenging problems facing our country.

The HPN approach is based on members sharing best practices through **Peer Exchange** from which new ideas emerge for **Innovation** in the housing and community development sectors. The result is a platform of impactful **Social Enterprises** that inform our **Policy** recommendations and

**HPN Headlines ...**

HPET Announces a Transition in Leadership  
[Read more](#)

Industry Voice: Upping Our Expertise in Home-liver Education

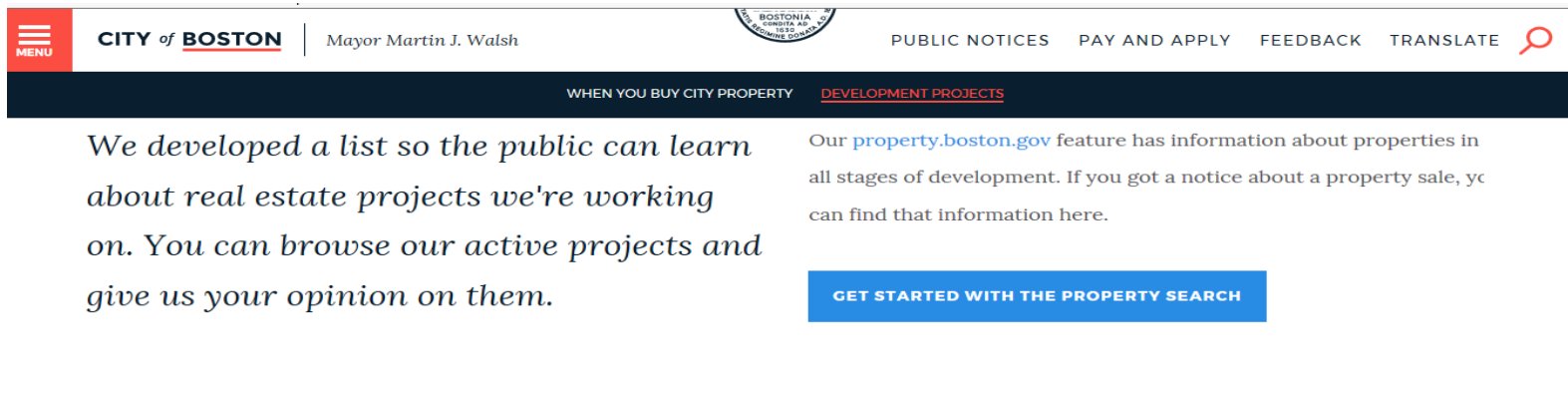
[www.housingpartnership.net/](http://www.housingpartnership.net/)



# Potential Solutions for Portland, ME's Affordable Housing Crises Cont'd

## 4) City Promote Transparency of City-Owned Properties by Transparent Notification/Advertising for Getting Sustainable/Affordable Housing Proposals rather than “Selective” RFP (Request For Proposal) from Certain Realtors/Developers

A) Good Example of a city promoting transparency is Boston city government website:  
<https://www.boston.gov/departments/neighborhood-development/how-we-sell-citys-land-and-buildings#development-projects>



B) City of Portland could put out a Design Challenge for Bayside not only for storm surge ideas that was made public last week but also for city-owned parcels of land that are for sale.

# Potential Solutions for Portland, ME's Affordable Housing Crises

## Cont'd

### 5) Example of Portland Residence's Vision of Re-establishing a Neighbor Center in Bayside

#### Comp Plan Snapshot Goals Relating to Bayside Development

##### Historic Resources

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

##### Economy

- Value innovation and creativity as cornerstones of the local economy, and central to Portland's uniqueness and diversity.
- Invest in, attract, and retain human capital to support a growing economy.
- Respect that our unique quality of place is a key part of our current and future economic success.

##### Housing

- Increase, preserve, and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households.
- Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.
- Pursue policies to enable people who work in Portland to have the option to live in Portland.
- Encourage quality, sustainable design in new housing development.

##### Transportation

- Promote multi-modal accessibility, enabling residents and visitors of all ages and abilities to participate fully in the social and economic life of the community.
- Support livability by improving the quality of life in neighborhoods and improving the public health of residents.

# Potential Solutions for Portland, ME's Affordable Housing Crises Cont'd

## 5) Example of Portland Residence's Vision of Re-establishing a Neighbor Center in Bayside (cont'd)

Current Bayside View

*Note: See Appendix Historical view of this area from 1914.*



Bayside Vision of City Owned Property  
Parris, Hanover, & Alder Streets / Portland, ME

Aerial / Existing  
Blue Anchor Design

February 27, 2017

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# Potential Solutions for Portland, ME's Affordable Housing Crises

## Cont'd

### 5) Example of Portland Residence's Vision of Re-establishing a Neighbor Center in Bayside (cont'd)

After – Bayside Vision



Bayside Vision of City Owned Property  
Parris, Hanover, & Alder Streets / Portland, ME

Aerial / Proposed  
Blue Anchor Design



# Potential Solutions for Portland, ME's Affordable Housing Crises

## Cont'd

### 6) Examples of Inspiration from International Cities Revitalization of Abandoned Facilities.

A) Copenhagen, Denmark -

- <https://www.nytimes.com/2017/02/22/business/denmark-copenhagen-carbon-neutral-carlsberg.html>

# Portland, ME City Government Next Steps Regarding Affordable Housing?

- 1) The affordability covenants and systems are in place. It would be relatively easy for the City to replicate on other infill development (if they have willing developers).
- 2) Work with the City of Portland Housing Committee these Affordable Housing Solutions and work in tandem with the City of Portland Economic Development Committee (EDC) to make it happen.
- 3) City of Portland makes an effort to revise the requirements for the Inclusionary Zoning “Ensure Housing Workforce” Policy.
- 4) City of Portland (EDC) and Housing Committee reach out to the Affordable Housing Developers shown in solution portion of this slide to request a RFP based on the Design Challenge.  
  
- Boston Developer: *Hearth, Inc.*
- 5) City of Portland (EDC) reaches out to the entrepreneurial non-profit called *Housing Partnership Network* to request a RFP based on the Design Challenge.

# Conclusion on Portland, ME Affordable Housing Crises

1. **The affordability covenants and systems are in place. It would be relatively easy for the City to replicate on other infill development (if they have willing developers).**
2. **These solutions should apply to ALL city owned property such as: the 7 West Bayside City Owned properties, parking lots, and the Thames Street gravel parking lot.**
3. **As shown in the Solutions section of this presentation, there are plenty of opportunities for the City of Portland to pursue and focus on affordable housing for the working class and middle class citizens.**
  - **How is it fair that a teacher has to buy her class school supplies but yet can't afford to live in Portland? This is not good for society.**
  - ***Developers are given “breaks” by the City of Portland, why can't the city also give “breaks” to the working/middle class?***
4. **At one time, the city of Portland worked for ALL income levels.. Not just the subsidized, not just the immigrants, and the rich but also the working and middle class. It has been proven time and time again, when the middle class is excluded or reduced, this reduces the vitality of a place.**
5. **It has also been proven time and time again that keeping an emphasis on ensuring affordable housing as well as local businesses thrive and are in neighborhoods, it provides more sustainability for all citizens.**

# Other Issues and Further Implications

## With More People moving into Portland, ME, this will Trigger Additional Issues besides Affordable Housing.....

1. **Retail Rental Space for Local entrepreneurial business are being pushed out of the City of Portland to Westbrook.**
2. **Revive the Portland, ME At One-Time Ordinance that limited the amount of “chain” or box stores in Portland, ME to promote more neighborhood and locally owned stores.**
  - This ordinance was almost immediately killed by the City Councilors in **2009**.  
<http://ilsr.org/wp-content/uploads/files/images/portlandordinancesupport.pdf>  
<http://www.theforecaster.net/task-force-rejects-portland-chain-store-restrictions/>
3. **Parking Congestion Issues...** Don't build parking garages. Force people to car pool, ride bikes, walk, bus, etc... In addition, revoke R6 zone ordinance that does not require any new developments to supply parking or the first 3 units.
4. **Climate Change** – How will the weather affect Portland? Acidification of the Bay affect the fisheries? Storm Surge Flooding of Back Cove?
5. **Greening The City** – City is getting hotter.. We need more trees to remove CO2 from the air and cool the temperature of buildings and asphalt.
6. **Banning Pesticides** – It is getting in everything... For example, Monsanto's Roundup is in the food chain and has been proven to cause cancer.  
<http://www.ecowatch.com/monsanto-ordered-to-pay-46-5-million-in-pcb-lawsuit-in-rare-win-for-pl-1891143419.html>



# Questions?



# Appendix

## Historical View of West Bayside Property from 1914 Richard's Atlas



### Richards Atlas of Portland Maine 1914

#### Adler and Hanover St. Parcel

- 8 Building Lots
- 10 Structures

#### Hanover and Parris St. Parcel

- 24 Building Lots
- 47 Structures

#### Parris and Brattle St. Parcel

- 2 Building Lots
- 3 Structures

#### Kennebec Parcel

- 1 Building Lot
- 2 Structures

Note: Map content provided by Ian Jacob

Google Groups

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## Affordable Housing Ordinance Revisions

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Quincy Hentzel <qhentzel@portlandregion.com>

Jun 22, 2017 2:34 PM

Posted in group: **Planning Board**

To Members of the Portland Planning Board:

On behalf of the Portland Regional Chamber of Commerce, I would like to add our support for the Affordable Housing Ordinance Revisions before you this evening. We all know one of the key challenges facing our city is the shortage of housing. Affordable housing is in even more demand. The increasing cost of housing options in our region, in large part, can be tied to supply and demand – and currently demand is high; supply is low. In an effort to help curb and ultimately reverse this trend, it is critical that our city add new housing units to keep housing costs down over time. The proposed amendments before you are designed to encourage further housing creation, particularly in the city's priority growth areas. The revisions allow for increasing density, dimensional, and height bonuses for affordable housing projects in certain zones. These bonuses should make affordable housing developers more competitive in terms of purchasing sites and securing public funding. By allowing density in the appropriate areas of our city such as along arterials, transportation corridors, and in our bustling downtown, Portland will be taking needed steps to increase our affordable housing supply to support those who choose to make this city their home.

Thank you for the opportunity to weigh in with our support for these proposed affordable housing ordinance revisions.

Sincerely,

Quincy Hentzel

**Quincy H. Hentzel**

**Interim CEO**

Portland Regional Chamber of Commerce

443 Congress St., Portland, ME 04101

Phone: 207-772-2811 ext 231

Fax: 207-772-1179

qhentzel@portlandregion.com

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## Google Groups

**Additional signaturesRe: Comments Division 30 Affordable Housing proposed text amendments.****Zack Barowitz** <zbarowitz@gmail.com>

Jun 20, 2017 4:53 PM

Posted in group: **Planning Board**

Jeff,  
A few others signed on, please see below.  
Thank you,  
Zack

Dear Chair Boepple and Members of the Portland Planning Board,

We congratulate your staff for crafting the Division 30 Affordable Housing proposed text amendments. By creating incentives, these amendments are a great step toward addressing Portland's affordable housing crisis for the development of new, critically needed market rate, workforce and low-income housing.

At the same time, we strongly urge you to broaden the proposed amendments, by expanding the areas of the city where they will apply. This will create a more equitable development environment; result in more housing; and better align with the City's 2017 Comprehensive Plan. We need to encourage future investment and opportunities to grow our tax base, and population, citywide.

Furthermore, we ask that you consider the following recommendations:

1. As drafted, we believe the amendments are designed to address barriers identified by existing developers of affordable housing but are not as future-oriented as they should be and may not provide sufficient incentives to market-rate developers. For example, the 2017 Comprehensive Plan strategies include:

- Building along priority corridors;
- Creating incentives to spur transit-oriented, mixed use development along corridors and in areas that can support high quality transit; and
- Encouraging housing density in and near neighborhood centers, concentrations of services, and transit corridors as a way to support complete neighborhoods.

Incentives for transit-oriented, higher density housing for all incomes should be in place along *all* the major transit or priority corridors. These corridors include Brighton, Washington, Stevens, and Allen Avenues as well as Congress Street. Encouraging new mixed income and mixed use development off the peninsula and along major transit routes will provide economic opportunities and ensure future growth on currently underdeveloped land. We support the inclusion of the areas around Morrill's Corner and Warren Avenue as drafted, as well as the proposed no minimum parking requirement and maximum of one space per unit.

2. We further recommend applying these incentives to the R-6 zone. Population on the peninsula is decreasing. There are many areas in the R-6 that could benefit from density and height incentives that would keep the peninsula a healthy, mixed income area. We need more housing for a mix of incomes to remain a vibrant city center.



3. Although we also support the height and density bonuses as drafted. The height bonuses could even be increased with appropriate design guidelines. Height will be less problematic if the City takes steps to provide context sensitive development; preserve neighborhood scale, and promote sensitive transitions. We urge you to consider design guidelines, such as:

- Eliminating side setbacks where 3-4 story row house style developments yield desired density; and
- Encouraging architectural step-backs to ensure light and air.

4. Furthermore, to insure that families of three or more may have affordable options in projects of mostly market rate studio and one-bedroom units, we strongly recommend that the size (i.e., bedroom count) of workforce and affordable units be determined according to need and not merely commensurate with the rest of the project (with allowances for square footage).

We also suggest adding more clarity in the text to ensure that affordable units will be equal and equivalent to market rate units with regard to size and amenities. Density bonuses should not apply to projects where individual luxury units are disproportionately large - and affordable units are disproportionately small - in terms of total square footage of the project.

5. There appear to be no numerical goals for these incentives over the next 2, 3 or 5 years. The 2017 Comprehensive Plan requires the addition of metrics. We urge you to add a required annual report to track performance to these amendments. In order for the City to know if the incentives are successful it will need to know the number of projects; type of housing (rental, ownership) built; total units; and number of units by affordability level. Measuring and reporting on progress will let us all know whether these changes are having the desired effect or if they will need to be revised sooner rather than later.

6. Finally, it would help both policymakers and citizens, when evaluating these text amendments, to be able to see via a chart the current incomes, by household size, that will qualify for the affordable housing incentives including affordable rental rates and purchase prices and how those figures will be updated over time.

Adopting these amendments in an expanded geographic area would be a solid, albeit modest, step toward addressing Portland's critical need for additional affordable/workforce housing and an overall expansion of our housing stock to help meet the goals of the 2017 Comprehensive Plan.

Thank you for your consideration of these comments.

Sincerely,  
Wendy Cherubini  
Zack Barowitz  
Markos Miller  
Ana Lagunez  
Ian Jacob  
Clifford Tremblay  
Steve Hirshorn  
Joey Brunelle  
Carol Morris  
Damon Yakovleff

Gwynne Williams

Will Watman  
Carrie Watman

--

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Jennifer Munson &lt;jmy@portlandmaine.gov&gt;

## Feedback Request from Planning Board Meeting on Chapter 30 Affordable Housing-6/22/2017

'Karen Snyder' via Planning and Urban Development &lt;planning@portlandmaine.gov&gt;

Fri, Jun 23, 2017 at 1:46 PM

Reply-To: Karen Snyder &lt;karsny@yahoo.com&gt;

To: Jeff Levine &lt;jlevine@portlandmaine.gov&gt;, Planning Board &lt;planningboard@portlandmaine.gov&gt;

Cc: Planning and Urban Development <planning@portlandmaine.gov>, Pa Ag <pagopian1@yahoo.com>, Joey Brunelle <joey.brunelle@gmail.com>, John O'Brien <obrien.john.david@gmail.com>, Steven Biel <stevenjonbiel@gmail.com>, Ian Jacob <iancasperjacob@gmail.com>, Eastbayside Info <info@eastbayside.org>, "Cynthia L. Cochran" <ccochran@maine.rr.com>, Douglas Martica <tica1529@gmail.com>, Barbara Vestal <vestal@chesterandvestal.com>, Belinda Ray <bsr@portlandmaine.gov>, Mary Casale <dirtgirl1@aol.com>, "Maggy W." <mwnola@gmail.com>

Good Afternoon Jeff and Planning Board Members,

I have a couple of requests/comments based on last night's Planning Board meeting regarding the Chapter 30 Affordable Housing Efforts.

1) Several of the public voiced last night that we were not notified of the Planning Department of public meeting held last Thursday (6/15/2017) regarding the Affordable Housing Division 30. Local residents were not either notified or the email notification was sent on the day of the meeting.

Per your comments last night, you said you would hold an additional meeting for the people that were not notified or the ones notified on the day of the meeting.

As such, I am requesting an additional meeting for the public regarding the Chapter 30 Affordable Housing Efforts with sufficient time be given and to use the standard email communication channel that you normally use for all other Planning board meetings and/or notifications.

2) The affordable housing issue in Portland is worse than I thought.

I was quite surprised to hear of the massive number of requests for Housing Vouchers that PHA (Portland Housing Authority) and Avesta reported last night. PHA stated they had over 7,000 and Avesta had 1,600 pending Housing voucher requests. This is a total of 8,600 pending housing voucher request for local residents because they can not afford to live in Portland any longer. This is almost 50% of the total rental units available to rent in Portland that are not affordable for local Portland residents.

3) Because of the extreme amount of housing voucher requests stated last night, while I appreciate the Planning Department is focused on Division 30 Affordable housing ordinance, I believe at the same time the Planning Department needs to make an effort in recommending changes to the current Inclusionary Workforce Housing Ordinance to make it more effective in order to make a dent in this 8,600 pending housing voucher requests.

- To provide a reason for revising the current Inclusionary Workforce Housing Ordinance, I am also requesting an analysis from your department as to how effective the current Inclusionary Workforce Housing Ordinance has so far been by providing the different number of development projects that are suppose to consider the Inclusionary Workforce Housing Ordinance, the number of affordable units created (or proposed) vs the overall total amount of units created (or proposed). Below is an example:

| Project | Overall Total #<br>Units<br>Constructed or<br>Proposed | # of Units<br>Affordable<br>Constructed or<br>Proposed |
|---------|--------------------------------------------------------|--------------------------------------------------------|
|         |                                                        |                                                        |

|                  |    |   |
|------------------|----|---|
| 123 Cookie Way   | 20 | 1 |
| 456 Monarch Lane | 15 | 0 |
| 678 Bee Street   | 19 | 1 |

Even though you have not provided the above requested results yet from what I have currently seen in several proposed developments with the current Inclusionary Workforce Housing ordinance, I am estimating that the current ordinance is probably not that effective.

-For Portland, ME, to help reduce the 8,600 pending housing voucher requests, I would recommend increasing the current requirement for affordable housing from 10% to possibly 25-33% with no "out" clause. It will still be profitable for the developers.

-One example of this being the case, is that the 155 Sheridan developer still thinks it is profitable to build 19 condos instead of the 36 condos it originally was planned to build prior to the implementation of the new Ft. Sumner Park overlay ordinance. That is almost a 50% a reduction in condos and the developer still wants to build.

-Additionally, San Francisco Planning department recently changed their Inclusionary Workforce Housing Ordinance requiring all new development to have 18% affordable with no "out" clause. Developers are still building in San Francisco.

4) I am also requesting feedback to why the 7 West Bay side city owned properties are not considered for affordable housing opportunities? The city all ready owns this land.

-During PHA (Portland Housing Authority) Jay Waterman's presentation last night, it appears that the focused -on area for concentrated affordable housing again is only centered on Franklin arterial creating a highly concentrated high rise wind tunnel on Franklin arterial.

Other parts of the city need to also be considered for Affordable Housing such as the traffic corridor nodes and the 7 West Bay side properties that the city currently owns but wants to sell.

5) I think it was a mix reaction with the Planning Board but I truly believe that the affordable housing square footage should be the same as the non-affordable units. Why? Because more than likely the developers will ensure that if they do provide Affordable housing units, it will be dramatically smaller in foot print to the other units offered when in fact it needs to be larger with more bedrooms to promote more economic diversity such as a lower middle class family able to live there or restaurant workers sharing the unit so they can afford to live in Portland. Who would want to live in a shoe box closet size affordable unit if making a teacher's salary?

6) There were several additional public comments that R3 and R5 needs to be included in the Chapter 30 affordable housing and not just focused on Franklin Arterial in addition to also focus on the other traffic corridors that the public bus system covers.

In conclusion, I hope the Portland Planning Department incorporates last night's public comments when implementing or revising these affordable housing ordinances and to also consider the above suggestions. The recommendations for Chapter 30 Affordable Housing requirements need to be streamlined in conjunction with revising the Inclusionary Workforce Housing Ordinance because currently, I believe the current Inclusionary Workforce Housing ordinance is not that effective.

By streamlining and revising these Portland's affordable housing policies, it should reduce the 8,600 Portland Housing Authority/Avesta pending housing voucher requests made by local Portland residents this year.

Regards,  
Karen Snyder  
Munjoy Hill Resident



### **Chair Boepple and Planning Board members – comment on proposed changes to PRUDs**

Planned Residential Unit Developments (PRUDs) by design have been very successful in accomplishing the goal of “promoting orderly development of low and moderate-income development” and “to promote an adequate supply of affordable housing” as is the goal for the proposed changes being suggested.

The city when creating PRUDs for off-peninsula R-3, R-5 and R-5A zones had the wisdom and foresight to recognize that there were opportunities for more housing on larger parcels that “shall respond to the physical qualities of a site and complement the scale, character and style of surrounding neighborhood”. The current standards for PRUDs have served the city and zoned neighborhoods well by allowing for higher density projects which meet the established purpose of those zones “to provide appropriate areas of the city for medium density development characterized by single-family and low-density multi-family dwellings on individual lots; to ensure the stability of established medium-density neighborhood by controlling residential conversions; and to provide for planned residential unit developments on substantially sized lots”.

There are wonderful examples of PRUDs such as Eben Hill off Presumpscot Street and others.

The **proposed changes** are not in keeping with the stated purpose of these off-peninsula neighborhood zones nor is it in keeping with the stated purpose of PRUDs. Rather it takes on the **characteristics of an R-6 and R-6A** compact lot development because of the dramatic reductions in density, height, setback and open space requirements. And there is an obvious omission of design standards related to bonuses.

*It will impact very much every neighborhood off-peninsula! There has to be integrity to our zoning, and its stated purpose. Change is inevitable, however, unintended consequences must be taken into consideration in order to stem the rising frustration of residents who bought homes in neighborhoods with an expectation that any future development would complement existing established patterns of development.*

And finally, if there are projects requesting dimensional bonuses for a PRUD, the rules should not be changed to accommodate such developments rather existing rules should be followed with scrutiny by planning and the Planning Board as to appropriateness for the physical site and compatibility in size and scale to neighboring properties as is the purpose of zoning and the established regulatory process.

Respectfully

Cheryl Leeman  
37 Savoy Street  
Portland, ME 04103  
cal4161@yahoo.com

**Current standards for PRUDs:**

- 3,000 sf net area per unit
- maximum length of building 140 ft
- building setback of 25 ft for building length of 100 ft or less  
or 35 ft for building length greater than 100 ft
- 300 sf for open space per unit
- all land owned in common (contiguous land area)

**Proposed changes to PRUDs:**

- 1,500 sf net area per unit
- NO maximum # of units or maximum length of buildings
- minimum setbacks reduced 10 ft
- 200 sf of open space per unit
- provision for 'contiguous' land area removed
- option to increase total permitted units by 25%



# Examples — Existing PRUDs



## Proposed





Jennifer Munson &lt;jmy@portlandmaine.gov&gt;

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**Fwd: PRUD Front Street Project**

1 message

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**Tuck O'Brien** <sgo@portlandmaine.gov>  
To: Jennifer Munson <jmy@portlandmaine.gov>

Tue, Jun 27, 2017 at 8:21 PM

Well said!

----- Forwarded message -----

From: Tuck O'Brien <sgo@portlandmaine.gov>  
Date: Tue, Jun 27, 2017 at 8:21 PM  
Subject: Re: PRUD Front Street Project  
To: Donna Warren <dwarren@maine.rr.com>, Justin Costa <jcosta@portlandmaine.gov>, <planningboard@portlandmaine.gov>

Well said!

On Tue, Jun 27, 2017 at 8:15 PM Donna Warren &lt;dwarren@maine.rr.com&gt; wrote:

To whom it may concern:

After the last meeting at the Prescumpscot School we were greatly disappointed that no matter how many concerns were expressed by us, and many others in the neighborhood, it appeared that "the dye was already cast" as relates to the increased population, parking issues, much more traffic, and the proposed modern design of the new buildings in an old established neighborhood such as ours. As we routinely travel on Front St., it has been so disturbing this year to see the total lack of maintenance of the grounds, with the grass having turned to a hay field before it was mowed, etc. We are greatly skeptical about the city doing a better job in the future with many more people living there, given the history. It appears that our hopes that there would be transparency by the City of Portland in the planning process, was in vain. Is it unrealistic to expect that reasonable consideration be given with regard to the input of the surrounding property owners, especially with respect to public safety in our congested neighborhood?

My husband and I, now retired senior citizens, are home owners one block from the present Front Street project, having purchased the property at 904 Baxter Blvd. over 25 years ago. Both dedicated working people, we bought the very small, greatly neglected and long time uninhabited abode, and poured our hard earned money into an addition and complete rehabilitation of the dwelling. Living here now since 1993, and continuing to work very hard, we both looked forward to retirement for many years to come, in our beloved home. More and more these days with the upcoming proposed changes in our very peaceful, small community of neighbors, and only retirement income, we wonder along with several others, if this is really where we want to be.



Please, won't you take our concerns, as mentioned above, into **SERIOUS** consideration and make the necessary corrections to insure the continued security and safety of ours, and many other property owners who will be greatly effected by your decisions.

We greatly appreciate any and all efforts on our behalf.

Burt and Donna Warren

Sincerely,

--  
Tuck O'Brien  
City Planning Director  
Department of Planning and Urban Development  
Office: [\(207\) 874-8724](tel:(207)874-8724)  
Cell: [\(207\) 553-0255](tel:(207)553-0255)

--  
Tuck O'Brien  
City Planning Director  
Department of Planning and Urban Development  
Office: [\(207\) 874-8724](tel:(207)874-8724)  
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## Google Groups

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Affordable Housing - Div 30 Percentage Affordable: Units or Square footage

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Zack Barowitz &lt;zbarowitz@gmail.com&gt;

Jul 7, 2017 6:06 AM

Posted in group: **Planning Board**

Chair Boepple, Member of the Planning Board, Honorable Mayor and Councilors:

I work as at a small residential property management firm where I am involved in all aspects of rental and condominium management. I field multiple calls a day for people looking for housing and routinely provide information for market surveys.

In reviewing the Division 30 affordable housing amendment, I was struck by some ambiguous and what appears to less then fully formed aspects of the document; especially those relating to the concept of "percentage affordable" which in the document refers to as the number of *units* - as opposed to percentage of square footage. It is my conclusion that the Planning Board strongly consider incorporating percentage square footage into the requirements.

This is manifest in the following ways:

- Firstly, the density bonus given for percentage affordable is somewhat ambiguous. Projects with 10% affordable get a small 10% density bonus, whereas projects that are 50% affordable get a 50% bonus. This may seem fair and equitable until one considers that the former example requires a minimum project size of ten units (to meet the 10% threshold) while the latter requires only two units. In addition to the affordable units, the table also calls for workforce units which makes the whole section rather confusing.

- Secondly, in not requiring a unit size minimum, an unscrupulous developer could take advantage of the density bonus and then turn around and build units so small that they would be affordable by virtue of their size, but otherwise market rate. For example, if there is a site where the current max square feet is 2,000 sq', a developer could take advantage of the bonus and a 3,200 sq' luxury unit and then tack on a tiny 180 sq' efficiency unit, thus fulfilling the 50% affordable requirement. In such an instance, the equitable approach is to make the units of equivalent size.

- Thirdly, it is not enough that affordable units be of (at least) equivalent size to the market rate units in the project; because such an approach would ignore the variations in demand across market sectors. For example, if the market is strong for projects comprised of "luxury" studio and one bedroom units, developers will (and are) catering to this segment for their multi-unit projects. However, it may be the case that affordable demand is highest for 2-or- 3- bedrooms affordable units; in which case the developer would not be able to address the affordable housing shortage in the segment (because a 3-bedroom unit cost more to build than a 1-bedroom ) even though the affordable units are cheaper to build on a square foot basis (due to the lack of additional kitchens and bathrooms - i.e., a 3-bedroom cost less to build than three studio apartments ). Such is the case in NYC where housing advocates clamor for multi-bedroom affordable units while the law prohibits it on the basis that the all units must be equivalent. The lack of affordable 3-bedroom units may be seen most dramatically in the loss of student population and loss of population to neighboring towns. Again, a percentage square footage allotment would better address this glitch.

Thank you for your attention to these concerns.

Zack Barowitz  
Huntress Street, Portland

--

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917-696-5649  
ZacharyBarowitz.com

To: Portland Planning Board Members via Barbara Barhydt  
From Cynthia Cochran, Vice President/Treasurer, East Bayside Neighborhood Organization  
Date: June 22, 2017  
Re: Proposed Amendments to Division 30 to support affordable housing in Portland

Dear Planning Board Members: Elizabeth Boepple, Sean Dundon, David Eaton, Brandon Mazer, Carol Morrisette, Maggie Stanley, and Lisa Whited,

I am greatly appreciative and supportive of the planning department's efforts to amend our City's zoning policies to provide greater incentives for development of affordable housing units in Portland. However, I am not fully supportive of the current proposed amendments for reasons I will try convey below.

**The proposal is both too restrained, and, at the same time too broad in relation to the comprehensive plan goal of increasing density along the City's transit corridors.** This results from the methodology applied, of selecting existing zones, mostly commercial/business zones, with two exceptions (i.e. the R-7 and R-P zones), one of them more notable than the other.

**It is too restrained** because the zones selected do not exist along the vast majority of the land areas defined in the City's comprehensive plan as priority transit corridors. Attachment H, the map showing the eligible zones overlaid by the comprehensive plans priority nodes and corridors, illustrates this fact quite well. The only transit corridor significantly impacted by this proposal, off-peninsula, is Forest Avenue. Even there, the incentives have been scaled back, since the May 9, 2017 planning board workshop, by the newly proposed 15 feet limit to the height bonus for the B-1 zone, which represents more than 50% of the zoning along this transit route. This height limit has also been newly applied to the R-P zone, which in combination with the B-1 zone height cap, effectively reduces these incentives for, almost all, off-peninsula affected areas. Since the B-1, B-1b, B-2, B-2b, and B-2c zones already include a lower density maximum for off peninsula parcels, the impact of this proposal off peninsula is quite limited, relative to its impact on the peninsula. Therefore, this proposal is not strongly supportive of the comprehensive plan's transportation strategy to invest in public transit: "Create incentives to spur transit-oriented, mixed use development along corridors and in areas that can support high quality transit service?" (comp plan page 76). Throughout the development of the City's new comprehensive plan, there was such a large consensus of public support for the "increase density along transit corridors" policy statement that I simply do not understand why this proposed amendment cannot be bolder in the application of these affordable housing incentives to properties located along the off-peninsula portions of the City's major transit corridors.

**However, this proposal is also overly broad** because some areas included within the selected zones are not located along the priority transit corridors, and would allow for heights that are not "contextually-appropriate" (comp plan goal, page 50). Examples in the East Bayside neighborhood include: the B-5 zone located along Anderson Street, with a single parcel on Fox

Street, as well as the isolated, single R-7 parcels discussed in Attachment E: R-7 Zones Memo. Also, in light of the 15 foot height-cap consideration given to B-1 and R-P zones, it seems pointedly insensitive to R-6 zone residents of Hammond, Winthrop, Monroe, Cleeve, and the eastern end of Oxford Street to allow the full 25 feet bonus to the B-2b zone along the western side of Washington Avenue. With both this, and the B-5 zone previously described, the R-6 zone residents of Hammond Street could potentially find their street-scape environment of, mostly, single-family, 2-3 unit housing structures sandwiched between 75 foot buildings on Anderson Street and Washington Avenue. It's important to note here that over the past few years, as parcels change hands on Hammond, Fox, and Winthrop Streets in East Bayside, the new owners are choosing to either renovate the current housing stock or to tear down and rebuild single family homes. This is quite likely not just a short-term/ personal use decision, but a wise, long-term investment decision that acknowledges the diminishing stock of single-family homes on the peninsula.

It is also necessary to address the inclusion of the R-7 zone in this proposal. It is my assessment that the R-7 zone has been included primarily to support the Portland Housing Authorities' plans for a 70 foot or taller project, located at 58 Boyd Street, along Franklin Street, as well as, the future development of their other R-7 zoned properties nearby. These PHA-owned properties may be the only R-7 parcels that make sense to include in this proposal because they are 1) located along a major transit route; 2) located along an outer edge of a residential neighborhood; 3) already owned by an affordable housing developer; and 4) bordered by other PHA owned properties. However, it is my very strong opinion, based on intentions, goals, and strategies contained in the City's comprehensive plan, as well as my personal experience of being a resident of East Bayside for more than 17 years, that this proposal is not the best, or even the appropriate vehicle for implementing these incentives for these R-7 properties. Please allow me to explain why.

**First**, it is important that all current planning board members know that the current text amendment proposal is the 2<sup>nd</sup> time, in roughly 3 years, that planning department staff has formulated a broad zoning policy change around a Portland Housing Authority project in East Bayside. In the spring of 2014, the planning department proposed to rezone the entire R-6 zone in East Bayside to R-7, in connection with PHA's request for greater zoning flexibility for its Bayside Anchor project, located at 81 East Oxford Street. After much push-back from residents, letters to, and coverage by, the Portland Press Herald, and support from other neighborhood association leaders, this overly broad rezoning effort was scaled back to include only those contiguous parcels along Franklin, Boyd, and Mayo Streets that you see outlined on the map in Attachment E: R-7 Zones Memo. This past effort created much tension between East Bayside residents and our valued neighbor, and largest East Bayside residential property owner, the Portland Housing Authority.

It is also important to note that the East Bayside Neighborhood Organization (EBNO) was, and is, completely supportive of the zoning flexibility sought by PHA for its Bayside Anchor project, and for its current 58 Boyd Street project. Over a year ago, on March 15, 2016, Mark Adelson and Jay Waterman presented their 58 Boyd Street project to EBNO board and general



members, and provided a very brief introduction to their overall strategic visioning process for their other properties. However, they did not provide to EBNO board, or general members, at that meeting, nor at any of numerous subsequent meetings, the entire “Strategic Vision Plan of Major Properties for the Portland Housing Authority” report, dated December 2015. I first located this document on the City’s [“Affordable Housing Development” web page](#) after Jeff Levine directed planning board members to look at these web pages for answers to some questions that arose at the May 9th planning board workshop about this housing policy text amendment.

On page 39 of this report (attached), there is an illustration of PHA’s plans for adding over 500 new units to PHA’s East Bayside properties. A reader of this report *should* be able to assume that these unit estimates are based upon the zoning ordinance requirements in place at the time of the issuance of the report (although that does not seem to be the case for the 58 Boyd Street property), and also *should* be able to assume that if this text amendment is approved, as currently proposed, these unit estimates pertaining to the R-7 parcels will increase accordingly. Please know that I am not, necessarily, expressing opposition to applying these incentives to these specific PHA properties. However, I am expressing great concerns about the lack of communication and public engagement, both from the City planning department staff, and from the Portland Housing Authority staff, with East Bayside residents, and their neighborhood organization, in relation to plans for this text amendment and the impact of PHA’s strategic vision for its East Bayside properties. So, once again, policy proposal decisions by planning department staff have created an unnecessary, and unproductive, tension between important East Bayside stakeholders.

**Second**, these decisions do not support, but instead, undermine, the following comprehensive plan strategies:

**Housing Strategy 6: Explore New Tools (page 52)**

- Develop additional resources for neighborhood associations and citizen planners, such as neighborhood planning toolkits and processes to enhance communication between neighborhood groups and City staff, to enrich community input.

**Housing Strategy 9: Adapt Affordable Housing (page 53)**

- Assess the capacity of existing affordable housing developments, many of which were built over four decades ago, to adapt to current best practices, by improving energy efficiency and physical and social connections to surrounding neighborhoods.
- Pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods.

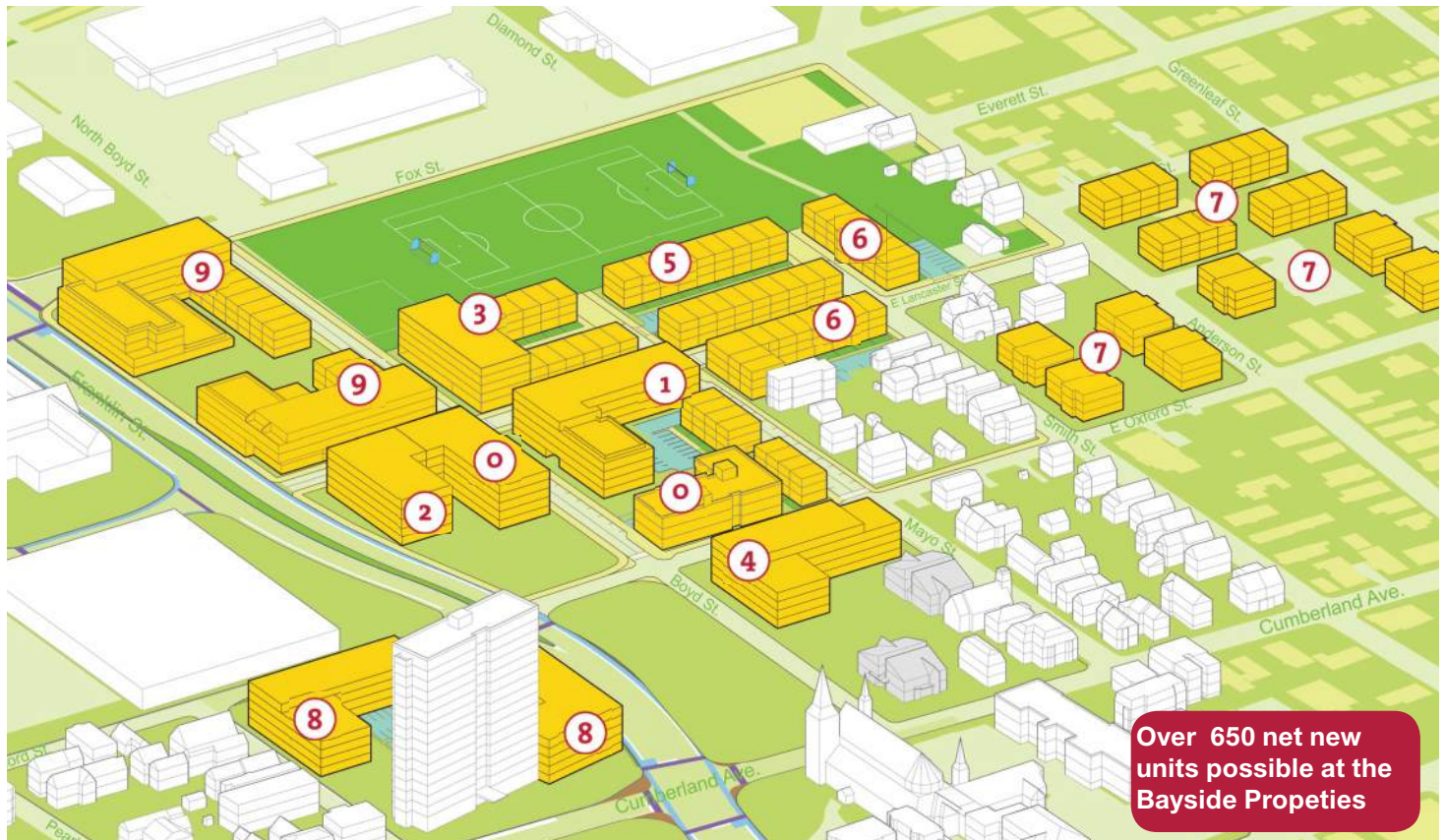
The East Bayside neighborhood is identified as a priority node for **EVALUATION** in the comprehensive plan. This evaluation would be more positive and productive if all stakeholders were engaged and involved in related planning proposals. In particular, in relation to the matter at hand: instead of rushing this proposed text amendment through, and quickly, out of the Housing Committee, and then scheduling the planning board hearing for next Tuesday, only

three workdays from now, and the City Council workshop on July 10, along with an amazingly full agenda, it would be more appropriate to actually conduct “robust public outreach” about this proposal, as the Housing Committee instructed.

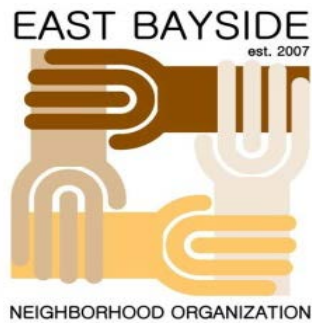
In summary, here are my requests:

- That the planning board public hearing and the City Council workshop on this proposal be rescheduled to allow time for further public outreach and education about this proposal and its impacts on City neighborhoods;
- That the planning board and staff consider possibilities and methods for extending these incentives to more off-peninsula properties, located along the major transit corridors, to better support the City’s comprehensive plan goals related to public transit.
- That the planning board and staff consider fine-tuning the affected, on-peninsula areas within the selected zones, to give more appropriate consideration and equitable sensitivity to the possible impacts on adjacent residential zone property owners; such as eliminating specific areas and extending the 156 foot height cap to the B-2 and B-2b zones, at least on-peninsula
- That communication, public outreach, and neighborhood planning be elevated to priority status, and policy be developed to support this going forward. Please recall the comprehensive plan comments submitted by EBNO’s board members related to this communication issue (see attached).

# Conceptual Build out



- |                                                                                                                                                                                                                |                                                                                                                                                                                 |                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <p>0 Bayside Anchor, under construction<br/>2016 - 45 units</p> <p>0 58 Boyd, under development<br/>2017 - 48 units</p> <p>1 55 Boyd St.<br/>2018 - 55 units</p> <p>2 58 Boyd, Phase 2<br/>2019 - 48 units</p> | <p>3 "Boyd + Lancaster"<br/>2021 - 60 units</p> <p>4 "Mayo + Oxford"<br/>2022 - 50 units</p> <p>5 Mayo + Lancaster<br/>2023 - 54 units</p> <p>6 56 Mayo<br/>2024 - 30 units</p> | <p>7 Anderson Townhomes<br/>2025 - 111 units</p> <p>8 Franklin Mid-rise<br/>160 units</p> <p>9 "Franklin + Fox"<br/>121 units</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|



***Mission:*** EBNO works in East Bayside to create and maintain a safe neighborhood; help all community members to thrive; ensure East Bayside is represented in city matters; and create a sense of community while preserving and respecting diversity.

To: Portland's Mayor and City Councilors  
CC: Portland's City Manager and Comprehensive Plan Project Team  
RE: City Council workshop review of proposed comprehensive plan  
Date: Monday, May 22, 2017

At the Monday, May 22<sup>nd</sup> workshop, City Council will review the City's comprehensive plan document as recommended by the City's Planning Board. This plan has been a challenging, long-term project of the City's Department of Planning and Urban Development. We commend the Department for their efforts, and extend our deep appreciation to the members of the project team. They brought together a beautifully designed, well-written overview with detailed background information, and implementation time-lines. The combination resulted in a plan, which strives to integrate aspirational vision with sector-focused policy guides. As such, it will function as an invaluable resource in support of Portland's planning and policy-making, as well as, an uplifting expression of the City's vision of itself, for both current and future citizens.

However, we believe there is still one extremely important policy area missing; one that impacts and underlies all other policy areas. "Communications," both internal and external, are likely to determine the success or failure of the City's attempts to implement its visions, goals, and objectives. The lack of a clear communications policy, which can be known and relied upon by City stakeholders, contributes to a climate of mistrust, and increases the possibility that processes, undertaken in good faith, will fail or be misunderstood.

From previous communications, the EBNO board understands that the project team and Planning Board members believe that various statements related to Communications, which are scattered throughout the plan, are sufficient (see attached list).

We strongly disagree with that assessment. We most certainly appreciate these statements that describe the City's recognition of the value of open government, transparency, and public engagement, and the City's aspirations towards these goals. However, these statements are dispersed throughout the document, always in the context of other policy areas. They do not demonstrate the level of commitment, planned investment, or contextual information as do the policy guides.



In specific, these statements **do not provide:**

- A “snapshot” summary of the City’s historic communications policies and information infrastructure
- Information about recent and ongoing initiatives
- Identified goals, future strategies, or an implementation time-line for those strategies.

We believe that the absence of a Communications policy guide could be interpreted as an absence of genuine commitment to the above-mentioned values.

In summary, we believe that clearly defined, publicly understood communications policies are integral and essential to furthering the City’s vision and goals. As a group, the EBNO Board urges you to strongly consider the inclusion of a “Communications” policy guide in this plan.

Thank you for consideration of our comments and concerns.

East Bayside Neighborhood Organization Board:

Ellen Bailey, President

Cynthia Cochran, Vice-President/Treasurer

Mark Noyes, Secretary

Alex Lehn

Kathleen McKeon

Christian Prasch

Toby Rzepka

Edie Woodward

## Comprehensive Plan Statements (Provided by Planning Staff)

### Re: Communications, Public Engagement, Transparency and Open Governance

Diverse forums for community engagement will remain essential to a strong civil society. (Vision Statement, p. 6)

We believe a key component of security is a transparent and accessible government. (Vision Statement, p. 6)

Because there is no one technique that engages all schedules, strengths, interests or needs, continued engagement, varied in methods and venues, that seeks to include as diverse a cross section of the community as possible, is essential to carry out the vision of this plan. Robust community engagement with neighborhood organizations, stakeholder groups, and the entire community is integral to implementation of the plan. (Community Engagement, p. 10)

New neighborhood plans should seek to advance the goals of Portland's Plan as specifically tailored to the context and unique qualities of the neighborhood they pertain to. The City will continue to engage in neighborhood planning and communication, as well as develop additional resources, tools and processes to enable citizen planners, neighborhood organizations, and coalitions to contribute to or develop appropriate plans. (Putting Portland's Plan to Work, p. 13)

Develop additional resources for neighborhood associations and citizen planners, such as neighborhood planning toolkits and processes to enhance communication between neighborhood groups and City staff, to enrich community input. (Housing, p. 52)

Engage the community in bringing arts and culture to the open space network. (Recreation & Open Space, p. 59)

Ensure transparency and access to City services and facilities for all residents. (Facilities & Services, p. 65)

Operate City facilities and services in an efficient and effective manner that is responsive to all segments of the community. (Facilities & Services, p. 65)

Provide services that integrate new residents into civic and community life. (Facilities & Services, p. 65)

Strengthen protocols for translation and interpretation services. (Facilities & Services, p. 65)

67 Ray Street  
Portland, Maine  
04103

July 7, 2017

Dear Chair Boepple and Members of the Portland Planning Board,

As I understand it, the Housing Committee and the Council are considering increasing housing density and affordability along the Forest Avenue transit corridor to address elements of the city's Comprehensive Plan. However, there is clearly so much potential—and need—for intelligently designed and thoughtfully implemented mixed-use development in *all* major transit corridors; **it is my hope the Council will vote in favor of the changes to the proposed Division 30 amendments.**

I write as a Portland public high school teacher and a resident of the area northeast of Washington Avenue between East and North Deering. Tucked away in this stretch of several blocks are small single family homes, early 20th century triple deckers, the 150 affordable housing units managed by PHA called Washington Gardens and the Tamarlane development, and the 50 units comprising the Front Street development. Between Veranda Street and the end of Washington where it intersects Allen Ave. there is only a smattering of businesses on Washington serving this diverse community—most near the intersections of Veranda, Ocean, and Allen avenues. Aside from Anania's and Botto's, none of these businesses offers food or other services that address one's daily needs.

Clearly, Washington Avenue is among the transit corridors that could benefit from the proposed amendments to Div 30, significantly improving our quality of life while simultaneously providing much needed housing options for both workforce and low-income renters. The proposed changes in setback limitations and density incentives make sense, if applied with sensitivity to each neighborhood's needs.

The creation of more affordable and mixed-use development along Washington Ave and other Portland transit corridors off the peninsula such as Brighton, Warren and Stevens Avenues would allow locally owned businesses to thrive, provide services where they are needed, and counteract the exodus of Portland taxpayers to Windham, Westbrook, Gorham, and South Portland where affordable housing is currently much more accessible.

Increased mixed-use development along these transit corridors will necessarily lead to improvements in public transit; this would have the twin advantages of reducing the number of commuters from outside the city while broadening our tax base.

Portland is struggling to define itself as luxury condos and expensive eateries alter the tenor of the city and change our demographics. Broadening the scope of the Div 30 amendments as proposed will help maintain Portland's diversity while also encouraging the creation of small, locally owned businesses, keeping Portlanders, like myself, in Portland. Please vote to adopt the proposed changes to the Div 30 amendments.

Respectfully,  
Sarah Shmitt





Monday, July 10, 2017

Chair Boepple and Members of the Planning Board  
City of Portland  
389 Congress Street  
Portland, ME 04101

Re: Proposed Text Amendments to Division 30. *Affordable Housing*

Greater Portland Landmarks urges the Board to approve the proposed Division 30 Affordable Housing text amendments including the added maximum structure height of 50 feet within 750 feet of the Portland Observatory. The Observatory is a National Historic Landmark and its significance is derived from the long distance views from its lantern deck.

As we testified in June, expanding the height to 60-feet in the B1 Zone, with a potential for rooftop projections of another 9-12 feet would potentially allow for buildings higher than the lantern deck on the Observatory. In addition, some of the parcels within the B1 Zone are uphill from the Observatory and new buildings could potentially be as high or higher than the Observatory's overall height. This additional height would have an adverse effect on Portland's signature landmark. We thank the staff for responding to our comments and we encourage the board to approve their proposed change.

Greater Portland Landmarks supports the proposed text amendments in all other zones proposed in the text amendments. As stated in Deb Andrews' memo of June 8<sup>th</sup>, 2017 the only historic district that would be impacted is a section of the Congress Street Historic District. The Congress Street Historic District is characterized by a variety of building heights and masses. Because of this variety, new construction utilizing the proposed height incentives would have a minimal visual impact on the character of the historic district.

Thank you for considering our views.

Julie Ann Larry  
Director of Advocacy



# Memorandum

## Planning and Urban Development Department

### Planning Division

**To:** Chair Boepple and Members of the Portland Planning Board

**From:** Jean Fraser, Planner

**Date:** July 7<sup>th</sup> 2017

**Re:** **July 11<sup>th</sup> 2017 Planning Board Workshop**  
Level III Site Plan and Subdivision:  
45 unit residential development, 218 Washington Avenue (#2016-280)  
218-220 Washington Avenue LLC, Applicant

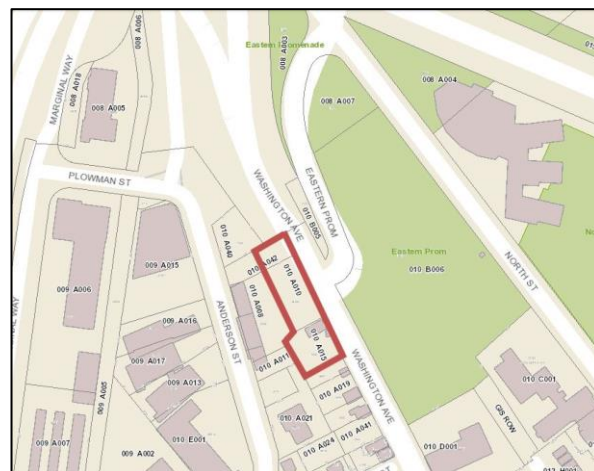
#### I. INTRODUCTION

This is the second Workshop to discuss a project submitted by Sebago Technics, on behalf of 218-220 Washington Avenue LLC, for a 4 story building of 45 dwelling units on Washington Avenue below the East End School. The project is located on a steeply sloping site that overlooks Back Cove; and is located in the B1b zone and within 100 feet of the Eastern Promenade Historic District.

The 45 dwellings are proposed as condo units, of which 22 are one-bedroom and 23 are two-bedroom units. The proposal is also subject to the Inclusionary Zoning (IZ) ordinance and a separate conditional use application confirming the number and location of workforce housing units to be provided is included at [Attachment W](#). The application confirms that a total of 5 workforce units will be provided: three 1-bed units and two 2-bed units located on the lower three floors.

This Workshop is suggested to focus on three issues that were raised at the first Workshop on May 9, 2017:

- Does the project meet the “Scenic Beauty” Standard in the Subdivision Ordinance?
- What landscaping, if any, is required in the negative easement area in order to meet the Subdivision and/or Site Plan standards?
- Constructability given the slopes and utility requirements?



This Workshop was noticed to 94 neighbors and interested parties, and the public notice appeared in the *Portland Press-Herald* on July 3<sup>rd</sup> and 4<sup>th</sup>, 2017. The applicant held a Neighborhood Meeting on January 4<sup>th</sup>, 2017 and the notes are included in [Attachment U](#). At the previous Workshop the Planning Division had received two letters from the attorney acting for the abutter at 202 Washington ([PC 1 and 2](#)) objecting to the earlier plans. The plans have now been revised. Also at the previous Workshop there was one further comment (PC3) raising concerns about the design and scale of the building, and a fourth comment (PC4) suggesting a different approach to the shared bike/pedestrian path along the frontage. This latter suggestion has been the basis of the staff recommendation for the ROW design in [Att. 5](#).

Applicant: 218-220 Washington Avenue LLC (represented by Maietta)  
Agent and Engineer: Sebago Technics (Will Conway)  
Architect: Archetype (Bill Hopkins)

Required reviews and requested waivers (formal waiver requests regarding the location of the driveway will need to form part of the final submissions):

| <b>Applicant's Proposal</b>          | <b>Applicable Standards</b>                       |
|--------------------------------------|---------------------------------------------------|
| New structure of 45 dwelling units   | Subdivision Review                                |
| Multifamily building of 81,200 sq ft | Level III Site Plan Review and B-1b Design Review |
| New structure of 45 dwelling units   | Inclusionary Zoning Section 14-484                |

## II. PROJECT DATA

| <b>SUBJECT</b>                        | <b>DATA</b>                                     |
|---------------------------------------|-------------------------------------------------|
| <b>Total area of the site</b>         | 28,382 sq ft                                    |
| <b>Total Disturbed Area</b>           | 22,532 sq ft                                    |
| <b>Existing Zoning</b>                | B1b                                             |
| <b>Existing Use</b>                   | Small residential building and otherwise vacant |
| <b>Proposed Use</b>                   | Residential; 45 condo units                     |
| <b>Impervious Surface Area</b>        |                                                 |
| --Existing                            | 2,375 sq ft                                     |
| --Proposed                            | 22,532 sq ft                                    |
| --Net Change                          | 20,157 sq ft                                    |
| <b>Building Footprint</b>             |                                                 |
| --Existing                            | 1,100 sq ft                                     |
| --Proposed                            | 13,751 sq ft                                    |
| --Net Change                          | 12,651 sq ft                                    |
| <b>Building Floor Area</b>            |                                                 |
| --Existing                            | 2,200 sq ft                                     |
| --Proposed                            | 69,459 sq ft                                    |
| -Net Change                           | 67,259 sq ft                                    |
| <b>Proposed Bedroom Mix</b>           |                                                 |
| -Efficiency Units                     | 0                                               |
| One-Bedroom Units                     | 22                                              |
| Two-Bedroom Units                     | 23                                              |
| Three-Bedroom Units                   | 0                                               |
| <b>Parking Spaces</b>                 | 45 under building (3 existing)                  |
| <b>Bicycle parking Spaces</b>         | 18 (none existing)                              |
| <b>Estimated Cost of the project:</b> | \$5,850,000                                     |

## III. EXISTING CONDITIONS

The development site is made up of three parcels previously in different ownerships, including one parcel that contains a single family home that will be demolished as part of the project [see right].

This section of Washington Avenue abuts the IL-b zone that runs along Anderson Street, to the west and below the site. To the north is land owned by the MDOT as part of the I295 buffer; at this location the buffer is wide so that the land may not be permanently needed for I295 purposes.



To the east is the intersection of the Washington Avenue slip road connecting to I295, and the Eastern Prom which winds down from the east End School and Back Cove overlook. Only a small part of the open area to the east is part of the historic landscape and the rest is parkland. To the south is a single family residential property.



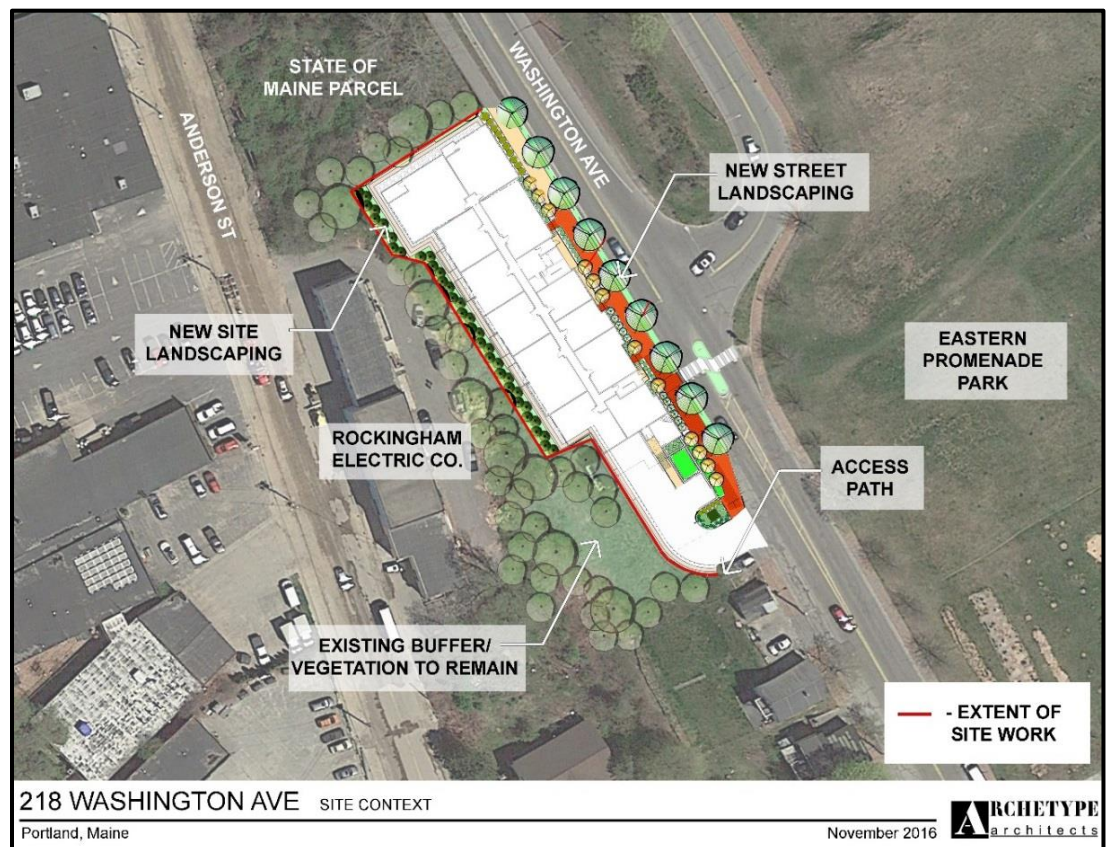
The site contains some mature vegetation on the northern half, but from the house (to be demolished) to the rear and south is mainly scrub and invasive species.



*Building to be demolished is at right of this photo*

The site includes a 20 foot wide section of relatively flat area nearest to Washington Avenue and then drops steeply by about 25 feet to the rear property line (see the Boundary Survey in [Plan 2](#)). This presents constraints on the development and construction techniques, which are discussed in greater detail as part of the review.

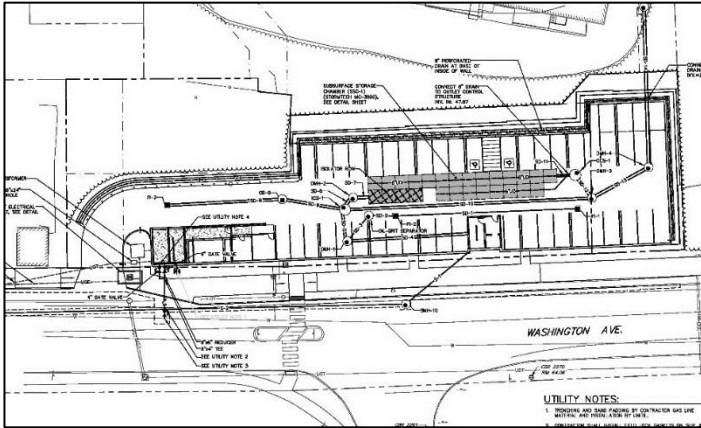
The site, along with other properties along Washington Avenue, benefits from long views over Back Cove. The applicants have submitted the following Context Plan ([Plan P11](#)):



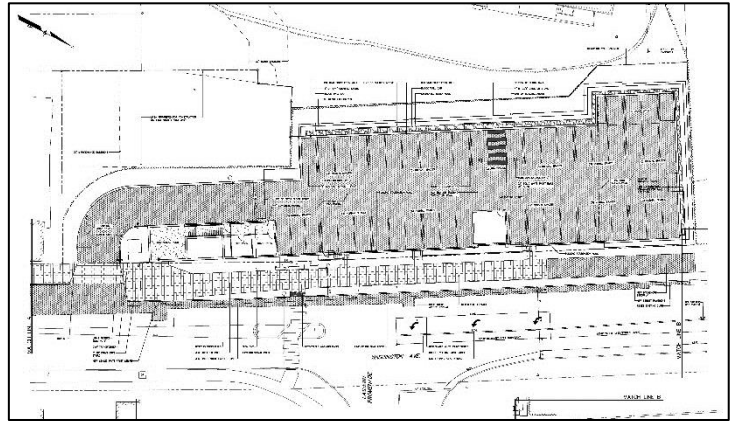


#### IV. PROPOSED DEVELOPMENT

The proposals have been revised since the May PB Workshop to move the retaining wall (around the drive access) nearer to Washington Avenue so it can be lower and also be set back from the negative easement area. This allows for buffer/screen planting all along the face of the wall - see revised plans and renderings in the plan set.



*As presented to May 9 PB Workshop*



*Submitted for July 11 PB Workshop*

The proposals have also been revised to address Planning Board comments regarding the roofline and mechanicals:



*As presented to May 9 PB Workshop*



*Submitted for July 11 PB Workshop*

The Floor Plans have also been submitted along with a total of 11 renderings illustrating how the building would appear from both near and distant views.

## V. STAFF REVIEW

### A. RIGHT, TITLE AND INTEREST (repeated from the May PB memo)

The applicant has submitted the deeds in respect of to the northern part of the site, and provided a Purchase and Sale Agreement for the parcel that makes up the southern part of the site (Attachment B). In addition, this property benefits from easements or land transfers with adjoining property owners along Anderson Street (referred to in Attachment E and included in Attachment B).

The southern parcel is of most concern as it includes a residential building that will be demolished to allow for the construction of a retaining wall (up to about 15 feet high in places) that supports the access drive into the garage under the condos. The remainder of the parcel, as currently proposed, includes no development nor any other improvements as it is constrained by a “Boundary Agreement” with an “Amendment to Boundary Agreement” (see applicant’s submittal Attachment B, last two documents). This agreement stems from the fact that this area has been the subject of several development concepts in the past, and it became apparent during those earlier reviews that the boundary surveys for the two adjoining properties (202 Washington and 218 Washington) overlapped. Prior to proceeding with any development reviews of the former plans, the city requested that clear right title and interest be presented. The current Boundary Agreement (with Amendment) is the result of private negotiations.

The submitted right, title and interest was reviewed by the Associate Corporation Counsel and determined to meet the site plan requirement for evidence of “Right, Title and Interest”. However, the Boundary Agreement (with Amendment) appears to have implications for the nature and extent of site plan improvements that may be carried out. The attorney for the owner of 202 Washington has set out an interpretation of the Boundary Agreement (see PC1) and suggested that the project is not in compliance, but the applicant’s attorney considers that they are in compliance (based on the current proposals).

Below is a summary of the boundary agreement limitations:

- Perpetual maintenance easement 30 feet in width along the common boundary, which allows for an access drive to be constructed (not a building) and requires a maintenance access along the boundary. The proposed drive access is at grade near Washington Avenue;
- “Negative Easement” that prohibits buildings or improvements within 50 feet of the NE boundary with Washington Avenue. The current proposals show "Existing vegetation to remain" (Plan 9).

### B. ZONING ASSESSMENT

The proposed building is located in the B1b zone which allows for a building height of 45 feet and the proposed building is 45 feet as from the average grade. It appears to be about 42 feet as measured from the level of Washington Avenue (see P15).

The proposal meets all of the other dimensional requirements of the B1b zone.

The Design Standards specify “*In B-1b zone buildings shall be multi-storied with mixed uses.*” However, the over-riding B1b ordinance states “*a) The following uses [which includes residential] are permitted in the B-1 zone and on the ground floor level of buildings in the B-1b zone.*”



## C. SUBDIVISION STANDARDS

14-496. Subdivision Plat Requirements: The applicant has submitted a draft plat (Plan P3) which has not been reviewed in detail.

### 14-497. General Requirements (a) Review Criteria

The standards impacted by the revised plans or new information have been **underlined**

#### **Water, Air Pollution and Soil Erosion**

The applicant has submitted the capacity letter from the Portland Water District (Attachment N.). The previous proposals included a deep stormdrain system (down to 45 feet in depth) and high retaining walls (up to 23 feet in height) and the Peer Engineering Reviewer was concerned about constructability including erosion control (Attachment 4). The applicant has revised the stormwater management system and it is now generally acceptable (Attachment 5).

#### **Traffic**

The applicant has submitted a Traffic Study that provides a trip generation estimate that shows a Traffic Movement Permit is not required (Attachment J). The Traffic Engineering reviewer concurs with this assessment but is concerned that traffic queuing takes place near the site and a revised lane layout (for a left turn lane) is requested. (Attachment 3).

#### **Parking**

The applicant has incorporated a parking level underneath the residential units to meet the zoning requirement of one space per unit (45 spaces). The Site Plans (Plan P5) show a total of 47 parking spaces, including one compact space and 4 tandem spaces. The Traffic Engineering reviewer has requested further information including how the tandem spaces would be managed and how all of the internal vehicle movements can occur within the garage thus ensuring that there would be no need to back out of the site (Attachment 3).

#### **Sanitary Sewer/Soils**

The application has been reviewed by the Peer Engineering Reviewer (Attachment 4 and 5) and is generally acceptable subject to confirmation of wastewater capacity.

#### **Storm water**

The applicant has submitted an updated Stormwater and Erosion Control Plan (Attachment L) that proposes to manage stormwater impacts by utilizing a StormTech chamber system with an underdrained subsurface sand filter to control peak runoff and provide treatment. The updated Plan addresses the earlier comments of the Peer Engineering Reviewer (Attachments 4 and 5).

#### **Scenic Beauty**

At the may PB Workshop staff raised a question as to whether the proposals met this standard. The Board questioned why a flat roof, is there a way to screen mechanicals since they would be viewed from above, and could the roof line be more broken up.

The standard for this issue reads as:

8. *Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat identified by the department of inland fisheries and wildlife or by the city, or rare and irreplaceable natural areas or any public rights for physical or visual access to the shoreline.*

Inevitably any development at that location will have an effect, and the question is whether the effect is “adverse”.



The applicant was requested to provide additional renderings showing how the proposed building would appear from different vantage points both close to and more distant from the site. The applicant has submitted 11 perspectives as included in Plans 16 and 17, including the one below from the park:



Jeff Tarling, the City Arborist, has not made any specific recommendation but points out that the nearby Eastern Promenade is an Olmstead Park and has been an important park area since 1902 and provides some background (Attachment 7), although it should be noted that the park area between the school and the site is not part of the Historic Landscape:

***e) Scenic and Open Space impact*** - *The project location on a ridge next to Washington Avenue has exposed views to the site from the West, Bayside, Back Cove, Interstate 295 and the East Bayside neighborhood. Views from nearby Eastern Promenade to Back Cove will be impacted as the proposed building height roof top is roughly 9' below the 'lookout' point on the Eastern Promenade's 'Northern Concourse', where the North Street community garden and orchard is located across from East End Community School. Remediation recommendations to reduce or improve these views are challenging at best given the geography of the project site and the nearby landscape features of Back Cove and Eastern Promenade. Additional information on the view impact to the Eastern Promenade, which is an historic Olmsted park on the National Historic register, maybe warranted or at least noted.*

*The proposed building scale, architectural features and landscape treatment will have a lasting effect on the Portland gateway from the Northeast, Route 100 and I-295 along with the view from the Eastern Promenade to Back Cove - careful review is needed for the unique property.*

*Recent updated landscape plans are an improvement over the earlier plans.*

*See attached notes from the City Annual Reports from early 1900's on the context of this section of the Eastern Promenade, they offer an interesting glimpse into the value of the Eastern Promenade's westerly view and the design intent of early construction.*

If the Board consider the general massing and architecture is acceptable, the question of the mechanicals and their screening may be the focus of further discussion/conditions.



## ***Comprehensive Plan***

The project is consistent with the Housing Goals and Policies of the Comprehensive Plan.

### **D. SITE PLAN STANDARDS**

The standards impacted by the revised plans or new information have been underlined

#### 14-526 Site Plan Standards

##### ***Traffic - Access, Circulation, Loading and Servicing***

The proposals retain an existing curbcut (currently used for parking of several vehicles) to provide the access drive to the 45+ space parking level. The Traffic Engineering Reviewer has noted that the access does not meet the City's Technical Standards regarding driveway separation and corner clearance and that further documentation in support of a waiver request should be submitted for further review (Attachment 3).

##### ***Sidewalks***

The applicant has proposed a treatment of the ROW along Washington Avenue that staff suggested did not fully address the complexity of integrating the bike path with street trees, street lighting and pedestrian sidewalks in the vicinity of a busy intersection.

Staff undertook to help with the detailed design of this area to meet ADA and other objectives (such as survivability of the street trees) and the current recommendation is include at Attachment 6; it includes the following features:

- 9 ft wide brick sidewalk
- 9 ft wide asphalt bike path
- Row of street lights in between trees
- No planters in the ROW along the site boundary
- Row of street trees in raised granite planters between these (trees are likely to be recommended to have sylvia cells to help ensure they stay alive; the Technical Standards allow the street tree contribution to be used to provide sylvia cells
- Transitions between street/shared bike path and this frontage treatment

##### ***Construction Management Plan***

A Construction Management Plan was submitted (Attachment I), and the Traffic Engineering reviewer has requested it be revised to preserve pedestrian and bicycle movements to/from the Back Cove shared path, and to address the management of construction and associated vehicles to minimize impacts on Washington Avenue traffic (Attachment 3).

##### ***Public Transit Access***

The project would need to address the ordinance requirements as part of the final submissions, which may require provision of a bus transit shelter. At this time it is understood that METRO do not wish to have a shelter on Washington Avenue opposite the proposed development.

***Parking:*** The proposed parking provision is discussed under Section V. C *Subdivision Standards*.

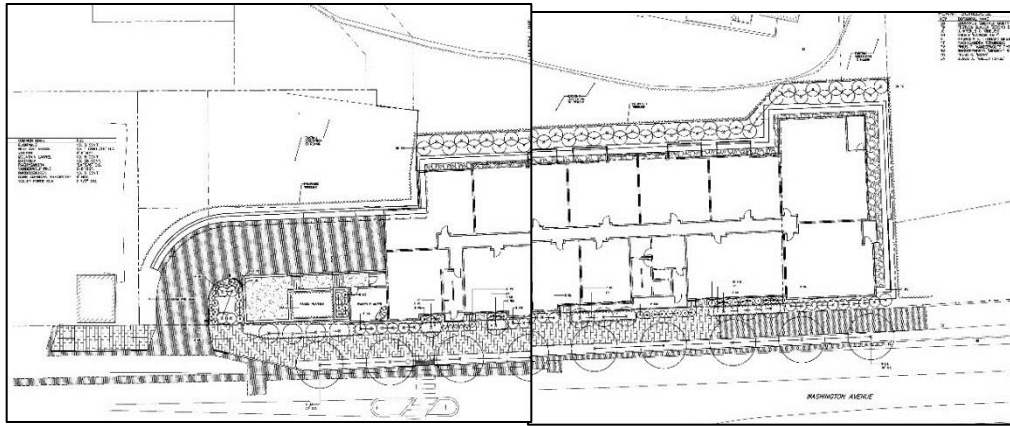
##### ***Snow Storage***

This may apply to the garage access drive and should be addressed at the final submission stage.

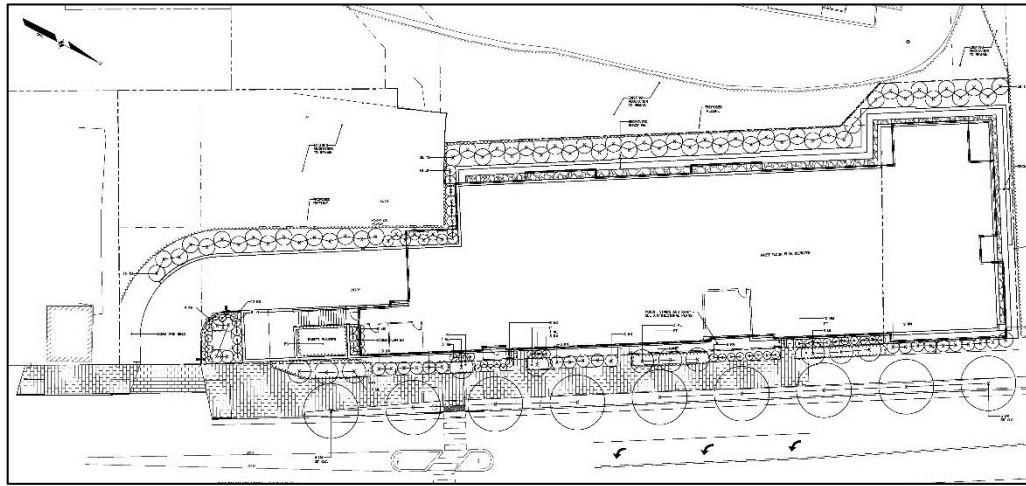
***Transportation Demand Management:*** The project is not subject to these ordinance provisions.

##### ***Landscape Preservation / Site Landscaping and Screening***

The previous proposal included planting along the front of the building and along part of the retaining wall. The Board, staff and a neighbor were concerned about screening of this retaining wall and the revised plans provide space to plant along the base of the wall:



As presented to May  
9 PB Workshop



Submitted for July 11  
PB Workshop

The City Arborist, Jeff Tarling, has provided extensive comments in Attachment 7.

**b) Washington Avenue landscape** - The project proposes landscape planting on the building side of the sidewalk partially within the street / sidewalk right of way. This important landscape feature should be protected by a low granite curb planter on the back side of the walk to protect the plants. This should be a condition of approval to ensure this landscape survives. This planting should have an official agreement in the Condo docs in regards to maintenance responsibilities.

**c) Retaining wall landscape screening** - The project proposes to plant 54, 8' tall 'Dark American' Arborvitae along the retaining wall Anderson Street side edge to act as screening. Along with the Arb's, 15 8' upright Junipers will be planted near the corner of the parking garage entrance between the two Arborvitae plantings. Note - this site location is very exposed to strong Westerly winds and bright sunlight exposure, 'extra' care is needed during establishment to ensure the planting is successful. This should include a 3-year guaranteed defect period.

**d) Easement area** - The project shows an easement area with 'Existing Vegetation To Remain' notation. Currently this open lawn space contains a number of invasive plants, 'Multiflora Rose' and 'Japanese Knotweed' both of which are on the State of Maine Invasive Plant list. All projects should include plans to control invasive plants listed by the State of Maine and to prevent to the extent possible spreading or allowing these plants to spread to new areas.

The key requirement relating to the area within the negative easement is the need to control invasive plants and the applicant would need to confirm that this is possible.

### **Street Trees**

The applicant has proposed 9 street trees (based on the Landscape Plan in Plan P9) and submitted a waiver request that refers to the provision of 22 street trees out of the requirement of 45 street trees. The applicant will need to clarify how the street tree requirement will be met and consider the provision of sylva cells as a way of meeting that requirement.

***Water quality, Stormwater Management and Erosion Control*** - see above under VC Subdivision Standards.

### ***Public Safety***

The Crime Prevention through Environmental Design (CPTED) standards in the site plan ordinance address the principles of natural surveillance, access control and territorial reinforcement so that the design of developments enhance the security of public and private spaces and reduce the potential for crime.

The proposals indicate a garage door at the entrance to the garage and do not appear to represent any particular concern. The final submissions should include a lighting plan that would help address this requirement.

***Fire Prevention and Public Utilities:*** There are no concerns at this time.

***Massing, Ventilation and Wind Impact and Shadows:*** Generally addressed in the Design Review.

***Historic Resources:*** Although technically within 100 feet of the Historic Landscape of the Eastern Promenade, the Historic Preservation Program Manager has indicated that there is no direct impact and therefore no need for any further review.

### ***Exterior Lighting incl Street Lighting***

The applicant has submitted the specifications for the site lighting and the final submission will need to include the photometric plans to confirm how the project would address the Technical Standards and CPTED objectives.

**Street Lights:** Reviewers have noted that the project will need to install new street lights along the frontage in the ROW (at the applicant's cost). The lights would need to meet the Technical Standards for street lighting and match the lights installed elsewhere along Washington Avenue (Bayside medium). Staff will work with the applicant to further develop the street light plan.

### ***Noise and Vibration***

The applicant has confirmed that the exact HVAC equipment has not been chosen at this time and requests that information be provided prior to the issuance of a full building permit. The site plan ordinance requires:

- (i) All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment shall meet applicable state and federal emissions requirements and shall comply with the following:
  - (a) Be located to the interior of the site, away from abutting residential properties;
  - (b) Be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof.

The elevations (Plan P14) suggest that some HVAC will be on the roof and the final submissions should clarify where the HVAC will be located and how it will be screened even if the exact specifications are submitted later.

## E. DESIGN STANDARDS

Zoning: The site is located within the B1b Zone and the City's Urban Designer has concluded that the project is generally in compliance with the somewhat limited design standards that apply in this zone (see Att. 2). Please see the discussion under *Zoning* regarding the issue of multiuse on the first floor.

The local context is B1b and ILb zones with open space and historic landscape on the other side of Washington Avenue. There may be longer distance views of the building from across Back Cove but there are no design standards that particularly apply to this issue (though the *Subdivision Standards re Scenic Beauty* do apply - see VC above).

Multi-family and Other Housing Types Design Standard - This design standard also applies to the proposal, is outlined below with associated staff review comments:

***(i) TWO-FAMILY, SPECIAL NEEDS INDEPENDENT LIVING UNITS, MULTIPLE-FAMILY, LODGING HOUSES, BED AND BREAKFASTS, AND EMERGENCY SHELTERS:***

***(1) STANDARDS.*** *Two-family, special needs independent living units, multiple-family, lodging houses, bed and breakfasts, and emergency shelters shall meet the following standards:*

*a. Proposed structures and related site improvements shall meet the following standards:*

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

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

Staff comment: as noted in the Urban Design Review comments (Attachment 2), there is little surrounding built context; the neighborhood is largely composed of industrial, business and open space uses. The perspective below and three others are included in Plan 16 and illustrate how the project may appear locally.





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

Staff comment: As proposed the project does not include open space as described in this provision, and staff requested the applicant to clarify how the project meets this standard. This was submitted and is included at Attachment V. Jeff Tarling has commented (Attachment 7):

***Landscape comment** - "Open Space" for residential projects should be an included feature for resident use. While the project is next to a large municipal park, having space for gardens, walking dogs and relaxation are important to have on site when possible. Easement language and agreement between this project and neighbor should include at least the promise to control invasive plants. Additional landscape or tree planting would help but may not be an agreeable topic.*

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

Staff comment: This standard appears to be met.

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

Staff comment: The parking is located underneath the units.

## **F. WORKFORCE HOUSING CONDITIONAL USE (INCLUSIONARY ZONING)**

This project is subject to the Inclusionary Zoning ordinance that ensures the provision of workforce housing. A development of ten or more units of housing in the City is required to provide on-site workforce housing units or make an in-lieu payment to the City's Housing Trust.

As applied to this project the applicant could provide 4 deed-restricted units on site, 4 deed-restricted units off site, or \$450,000 fee-in-lieu to the Housing Trust. If the provision of on-site units is chosen, the number of bedrooms also must be at least 10% of the total number of bedrooms included in the project.

The applicant has just confirmed the way they propose to address this requirement in a completed Inclusionary Zoning application (Attachment W). The application confirms that a total of 5 workforce units will be provided: three 1-bed units and two 2-bed units located on the lower three floors. This appears to meet the ordinance requirement, subject to further review of the deed restrictions and other details.

## **VI NEXT STEPS**

The final submission will need to fully address the IZ, Subdivision and Site Plan review standards, including the following:

- Revised plat
- Draft Condominium Association documents that include control of invasive species
- Response to the review comments

- Submission of waiver requests and justification
- Confirmation that the site plan requirement regarding invasive species can be achieved
- Revision of the Construction Management Plan to address comments
- Work with staff to finalize, sidewalks/ROW design and materials, street lights and street trees and submit final plans
- Confirm screening details for HVAC
- Submit capacity letter for Wastewater
- Provide additional Workforce Housing information (eg deed restrictions) to the Housing & Community Development Division and finalize details
- Other issues raised by the Planning Board

## **ATTACHMENTS:**

### **Attachments to Memorandum**

1. Staff e-mail prelim review comments
2. Design Review - Preliminary comments
3. Traffic Engineering Preliminary Review comments
4. Peer Engineer previous review comments
5. Peer Engineer updated review comments
6. ROW Staff suggested layout ped/bike/street tree
7. City Arborist updated comments

### **Public Comments**

PC1 Attorney Schofield on behalf 202 Washington 1.19.17

PC2 Attorney Schofield on behalf 202 Washington 5.9.17

PC3 K Snyder 5.9.17

### **Applicant's Submittal**

- A. Application
- B. Right, title and Interest
- C. State & Federal Approvals
- D. Zoning analysis
- E. Easements
- F. Waivers
- G. Financial and Technical Capacity
- H. Boundary survey
- I. Construction management Plan
- J. Traffic Study

- K. Natural Features
- L. Stormwater Management Plan
- M. City Master plans
- N. Utilities
- O. Solid Waste
- P. Fire
- Q. Design Review
- R. HVAC
- S. Lighting Specs
- T. Retaining Wall Specs
- U. Neighborhood Meeting
- V. Narrative re Multi-Family Design Standards
- W. Workforce Housing application and plans

**Plans**

- P1 Cover sheet
- P2 Boundary Survey & Existing Conditions
- P3 Draft Plat
- P4 Demolition Plans
- P5 Site Plans (2 sheets)
- P6 Utility Plan
- P7 Grading Plans (2 sheets)
- P8 Details (4 sheets)
- P9 Landscape Plans
- P10 Watershed Plans (2 sheets)
- P11 Site Context (3 sheets)
- P12 Site Section
- P13 Retaining Wall
- P14 Floor Plans
- P15 Elevations (2 sheets)
- P16 Renderings- Local Views (7 sheets)
- P17 Renderings- Distant Views (4 views)

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## Fwd: 218 Washington Avenue - Trees along Frontage.

1 message

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**Jean Fraser** <jf@portlandmaine.gov>

Fri, Apr 21, 2017 at 4:31 PM

To: Shawn Frank <sfrank@sebagotechnics.com>

Cc: Will Conway <wconway@sebagotechnics.com>, Michael Coyne  
<coyne@archetypepa.com>

Hello Shawn

Despite the subject heading this covers traffic, stormwater, design and city arborist comments. (Fire Department do not have comments)

I undertook to get comments to you by today in order to give you time to revise the plans for presentation to the Planning Board.

I attach the Preliminary Comments from the Traffic and Peer Engineering Reviewers. Tom Errico refers to previous comments but those have not been sent as they are in draft form- they are quite detailed but I will get you those on Monday.

Please note that streetlights will need to be provided by the applicant along the frontage in compliance with the City's Technical Standards. I think it will need to be 2 or 3- I am getting confirmation on the number and type (probably Bayside medium) and will send asap.

I also attach the Design Review comments that we will include in the memo to the Planning Board; this does not raise any key issues.

Below are the City Arborist prelim comments as the plans show this area as having the vegetation "preserved" (the rendering shows it as partly lawn) but in any case it needs a landscape plan showing new planting treatment. The City Arborist will have further comments on the street trees and proposed planting elsewhere (hopefully Monday).

While writing, I would appreciate it if you could please use one plan per subject (like the Utility Plan)- it is very difficult to understand and review to have part of the subject plan on each of two sheets.

Please contact me if any questions. We would need any revised plans that you want to have reviewed and presented to the Planning Board by the end of next week.

thank you  
Jean



----- Forwarded message -----

From: **Jeff Tarling** <[jst@portlandmaine.gov](mailto:jst@portlandmaine.gov)>

Date: Thu, Apr 20, 2017 at 4:27 PM

Subject: Re: 218 Washington Avenue - Trees along Frontage.

To: Bruce Hyman <[bhyman@portlandmaine.gov](mailto:bhyman@portlandmaine.gov)>

Cc: Jean Fraser <[jf@portlandmaine.gov](mailto:jf@portlandmaine.gov)>

Jean -

The project at 218 Washington Avenue proposes to use a portion of the slope area, see photo below. The existing vegetation is mostly invasive plants that do not offer much in the way of useful green space from a functional open or landscape buffer. If the project is using this space for that purpose, an improvement plan is needed, the space has potential to meet the landscape goals for a project of this scale if they can improve.

A more detail review to follow.

Thanks

Jeff

# Planning and Urban Development Department

## Planning Division

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**Subject:** B-1b Design Review – 218 Washington Avenue  
**Written by:** Caitlin Cameron, Urban Designer  
**Date of Review:** Wednesday, April 19 2017

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The residential project at 218 Washington Avenue was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer against the *B-1b Commercial Business Zones Standards* (Section (d) of the Design Manual).

### **(d) B-1b Neighborhood Business Zones**

*Standard (1) a. Urban Street Wall* – Building is located to create an urban street wall. There is little to no existing street wall in this context. The aspiration for Washington Avenue is to become built up with a more urban street wall, mixed uses, and density. This project could be considered to be establishing a scale and street wall pattern for this end of the street.

*Standard (1) b. Mixed Uses* – Project is multi-storied but **not mixed-use**.

*Standard (1) c. Building Entrances* – Primary building entrance faces Washington Avenue and is emphasized with stoop, canopy, material differentiation.

*Standard (1) d. Windows* – Windows are present along the street frontage though slightly elevated because first floor is residential. **Windows shall be transparent.**

*Standard (1) e. Façade Character* – No active or public portions of the building. Main residential entry faces Washington Avenue. Additional visual amenity provided by landscaping, changes in façade plane, fenestration.

*Standard (1) f. Building Design* – Washington Ave includes one and two-story commercial and residential buildings of varying styles, forms, and roof lines. A flat roof for a multi-family building is appropriate. The building is significantly larger in scale (height and length on the street) than most of the existing Washington Ave context, however, there is little built context immediately adjacent to the site.

*Standard (1) g. Building Materials* – Residential buildings on Washington Ave are predominantly clapboard. Project proposed clapboard as the primary material with the additional use of metal, fiber cement panel and boards. Again, there is little surrounding context, but the use of clapboard is preferred as the predominant material to be consistent with the overall Washington Avenue residential streetscape.

*Standard (1) h. Building Scale* – Building is two stories taller than predominant residential context on Washington Ave. However, the site is at the end of Washington Ave with little surrounding built context.

*Standard (1) i. Landscaping and Buffers* – Parking areas are screened from street with wall and landscaping.

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## 218 Washington Street - Preliminary Traffic Comments

1 message

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**Tom Errico** <thomas.errico@tylin.com>

Fri, Apr 21, 2017 at 3:29 PM

To: Jean Fraser <jf@portlandmaine.gov>

Cc: Katherine Earley <kas@portlandmaine.gov>, Jeremiah Bartlett

<JBartlett@portlandmaine.gov>, Lauren Swett <lswett@woodardcurran.com>, Jeff Tarling  
<jst@portlandmaine.gov>

Hi Jean – I have reviewed the application materials and offer the following preliminary traffic comments.

- The applicant has conducted a trip generation estimate for the project and less than 20 peak hour trips will be generated by the project. Accordingly, a Traffic Movement Permit or a formal Traffic Impact Study are not required.
- The City standard for driveway separation on a roadway such as Washington Avenue is 100 feet. The applicant shall provide documentation in support of a waiver for driveway separation. In general, I'm concerned about future development on the abutting property and how best to manage access.
- The City standard for corner clearance or distance to a nearby intersection is 150 feet for an arterial street like Washington Avenue. The applicant shall provide documentation in support of a waiver for corner clearance.
- The construction management plan shall be revised to preserve pedestrian and bicycle movements from the Back Cove shared use path. The applicant should note if impacts to Washington Avenue vehicle traffic is expected and if so how it will be managed.
- The plans note that two parking spaces will be provided at the driveway entrance (after the curve). The applicant should note the use of these spaces.
- The applicant should provide information on how the tandem parking spaces will be managed.
- The applicant shall confirm that all internal vehicle movements can occur without having to back out of the site.

- During peak time periods, inbound Washington Avenue at the Eastern Promenade intersection can experience traffic queuing. The City is interested in the development of a short narrow left-turn lane (opposite the median refuge island). It is requested that the applicant develop a layout plan for consideration.
- The driveway apron shall be constructed such that a 5-foot wide area with maximum 2% cross-slope is provided. I believe Bruce Hyman has provided comments on this as well as driveway apron material and other frontage comments.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE

Senior Associate

Traffic Engineering Director

**TYLIN** INTERNATIONAL

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"One Vision, One Company"



## MEMORANDUM



**TO:** Jean Fraser, Planner  
**FROM:** Lauren Swett, PE  
**DATE:** April 21, 2017  
**RE:** 218 Washington Avenue, Level III Site Plan Application

Woodard & Curran has reviewed the Level III Site Plan Application and attachments for the proposed development located at 218 Washington Avenue in Portland, Maine. The project involves the construction of a 45 – unit condominium building.

### **Documents Reviewed by Woodard & Curran**

- Level III Site Plan Application and attachments, dated December 12, 2016, prepared by Sebago Technics, Inc, on behalf of 218 – 220 Washington Avenue, LLC.
- Engineering Plans, Sheets 1 – 23, dated December 15, 2016, along with updates dated April 11, 2017, prepared by Sebago Technics, Inc, on behalf of 218 – 220 Washington Avenue, LLC.

### **Comments**

- 1) In general, we have constructability concerns with this project. There are varying steep slopes on the site, and significant features proposed for construction, including a tall retaining wall and deep stormdrain features. These features may be constructable, but larger impact areas and limits of work may be required than what is currently shown on the plans. We understand that maintenance of existing vegetation is proposed, so it will be important to ensure that these areas can be maintained.
- 2) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
  - a) Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500. No erosion control has been specified associated with the proposed stormdrain installation, and additional clarification will be required in this area.
  - b) General Standard: The project will result in a net increase in impervious area of approximately 17,460 square feet. As such, the project is required to include stormwater management features for stormwater quality control. The Applicant has proposed an Underdrained Subsurface Sand Filter. The stormwater system is required to comply with the requirements of Chapter 7.3 of Volume III of the MaineDEP Stormwater BMP Manual. In general, we are in agreement with the stormwater management approach. We recommend that the applicant review the project layout with the Stormtech manufacturer to ensure that the design is in conformance with the manufacturer's standards. The Applicant should confirm that adequate access for maintenance will be provided. We are completing further review of the stormwater model, and will provide additional comments following the workshop.
  - c) Flooding Standard: The project will result in a net increase in impervious area of approximately 17,460 square feet. As such, the project is required to control the rate or quantity of stormwater runoff from the site. Stormwater flow will increase during the 2-year storm event. We agree that the impact will be minimal, but we do recommend that the Applicant review their stormwater system for potential changes.
- 3) The Applicant is proposing to connect their stormdrain system to the City's infrastructure in Anderson Street. The City has been completing a project on Anderson Street, and the street will be under a moratorium.



- 4) The Applicant should review their stormdrain design relative the depth of structures and pipes. DMH 4 is proposed with nearly 45' in depth, and DMH 5 is proposed with nearly a 28' depth. These are unreasonable for construction. Other structures are not as deep, but still deep enough to require a fairly significant trench width. The Applicant should review all structure depths and provide a realistic impact width to manage construction of stormwater systems at these depths.
- 5) Relative to the depths discussed above, pipes will also be installed with steep slopes. The Applicant should address concerns associated with steep slopes (internal pipe scour, trench backfill erosion, etc.).
- 6) A stormwater inspection and maintenance plan is required in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances. A plan has been provided, but it should be updated to reflect the current proposed stormwater treatment systems.
- 7) Per the City of Portland's recently adopted modifications to the sidewalk standards, the driveway apron must match the sidewalk material.
- 8) All work within the City of Portland right-of-way must meet the City of Portland Technical standards. The Applicant should review this standards relative to pipe installation and pavement. Specifically note, that 9.5 mm HMA is not the City's standard for surface pavement.
- 9) Additional geotechnical information will be required for the retaining wall design.

## MEMORANDUM



**TO:** Jean Fraser, Planner  
**FROM:** Lauren Swett, PE  
**DATE:** July 6, 2017  
**RE:** 218 Washington Avenue, Level III Site Plan Response to Comments

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Woodard & Curran has reviewed the Level III Site Plan Application Response to Comments and attachments for the proposed development located at 218 Washington Avenue in Portland, Maine. The project involves the construction of a 45 – unit condominium building.

### **Documents Reviewed by Woodard & Curran**

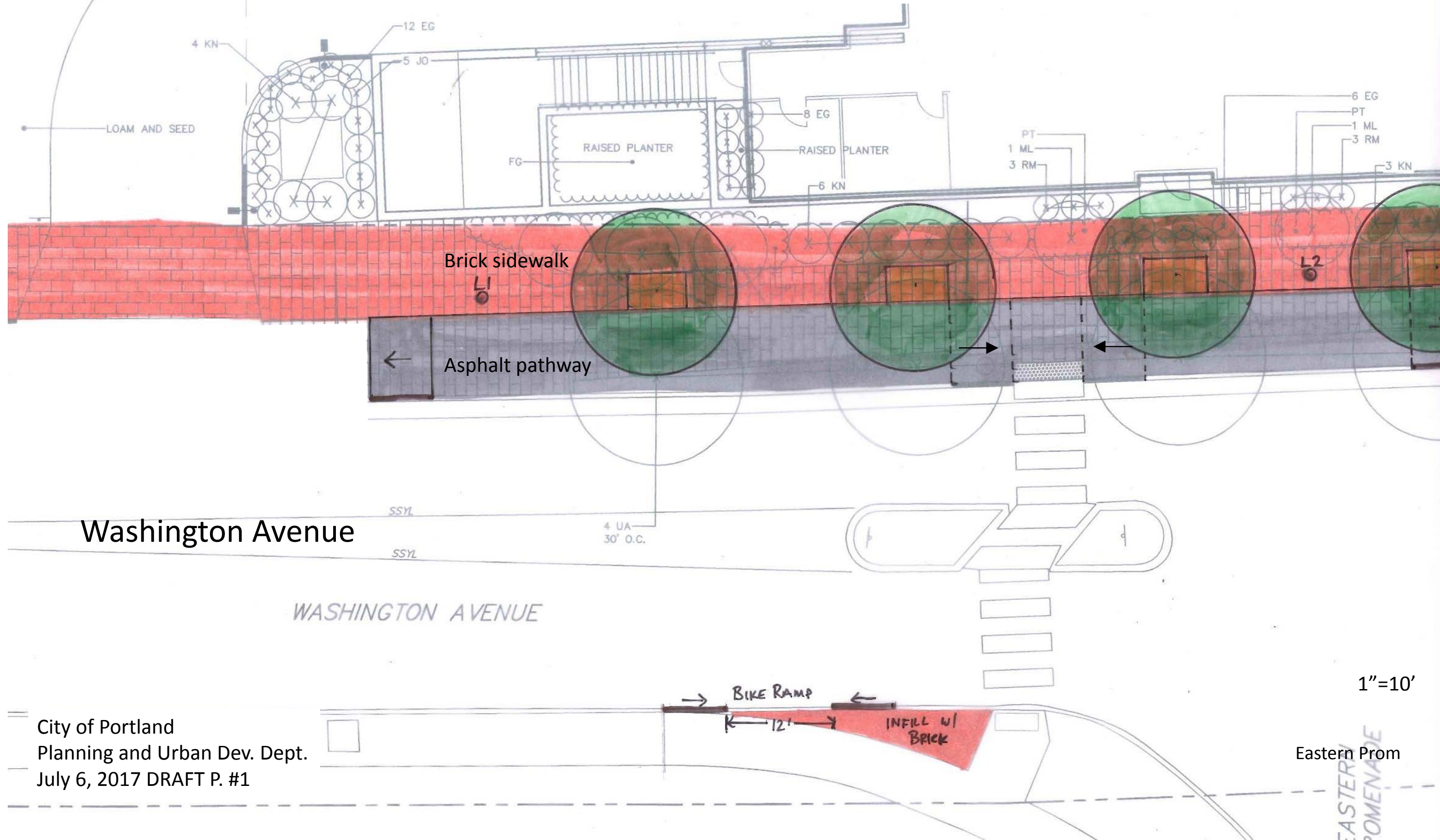
- Level III Site Plan Response to Comments and attachments, dated June 14, 2017, prepared by Sebago Technics, Inc, on behalf of 218 – 220 Washington Avenue, LLC.
- Engineering Plans, Sheets 1 – 23, dated June 15, 2017, prepared by Sebago Technics, Inc, on behalf of 218 – 220 Washington Avenue, LLC.

### **Comments**

- 1) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
  - a) Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500. The erosion control filter barrier should be adjusted to follow the clearing limits along the storm drain utility installation area.
  - b) General Standard: The project will result in a net increase in impervious area of approximately 17,460 square feet. As such, the project is required to include stormwater management features for stormwater quality control. The Applicant has proposed an Underdrained Subsurface Sand Filter. The stormwater system is required to comply with the requirements of Chapter 7.3 of Volume III of the MaineDEP Stormwater BMP Manual. The system will provide for adequate stormwater treatment.
  - c) Flooding Standard: The project will result in a net increase in impervious area of approximately 17,460 square feet. As such, the project is required to control the rate or quantity of stormwater runoff from the site. Stormwater flow will have a slight increase during the 2-year storm event. We agree that the impact will be negligible.
- 2) The Applicant is proposing to connect their stormdrain system to the City's infrastructure in Anderson Street. The Applicant should coordinate directly with the Water Resources Division at Public Works on the means of connecting to the City infrastructure.

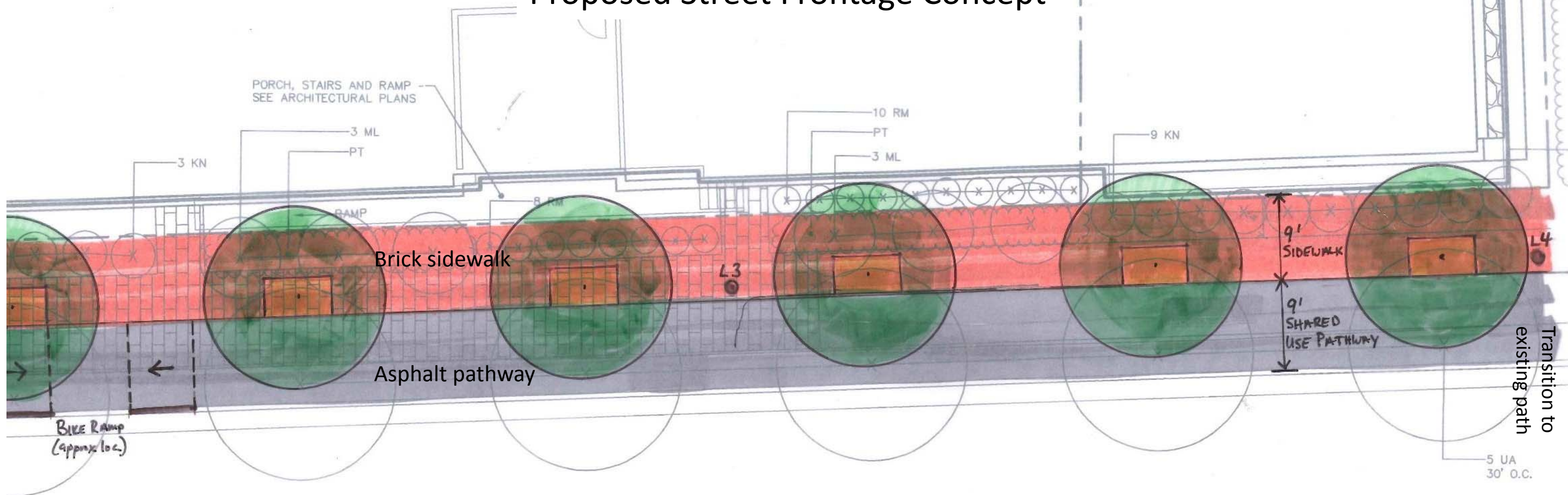


# 218 Washington Avenue Proposed Street Frontage Concept





# 218 Washington Avenue Proposed Street Frontage Concept



Washington Avenue

## Notes:

- The final size and configuration of raised granite tree wells are to be determined in consultation with City Arborist to maintain 5' cleared width of sidewalk (4'x7' shown).
- A transition will be needed from the proposed sidewalk-pathway configuration to the existing shared use pathway-esplanade configuration.
- Transitions from sidewalk to bike ramps (3) and curb ramp/pedestrian crossing (1) are not shown.
- Lighting locations (L1 – L4) are approximate, assuming 80'-100' spacing.
- The need for pavement markings to denote the crossing of the parking garage drive is to be determined by the City Traffic Engineer

1"=10'

City of Portland  
Planning and Urban Dev. Dept.  
July 6, 2017 DRAFT P. #2

Eastern Prom

12" STOP BAR

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## 218 Washington Avenue Project

1 message

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**Jeff Tarling** <jst@portlandmaine.gov>  
To: Jean Fraser <jf@portlandmaine.gov>

Wed, Jun 28, 2017 at 9:51 PM

Jean -

In review of the proposed 218 Washington Avenue project, I offer the following tree & landscape comments:

**a) Street trees and Washington Avenue frontage landscape** - The project proposes 9 'street-trees' planted along the Washington Avenue frontage along with a variety of landscape planting next to the building. The proposed street trees should have adequate planting space... tree # 1 from left to right or the Southerly end of the project appeared too close to the sidewalk in the landscape plan, revised drawings should address per field visit.

Esplanade options - Turf with trees, raised granite planter to reduce salt damage and compaction with groundcover planting. I would favor the most protection for the trees and landscape but other factors, pedestrian use near the sidewalk road edge is important. I agree with recommendations from Bruce Hyman on bike / ped suggestions and how they fit into the landscape plan.

Recommended tree type suggestions - Upright shade tree and not the American Elm that are too wide (crown width) for the space between the building and tree planter.

'Musashino' upright Zelkova (2016 Urban tree of the year)

Second choice - Upright, 'Armstrong' Red Maple 3" caliper

<https://www.jfschmidt.com/articles/musashino>

<http://www.jfschmidt.com/musashino/>

<http://www.amerinursery.com/plants/sma-announces-its-2016-urban-tree-of-the-year-zelkova-serrata-musashino>

<http://www.jfschmidt.com/pdfs/armstrongmaple.pdf>

**b) Washington Avenue landscape** - The project proposes landscape planting on the building side of the sidewalk partially within the street / sidewalk right of way. This

important landscape feature should be protected by a low granite curb planter on the back side of the walk to protect the plants. This should be a condition of approval to ensure this landscape survives. This planting should have an official agreement in the Condo docs in regards to maintenance responsibilities.

**c) Retaining wall landscape screening** - The project proposes to plant 54, 8' tall 'Dark American' Arborvitae along the retaining wall Anderson Street side edge to act as screening. Along with the Arb's, 15 8' upright Junipers will be planted near the corner of the parking garage entrance between the two Arborvitae plantings. Note - this site location is very exposed to strong Westerly winds and bright sunlight exposure, 'extra' care is needed during establishment to ensure the planting is successful. This should include a 3-year guaranteed defect period.

**d) Easement area** - The project shows an easement area with 'Existing Vegetation To Remain' notation. Currently this open lawn space contains a number of invasive plants, 'Multiflora Rose' and 'Japanese Knotweed' both of which are on the State of Maine Invasive Plant list. All projects should include plans to control invasive plants listed by the State of Maine and to prevent to the extent possible spreading or allowing these plants to spread to new areas.

**Landscape comment** - "Open Space" for residential projects should be an included feature for resident use. While the project is next to a large municipal park, having space for gardens, walking dogs and relaxation are important to have on site when possible. Easement language and agreement between this project and neighbor should include at least the promise to control invasive plants. Additional landscape or tree planting would help but may not be an agreeable topic.

**e) Scenic and Open Space impact** - The project location on a ridge next to Washington Avenue has exposed views to the site from the West, Bayside, Back Cove, Interstate 295 and the East Bayside neighborhood. Views from nearby Eastern Promenade to Back Cove will be impacted as the proposed building height roof top is roughly 9' below the 'lookout' point on the Eastern Promenade's 'Northern Concourse', where the North Street community garden and orchard is located across from East End Community School. Remediation recommendations to reduce or improve these views are challenging at best given the geography of the project site and the nearby landscape features of Back Cove and Eastern Promenade. Additional information on the view impact to the Eastern Promenade, which is an historic Olmsted park on the National Historic register, maybe warranted or at least noted.

The proposed building scale, architectural features and landscape treatment will have a lasting effect on the Portland gateway from the Northeast, Route 100 and I-295 along with the view from the Eastern Promenade to Back Cove - careful review is needed for the unique property.

Recent updated landscape plans are an improvement over the earlier plans.

See attached notes from the City Annual Reports from early 1900's on the context of this section of the Eastern Promenade, they offer an interesting glimpse into the value of the Eastern Promenade's westerly view and the design intent of early construction.

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



**Eastern Prom History.docx**

15K



### **Annual Report 1902**

Every citizen of Portland should be proud of our two promenades, for no other city in this country can avail themselves of the privilege of obtaining the extended views which are only attainable from these two promenades, and the views are entirely different; from the Eastern Promenade you get a view of "old ocean," and from the Western Promenade the eye takes in a large area of the surrounding country, with the Presidential range of mountains in New Hampshire for a background.

### **Annual Report 1905**

The city has come into possession of a large portion of the slope is 29.25 acres, and of this the city has acquired all but about 8 ½ acres, at prices ranging from \$.03 to \$.10 per square foot. Quite an important change has been made at the northerly end of the driveway at the Eastern Promenade by the building of the concourse at this point to intersect with Washington Avenue, and it is the desire of the Commissioners to continue this work in the early spring and beautify this new addition to our park system by the planting of shrubbery and running of vines to protect the work already begun.

### **Annual Report 1906**

An important addition to the beauty and attractiveness of the Eastern Promenade is the building of the concourse at the northerly end of this promenade.

It will be remembered that in our report of 1905 we said we intended to plant a large amount of shrubbery at this point in the spring of 1906, and we are pleased to report that we did so.

Under the direction of the Department of Public Works a marked improvement of the northern concourse has been made. The roadways on the circular part of the concourse have been defined by granite curbs and gutters, and curbing and gutters set on the westerly side of the roadway leading to Washington Avenue, also on both sides of the roadway on Washington Avenue. Catch basins have been constructed to take care of surface water, and the roadways graded and surfaced. The total length of curbing set was 982.0 linear feet. The curbing cost \$653.00, and was paid for from the appropriation made for cemeteries and public grounds.

### **Annual Report 1907**

Each year leaves traces of improvement in some of our parks. At the new concourse on the Eastern Promenade, the walks and the roadway were much improved early in the spring. All of the shrubbery was given a systematic pruning, and the result was a fine display of the flowering shrubs all summer, especially the display of hydrangeas from July to September; the branches were bent beneath the weight of the huge flower clusters. They were the largest and finest we have ever had in our park, although they have been planted only two years.

The treatment of the slope or bank facing Washington Avenue is a problem the Commissioners are trying to solve. The most feasible plan suggested is to build a retaining wall at the bottom of the slope, and if that plan is adopted we shall try to begin the work this spring.

1910

#### EASTERN PROMENADE

The driveways built during the year 1910 are in good condition, and no money has been expended on these driveways for repairs during the present year. This improvement has been the means of increasing the travel over the promenade, and the fine water view of the harbor and lower bay which one gets from a trip across the promenade cannot be excelled in this part of the country.

The high bank lying between North Street and Washington Ave. has been graded back for a distance of one hundred feet, to allow a better view for travel making the turn at the Concourse. This material was utilized in grading the walk on the easterly side of the Promenade driveway. The cost of this work was \$394.53.

The City of Portland is fortunate in having secured in times past some of the most desirable land in the city for park purposes. A general plan for an improvement of the system as a whole has been formulated, and each year should see some work done toward the fulfillment of this plan. This is especially true in relation to the proposed boulevards which have been designed with the ultimate purpose of connecting the Western Promenade, Deering's Oaks and the Eastern Promenade into a continuous park. The completion of this plan necessarily involves a large expenditure, but City Governments and public spirited citizens can do much to help along the work, and the Commissioners ask the co-operation of all citizens in the undertaking and development of a park system which will constitute one of the city's most valuable assets and place her in the front rank of progressive American cities.

#### EASTERN PROMENADE

Surveys and plans were completed for a development of the northerly end of the Eastern Promenade. The purpose of this is to consider for future use the removal of earth for filling from this location to the Baxter Boulevard and other places, as well as to endeavor to improve this unsightly area. The area in mention is the undeveloped park land between Washington avenue and North street, near the Northern Concourse.

# H & A HOPKINSON & ABBONDANZA

A T T O R N E Y S

Please respond to our Portland office

- James A. Hopkinson
- Richard J. Abbondanza
- Gerald B. Schofield, Jr.
- Mark A. Woronoff
- Jeffrey S. LaCourse

January 19, 2017

City of Portland  
Planning and Urban Development  
✓ Attn: Tuck O'Brien, City Planning Director  
389 Congress Street  
Portland, Maine 04101

VIA MAIL AND EMAIL  
sgo@portlandmaine.gov

City of Portland  
Office of Corporation Counsel  
Attn: Danielle West-Chuhta, Corp. Counsel  
389 Congress Street, Room 211  
Portland, Maine 04101

**Re: December 15, 2016 Site Plan of 218-220 Washington Avenue for 218-220 (Tax Maps 10-A-15 and 10-A-10) Washington Avenue, LLC ("Site Plan")**

Dear Director O'Brien and Attorney West-Chuhta:

This letter follows and confirms a telephone conversation I had with Tuck O'Brien on January 10, 2017.

Our office represents 202 Washington Avenue, LLC ("202"), the owner of real property located at 202 Washington Avenue, Portland, Maine (Tax Map 10-A-16-19) ("202 Washington Property") by virtue of a deed dated September 28, 2007 and recorded in the Cumberland County Registry of Deeds ("CCRD") in Book 25509, Page 156. The 202 Washington Property directly abuts the parcel known as 218-220 Washington Avenue, Portland, Maine ("218-220 Washington Property"). I have reviewed a copy of the above-referenced Site Plan prepared by Sebago Technics dated December 15, 2016 for the project at the 218-220 Washington Property, proposed by 218-220 Washington Avenue, LLC ("218-220").

The purpose of this letter is to advise you that the Site Plan prepared by Sebago Technics and submitted to the City appears to clearly violate the terms of a Boundary Agreement dated May 25, 2010 and recorded in the CCRD in Book 27839, Page 310, as amended by an Amendment to Boundary Agreement dated March 29, 2016 and recorded in the CCRD in Book 33018, Page 158. The Site Plan clearly references both a 30 foot maintenance easement ("Maintenance Easement"), as well as an area of building restriction for the land existing greater than 50 feet



from Washington Avenue on the 218-220 Washington Property ("Negative Easement"). Both of the aforementioned easements are clearly denoted and specified in the recorded Boundary Agreement and Amendment to Boundary Agreement. Both the current owners of the properties and the applicant were involved in the creation of the final version of the Boundary Agreement and amendment thereto, so I was surprised to see that the Site Plan submitted to the City by the applicant violates the terms of both agreements and both Easements. The agreements were on record prior to the preparation of the Site Plan.

The proposed Site Plan violated the Maintenance Easement, inter alia, by rendering access and use impassable due to the proposed retaining wall. The proposed Site Plan violates the Negative Easement, inter alia, by permitting uses and improvements in the Negative Easement contrary to the stated purposes of the Easement. The Negative Easement states that "[n]o buildings or improvements of any kind shall be constructed, located or maintained in any area of the Morse Parcel that is more than [50 feet] from the Morse Parcel's northeasterly boundary abutting Washington Avenue." Such language would, and does, clearly prohibit the installation, implementation, or other work related to any storm management, erosion control, landscaping, staging, equipment, or other measures on this area of the 218-220 Washington Property. Simply stated, the Negative Easement area must remain status quo.

Under the agreement entered into by and between 202, 218-220 and/or Morse, 202 is permitted to object to any project proposed that may violate the terms of the Boundary Agreement and/or Amendment to Boundary Agreement. This letter shall constitute formal notice to the City of Portland that the project and permitting proposed for the 218-220 Washington Property is directly opposed by 202 as an immediate abutter to the project, and as an owner of real property rights that will be directly impacted by the granting of any said permit. It is my understanding that the City of Portland traditionally does not approve projects and Site Plans that in any manner violate easements, such as the Maintenance Easement or the Negative Easement in this instance. Should the project move forward as proposed, my client will be exercising its rights under the Boundary Agreement and Amendment to Boundary Agreement, as well as exercising its rights to demand arbitration with 218-220 and Mr. Morse as it is entitled.

In my conversation with Tuck on January 10, 2017, Tuck advised that a completeness check had yet to be completed, and that the same would not occur until late March, 2017. Additionally, he confirmed that the applicant, 218-220, would have to show 'right, title and interest' before its project would be approved. Certainly any such display of proof of the same by 218-220 will involve the resolution of issues with 202 related to the Easements and the Agreements of record.

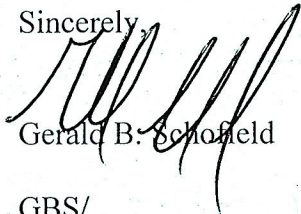
By virtue of this letter, and on behalf of 202, it is respectfully requested that the City of Portland decline to approve or move forward or find complete the proposed project of 218-220 until such time as matters resolve by and between 202 and 218-220 and/or Mr. Morse.



City of Portland  
January 19, 2017  
Page 3

Thank you very much for your kind attention.

Sincerely,

A handwritten signature in black ink, appearing to read 'G. Schofield', written over the printed name.

Gerald B. Schofield

GBS/

Email: [gschofield@hablaw.com](mailto:gschofield@hablaw.com)

Please respond to our Portland office

- James A. Hopkinson
- Richard J. Abbondanza
- Gerald B. Schofield, Jr.
- Mark A. Woronoff
- Jeffrey S. LaCourse

May 9, 2017

City of Portland  
Planning and Urban Development ✓  
Attn: Tuck O'Brien, City Planning Director  
389 Congress Street  
Portland, Maine 04101

VIA MAIL AND EMAIL  
[sgo@portlandmaine.gov](mailto:sgo@portlandmaine.gov)  
[DWCHUHTA@portlandmaine.gov](mailto:DWCHUHTA@portlandmaine.gov)

City of Portland  
Office of Corporation Counsel  
Attn: Danielle West-Chuhta, Corp. Counsel  
389 Congress Street, Room 211  
Portland, Maine 04101

**Re: April 11, 2017 Site Plan of 218-220 Washington Avenue for 218-220 (Tax Maps 10-A-15 and 10-A-10) Washington Avenue, LLC ("Site Plan")**

Dear Director O'Brien and Attorney West-Chuhta:

This letter follows my initial letter to each of you dated January 19, 2017 ("Letter"), as well as my conversation with Tuck on May 3, 2017. As you may recall, our office represents 202 Washington Avenue, LLC ("202"), the owner of real property located at 202 Washington Avenue, Portland, Maine (Tax Map 10-A-16-19) ("202 Washington Property"). I will not reiterate the additional facts as set forth in my Letter to you, and I will also use all of the same abbreviations, nomenclature and acronyms as previously set forth in said Letter.

By virtue of this Letter, and on behalf of my client, I renew our objection to the Project set forth by Mr. Morse and 218-220. We also renew our request that the City of Portland decline to move forward or find complete the proposed project of 218-220 until such time as matters resolve by and between 202 and 218-220 and/or Mr. Morse. To date, and for reasons unbeknownst to me, Mr. Morse and 218-220 refuse to work with my client, or me, in any form of constructive manner. Rather, it is my understanding that they have pressured the City to push forward with their project despite the lingering dispute between the parties. Arbitration has been demanded by counsel for the applicant, so moving forward on the applicant's application prior to any such arbitration does not make practical sense.

In speaking with Tuck, I understand that the project has been set for a "workshop" hearing, and that no formal hearing before the Planning Board has been scheduled to date. This letter shall constitute 202's written objection to the workshop hearing, and Mr. Gan will also appear to voice his objections to the project. I also understand that 218-220, via its counsel, has contacted the City on numerous occasions, and submitted additional materials, in an effort to persuade the City that it can satisfy its threshold of right, title and interest. While my client has been able to send to me an additional Site Plan dated April 11, 2017 (City Submittal No. 3), I have not been provided copies of anything else that has been submitted to the City by 218-220, Mr. Morse, or their counsel since January 2017. Importantly, the April 11, 2017 Site Plan also clearly violates my client's property rights, as further discussed below.

The project, as currently proposed, is in clear violation of the Maintenance Easement and Negative Easement as set forth more fully in my Letter of January 2017. The Boundary Agreement and Amendment to Boundary Agreement are both of record in the Cumberland County Registry of Deeds, so that the project constitutes a violation of such agreements should be easily discernible. Notwithstanding, I understand from Tuck that the City has decided to move forward with the application process for the project because Corporation Counsel has determined that the applicant has displayed some level of right, title and interest to the property. Such is not the case, and I am not sure how it could possibly be the case, given the lingering dispute. If the application advances, the City will likely be utilizing resources in approving a project that cannot be built due to the existing encumbrances and rights of record.

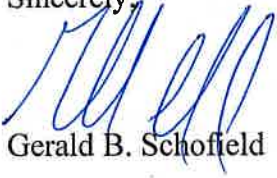
While 218-220 and Mr. Morse own the fee interest in and to the land upon which the proposed project rests, my client's have a clear, recorded and legal right to the portion of the land which is affected by the Maintenance Easement and Negative Easement. Property remains within the ownership and control of the owner of the servient estate (218-220/Morse). *Flaherty v. Muther*, 2013 ME 39, ¶ 21, 65 A.3d 1209. However, that ownership is subject to the restriction that the owner of said servient estate may not materially impair or unreasonably interfere with the use of the easement by the dominant estate holder (202). *Id.* 218-220/Morse may only use that portion of their land subject to the Maintenance Easement and Negative Easement in a manner not inconsistent with 202's rights pursuant to the Boundary Agreement and Amended Boundary Agreement. The new Site Plan submitted clearly depicts buildings and structures in both the Maintenance Easement Area and the Negative Easement Area that violate 202's rights, and, as such, 218-220/Morse cannot show right, title and interest in and to those portions of the property unless and until such issues are addressed and corrected with 202.

Based upon the above, I respectfully request that Corporation Counsel review its position with respect to 218-220 and/or Morse's claim of right, title and interest after careful review of all documents related to this project, including those documents recorded in the Cumberland County Registry of Deeds related to 202. Any such failure to do so, and any approval of a project that may impinge upon my client's property rights and interests will cause my client to exercise any and all legal and equitable remedies that may be available to it in order to protect and preserve such rights.

City of Portland  
May 9, 2017  
Page 3

Thank you for your kind attention to this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read 'G. Schofield', written over the word 'Sincerely,'.

Gerald B. Schofield

GBS/  
Email: [gschofield@hablaw.com](mailto:gschofield@hablaw.com)



Please respond to our Portland office

- James A. Hopkinson
- Richard J. Abbondanza
- Gerald B. Schofield, Jr.
- Mark A. Woronoff
- Jeffrey S. LaCourse

May 9, 2017

City of Portland  
Planning and Urban Development  
Attn: Tuck O'Brien, City Planning Director  
389 Congress Street  
Portland, Maine 04101

VIA MAIL AND EMAIL  
[sgo@portlandmaine.gov](mailto:sgo@portlandmaine.gov)  
[DWCHUHTA@portlandmaine.gov](mailto:DWCHUHTA@portlandmaine.gov)

City of Portland  
Office of Corporation Counsel ✓  
Attn: Danielle West-Chuhta, Corp. Counsel  
389 Congress Street, Room 211  
Portland, Maine 04101

**Re: April 11, 2017 Site Plan of 218-220 Washington Avenue for 218-220 (Tax Maps 10-A-15 and 10-A-10) Washington Avenue, LLC ("Site Plan")**

Dear Director O'Brien and Attorney West-Chuhta:

This letter follows my initial letter to each of you dated January 19, 2017 ("Letter"), as well as my conversation with Tuck on May 3, 2017. As you may recall, our office represents 202 Washington Avenue, LLC ("202"), the owner of real property located at 202 Washington Avenue, Portland, Maine (Tax Map 10-A-16-19) ("202 Washington Property"). I will not reiterate the additional facts as set forth in my Letter to you, and I will also use all of the same abbreviations, nomenclature and acronyms as previously set forth in said Letter.

By virtue of this Letter, and on behalf of my client, I renew our objection to the Project set forth by Mr. Morse and 218-220. We also renew our request that the City of Portland decline to move forward or find complete the proposed project of 218-220 until such time as matters resolve by and between 202 and 218-220 and/or Mr. Morse. To date, and for reasons unbeknownst to me, Mr. Morse and 218-220 refuse to work with my client, or me, in any form of constructive manner. Rather, it is my understanding that they have pressured the City to push forward with their project despite the lingering dispute between the parties. Arbitration has been demanded by counsel for the applicant, so moving forward on the applicant's application prior to any such arbitration does not make practical sense.

In speaking with Tuck, I understand that the project has been set for a "workshop" hearing, and that no formal hearing before the Planning Board has been scheduled to date. This letter shall constitute 202's written objection to the workshop hearing, and Mr. Gan will also appear to voice his objections to the project. I also understand that 218-220, via its counsel, has contacted the City on numerous occasions, and submitted additional materials, in an effort to persuade the City that it can satisfy its threshold of right, title and interest. While my client has been able to send to me an additional Site Plan dated April 11, 2017 (City Submittal No. 3), I have not been provided copies of anything else that has been submitted to the City by 218-220, Mr. Morse, or their counsel since January 2017. Importantly, the April 11, 2017 Site Plan also clearly violates my client's property rights, as further discussed below.

The project, as currently proposed, is in clear violation of the Maintenance Easement and Negative Easement as set forth more fully in my Letter of January 2017. The Boundary Agreement and Amendment to Boundary Agreement are both of record in the Cumberland County Registry of Deeds, so that the project constitutes a violation of such agreements should be easily discernible. Notwithstanding, I understand from Tuck that the City has decided to move forward with the application process for the project because Corporation Counsel has determined that the applicant has displayed some level of right, title and interest to the property. Such is not the case, and I am not sure how it could possibly be the case, given the lingering dispute. If the application advances, the City will likely be utilizing resources in approving a project that cannot be built due to the existing encumbrances and rights of record.

While 218-220 and Mr. Morse own the fee interest in and to the land upon which the proposed project rests, my client's have a clear, recorded and legal right to the portion of the land which is affected by the Maintenance Easement and Negative Easement. Property remains within the ownership and control of the owner of the servient estate (218-220/Morse). *Flaherty v. Muther*, 2013 ME 39, ¶ 21, 65 A.3d 1209. However, that ownership is subject to the restriction that the owner of said servient estate may not materially impair or unreasonably interfere with the use of the easement by the dominant estate holder (202). *Id.* 218-220/Morse may only use that portion of their land subject to the Maintenance Easement and Negative Easement in a manner not inconsistent with 202's rights pursuant to the Boundary Agreement and Amended Boundary Agreement. The new Site Plan submitted clearly depicts buildings and structures in both the Maintenance Easement Area and the Negative Easement Area that violate 202's rights, and, as such, 218-220/Morse cannot show right, title and interest in and to those portions of the property unless and until such issues are addressed and corrected with 202.

Based upon the above, I respectfully request that Corporation Counsel review its position with respect to 218-220 and/or Morse's claim of right, title and interest after careful review of all documents related to this project, including those documents recorded in the Cumberland County Registry of Deeds related to 202. Any such failure to do so, and any approval of a project that may impinge upon my client's property rights and interests will cause my client to exercise any and all legal and equitable remedies that may be available to it in order to protect and preserve such rights.

City of Portland  
May 9, 2017  
Page 3

Thank you for your kind attention to this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read 'G. Schofield', is written over the printed name.

Gerald B. Schofield

GBS/

Email: [gschofield@hablaw.com](mailto:gschofield@hablaw.com)

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## 218 Washington Avenue Project Concerns

1 message

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**'Karen Snyder' via Planning and Urban Development** <planning@portlandmaine.gov> Tue, May 9, 2017 at 12:34 PM

Reply-To: Karen Snyder <karsny@yahoo.com>

To: Planning Board <planningboard@portlandmaine.gov>, Jean Fraser <jf@portlandmaine.gov>, "planning@portlandmaine.gov" <planning@portlandmaine.gov>

Cc: Eastbayside Info <info@eastbayside.org>, Paula Agopian <pagopian1@yahoo.com>, Nini Mc Manamy <ninimaine@aol.com>, "Carolyn B. Young" <cbymaine@icloud.com>, Douglas Martica <tica1529@gmail.com>, Barbara Vestal <vestal@chesterandvestal.com>, Jay Norris <jay.norris@munjoyhill.org>, "Cynthia L. Cochran" <ccochran@maine.rr.com>, Ned Chester <ned.chester@munjoyhill.org>, Angela Adams <aaa@angelaadams.com>, Anne Rand <rndanne@aol.com>, Pam Macomber <pam@ninstonesspa.com>, Peter Macomber <pbm@macomber.com>, "Maggy W." <mwnola@gmail.com>, Sherwood Hamill <shamill@angelaadams.com>, Mary Casale <dirtgirl1@aol.com>, Berry Manter <berrymanter@yahoo.com>, Dave Cowie <dcowie@maine.rr.com>, Herb Adams <hadams@smccme.edu>, Belinda Ray <bsr@portlandmaine.gov>, Kathleen McKeon <kmckeon@maine.rr.com>

Dear Planning Department and Portland Planning Board,

I have reviewed the 218 Washing Ave project from today's agenda and I have several concerns:

[http://www.portlandmaine.gov/AgendaCenter/ViewFile/Agenda/\\_05092017-2041?html=true](http://www.portlandmaine.gov/AgendaCenter/ViewFile/Agenda/_05092017-2041?html=true)

- 1) Since only 5 of the 45 proposed units are workforce units are to be provided since this technically is only 11% of the proposed units are geared towards workforce units. As such, there should be no additional height or setbacks given.
- 2) It is not clear how many feet above Washington Avenue is this project. Please advise.
- 3) Does the height of this building off of Washing Avenue interrupt or block the shore lines of Fort Sumner Park? How is this assured that no rooftop miscellaneous equipment on top of this building will not obstruct Fort Sumner Park vista sight lines?
- 4) This building architectural exterior is very blocky non-descriptive and does not reflect East Bay Side and East End historic architecture in which this building "technically" falls into this historic district.
- 5) Due to the slope of this barely buildable lot, the driveway/curb entrance has technical issues on to Washington Avenue that need to be addressed without giving waivers.

Therefore, there should no waivers given to this development which appears to eliminate and reduce even more of the open space and sight lines of Washington Avenue of East Bay side...

Regards,  
Karen Snyder  
Munjoy Hill Resident



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## Suggestion re: shared-use path at 218 Washington Avenue

1 message

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**Christian MilNeil** <c.neal.milneil@gmail.com>

Tue, May 9, 2017 at 11:53 AM

To: Bruce Hyman <BHYMAN@portlandmaine.gov>, Jean Fraser <JF@portlandmaine.gov>, Caitlin Cameron <CCameron@portlandmaine.gov>, maietta@aol.com, wconway@sebagotechnics.com

Hi Jean and Bruce,

As an East Bayside neighbor, I support the application for new housing at 218 Washington Avenue.

I'd like to offer some suggestions for the shared-use pathway in the site plan. I use this path often, and I expect that the new housing will increase the pathway's traffic (which is great! Increasing \*foot\* traffic, instead of merely managing car traffic, ought to be more of a focus for the planning board).

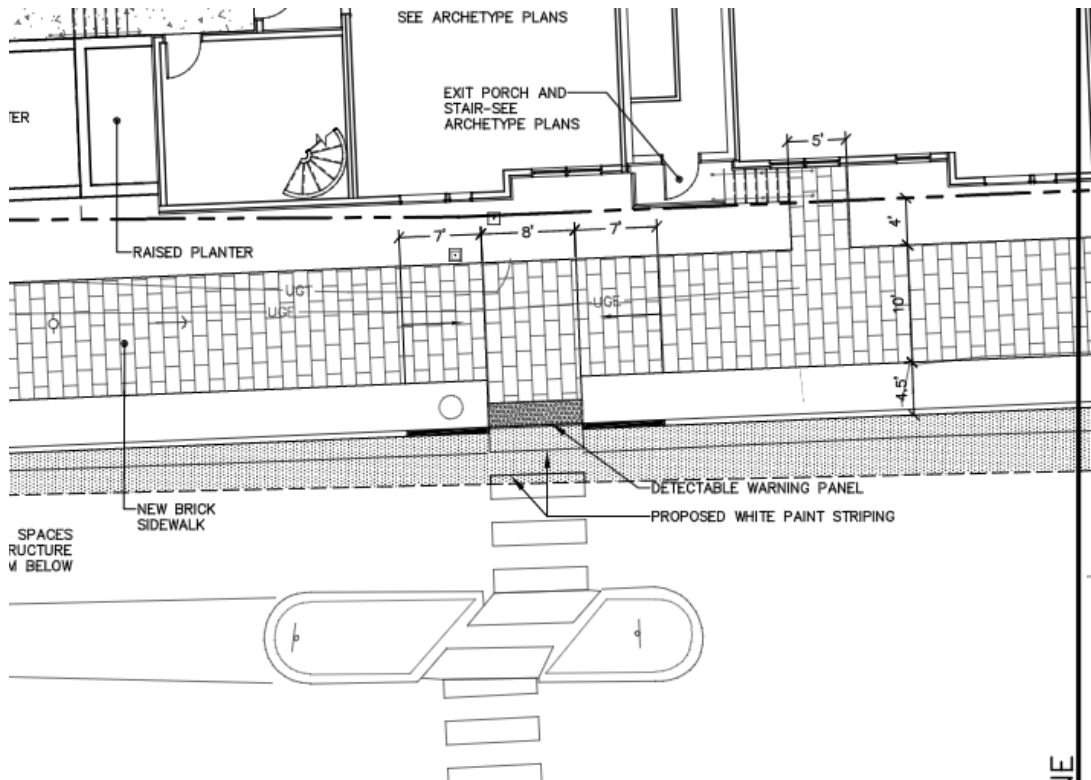
First of all, the rebuilt sidewalk should preserve this ramp in front of the current 218 Washington building to give cyclists an easy, direct route onto the off-street path:



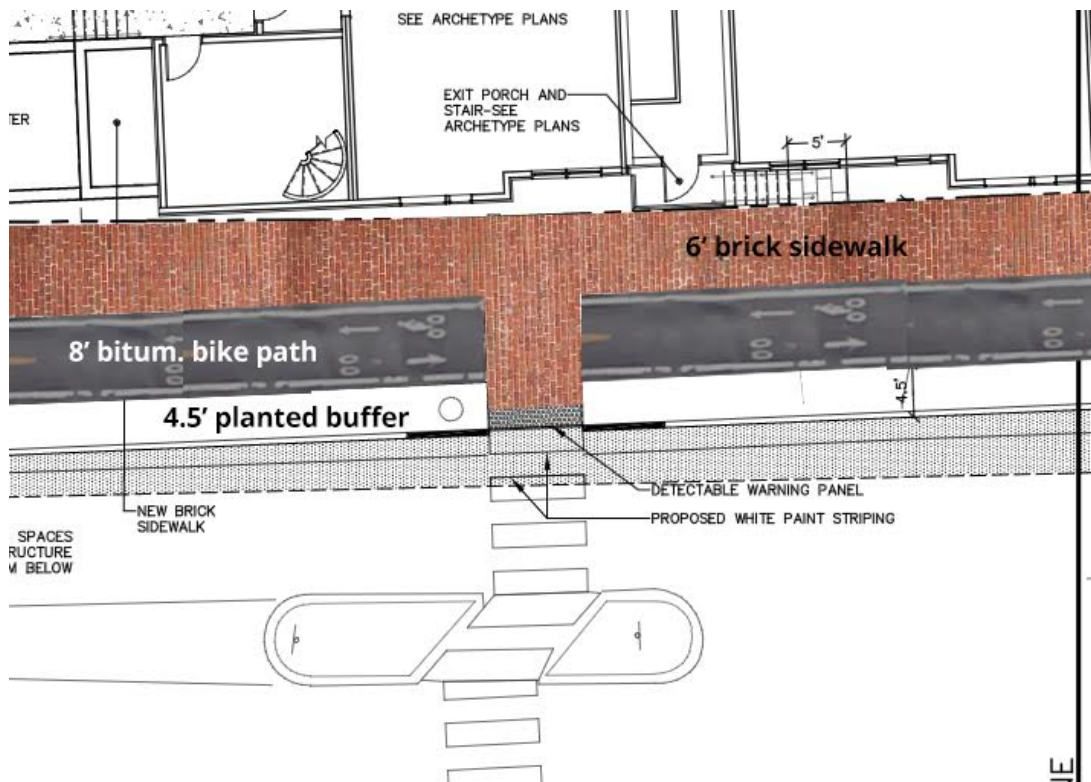
Second suggestion has to do with the conversion of the shared-use path's material to more brick – which I'm not thrilled about. Brick has higher maintenance issues and its

uneven surfaces are less ideal for cycling. So I'd like to suggest the city allow a continuous bituminous path along the site's frontage for bikes.

The current design, as I read it, replaces the existing 10' path with a brick surface along the frontage of the new building, where several building entrances open up to the pathway. There's a 4' buffer between the property line and the path, the 10' path, and a 4.5' esplanade, all within the city's ROW:



I'd suggest that this layout could be improved by reducing the brick sidewalk to 6' and eliminating the buffer to place the sidewalk immediately against the property line. This layout allows for an 8' bituminous path for bikes and other faster-moving traffic closer to the roadway, plus the 4.5' planted buffer:



This layout could also save installation costs for the developers by reducing the total surface area of the brick sidewalk, and will obviously save long-term maintenance costs for the city.

Thanks for considering this – we need more housing like this to ensure that East Bayside remains welcoming and affordable to everyone who wants to live here.

-Christian MilNeil  
45 Smith Street

Christian MilNeil

double u double u double u dot christianmilneil dot com

Please respond to our Portland office

- James A. Hopkinson
- Richard J. Abbondanza
- Gerald B. Schofield, Jr.
- Mark A. Woronoff
- Jeffrey S. LaCourse

July 10, 2017

City of Portland  
Planning and Urban Development  
Attn: Tuck O'Brien, City Planning Director  
Attn: Jean Fraser, Planner  
389 Congress Street  
Portland, Maine 04101

VIA MAIL AND EMAIL  
[sgo@portlandmaine.gov](mailto:sgo@portlandmaine.gov)  
[DWCHUHTA@portlandmaine.gov](mailto:DWCHUHTA@portlandmaine.gov)  
[jf@portlandmaine.gov](mailto:jf@portlandmaine.gov)

City of Portland  
Office of Corporation Counsel  
Attn: Danielle West-Chuhta, Corp. Counsel  
389 Congress Street, Room 211  
Portland, Maine 04101

**Re: April 11, 2017 Site Plan of 218-220 Washington Avenue for 218-220 (Tax Maps 10-A-15 and 10-A-10) Washington Avenue, LLC ("Site Plan")**

Dear Director O'Brien and Attorney West-Chuhta:

I am again writing on behalf of 202 Washington Avenue, LLC ("202"). This letter follows my initial letter to each of you dated January 19, 2017 ("Letter"), as well as my conversation with Tuck on May 3, 2017. I also sent correspondence to you on May 9, 2017, before the first workshop hearing.

By virtue of this Letter, and on behalf of my client, I renew our objection to the Project set forth by Mr. Morse and 218-220. We also renew our request that the City of Portland decline to move forward or find complete the proposed project of 218-220 until such time as matters resolve by and between 202 and 218-220 and/or Mr. Morse. Arbitration has been demanded by counsel for the applicant, so moving forward on the applicant's application prior to any such arbitration does not make practical sense. 218-220/Morse cannot submit final plans to the City for its consideration unless and until all rights are arbitrated between the parties. New plans were recently submitted to me by counsel for Mr. Morse and 218-220; based upon a review of the same, it does not appear that much has changed to assuage my clients' concerns with the proposed project. Additionally, a determination by an arbitrator may drastically change that which ends up in front of the City for final approval. Consideration of, and approval of, any Site Plan at this time is premature.



I understand that another workshop hearing is set for July 11, 2017. This letter shall constitute 202's further written objection to the workshop hearing. The Site Plans remitted to me for my review still clearly violate my client's property rights, including with respect to the Negative Easement and Maintenance Easement areas, as further discussed below.

The project, as currently proposed, is in clear violation of the Maintenance Easement and Negative Easement as set forth more fully in my Letter of January 2017. The Boundary Agreement and Amendment to Boundary Agreement are both of record in the Cumberland County Registry of Deeds, so that the project constitutes a violation of such agreements should be easily discernible. In fact, it was admitted by counsel for the applicant that the previously submitted Site Plan did in fact violate the Negative Easement. The new Site Plan, in particular, and as a for-instance, depicts trees planted across the Maintenance Easement area, which is clearly a violation of my clients' rights under such Easement. My client will not have the requisite access over the area provided by the Maintenance Easement if this Plan is approved.

The new Site Plan submitted clearly depicts vegetation, improvements, buildings and structures in both the Maintenance Easement Area and the Negative Easement Area that violate 202's rights, and, as such, 218-220/Morse cannot show right, title and interest in and to those portions of the property unless and until such issues are addressed and corrected with 202. On Page 3 of the City's "Memorandum Planning and Urban Development Department Planning Division" dated July 7, 2017, a visual depiction of the project is shown which clearly shows unpermitted improvements in the Negative Easement Area in violation of 202's rights under the Boundary Agreement, as amended.

The parties are working towards meeting with an arbitrator, and will, in all likelihood, be resolving these issues via subsequent arbitration. Mr. Morse contracted and negotiated for the Easements that relate to his property and this project; the City should not countenance his attempt to circumvent his own agreements with my client unless and until the rights of the parties are determined by an arbitrator, as agreed by the parties. Any such City approval at this time would not override my clients' record property rights, and, more importantly, would be premature until the parties privately work out the issues between them.

Based upon the above, I respectfully request that Corporation Counsel review its position with respect to 218-220 and/or Morse's claim of right, title and interest after careful review of all documents related to this project, including those documents recorded in the Cumberland County Registry of Deeds related to 202. Any such failure to do so, and any approval of a project that may impinge upon my client's property rights and interests will cause my client to exercise any and all legal and equitable remedies that may be available to it in order to protect and preserve such rights. Importantly, it is my understanding that Mr. Morse's permit for a smaller, yet different project had been rejected by the City back in 2010, or thereabout, which subsequently led to litigation by and between my client and Mr. Morse. That project was in violation of my

City of Portland  
July 10, 2017  
Page 3

clients' rights back then, and was rejected, so it should follow that the issues between the parties be resolved privately now before the City makes any determination on the applicant's application, or advances said application. It seems lost on the applicant for the current proposed project that it was he who negotiated away certain rights with respect to his property, and now he seeks to have the City somehow override his covenants with my client.

Thank you for your kind attention to this matter.

Sincerely,



Gerald B. Schofield  
GBS/  
Email: [gschofield@hablaw.com](mailto:gschofield@hablaw.com)



## **Level III – Preliminary and Final Site Plans Development Review Application Portland, Maine**

Planning and Urban Development Department  
Planning Division

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Level III: Preliminary or Final Site Plan. Please note that Portland has delegated review from the State of Maine for reviews under the Site Location of Development Act, Chapter 500 Stormwater Permits, and Traffic Movement Permits.

### **Level III: Site Plan Development includes:**

- New structures with a total floor area of 10,000 sq. ft. or more except in Industrial Zones.
- New structures with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- New temporary or permanent parking area(s) or paving of existing unpaved parking areas for more than 75 vehicles.
- Building addition(s) with a total floor area of 10,000 sq. ft. or more (cumulatively within a 3 year period) except in Industrial Zones.
- Building addition(s) with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- A change in the use of a total floor area of 20,000 sq. ft. or more in any existing building (cumulatively within a 3 year period).
- Multiple family development (3 or more dwelling units) or the addition of any additional dwelling unit if subject to subdivision review.
- Any new major or minor auto business in the B-2 or B-5 Zone, or the construction of any new major or minor auto business greater than 10,000 sq. ft. of building area in any other permitted zone.
- Correctional prerelease facilities.
- Park improvements: New structures greater than 10,000 sq. ft. and/or facilities encompassing 20,000 sq. ft. or more (excludes rehabilitation or replacement of existing facilities); new nighttime outdoor lighting of sports, athletic or recreation facilities not previously illuminated.
- Land disturbance of 3 acres or more (includes stripping, grading, grubbing, filling or excavation).

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: <http://me-portland.civicplus.com/DocumentCenter/Home/View/1080>

Design Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2355>

Technical Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2356>

#### **Planning Division**

Fourth Floor, City Hall

389 Congress Street

p.m. (207) 874-8719

[planning@portlandmaine.gov](mailto:planning@portlandmaine.gov)

#### **Office Hours**

Monday thru Friday

8:00 a.m. – 4:30

**PROJECT NAME:**218 - 220 Washington Avenue**PROPOSED DEVELOPMENT ADDRESS:**218 - 220 Washington Avenue**PROJECT DESCRIPTION:**45 Residential Condominiums in one building  
with parking under the building**CHART/BLOCK/LOT:** MAP 10/BLOCK A/LOT 10  
AND 15**PRELIMINARY PLAN**  
**FINAL PLAN**

\_\_\_\_\_(date)

\_\_\_\_\_(date)

**CONTACT INFORMATION:**

|                                                                                                                                                                                                                                        |                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant – must be owner, Lessee or Buyer</b><br>Name: <u>218 - 220 Washington Avenue LLC</u><br>Business Name, if applicable:<br>Address: <u>199 Elderberry Road</u><br>City/State: <u>So. Portland ME</u> Zip Code: <u>04106</u> | <b>Applicant Contact Information</b><br>Work #: <u>—</u><br>Home #: <u>—</u><br>Cell #: <u>207.749.0000</u> Fax#: <u>—</u><br>e-mail: <u>mairetta@aol.com</u>                                     |
| <b>Owner – (if different from Applicant)</b><br>Name: <u>—</u><br>Address:<br>City/State: Zip Code:                                                                                                                                    | <b>Owner Contact Information</b><br>Work #: <u>—</u><br>Home #:<br>Cell #: Fax#: <u>—</u><br>e-mail:                                                                                              |
| <b>Agent/ Representative</b><br>Name: <u>Sebago Technics Inc. / Will Conway</u><br>Address: <u>75 John Roberts Road</u><br>City/State: <u>So. Portland ME</u> Zip Code: <u>04106</u>                                                   | <b>Agent/Representative Contact information</b><br>Work #: <u>207. 200. 2055</u><br>Home #: <u>—</u><br>Cell #: <u>—</u> Fax#: <u>207. 856, 2206</u><br>e-mail: <u>Wconway@sebagotechnics.com</u> |
| <b>Billing Information</b><br>Name: <u>Sebago Technics</u><br>Address:<br>City/State: Zip Code:                                                                                                                                        | <b>Billing Contact Information</b><br>Work #: <u>Will Conway</u><br>Home #: <u>207. 200. 2055</u><br>Cell #: <u>—</u> Fax#: <u>—</u><br>e-mail:                                                   |



|                                                                                                                                                                                          |                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineer</b><br>Name: <u>Sebago Technics</u><br>Address:<br>City/State :                      Zip Code:                                                                               | <b>Engineer Contact Information</b><br>Work #: <u>Will Conway</u><br>Home #:<br>Cell #:                      Fax#:<br>e-mail:                                              |
| <b>Surveyor</b><br>Name: <u>Sebago Technics</u><br>Address:<br>City/State :                      Zip Code:                                                                               | <b>Surveyor Contact Information</b><br>Home #: <u>Will Conway</u><br>Work #:<br>Cell #:                      Fax#:<br>e-mail:                                              |
| <b>Architect</b><br>Name: <u>Archetype / Bill Hopkins</u><br>Address: <u>48 Union Wharf</u><br>City/State <u>Portland ME</u> Zip Code: <u>04101</u>                                      | <b>Architect Contact Information</b><br>Work #: <u>207. 772. 6022</u><br>Home #: <u>—</u><br>Cell #: <u>—</u> Fax#: <u>—</u><br>e-mail: <u>hopkins @ archetypepa . com</u> |
| <b>Attorney</b><br>Name: <u>—</u><br>Address:<br>City/State :                      Zip Code:                                                                                             | <b>Attorney Contact Information</b><br>Work #: <u>—</u><br>Home #:<br>Cell #:                      Fax#:<br>e-mail:                                                        |
| <b>Designated person/person(s) for uploading to e-Plan:</b><br>Name: <u>Will Conway</u><br>e-mail: <u>wconway @ sebago technics. com</u><br><br>Name:<br>e-mail:<br><br>Name:<br>e-mail: |                                                                                                                                                                            |

## APPLICATION FEES:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Level III Development (check applicable reviews)</b></p> <p><input checked="" type="checkbox"/> Less than 50,000 sq. ft. (\$750.00)</p> <p><input checked="" type="checkbox"/> 50,000 - 100,000 sq. ft. (\$1,000)</p> <p><input type="checkbox"/> 100,000 - 200,000 sq. ft. (\$2,000)</p> <p><input type="checkbox"/> 200,000 - 300,000 sq. ft. (\$3,000)</p> <p><input type="checkbox"/> over 300,00 sq. ft. (\$5,000)</p> <p><input type="checkbox"/> Parking lots over 11 spaces (\$1,000)</p> <p><input type="checkbox"/> After-the-fact Review (\$1,000.00 plus applicable application fee)</p> <p><b>Plan Amendments (check applicable reviews)</b></p> <p><input type="checkbox"/> Planning Staff Review (\$250)</p> <p><input type="checkbox"/> Planning Board Review (\$500)</p> <hr/> <p>The City invoices separately for the following:</p> <ul style="list-style-type: none"> <li>• Notices (\$.75 each)</li> <li>• Legal Ad (% of total Ad)</li> <li>• Planning Review (\$50.00 hour)</li> <li>• Legal Review (\$75.00 hour)</li> </ul> <p>Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.</p> | <p><b>Other Reviews (check applicable reviews)</b></p> <p><input checked="" type="checkbox"/> Traffic Movement (\$1,500)</p> <p><input checked="" type="checkbox"/> Stormwater Quality (\$250)</p> <p><input type="checkbox"/> Subdivisions (\$500 + \$25/lot)</p> <p><input type="checkbox"/> # of Lots <u>45</u> x \$25/lot = <u>\$ 1125</u> (units)</p> <p><input type="checkbox"/> Site Location (\$3,500, except for residential projects which shall be \$200/lot)</p> <p><input type="checkbox"/> # of Lots <u>    </u> x \$200/lot = <u>    </u></p> <p><input type="checkbox"/> Other <u>    </u></p> <p><input type="checkbox"/> Change of Use</p> <p><input type="checkbox"/> Flood Plain</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Design Review</p> <p><input type="checkbox"/> Housing Replacement</p> <p><input type="checkbox"/> Historic Preservation</p> |
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## INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

**Please refer to the application checklist (attached) for a detailed list of submission requirements.**

1. Fill out the application completely and e-mail the **application only** to [planning@portlandmaine.gov](mailto:planning@portlandmaine.gov) (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.
2. An invoice for the application fee will be e-mailed to you. Payments can be made on-line at [Pay Your Invoice](#), by mail or in person at City Hall, 4<sup>th</sup> Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.
3. The designated person responsible for uploading documents and drawings will receive an email from [eplan@portlandmaine.gov](mailto:eplan@portlandmaine.gov) with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

**Reminder: Before the project can move forward, the application fee shall be paid in full and all required documents and drawings shall be uploaded into e-plan correctly.**

4. Follow the link below (Applying Online Instructions) for step by step instructions on how to do the following:  
 Tab 1 - Setting up the appropriate compatibility settings for your PC and getting started in e-plan.  
 Tab 2 - Preparing your drawings, documents and photos for uploading using the correct naming conventions  
 Tab 3 - Preparing and uploading revised drawings and documents

[Applying Online Instructions](#)

5. When ready, upload your files and documents into the following folders:  
 "Application Submittal – Drawings"  
 "Application Submittal – Documents"

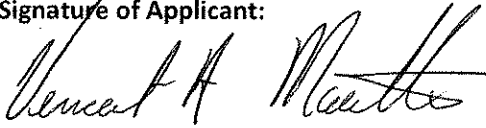
6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

**APPLICANT SIGNATURE:**

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a *legal signature* per Maine state law.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Level III Site Plan review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.

|                                                                                                              |                   |
|--------------------------------------------------------------------------------------------------------------|-------------------|
| Signature of Applicant:<br> | Date:<br>12/12/16 |
|--------------------------------------------------------------------------------------------------------------|-------------------|

## PROJECT DATA

The following information is required where applicable, in order to complete the application.

|                                                                                                                                                                                                                          |                           |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------|
| <b>Total Area of Site</b>                                                                                                                                                                                                | 28,382                    | sq. ft. |
| <b>Proposed Total Disturbed Area of the Site</b>                                                                                                                                                                         | 22,532                    | sq. ft. |
| If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland. |                           |         |
| <b>Impervious Surface Area</b>                                                                                                                                                                                           |                           |         |
| Impervious Area (Total Existing)                                                                                                                                                                                         | 2375                      | sq. ft. |
| Impervious Area (Total Proposed)                                                                                                                                                                                         | 22,532                    | sq. ft. |
| <b>Building Ground Floor Area and Total Floor Area</b>                                                                                                                                                                   |                           |         |
| Building Footprint (Total Existing)                                                                                                                                                                                      | 1100                      | sq. ft. |
| Building Footprint (Total Proposed)                                                                                                                                                                                      | 13,751                    | sq. ft. |
| Building Floor Area (Total Existing)                                                                                                                                                                                     | 2200                      | sq. ft. |
| Building Floor Area (Total Proposed)                                                                                                                                                                                     | 69,459                    | sq. ft. |
| <b>Zoning</b>                                                                                                                                                                                                            |                           |         |
| Existing                                                                                                                                                                                                                 | B1h                       |         |
| Proposed, if applicable                                                                                                                                                                                                  | B1h                       |         |
| <b>Land Use</b>                                                                                                                                                                                                          |                           |         |
| Existing                                                                                                                                                                                                                 | RESIDENTIAL / UNDEVELOPED |         |
| Proposed                                                                                                                                                                                                                 | RESIDENTIAL               |         |
| <b>Residential, if applicable</b>                                                                                                                                                                                        |                           |         |
| # of Residential Units (Total Existing)                                                                                                                                                                                  | 1                         |         |
| # of Residential Units (Total Proposed)                                                                                                                                                                                  | 45                        |         |
| # of Lots (Total Proposed)                                                                                                                                                                                               | 1 (CONDO)                 |         |
| # of Affordable Housing Units (Total Proposed)                                                                                                                                                                           | 0                         |         |
| <b>Proposed Bedroom Mix</b>                                                                                                                                                                                              |                           |         |
| # of Efficiency Units (Total Proposed)                                                                                                                                                                                   | 0                         |         |
| # of One-Bedroom Units (Total Proposed)                                                                                                                                                                                  | 22                        |         |
| # of Two-Bedroom Units (Total Proposed)                                                                                                                                                                                  | 23                        |         |
| # of Three-Bedroom Units (Total Proposed)                                                                                                                                                                                | 0                         |         |
| <b>Parking Spaces</b>                                                                                                                                                                                                    |                           |         |
| # of Parking Spaces (Total Existing)                                                                                                                                                                                     | 3                         |         |
| # of Parking Spaces (Total Proposed)                                                                                                                                                                                     | 45                        |         |
| # of Handicapped Spaces (Total Proposed)                                                                                                                                                                                 | 2                         |         |
| <b>Bicycle Parking Spaces</b>                                                                                                                                                                                            |                           |         |
| # of Bicycle Spaces (Total Existing)                                                                                                                                                                                     | 0                         |         |
| # of Bicycle Spaces (Total Proposed)                                                                                                                                                                                     | 18                        |         |
| <b>Estimated Cost of Project</b>                                                                                                                                                                                         | \$ 13.0 M                 |         |



| <b>PRELIMINARY PLAN (Optional) - Level III Site Plan</b> |                          |                    |                                                                                                                                                                                                                                            |
|----------------------------------------------------------|--------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant Checklist</b>                               | <b>Planner Checklist</b> | <b># of Copies</b> | <b>GENERAL WRITTEN SUBMISSIONS CHECKLIST</b>                                                                                                                                                                                               |
| ✓                                                        |                          | 1                  | Completed Application form                                                                                                                                                                                                                 |
| ✓                                                        |                          | 1                  | Application fees                                                                                                                                                                                                                           |
| ✓                                                        |                          | 1                  | Written description of project                                                                                                                                                                                                             |
| ✓                                                        |                          | 1                  | Evidence of right, title and interest                                                                                                                                                                                                      |
| ✓                                                        |                          | 1                  | Evidence of state and/or federal approvals, if applicable                                                                                                                                                                                  |
| ✓                                                        |                          | 1                  | Written assessment of proposed project's compliance with applicable zoning requirements                                                                                                                                                    |
| ✓                                                        |                          | 1                  | Summary of existing and/or proposed easement, covenants, public or private rights-of-way, or other burdens on the site                                                                                                                     |
| ✓                                                        |                          | 1                  | Written requests for waivers from site plan or technical standards, if applicable.                                                                                                                                                         |
| ✓                                                        |                          | 1                  | Evidence of financial and technical capacity                                                                                                                                                                                               |
| ✓                                                        |                          | 1                  | Traffic Analysis (may be preliminary, in nature, during the preliminary plan phase)                                                                                                                                                        |
| <b>Applicant Checklist</b>                               | <b>Planner Checklist</b> | <b># of Copies</b> | <b>SITE PLAN SUBMISSIONS CHECKLIST</b>                                                                                                                                                                                                     |
| ✓                                                        |                          | 1                  | Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual                                                                                                                                          |
| ✓                                                        |                          | 1                  | <b>Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)</b>                                                                                                    |
| ✓                                                        |                          |                    | Proposed grading and contours;                                                                                                                                                                                                             |
| ✓                                                        |                          |                    | Existing structures with distances from property line;                                                                                                                                                                                     |
| ✓                                                        |                          |                    | Proposed site layout and dimensions for all proposed structures (including piers, docks or wharves in Shoreland Zone), paved areas, and pedestrian and vehicle access ways;                                                                |
| ✓                                                        |                          |                    | Preliminary design of proposed stormwater management system in accordance with Section 5 of the Technical Manual (note that Portland has a separate applicability section);                                                                |
| ✓                                                        |                          |                    | Preliminary infrastructure improvements;                                                                                                                                                                                                   |
| ✓                                                        |                          |                    | Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;                                                                                                                                                           |
| ✓                                                        |                          |                    | Location of significant natural features (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features) located on the site as defined in Section 14-526 (b) (1); |
| ✓                                                        |                          |                    | Proposed buffers and preservation measures for significant natural features, as defined in Section 14-526 (b) (1);                                                                                                                         |
| ✓                                                        |                          |                    | Location , dimensions and ownership of easements, public or private rights of way, both existing and proposed;                                                                                                                             |
| ✓                                                        |                          |                    | Exterior building elevations.                                                                                                                                                                                                              |

| FINAL PLAN - Level III Site Plan |                   |             |                                                                                                                                                                              |
|----------------------------------|-------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant Checklist              | Planner Checklist | # of Copies | GENERAL WRITTEN SUBMISSIONS CHECKLIST<br>(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required) |
| ✓                                |                   | 1           | * Completed Application form                                                                                                                                                 |
| ✓                                |                   | 1           | * Application fees                                                                                                                                                           |
| ✓                                |                   | 1           | * Written description of project                                                                                                                                             |
| ✓                                |                   | 1           | * Evidence of right, title and interest                                                                                                                                      |
| ✓                                |                   | 1           | * Evidence of state and/or federal permits                                                                                                                                   |
| ✓                                |                   | 1           | * Written assessment of proposed project's specific compliance with applicable Zoning requirements                                                                           |
| ✓                                |                   | 1           | * Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site                                                    |
| ✓                                |                   | 1           | * Evidence of financial and technical capacity                                                                                                                               |
| ✓                                |                   | 1           | Construction Management Plan                                                                                                                                                 |
| ✓                                |                   | 1           | A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.                                            |
| ✓                                |                   | 1           | Written summary of significant natural features located on the site (Section 14-526 (b) (a))                                                                                 |
| ✓                                |                   | 1           | Stormwater management plan and stormwater calculations                                                                                                                       |
| ✓                                |                   | 1           | Written summary of project's consistency with related city master plans                                                                                                      |
| ✓                                |                   | 1           | Evidence of utility capacity to serve                                                                                                                                        |
| ✓                                |                   | 1           | Written summary of solid waste generation and proposed management of solid waste                                                                                             |
| ✓                                |                   | 1           | A code summary referencing NFPA 1 and all Fire Department technical standards                                                                                                |
| ✓                                |                   | 1           | Where applicable, an assessment of the development's consistency with any applicable design standards contained in Section 14-526 and in City of Portland Design Manual      |
| Request Waiver                   |                   | 1           | Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.                                    |

| Applicant Checklist | Planner Checklist | # of Copies | <b>SITE PLAN SUBMISSIONS CHECKLIST</b><br>(* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required) |
|---------------------|-------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ✓                   |                   | 1           | * Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual                                                                           |
| ✓                   |                   | 1           | <b>Final Site Plans including the following:</b>                                                                                                                              |
| ✓                   |                   |             | Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);               |
| ✓                   |                   |             | Existing and proposed structures on parcels abutting site;                                                                                                                    |
| ✓                   |                   |             | All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;                                                |
| ✓                   |                   |             | Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;        |
| ✓                   |                   |             | Engineered construction specifications and cross-sectional drawings for all proposed driveways, paved areas, sidewalks;                                                       |
|                     |                   |             | Location and dimensions of all proposed loading areas including turning templates for applicable design delivery vehicles;                                                    |
| N/A                 |                   |             | Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;                                                                |
| ✓                   |                   |             | Location of existing and proposed vehicle and bicycle parking spaces with applicable dimensional and engineering information;                                                 |
|                     |                   |             | Location of all snow storage areas and/or a snow removal plan;                                                                                                                |
|                     |                   |             | A traffic control plan as detailed in Section 1 of the Technical Manual;                                                                                                      |
|                     |                   |             | Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);                                            |
| N/A                 |                   |             | Location and proposed alteration to any watercourse;                                                                                                                          |
| N/A                 |                   |             | A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;                                                   |
|                     |                   |             | Proposed buffers and preservation measures for wetlands;                                                                                                                      |
|                     |                   |             | Existing soil conditions and location of test pits and test borings;                                                                                                          |
| ✓                   |                   |             | Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;                                                           |
| ✓                   |                   |             | A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;                                                                              |
| ✓                   |                   |             | Grading plan;                                                                                                                                                                 |
|                     |                   |             | Ground water protection measures;                                                                                                                                             |
| ✓                   |                   |             | Existing and proposed sewer mains and connections;                                                                                                                            |

- Continued on next page -

|                |  |                                                                                                                                                                                                                                |
|----------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ✓              |  | Location of all existing and proposed fire hydrants and a life safety plan in accordance with Section 3 of the Technical Manual;                                                                                               |
| ✓              |  | Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;                                                                                            |
|                |  | Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;                                                                                                         |
| ✓              |  | Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;                                                             |
| ✓              |  | Plans showing the location, ground floor area, floor plans and grade elevations for all buildings;                                                                                                                             |
| N/A            |  | A shadow analysis as described in Section 11 of the Technical Manual, if applicable;                                                                                                                                           |
| N/A            |  | A note on the plan identifying the Historic Preservation designation and a copy of the Application for Certificate of Appropriateness, if applicable, as specified in Section Article IX, the Historic Preservation Ordinance; |
| REQUEST WAIVER |  | Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;                                                                                               |
|                |  | An exterior lighting plan in accordance with Section 12 of the Technical Manual;                                                                                                                                               |
|                |  | A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;                                                                                                                        |
| ✓              |  | Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.                                                                                                                  |





# Conditional Use for Ensuring Workforce Housing Inclusionary Zoning Planning Board Review Application Portland, Maine

Planning and Urban Development Department  
Planning Division and Housing and Community Development

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Conditional Use review of applications to ensure workforce housing in development projects that create ten or more new dwelling units. The units may be for rent or for sale and created through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements. At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or rent. All developments of ten units or more a conditional uses subject to Planning Board review on the condition that they comply with the requirements of section 14-487.

## A. Ensuring Workforce Housing: Standards -Section 14-484

**(d) Workforce Housing Minimum** At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or for rent. The number of units required is rounded down to a whole number if providing units on- or off-site, or shall include a fractional value in cases where a project prefers to pay a fee-in-lieu as per (e)3. below.

### **(e) Standards**

1. Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.
2. Workforce units are encouraged to be integrated with the rest of the development, should use a common entrance and should provide no indications from common areas that these units are workforce housing units.
3. Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be 10 percent of the total number of bedrooms in the development. For the purposes of this section, for every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.
4. As an alternative to providing workforce housing units, projects may pay a fee in lieu of some or all of the units. In-lieu fees shall be paid into the Housing Trust Fund as defined in Sec. 14-489. The fee for affordable units not provided shall be \$100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement.
5. Workforce housing units for sale, if converted to workforce housing units for rent, shall become subject to the income limits and other requirements of such units.
6. If at least 33 percent of the units in a development are workforce units, the development is eligible for subsidy through an Affordable Housing TIF, subject to City Council approval.

7. The term of affordability for the required 10 percent workforce units provided shall be defined as follows:

| Percentage of Workforce Units Provided | Minimum Term of Affordability for Required Workforce Units                |
|----------------------------------------|---------------------------------------------------------------------------|
| 10%                                    | Longest term permitted under federal, state and local laws and ordinances |
| 25%                                    | 30 years                                                                  |
| 50%                                    | 20 years                                                                  |
| 100%                                   | 10 years                                                                  |

**(f) Implementing Regulations.** Regulations to further specify the details of this section shall be developed, including, but not limited to:

1. Specific methodology for income verification;
2. Situations where less than permanent affordability might be considered; and
3. Guidelines for meeting the requirement that off-site units be “in the same neighborhood”.

**B. Site Plan Application: Please submit the Conditional Use Application in addition to the applicable Site Plan Application.**

Portland’s development review process and requirements are outlined in the Land Use Code (Chapter 14) which is available on our website:

Land Use Code: <http://me-portland.civicplus.com/DocumentCenter/Home/View/1080>

Design Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2355>

Technical Manual: <http://me-portland.civicplus.com/DocumentCenter/View/2356>

**Planning Division**

Fourth Floor, City Hall  
389 Congress Street  
(207)874-8719

**Housing and Community Development**

Room 313, Third Floor, City Hall  
389 Congress Street  
(207)482-5028

**Office Hours**

Monday thru Friday  
8:00 a.m. – 4:30 p.m.

**PROJECT NAME:**218 - 220 Washington Avenue**PROPOSED DEVELOPMENT ADDRESS:**218 - 220 Washington Avenue**CHART/BLOCK/LOT (s):** MAP 10 / BLOCK A / LOT 10  
AND 15**Applicable Zone:** B1b**CONTACT INFORMATION:**

|                                                                                                                                                                                                                                         |                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant – must be owner, Lessee or Buyer</b><br>Name: <u>218 - 220 Washington Avenue LLC</u><br>Business Name, if applicable:<br>Address: <u>199 Elderberry Road</u><br>City/State: <u>So. Portland, ME</u> Zip Code: <u>04106</u> | <b>Applicant Contact Information</b><br>Work # <u>—</u><br>Home# <u>—</u><br>Cell # <u>207.749.0000</u> Fax#<br>e-mail: <u>Marietta @ aol. com</u> |
| <b>Owner – (if different from Applicant)</b><br>Name: <u>—</u><br>Address:<br>City/State : Zip Code:                                                                                                                                    | <b>Owner Contact Information</b><br>Work # <u>—</u><br>Home#<br>Cell # Fax#<br>e-mail:                                                             |
| <b>Billing Information</b><br>Name: <u>Sebago Technics</u><br>Address: <u>75 John Roberts Road</u><br>City/State <u>So. Portland, ME</u> Zip Code: <u>04106</u>                                                                         | <b>Billing Information</b><br>Work # <u>Will Conway</u><br>Cell # <u>207.200.2055</u> Fax#<br>e-mail:                                              |
| <b>Designated person/person(s) for uploading to e-Plan:</b><br>Name: <u>WILL CONWAY</u><br>e-mail: <u>wconway @ sebago technics. com</u><br><br>Name:<br>e-mail:<br><br>Name:<br>e-mail:                                                |                                                                                                                                                    |

**RIGHT, TITLE OR INTEREST:**

SEE SITE PLAN APPLICATION

(Please identify the status provide documentary evidence, attached to this application, of the applicant's right, title, or interest in the subject property (ex: deed, option or contract to purchase or lease the property.)

**EXISTING USE:** Describe the existing use of the subject property.

1 SINGLE FAMILY HOME

**PROJECT DESCRIPTION:**

45 RESIDENTIAL CONDOMINIUM UNITS

| INCLUSIONARY ZONING:     |  |
|--------------------------|--|
| # IZ Units               |  |
| On-Site IZ Units         |  |
| Off-Site IZ Units        |  |
| # IZ Homeownership Units |  |
| # IZ Rental Units        |  |
| # IZ Efficiencies        |  |
| # IZ 1-Beds              |  |
| # IZ 2-Beds              |  |
| # IZ 3-Beds              |  |
| IZ Fee In-Lieu           |  |

**APPLICATION FEES:**

|                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>___ Conditional Use Review to Ensure Workforce Housing (\$100.00)</p> <p>(Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application)</p> | <p>The City invoices separately for the following:</p> <ul style="list-style-type: none"><li>• Notices (\$.75 each)</li><li>• Legal Ad (% of total Ad)</li><li>• Planning Review (\$50.00 hour)</li><li>• Legal Review (\$75.00 hour)</li></ul> <p>Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



## INSTRUCTIONS FOR ELECTRONIC SUBMISSION:

Please refer to the application checklist (attached) for a detailed list of submission requirements.

1. Fill out the application completely and e-mail the **application only** to [planning@portlandmaine.gov](mailto:planning@portlandmaine.gov) (Please be sure to designate a person who will be responsible for uploading documents and drawings.) This step will generate the project ID number for your project.
2. An invoice for the application fee will be e-mailed to you. Payments can be made on-line at [Pay Your Invoice](#), by mail or in person at City Hall, 4<sup>th</sup> Floor. Please reference the Application Number when submitting your payment which is located in the upper left hand corner of the invoice.
3. The designated person responsible for uploading documents and drawings will receive an email from [eplan@portlandmaine.gov](mailto:eplan@portlandmaine.gov) with an invitation into the project. At this time, you will upload all corresponding documents and plans into the project. For first time users you will receive a temporary password which you must change on entry. Make note of your username and password for any future projects.

**Reminder: Before the project can move forward, the application fee shall be paid in full and all required documents and drawings shall be uploaded into e-plan correctly.**

4. Follow the link below (Applying Online Instructions) for step by step instructions on how to do the following:  
 Tab 1 - Setting up the appropriate compatibility settings for your PC and getting started in e-plan.  
 Tab 2 - Preparing your drawings, documents and photos for uploading using the correct naming conventions  
 Tab 3 - Preparing and uploading revised drawings and documents

### Applying Online Instructions

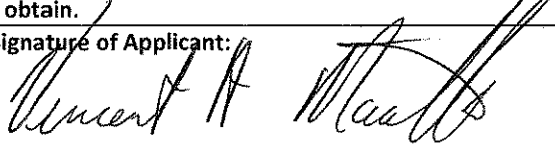
5. When ready, upload your files and documents into the following folders:  
 "Application Submittal – Drawings"  
 "Application Submittal – Documents"
6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

| Applicant Checklist | Planner Checklist | # of Copies | GENERAL WRITTEN SUBMISSIONS CHECKLIST                                                                                                                                                              |
|---------------------|-------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ✓                   |                   | 1           | Completed Application Form                                                                                                                                                                         |
|                     |                   | 1           | Cover letter stating the nature of the project.                                                                                                                                                    |
| ✓                   |                   | 1           | Evidence of right, title and interest.                                                                                                                                                             |
|                     |                   | 1           | Written Submittals that address the conditional use standards of Sec. 14-484, including unit size and bedroom count                                                                                |
|                     |                   | 1           | Draft Workforce Housing Agreement                                                                                                                                                                  |
|                     |                   | 1           | Proposed Marketing Strategy                                                                                                                                                                        |
|                     |                   | 1           | Written Proposal for providing workforce units on-site, off-site, or payment of fee-in-lieu.                                                                                                       |
|                     |                   | 1           | If the project is to be phased, provide written description of project phasing and accommodation of workforce units.                                                                               |
|                     |                   |             | <b>Plans and Construction Details Submission Checklist</b>                                                                                                                                         |
| ✓                   |                   | 1           | An accompanying site plan application, as applicable.                                                                                                                                              |
|                     |                   | 1           | Floor Plans of all units and identifying proposed designated workforce housing units                                                                                                               |
|                     |                   | 1           | Interior Standards for Units for market rate and workforce housing units, including kitchen, bathroom, flooring and closet amenities                                                               |
|                     |                   | 1           | If workforce units are proposed off-site, provide vicinity map with project location and workforce unit locations within the applicable census block group map or within 1500 feet of the project. |

**APPLICANT SIGNATURE:**

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

**This application is for a Conditional Use IZ Review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction, which are the responsibility of the applicant to obtain.**

|                                                                                                              |                   |
|--------------------------------------------------------------------------------------------------------------|-------------------|
| Signature of Applicant:<br> | Date:<br>12/12/16 |
|--------------------------------------------------------------------------------------------------------------|-------------------|



Individual Member  
Individual Membership



Specialist,  
Industrial and  
Office Real Estate

One Canal Plaza, Portland, ME 04101 \* 207.772.1333

## CONTRACT FOR THE SALE OF REAL ESTATE

**Contract Date:** October 19, 2016

RECEIVED OF: 218-220 Washington Avenue LLC and/or assigns whose mailing address is 199 Elderberry Rd, South Portland, ME 04106 hereinafter called the Buyer, the sum of [REDACTED] as earnest money deposit and in part payment of the purchase price of the following described real estate, situated in the municipality of Portland, County of Cumberland, State of Maine and located at 230-234 Washington Ave being a portion of the property owned by the Rockingham LLC, herein Seller, and part of the land described at said County's Registry of Deeds Book 27757, Page 278 and further described as: (a) a 15' x 160' strip of land along the common boundary of Buyer and Seller (a portion of parcel 10): a 50' x 95' lot of land, being a portion of Lot 42, with a 50' of frontage on Washington Avenue; and a 20' wide underground sewer easement along the northerly boundary of Lot 42 from the parcel to be conveyed to Anderson Street. Also to be conveyed a triangle piece of land measuring 15' x 15' x 21' (113 square feet) as referenced in Sebego Tech.'s drawings Existing Conditions Plan. upon the terms and conditions indicated below:

1. **PURCHASE PRICE:** The TOTAL purchase price being [REDACTED]
2. **EARNEST MONEY/ACCEPTANCE:** Rockingham, LLC shall hold all earnest money in a non-interest bearing account and act as Escrow Agent until closing. The first deposit of [REDACTED] shall be non refundable.
3. **TITLE:** That a deed, conveying good and merchantable title in accordance with standards adopted by the Maine Bar Association shall be delivered to the Purchaser(s) and this transaction shall be closed and the Purchaser(s) shall pay the balance due and execute all necessary papers on or before, April 19th, 2017. If Seller(s) is unable to convey in accordance with the provisions of this paragraph, then the Seller(s) shall have a reasonable time period, not to exceed thirty (30) days, from the time the Seller(s) receives written notice of the defect, unless otherwise agreed to by both parties, to remedy the title, after which time, if such defect is not corrected so that there is merchantable title, the Purchaser(s) may, within fifteen (15) days thereafter, at Purchaser's option, declare the contract null and void and any earnest money shall be returned to the Purchaser(s) and neither party shall have any further obligation hereunder. If the Purchaser(s) does not declare the contract void within the period set forth above, the Purchaser(s) shall have waived the right to object to title. The Seller(s) hereby agrees to make a good-faith effort to cure any title defect during such period.
4. **DEED:** That the property shall be conveyed by a Quit Claim with Covenant, and shall be free and clear of all encumbrances except building and zoning restrictions of record, restrictive covenants and conditions of record and usual public utilities servicing the property and shall be subject to applicable land use and building laws and regulations.
5. **POSSESSION /OCCUPANCY:** Possession/occupancy of premises shall be given to Purchaser(s) immediately at closing, subject to any leases, unless otherwise agreed by both parties in writing.
6. **RISK OF LOSS:** Until the transfer of title, the risk of loss or damage to said premises by fire or otherwise, is assumed by the Seller(s) unless otherwise agreed in writing. Said premises shall then be in substantially the same condition as at present, excepting reasonable use and wear.
7. **PRORATIONS:** The following items shall be prorated as of the date of closing:

- a. Real Estate Taxes based on the municipality's tax year. Seller is responsible for any unpaid taxes for prior year
- b. Purchaser(s) and Seller(s) shall each pay its transfer tax as required by the State of Maine.

8. **INSPECTIONS:** The Purchaser(s) is encouraged to seek information from professionals regarding any specific issue of concern. Purchaser(s) acknowledges receipt of disclosure form attached hereto. The Agent makes no warranties regarding the condition, permitted use or value of the Seller's real or personal property. This Contract is subject to the following inspections, with the results being satisfactory to the Purchaser(s):

| TYPE OF INSPECTION      | YES                      | NO                                  | RESULTS<br>REPORTED      | TYPE OF INSPECTION       | YES                                 | NO                                  | RESULTS<br>REPORTED      |
|-------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a. General Building     | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Within <u>  #  </u> days | g. Lead Paint            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within <u>  #  </u> days |
| b. Sewage Disposal      | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Within <u>  #  </u> days | h. Pests                 | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within <u>  #  </u> days |
| c. Water Quality        | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Within <u>  #  </u> days | i. ADA                   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within <u>  #  </u> days |
| d. Radon Air Quality    | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Within <u>  #  </u> days | j. Wetlands              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within <u>  #  </u> days |
| e. Radon Water Quality  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Within <u>  #  </u> days | k. Environmental Scan    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Within <u>  #  </u> days |
| f. Asbestos Air Quality | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Within <u>  #  </u> days | l. General Due Diligence | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Within <u>60</u> days    |

The use of days is intended to mean from the effective date of this Contract. All inspections will be done by inspectors chosen and paid for by the Purchaser(s). If the result of any inspection or other condition specified herein is unsatisfactory to the Purchaser(s), in Purchaser(s) sole discretion, Purchaser(s) may declare the Contract null and void by notifying Seller(s) in writing within the specified number of days, and any earnest money shall be returned to the Purchaser(s). If the Purchaser(s) does not notify the Seller(s) that an inspection is unsatisfactory within the time period set forth above, this contingency is waived by the Purchaser(s). In the absence of inspection(s) mentioned above, the Purchaser(s) is relying completely upon Purchaser's own opinion as to the condition of the property.

11. **FINANCING:** Intentionally Deleted

12. **AGENCY DISCLOSURE:** Intentionally Deleted

13. **DEFAULT:** If Purchaser(s) fails to perform any of the terms of this Contract or is otherwise in default of any of its obligations, Seller shall have the option of either retaining the earnest money as full and complete liquidated damages or employing all available legal and equitable remedies. Notwithstanding any other provision of this agreement, Escrow Agent shall have the right to require written releases from both parties prior to releasing the earnest money to either party. If a dispute arises between Purchaser(s) and Seller as to the existence of a default hereunder and/or the release of the earnest money and said dispute is not resolved by the parties within (30) days, Escrow Agent may elect to file an action in interpleader and deposit the earnest money in the court to resolve said dispute, or otherwise disburse the earnest money pursuant to Maine Real Estate Commission regulations. Purchaser(s) and Seller, jointly and severally, shall indemnify Escrow Agent for all costs, losses, expenses, and damages, including reasonable attorneys' fees, incurred by Escrow Agent in connection with said action and/or in connection with any dispute relating to this Contract and/or the Deposit.

14. **MEDIATION:** Any dispute or claim arising out of or relating to this Contract or the premises addressed in this Contract shall be submitted to mediation in accordance with the Maine Residential Real Estate Mediation Rules of the American Arbitration Association. This clause shall survive the closing of this transaction.

15. **PRIOR STATEMENTS:** Any verbal representations, statements and agreements are not valid unless contained herein. This Contract completely expresses the obligations of the parties. This is a Maine contract and shall be construed according to the laws of Maine.

16. **HEIRS/ASSIGNS:** This Contract is assignable YES ☒ NO ☐. This Contract shall extend to and be obligatory upon heirs, personal representatives, successors, and assigns (if assignment is allowed by the terms of this Contract), of the respective parties.

17. **COUNTERPARTS:** This Contract may be signed on any number of identical counterparts, including telefacsimile copies, with the same binding effect as if the signatures were on one instrument. Original or telefacsimiled signatures are binding.



18. **BINDING CONTRACT:** This Contract is a binding contract when signed by both Seller(s) and Purchaser(s) and when that fact has been communicated to all parties or to their agents. The Effective Date of the Contract is noted below. Time is of the essence of this Contract.
19. Seller(s) and Purchaser(s) acknowledge receipt of the Maine Real Estate Commission Disclosure of Agency Relationship Form (Form #2), *if the property is, or has a component of, one to four residential dwelling units.*
20. **ADDENDA:** This Contract has addenda containing additional terms and conditions YES ☐ NO ☒
21. The existing sewer easement as set forth in Book 29539, Page 10 shall be released.
22. The deadline for the Buyer to close shall be April 19th, 2017. The Buyer may extend this deadline for six (6) months by making a further [REDACTED] earnest money deposit by deadline. Buyer may further extend the deadline to close for another six (6) months, by making another [REDACTED] earnest deposit, however, these further deposits shall be credited towards the purchase price.
23. The Seller's obligation shall be subject to the Seller obtaining within ninety (90) days of the date of this Contract a consent from its Lender that it will release the Premise.
24. The Buyer shall have ninety (90) days from the date of this contract to make any objections to title then existing, but not arising thereafter.
25. In the event that the Seller cannot deliver good and insurable title, or obtain the approval set forth in paragraph 23, the deposit shall be returned to the Buyer.

Seller(s) acknowledges that the laws of the State of Maine provide that every buyer of real property located in Maine must withhold a withholding tax equal to 2 % of the consideration unless the Seller(s) furnishes to the Buyer(s) a certificate by the Seller(s) stating, under penalty of perjury, that Seller(s) is/are a resident of Maine or the transfer is otherwise exempt from withholding.

Vernon A. Mouton Member

Purchaser

10-19-16

Date

Name/Title 281-220 Washington Avenue LLC

Soc. Sec # or Tax I.D.

Purchaser

Date

Name/Title

Soc. Sec # or Tax I.D.

The Seller(s) accepts the offer and agrees to deliver the above-mentioned property at the price and upon the terms and conditions set forth above.

Signed this: 19<sup>th</sup> day of October, 2016. Effective date of Contract: 19<sup>th</sup> day of Oct., 2016



10/14/16

Seller

Allan Jagger

Date

Name/Title Rockingham LLC

Soc. Sec # or Tax I.D.

Seller

Date

Name/Title

Soc. Sec # or Tax I.D.

Offer reviewed and refused on \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, Seller

PER 29641/338  
"PROHIBIT FROM ALLOWING TREES TO  
GROW MORE THAN 35 FEET IN HEIGHT"  
(ABOVE PARKING LOT)

N/F  
ROCKINGHAM LLC  
27757/278  
10-A-008 & 011

N/F  
PINE STATE ELE  
6106/322  
10-A-00

PROPERTY LINE PER  
ACTION 25874/165

PER 29641/338  
RETAINING WALL EASEMENT

N 29°24'37" W  
160.08'

5/8" REBAR  
CAP  
2305 ROSS

N/F  
MORGAN GAVIN LLC  
29641/338  
10-A-010  
±10,420 S.F.

FOUND GRANITE MONUMENT  
6"X6" 'H' WITH DRILL HOLE

N 62°27'21" E  
65.03'

S 29°24'37" E  
160.28'

DMH 2  
RIM 6

FOUND GRANITE MONUMENT 8"X8" WITH  
DRILL HOLE, DISTURBED ACCORDING TO  
SURVEYORS ORIGINAL LOCATION HELD  
FOR 3' OFFSET FROM STREET LINE

WASHINGTON AVE.

### SHORT FORM WARRANTY DEED

**Chadballs Holding, LLC**, a Maine limited liability company with a place of business at Freeport, Maine ("Grantor"), FOR CONSIDERATION PAID, grants to **Rockingham, LLC**, a Maine limited liability company with a mailing address of 40 O'Brien Street, Portland, ME 04101 ("Grantee"), with WARRANTY COVENANTS, certain real property, together with any improvements thereon, located in the City of Portland, Cumberland County, Maine and more particularly described on Exhibit A attached hereto and made a part hereof.

Being the same premises conveyed to the Grantor by deed from the City of Portland dated May 10, 2007 and recorded in the Cumberland County Registry of Deeds in Book 25095, Page 316; and deed from James E. Pender, Sr., Trustee of the Herbert B. Clifford, Sr. Revocable Trust dated May 10, 2007 and recorded in said Registry of Deeds in Book 25095, Page 320.

IN WITNESS WHEREOF, Chadballs Holding, LLC has caused this instrument to be executed by William P. Simpson, its Manager thereunto duly authorized, this 7<sup>th</sup> day of May, 2010.

WITNESS:

CHADBALLS HOLDING, LLC

  
Name: Thomas J. Jell

By:   
William P. Simpson  
Its Manager

State of Maine  
County of Cumberland, ss.

May 7, 2010

PERSONALLY APPEARED the above-named William P. Simpson, Manager of Chadballs Holding, LLC as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company.

Before me,  
  
Name: Thomas J. Jell  
~~Notary Public~~ / Attorney at Law



## EXHIBIT A

### TRACT I

A certain lot or parcel of land situated in said Portland, on the Easterly side of Anderson Street, bounded and described as follows, viz:

Beginning at a point on the said Easterly side line of said Anderson Street where a line projected from the fence on the Southerly side of said lot would intersect; thence Northwardly along the said Easterly side line of said Anderson Street one hundred eighty (180) feet, more or less, to a point beyond the cement building, thence turning to the right and running Eastwardly until it meets the Westerly corner of the land sold by The Cash Fuel Company to one Charles C. Achorn, by deed recorded in Cumberland County Registry of Deeds, Book 944, Page 141, which is eighty (80) feet distant from Washington Avenue and about ninety (90) feet, more or less, from said Anderson Street; thence turning to the right and following the line of said Achorn land to the said fence on said Southerly side of said lot a distance of one hundred sixty (160) feet, more or less; thence turning to the right and following the line of said fence, ninety (90) feet, more or less to said Anderson Street and the point of beginning. Being the Westerly portion of the lot of land conveyed to The Cash Fuel Company by Edwin H. Hall and Frederick W. Hall by deed recorded in said Registry, Book 844, Page 384, and the same lot on which the Cash Fuel Company built its brick stable and its cement house. The lot hereby conveyed is subject to the right of a sewer from the lot above being built and maintained through the Southerly side of the sewer on Anderson Street. Said lot is also subject to the right-of-way over the stairs on the Southerly side of said lot and the maintenance of said stairs as stated in the deed from The Cash Fuel Company to Achorn.

Also a certain other lot of land in said Portland, situated near Nos. 214 and 218 W. side of Washington Avenue. Being the same premises conveyed to the Pinkham Associates, Inc. by deed of Samuel J. Knowles dated November 18, 1922 and recorded in the Cumberland County Registry of Deeds in Book 1112, Page 335.

The above-described property is conveyed subject to the Notice of Layout and Taking to the State of Maine recorded in the Cumberland County Registry of Deeds in Book 2407, Page 418.

Reference is made to a Deed of Distribution by Personal Representative from Alma M. Clifford, Personal Representative of the Estate of Herbert B. Clifford, Sr. to Amoskeag Bank & Trust Company, Trustee of the Herbert B. Clifford Trust dated May 10, 1985 and recorded in said Registry of Deeds in Book 6764, Page 65.

### TRACT II

ALSO conveying the premises at 207-209 Anderson Street, Assessor's Plan 10-A-13 as described in a deed of the City of Portland to Herbert B. Clifford, Sr. dated December 18, 1973 and recorded in the Cumberland County Registry of Deeds in Book 3498, Page 144.

TRACT III

ALSO another lot or parcel of land situated on the westerly side of Washington Avenue in said Portland bounded and described as follows:

Beginning at the intersection of the fence along the southerly side line of the said Cash Fuel Company's property with said Washington Avenue; thence northerly along the westerly side line of said Washington Avenue to the corner of the fence on the northerly side line of the said Cash Fuel Company's property, one hundred sixty (160) feet, more or less; thence westerly along said fence to its intersection with a line parallel to the said westerly side line of said Washington Avenue, and eighty (80) feet distant from said Avenue; thence southerly along said parallel line, eighty (80) feet distant from said Washington Avenue to its intersection with the fence first mentioned on the southerly side line of the said Cash Fuel Company's property; thence easterly by said fence to Washington Avenue at the point of beginning. Being a portion of the premises conveyed to Herbert B. Clifford by Ideal Cleaners and Launderers, Inc. by deed dated September 29, 1972 and recorded in the Cumberland County Registry of Deeds in Book 3311, Page 6.

The above parcel was inadvertently omitted from the Deed of Distribution recorded in Book 6764, Page 65 as more fully set forth in an Affidavit of James E. Pender dated February 13, 2007 and recorded in said Registry of Deeds in Book 25095, Page 318.

The above-described property is conveyed subject to the Notice of Layout and Taking to the State of Maine recorded in the Cumberland County Registry of Deeds in Book 2407, Page 418.

TRACT IV

A certain lot or parcel of land located in the City of Portland, Cumberland County, Maine known as Tax Map and Lot 10-A-42 on the maps of the Tax Assessor for the City of Portland for the fiscal year 2007 on file in the Office of the Tax Assessor for the City of Portland. Being the premises obtained by the City of Portland by tax foreclosure in 1954. The premises was previously referred to as Tax Map and Lot 10-A-6 by a Tax Deed recorded in the Cumberland County Registry of Deeds in book 2280, Page 300.

The above-described property is conveyed subject to the Notice of Layout and Taking to the State of Maine recorded in the Cumberland County Registry of Deeds in Book 2407, Page 418.

All of the property described herein is conveyed subject to real estate taxes assessed as of April, 2010 not yet due, that Grantee upon acceptance of this deed, assumes and agrees to pay.

Received  
Recorded Register of Deeds  
May 07, 2010 02:49:19P  
Cumberland County  
Pamela E. Lovley

# QUITCLAIM DEED

(Release Deed)

Maine Statutory Short Form

## KNOW ALL MEN BY THESE PRESENTS

**THAT** MORGAN GAVIN, LLC, a Maine Limited Liability Company, of Scarborough, Cumberland County, State of Maine, for consideration paid, releases to **GLENN A. MORSE**, whose mailing address is P.O. Box 1466, Scarborough, Maine 04070, a certain lot or parcel of land, with any buildings thereon, located in Portland, Cumberland County, State of Maine, bounded and described as follows:

SEE EXHIBIT "A" ATTACHED HERETO  
MADE A PART HEREOF AND INCORPORATED BY REFERENCE HEREIN

Being the same premises conveyed in a deed from Glenn A. Morse to Morgan Gavin, LLC, a Maine Limited Liability Company, dated June 12, 2006 and recorded in the Cumberland County Registry of Deeds in Book 24078, Page 203. Reference is also made in a deed conveyed to Glenn A. Morse by Nancy A. Kelly, Personal Representative of the Estate of Philip Maloney dated July 14, 2005 and recorded in the Cumberland County Registry of Deeds in Book 22895, Page 28.

IN WITNESS WHEREOF, Glenn A. Morse, Manager of Morgan Gavin, LLC, caused this instrument to be executed on this 6<sup>th</sup> day of Dec., 2006.

SIGNED, SEALED AND DELIVERED  
in presence of

MORGAN GAVIN, LLC

Steve W. R. D.  
Witness

By: Glenn A. Morse  
Its: Manager

STATE OF MAINE  
Cumberland, ss.

December 6, 2006.

Then personally appeared the above-named Glenn A. Morse, Manager of said Grantor Limited Liability Company as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said Limited Liability Company.

Before me,

Steve W. R. D.  
Notary Public/Attorney at Law

Printed Name:

COMMISSION EXPIRES:

k:realswr/firstfinancial/morsereleasedeed

EXHIBIT A  
DESCRIPTION OF LAND

Doc#: 80743 Bk:24651 Pg: 158

EXHIBIT A

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

Beginning at a point on the southwesterly side of Washington Avenue, which point marks the most northerly corner of land conveyed by John Coughlin to Hattie E. Junco by deed dated November 1897 and recorded in the Cumberland County Registry of Deeds in Book 656, Page 339; thence northwesterly along said southwesterly sideline of Washington Avenue, One Hundred Fifty-Two and One-Half (152-1/2') feet to a point; thence at right angles to said Washington Avenue, One Hundred (100') feet to a point; thence at right angles in a southeasterly direction, One Hundred Fifty-Two and One-Half (152-1/2') feet to a point; thence at right angles in a southeasterly (incorrectly identified as northeasterly in deed 3828-70) direction, One Hundred (100') feet to the point of beginning.

Excepting a parcel of land conveyed by Philip E. Maloney to Nancy A. Kelly dated July 23, 1997 and recorded in the Cumberland County Registry of Deeds in Book 13210, Page 278.

Received  
Recorded Register of Deeds  
Dec 12, 2006 11:59:40A  
Cumberland County  
John B O'Brien



## **EASEMENT**

We, Glenn Morse (hereinafter "Morse") of Scarborough, Maine and Rockingham, LLC (hereinafter "Rockingham") a Maine Limited Liability Company hereby agree as follows:

**WHEREAS** Morse owns real estate in the City of Portland, Maine located at 218 Washington Ave. and more particularly described in a deed recorded in the Cumberland County at Book 22895, Page 28;

**WHEREAS** Rockingham owns real estate in the City of Portland, Maine located at 219 Anderson St. and more particularly described in a deed recorded in the Cumberland County at Book 27757, Page 278;

**WHEREAS** the parties want to delineate and define an easement for an existing sewer line and provide for the future maintenance and repair of said sewer line serving the Morse premises and located on the above mentioned real estate owned by Rockingham;

**WHEREAS** Rockingham wants to grant an easement to Morse subject to the terms and conditions below;

**NOW THEREFORE** in consideration of One Dollar (\$1.00) and other good and valuable consideration, the parties agree as follows:

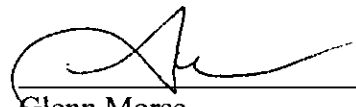
1. There is currently an existing sewer line located on Rockingham's property which serves the building on Morse's adjacent property. The approximate location of the sewer line is depicted on the attached Exhibit A. Rockingham hereby grants an underground Easement to Morse to maintain, improve and repair this sewer line where it is actually located, together with an area ten feet (10') to either side of the line for construction access purposes, except to the extent there are existing buildings within such corridor.
2. In the event that the sewer line should fail or need to be repaired or improved, then Morse shall do all necessary work and shall restore the surface of the Easement to its condition prior to the repair. Morse shall inform Rockingham in advance of any repair work and shall conduct all work so that it will minimally interfere with use of the Rockingham premises.
3. Morse shall keep the Rockingham premises free of any mechanic liens. If Morse fails to comply with this provision, Rockingham shall be entitled to pay the lien, and Morse will reimburse Rockingham for all expenses incurred in this regard, including any legal fees, plus interest at 18% for any advances and payments made by Rockingham.
4. The terms of this Easement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties hereto and shall be a covenant running with the land on the parcel owned by Rockingham. Time is of the essence in the performance of this Agreement.

5. This Easement shall be governed by and construed in accordance with, Maine law. This constitutes the entire agreement among the parties pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements and understandings of the parties, and any other claim of easement by Morse over land of Rockingham, in connection therewith which conflict with the express terms of this Agreement.

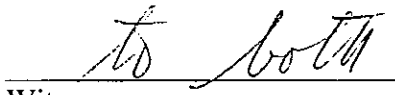
6. If any provision of this Easement is determined to be invalid or unenforceable, it shall not affect the validity or enforceability of the remaining provisions hereof.

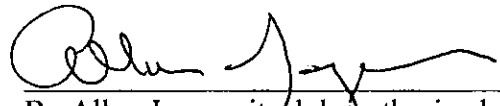
Dated at Portland, Maine this 27<sup>th</sup> day of April, 2012.

  
Witness

  
Glenn Morse

ROCKINGHAM, LLC

  
Witness

  
By Allan Jagger, its duly authorized  
Manager

STATE OF MAINE  
COUNTY OF CUMBERLAND

April 27, 2012

Then personally appeared Allan Jagger, Manager of Rockingham, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

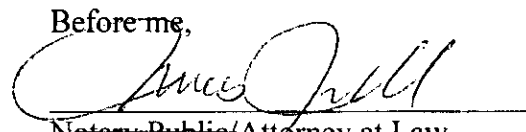
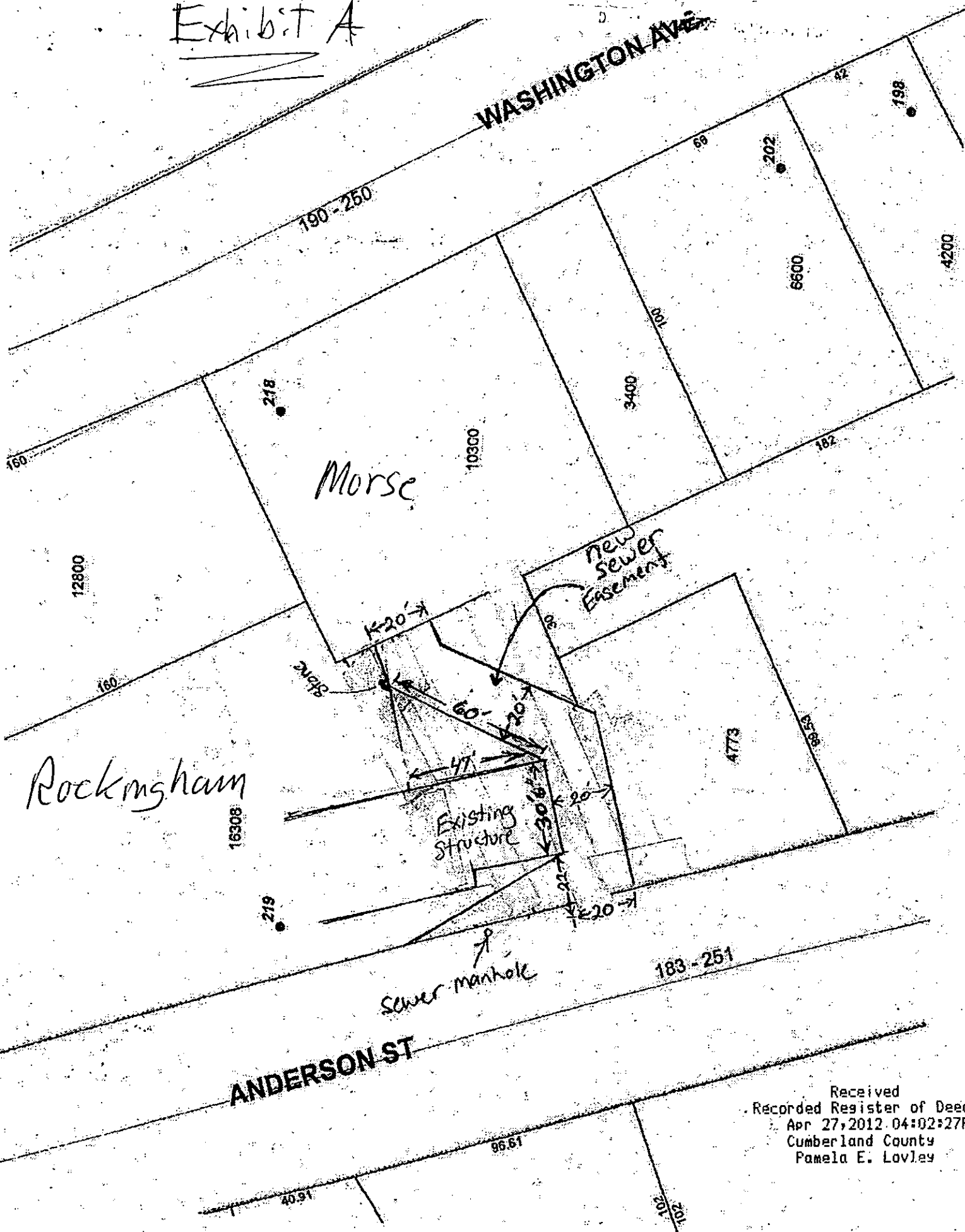
Before me,  
  
~~Notary Public~~ Attorney at Law  
Thomas Jewell

Exhibit A



Received  
Recorded Register of Deeds  
Apr 27, 2012 04:02:27P  
Cumberland County  
Pamela E. Lovley

**QUITCLAIM DEED WITH COVENANT  
KNOW ALL MEN BY THESE PRESENTS**

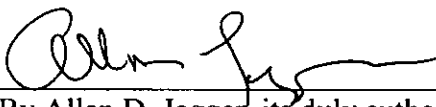
THAT, ROCKINGHAM, LLC, a Maine limited liability company, in consideration of one dollar and other valuable consideration paid, grants to MORGAN GAVIN, LLC, a Maine limited liability company, with a mailing address at P.O. Box 1466, Scarborough, Maine 04070, with quitclaim covenant, the land in the City of Portland, County of Cumberland, and State of Maine and more specifically described in Exhibit A attached heretofore and incorporated by reference.

To have and to hold the same, together with all the privileges and appurtenances thereunto belonging, to the said Morgan Gavin, LLC, its successors and assigns forever.

Dated at Portland, Maine this 30 day of May, 2012.

ROCKINGHAM, LLC

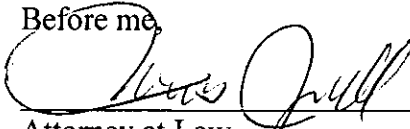
  
Witness

  
By Allan D. Jagger, its duly authorized  
Manager

STATE OF MAINE  
COUNTY OF CUMBERLAND

May 30, 2012

Then personally appeared Allan D. Jagger, Manager of Rockingham, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,  
  
Attorney at Law  
Thomas Jewell

MAINE REAL ESTATE TAX PAID



# LEGAL DESCRIPTION FOR 220 WASHINGTON AVENUE

A certain lot or parcel of land situated on the westerly side of Washington Avenue in said Portland bounded and described as follows:

Beginning at the intersection of the fence along the southerly side line of the said Cash Fuel Company's property with said Washington Avenue; thence northerly along the westerly side line of said Washington Avenue to the corner of the fence on the northerly side line of the said Cash Fuel Company's property, one hundred sixty (160) feet, more or less; thence westerly along said fence to its intersection with a line parallel to the said westerly side line of said Washington Avenue, and eighty (80) feet distant from said Avenue; thence southerly along said parallel line, eighty (80) feet distant from said Washington Avenue to its intersection with the fence first mentioned on the southerly side line of the said Cash Fuel Company's property; thence easterly by said fence to Washington Avenue at the point of beginning. Being a portion of the premises conveyed to Herbert B. Clifford by Ideal Cleaners and Launderers, Inc. by deed dated September 29, 1972 and recorded in the Cumberland County Registry of Deeds in Book 3311, Page 6.

The above-described property is conveyed subject to the Notice of Layout and Taking to the State of Maine recorded in the Cumberland County Registry of Deeds in Book 2407, Page 418.

Excepting a 15 foot by 160 foot strip of land along the western side of the premises conveyed, which is the area of the common boundary between the above property being sold and the adjoining land of the Grantor.

Together with an easement over said fifteen strip described in the preceding paragraph, within which area the Grantee shall have the right to build and maintain a retaining wall.

The following interest is conveyed with no title covenants: Together with an easement over a portion of the remaining land of Grantor, which portion of land is described as Assessor Lot 10-A-8, within which area the Grantor is prohibit from allowing trees to grow more than 35 feet in height, with the base line being the high point of the existing paved parking lot at the rear of the building located on this parcel. This easement does not apply to structures. Grantee is responsible for maintaining the tree height and shall have reasonable access over Lot 10-A-8 in order to perform periodic tree trimming activities consistent with this view easement.

Being a portion of the premises (Tract III) conveyed to the Grantor by Chadballs Holding, LLC by deed dated May 7, 2010 and recorded in said Registry of Deeds in Book 27757, Page 278.

Received  
Recorded Register of Deeds  
Jun 05, 2012 12:38:55P  
Cumberland County  
Pamela E. Lovley

## **BOUNDARY AGREEMENT**

This Boundary Agreement ("Agreement") is made and entered into this 25<sup>th</sup> day of MAY, 2010, by and between Glenn A. Morse an individual residing in Scarborough, Maine (hereinafter referred to as "Morse") and 202 Washington, LLC, a Maine limited liability company with a principal place of business located in Portland, Maine (hereinafter referred to as "202 Washington").

WHEREAS, Morse currently holds title to a certain parcel of land and other improvements thereon in Portland, Cumberland County, State of Maine, said parcel being described in a deed from Morgan Gavin, LLC, dated December 6, 2006, and recorded in the Cumberland County Registry of Deeds in Book 24651, Page 157 (hereinafter referred to as the "Morse Parcel" and said deed referred to as the "Morse Deed");

WHEREAS, 202 Washington currently holds title to a certain parcel of land and other improvements thereon in Portland, Cumberland County, State of Maine, said parcel being described in a deed from Kevin D. Kelly and Nancy A. Kelly to Plaintiff, dated September 28, 2007, and recorded in the Cumberland County Registry of Deeds in Book 25509, Page 156 (herein referred to as "202 Washington Parcel" and said deed referred to as the "202 Washington Deed");

WHEREAS, Morse and 202 Washington desire to establish and/or confirm their common boundary in accordance with the "Line of Agreement" as shown on a certain sketch plan attached hereto as **Exhibit A** (hereinafter referred to as the "Plan"), and as more particularly described herein;

WHEREAS, Morse desires to grant certain easements and establish certain negative easements, as more particularly set forth herein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

A. **Establishment of Common Boundary:**

1. Morse hereby quitclaims and releases to 202 Washington, any and all right, title and interest he may have, by virtue of the Morse Deed, in land lying southeasterly of the following described boundary line (hereinafter referred to as the "Line of Agreement"):

Beginning on the southwesterly side of Washington Avenue at a ½ inch iron rod to be set with plastic cap marked "Austin 2174" being NORTH 35° WEST as measured along the southwesterly side of Washington Avenue a distance of ONE HUNDRED FEET (100.00) from the southeasterly side of a concrete retaining wall at the division line between 202 Washington, LLC and land now or formerly of Anthony and Mary Pereira, said point of beginning being further described as being SOUTH 33°30'41" EAST a distance of

115.44 FEET from a brass rod found in a street right of way offset granite monument found by the northerly corner of the building located at 218 Washington Avenue;

THENCE, SOUTH 55°00'00" WEST on a bearing 90 degrees from the street line of Washington Avenue a distance of ONE HUNDRED FEET (100.00) to land now or formerly of Faber Anderson Street Co. and a ½ inch iron rod to be set with plastic cap marked "AUSTIN 2174."

2. 202 Washington hereby quitclaims and releases to Morse, any and all right, title and interest it may have, by virtue of the 202 Washington Deed, in land lying northwesterly of the Line of Agreement.

3. The parties desire to, and do hereby, establish and confirm by virtue of this Agreement and the conveyance made herein, that the common boundary line between the Morse Parcel and the 202 Washington Parcel is the Line of Agreement as shown on the Plan and described herein.

4. It is the specific intent of the parties hereto that this document shall have all the force and effect of an exchange of quitclaim release deeds between the parties.

B. Maintenance Easement:

1. Morse hereby grants to 202 Washington, and its successors in title, the following easement:

An appurtenant easement to enter the Morse Parcel with any necessary equipment, and at any reasonable time, as may be necessary for the purpose of construction, examination, maintenance, repair or replacement of a retaining wall to be located on the 202 Washington Parcel.

2. This Maintenance Easement burdens the Morse Parcel and benefits the 202 Washington Parcel. These easement covenants shall run with the land.

3. 202 Washington, and its successors in title, shall restore and/or repair as necessary the surface of the easement parcel described herein to its former condition after exercising the within granted rights.

C. Negative Easement:

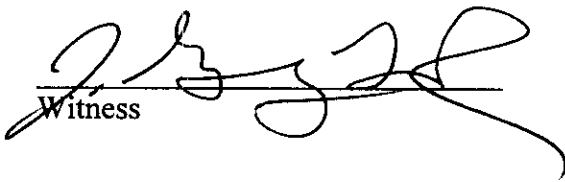
1. Morse hereby grants to 202 Washington and its successors in title, and hereby subjects the Morse Parcel, to the following easement:

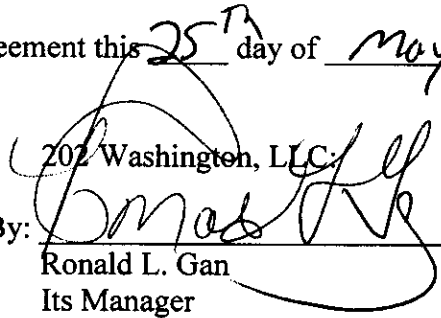
No buildings or improvements shall be constructed, located or maintained in any area of the Morse Parcel that is more than fifty (50) feet from the Morse Parcel's northeasterly boundary abutting Washington Avenue.

2. This Negative Easement burdens the Morse Parcel and benefits the 202 Washington Parcel. These easement covenants shall run with the land, provided, however, that this Negative Easement as set forth in this paragraph C of this Agreement shall immediately expire twenty-five (25) years from the recording of this Agreement.

D. This Agreement may be signed on any number of identical counterparts with the same binding effect as if the signatures were on one instrument.

Witness our hands and seals on this Boundary Agreement this 25<sup>th</sup> day of May, 2010.

  
Witness

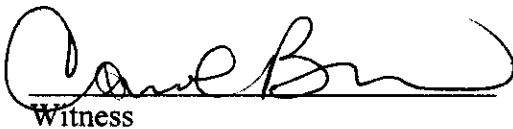
202 Washington, LLC  
By:   
Ronald L. Gan  
Its Manager

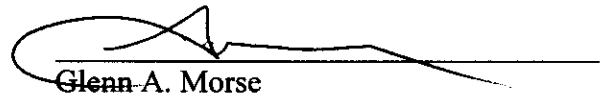
STATE OF MAINE  
Cumberland, ss.

5/28, 2010  
Manager - (564)

Then personally appeared before me the above-named, Ronald L. Gan, Sole Member of 202 Washington, LLC, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the company.

  
Notary Public/Attorney at Law

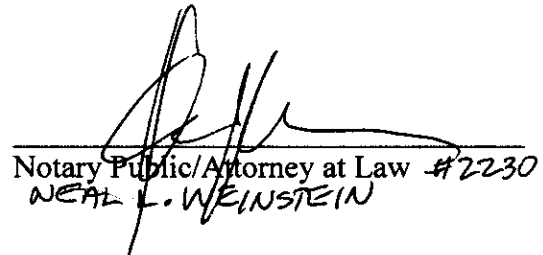
  
Witness

  
Glenn A. Morse

STATE OF MAINE  
York, ss.

MAY 25, 2010

Then personally appeared before me the above-named Glenn A. Morse and acknowledged the foregoing instrument to be their free act and deed.

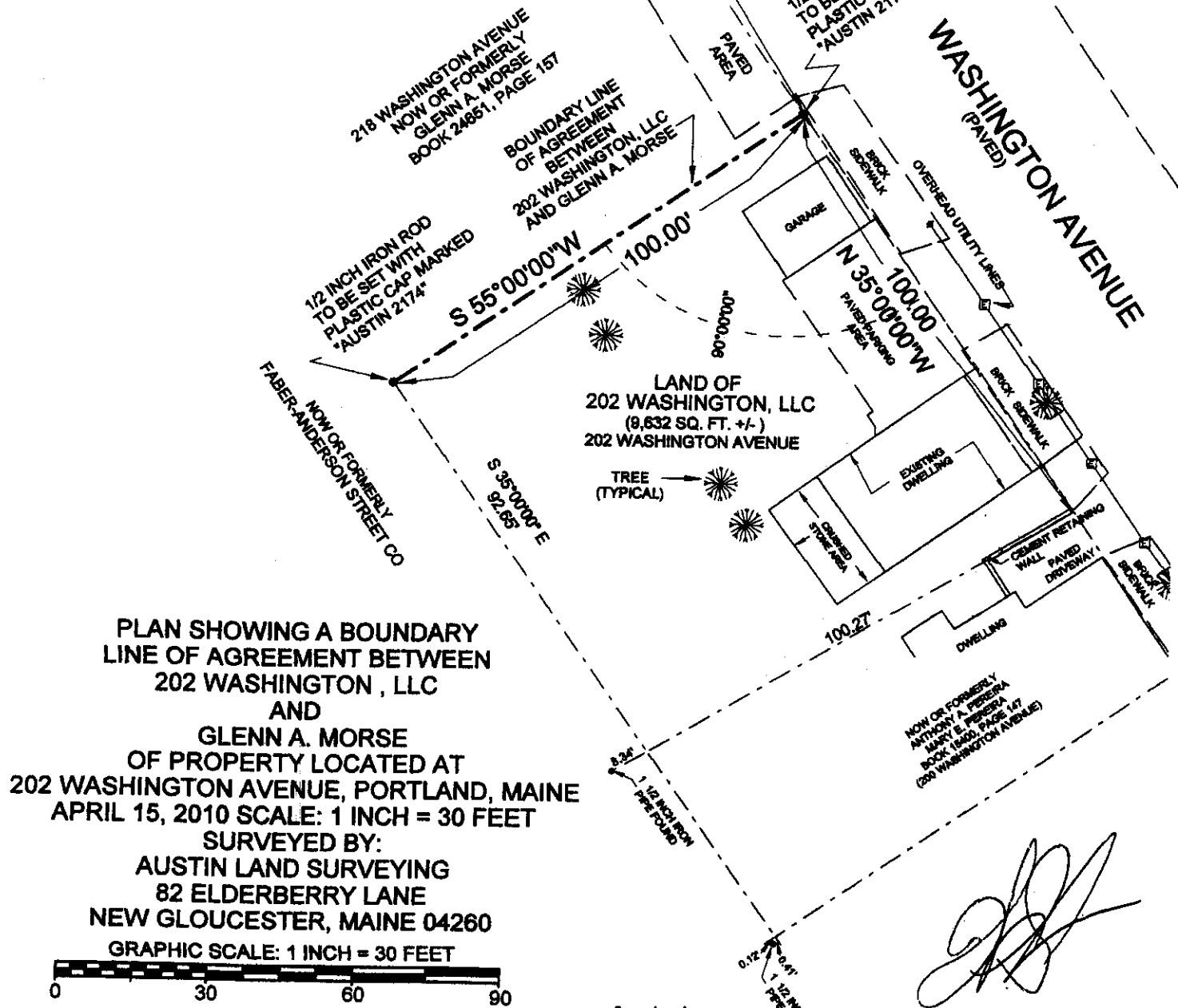
  
Notary Public/Attorney at Law #2230  
NEAL L. WEINSTEIN



**EXHIBIT A**  
**To Boundary Agreement**  
**202 Washington, LLC**  
**& Glenn A. Morse**

**NOTES:**

- 1.) BEARINGS REFER TO MAGNETIC FOR THE YEAR 2007.
- 2.) THIS PLAN IS BASED ON PLAN ENTITLED "PLAN SHOWING A STANDARD BOUNDARY AND TOPOGRAPHIC SURVEY MADE FOR RONALD GANN", DATED OCTOBER 2007 BY AUSTIN LAND SURVEYING, LLC.
- 3.) THIS PLAN WAS CREATED TO SHOW THE LINE OF AGREEMENT BETWEEN 202 WASHINGTON, LLC AND GLENN A. MORSE.



Received  
 Recorded Register of Deeds  
 Jun 14, 2010 02:12:16P  
 Cumberland County  
 Pamela E. Lovley

WILLIAM G. AUSTIN  
 STATE OF MAINE  
 PROFESSIONAL LAND SURVEYOR 2174

### AMENDMENT TO BOUNDARY AGREEMENT

This Amendment to Boundary Agreement is made and entered into on March 29, 2016, by and between **Glenn A. Morse**, an individual residing in Scarborough, Maine (hereinafter referred to as "Morse"), and **202 Washington, LLC**, a Maine limited liability company with a principal place of business located in Portland, Maine (hereinafter referred to as "202 Washington");

WHEREAS, Morse currently holds title to certain real estate located on Washington Avenue in Portland, Maine, said parcel being described in a deed dated December 6, 2006, and recorded in the Cumberland County Registry of Deeds in Book 24651, Page 157 (hereinafter referred to as the "Morse Parcel");

WHEREAS, 202 Washington currently holds title to certain abutting real estate located on Washington Avenue as described in a deed dated September 28, 2007, and recorded in said Registry of Deeds in Book 25509, Page 156 (herein referred to as "202 Washington Parcel");

WHEREAS, Morse and 202 Washington entered into a Boundary Agreement with respect to said abutting parcels of real estate dated May 25, 2010 and recorded in said Registry of Deeds in Book 27839 Page 310 (the "Agreement");

WHEREAS, the parties desire to amend and restate the "Maintenance Easement" portion of the Agreement in accordance with the terms set forth below;

WHEREAS, the Negative Easement contained in the Agreement is reaffirmed and restated -- no building, structure, or improvement of any kind shall be constructed in the area described in Paragraph C(1) of the Agreement;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. The "Maintenance Easement" set forth in Paragraph B of the Agreement is hereby amended and restated as follows:

Morse hereby grants to 202 Washington, and its successors and assigns, a perpetual easement in common with Morse for ingress and egress on foot and with equipment and motor vehicles over a thirty foot (30') wide strip of land running along the southeasterly sideline of the Morse Parcel abutting the 202 Washington Parcel extending from Washington Avenue to the southwesterly or rear line of the Morse Parcel (the "easement area") at reasonable times, as may be necessary for the purpose of constructing, maintaining, examining, repairing, or replacing any retaining wall or building or other structure on the 202 Washington

Parcel. The parties further agree that: (i) no building may be constructed within the easement area; (ii) an access drive may be constructed within the easement area to provide access by foot and vehicle for the benefit of the Morse Parcel and the parcel located at 220 Washington Avenue, and said access drive, or any other building, structure, or improvement, shall not enter the Negative Easement area; and (iii) 202 Washington's use of the easement area shall be carried on so as not to interfere with access over the access drive and so as to reasonably minimize any disturbance to the use and enjoyment of the Morse Parcel.

This easement burdens the Morse Parcel and benefits the 202 Washington Parcel and shall run with the land.

202 Washington, and its successors and assigns, shall restore and/or repair as necessary the easement area described herein to its former condition after exercising the within granted rights.

2. 202 Washington Avenue hereby releases the former Maintenance Easement originally established under the Agreement.

3. Except as set forth above, the Agreement shall remain in full force and effect, and no further revisions of the Agreement, as amended herein, shall be made except with the informed written consent of all parties hereto. Absent such informed written consent, the Agreement shall not be further revised or changed. Morse shall be responsible for recording this Amendment in the Cumberland County Registry of Deeds.

[This space intentionally blank]

IN WITNESS WHEREOF the parties have set their respective hands and seals on March 29, 2016.

Marie C. Solad  
Witness

Glenn A. Morse  
GLENN A. MORSE

STATE OF MAINE  
COUNTY OF CUMBERLAND

March 29, 2016

Then personally appeared the above named Glenn A. Morse and acknowledged the foregoing instrument to be his free act and deed.

4/7/16 - ME BAR NO. 7541  
~~Notary Public~~/Maine Attorney at Law  
Name: \_\_\_\_\_  
My commission expires \_\_\_\_\_



Peggy S. Toothaker  
Witness

202 Washington, LLC

By: Ronald L. Gan  
Ronald L. Gan, its Manager

STATE OF MAINE  
COUNTY OF CUMBERLAND

March 29, 2016

Then personally appeared the above named Ronald L. Gan in his said capacity and acknowledged the foregoing instrument to be his free act and deed, and the free act and deed of said limited liability company.

[Signature] ME BAR NO. 7541  
Notary Public/Maine Attorney at Law  
Name: \_\_\_\_\_  
My commission expires \_\_\_\_\_

Received  
Recorded Register of Deeds  
Apr 04, 2016 01:51:49P  
Cumberland County  
Nancy A. Lane

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION C – STATE/FEDERAL APPROVALS

THERE ARE NO STATE OR FEDERAL APPROVALS REQUIRED FOR THIS PROJECT.

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION D – ZONING ASSESSMENT

A ZONING ASSESSMENT IS INCLUDED ON THE PLAT DRAWING, IN THE NOTES.

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION E – EASEMENTS

THERE ARE FOUR EASEMENT AREAS RELATING TO THIS PROJECT –

- A 30 FOOT MAINTENANCE EASEMENT TO 202 WASHINGTON LLC AT THE SOUTH END OF THE SUBJECT PROPERTY.
- A 20 FOOT SEWER LINE EASEMENT TO THE SUBJECT PROPERTY ACROSS LAND OF ROCKINGHAM LLC TO ANDERSON STREET.
- A PROPOSED 25 FOOT UTILITY EASEMENT TO THE SUBJECT PROPERTY ACROSS LAND OF ROCKINGHAM LLC.
- A PROPOSED WALL EASEMENT TO THE SUBJECT PROPERTY ACROSS LAND OF ROCKINGHAM LLC.

ALL OF THESE EASEMENTS ARE SHOWN ON THE PLAT DRAWING.



SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION F - WAIVERS

1 . A WAIVER IS REQUESTED ON THE SITE PLAN STANDARD SECTION 14-526(b)2.B(III) AND TECHNICAL MANUAL SECTION 4.6.1 ON STREET TREES. THERE ARE 45 STREET TREES REQUIRED BY THESE STANDARDS – 22 STREET TREES ARE PROPOSED. TO COMPENSATE FOR THE DIFFERENCE, THE APPLICANT SHALL CONTRIBUTE TO THE CITY TREE FUND, AS DETERMINED BY THE PLANNING AUTHORITY.



MAILING ADDRESS • 50 Industrial Park Rd, Saco, ME 04072 • 1-877-SACO-BID

December 7, 2016

Mrs. Barbara Barhydt  
Portland Planning Staff  
Portland City Hall  
389 Congress Street  
Portland, ME 04101

Dear Mrs. Barhydt:

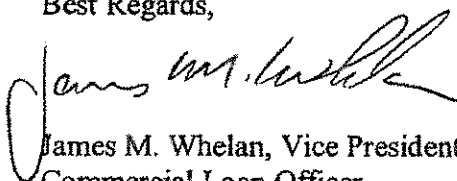
Saco & Biddeford Savings Institution (SBSI) has provided financing to Mr. Vincent Maietta on various real estate development projects over the last several years. Mr. Maietta is held in high regard by SBSI and is considered a customer in good standing.

I understand that he is working on the possible development of a +/- 45 unit condominium development at 218-220 Washington Avenue. Based on our experience with Mr. Maietta, his experience as a successful developer, and his financial strength, SBSI would be pleased to consider a loan application to participate in the financing of this project.

SBSI reserves the right to perform its due diligence with further assessment of a loan application, budgets, plans, specifications, market analysis, etc. This letter is not intended to be a commitment to lend.

Should you have any questions, please contact me at (207) 602-7652.

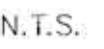
Best Regards,

  
James M. Whelan, Vice President  
Commercial Loan Officer  
Saco & Biddeford Savings Institution

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION H- BOUNDARY SURVEY

THE BOUNDARY SURVEY HAS BEEN COMPLETED AND IS SUBMITTED AS PLAN SUBMISSION – PLAN 2.





NOT FOR CONSTRUCTION

**SEBAGO**  
T E C H N I C S  
[WWW.SEBAGOTECHNICS.COM](http://WWW.SEBAGOTECHNICS.COM)

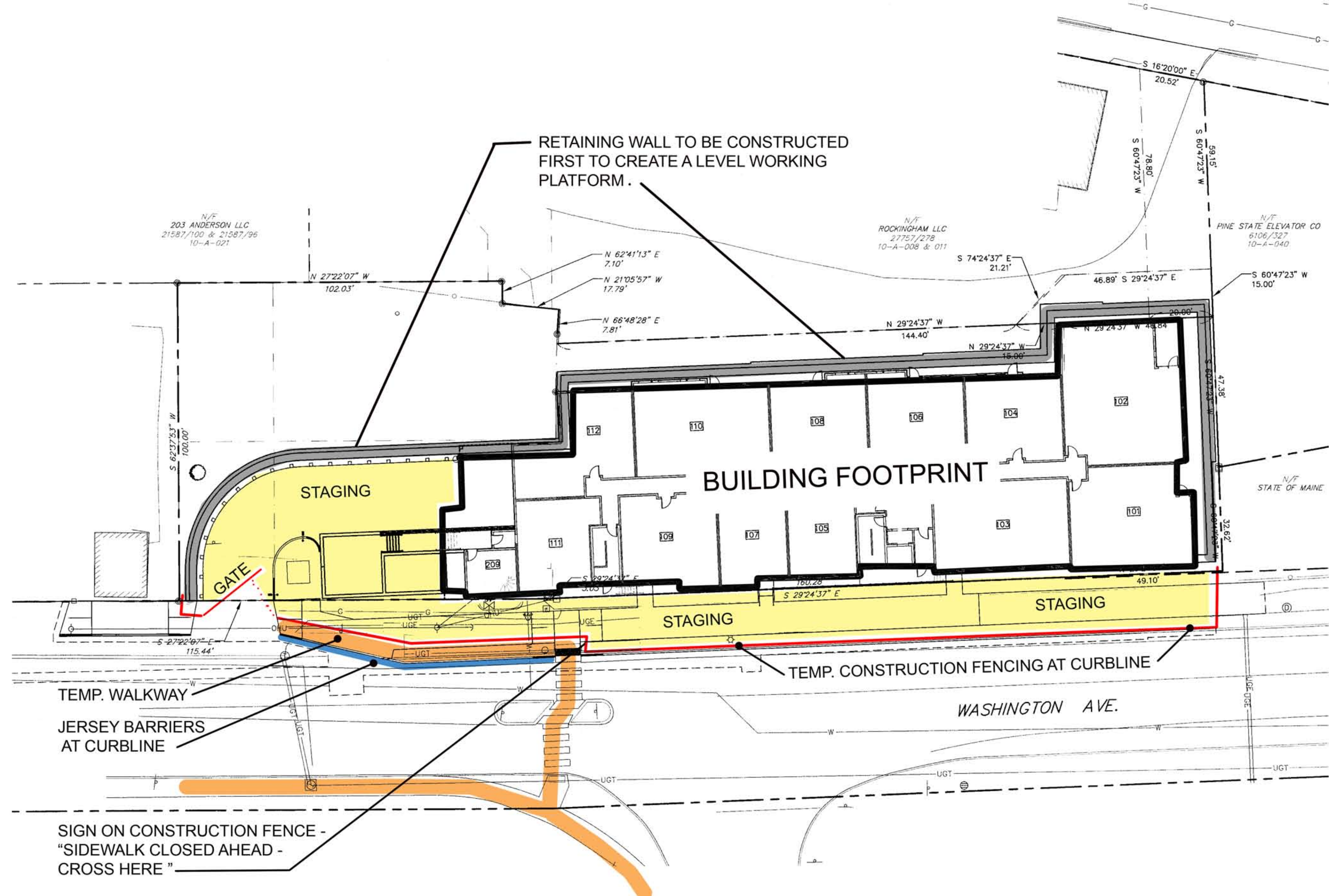
75 John Roberts Rd.  
Suite 1A  
South Portland, ME 04106  
Tel. 207-200-2100

250 Goodard Rd.  
Suite B  
Lewiston, ME 04240  
Tel. 207-783-5656

|             |          |
|-------------|----------|
| PROJECT NO. | SCALE    |
| 06172       | 1" = 20' |

SHEET 1 OF 1

06172SB.dwg, TAB:SB



ATTEST \_\_\_\_\_ REGISTRAR



## Memorandum

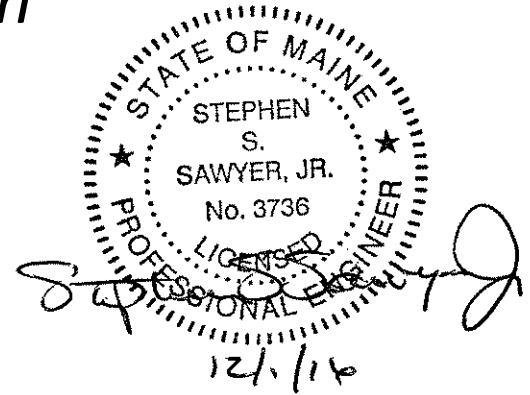
06172

To: Will Conway

From: Steve Sawyer

Date: December 1st, 2016

Subject: Trip Generation for 218 Washington Avenue  
45 Condominiums, Portland



Per your request, we have completed Trip Generation calculations for the proposed condominium project located in Portland at 218 Washington Avenue. To our understanding the proposed building includes parking under the building and forty five condominium residential units located on the upper four floors.

### Trip Generation

Using the 9<sup>th</sup> Edition of ITE's Trip Generation Manual we have estimated the following trip generation for the proposed building and the results are included within Table 1 below. The condominiums are classified as Land Use Code 232 – High-Rise Residential Condominium/Townhouse.

**Table 1– Trip Generation**  
**Land Use 232 – High-Rise Residential Condominium/Townhouse**  
**(45 Units)**

| <i>Time Period</i>              | <i>Trip Generation Rate<br/>(trips/ 1 unit)</i> | <i>Total Trips</i> | <i>Entering</i> | <i>Exiting</i> |
|---------------------------------|-------------------------------------------------|--------------------|-----------------|----------------|
| AM Peak Hour of Generator       | 0.34/Unit                                       | 15                 | 12              | 3              |
| PM Peak Hour of Generator       | 0.38/Unit                                       | 17                 | 11              | 6              |
| Saturday Peak Hour of Generator | 0.35/Unit                                       | 16                 | 6               | 10             |
| Sunday Peak Hour of Generator   | 0.30/Unit                                       | 14                 | 7               | 7              |

## **Conclusions**

The estimated peak hour trip generation does not trigger the threshold for a MaineDOT Traffic Movement Permit of 100 trips nor meets the 25 trip requirement for a City of Portland Traffic Impact Study. Based upon the capacity of existing streets in the project location, we do not anticipate any adverse traffic impacts. Let me know if you need anything else in this regard.

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION K – NATURAL FEATURES

THERE ARE NO SIGNIFICANT NATURAL FEATURES ON THIS SITE .



# **STORMWATER MANAGEMENT PLAN**

To:

**City of Portland**

## **Proposed Condominium Development**

218 Washington Avenue  
Portland, Maine

Prepared for:

218-220 Washington Avenue, LLC  
199 Elderberry Road  
South Portland, Maine 04106

Prepared by:

Sebago Technics, Inc.  
75 John Roberts Road, Suite 1A  
South Portland, Maine 04106

Revised June, 2017  
December 2016



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### Attachments

Attachment A: Basic Standards – Inspection, Maintenance, and Housekeeping Plan

Attachment B: General Standards - Stormwater Quality Calculations

Attachment C: Flooding Standards - HydroCAD Output-Pre-Development & Post Development

Attachment D: Soils Report

**STORMWATER & EROSION CONTROL PLAN**  
**218-220 WASHINGTON AVE. CONDOMINIUMS**  
**218 WASHINGTON AVENUE**  
**PORTLAND, MAINE**

**Executive Summary**

On behalf of 218-220 Washington Avenue, LLC, we are pleased to submit this Stormwater Management Plan for the proposed 45-unit residential condominiums at 218 Washington Ave. The applicant intends to remove the existing home and develop the property into a 13,982 s.f. building with associated parking located at the basement level.

The project is subject to the City's Site/Stormwater Standards and is required to provide treatment for both stormwater quantity and quality. The chambers combined with the underdrained subsurface sand filter have been designed to have a treatment volume equal to one inch of runoff times the tributary impervious area and 0.4 inches of runoff times the tributary landscaped area. Additional storage provided above the treatment volume will be utilized for controlling the peak runoff from the site to meet the peak discharge requirement under the City of Portland's Site Plan review.

The project has been designed to provide treatment for 97% of the impervious area and 88% of the developed area. Treatment is achieved utilizing a wetpond located on the southerly side of the site to treat and detain the developed area. Best Management Practices (BMPs) have been designed and sized in accordance with criteria published in Chapter 500 BMP's Technical Design Manual.

**STORMWATER & EROSION CONTROL PLAN**  
**218-220 WASHINGTON AVE. CONDOMINIUMS**  
**218 WASHINGTON AVENUE**  
**PORTLAND, MAINE**

**I. Introduction**

This Stormwater Management Plan has been prepared to address the potential impacts associated with this project due to the proposed modification in stormwater runoff characteristics. The stormwater management controls that are outlined in this plan have been designed to best suit the proposed development and to comply with applicable regulatory requirements.

**II. Existing Conditions**

The property is identified as Lot 10 and 15 on the City of South Portland Tax Map 10 and is located in the Residential District. The proposed 13,982 s.f. building is to be constructed across the street from the intersection of Washington Avenue and Eastern Promenade. The existing single family structure located at 218 Washington Avenue would be demolished to clear the way for the proposed condominiums.

Land Cover: The site is currently developed with an existing 1,844 s.f. building, shed and deck. The vegetation of the property consists of minimal lawn areas and landscaping associated with the house with the majority of the site consisting mostly of mixed vegetated and wooded open space on a steep embankment.

Site Topography: The site significantly decreases in elevation from Washington Avenue down to Anderson Street. The elevation at Washington Ave is around 65 and the elevation at the back (western) property boundary is about 45 averaging a 30% slope across the property.

Surface Water Features: The project site contains multiple subareas where the majority of stormwater runoff from the site flows towards Anderson Street and is directed to existing catch basins and municipal infrastructure. The municipal infrastructure in Washington Ave discharges to Casco Bay. There are no existing wetlands delineated onsite. No other special natural features are known to exist within 500 feet of the project site.

Soils: Soil characteristics were obtained from the Soil Conservation Service (SCS) Medium Intensity Soil Survey of Cumberland County. Soils identified on the site (or within close proximity) are identified below in Table 1. These soil boundaries are identified on the attached watershed maps.

| <b>Table 1 – Proximity Soil Types and Characteristics</b> |        |     |          |
|-----------------------------------------------------------|--------|-----|----------|
| Soil Type                                                 | Symbol | HSG | K Factor |
| Hinckley loamy sand (8% to 15% slopes)                    | HIC    | A   | 0.28     |
| Hinckley loamy sand (15% to 25% slopes)                   | HID    | A   | 0.28     |

The K factor is an erodibility index that relates each soil family based on a slight erosion potential of 0.10 to a high erosion potential of 0.64. An index number, greater than 0.32, indicates that a high level of erosion control measures must be taken in order to control erosion of this soil. The Hydrologic Soil Group (HSG) designation is based on a rating of the relative permeability of a soil, with Group “A” being extremely permeable such as coarse sand, to Group “D” having low permeability such as clay.

### **III. Proposed Development**

The proposed 13,982 s.f. building is situated over undeveloped woods and the existing single family home to be demolished. Access to the site is proposed to be located at the existing curb cut off from Washington Avenue where vehicles will proceed down a ramp to the parking deck located at the basement level of the building.

The majority of the stormwater runoff from the proposed development will be collected within the roof drainage leaders connected to catch basins and routed to underground storage chambers for treatment and detention prior to connecting into the City’s storm infrastructure in Anderson Street. The development proposes to meet the Maine DEP Chapter 500 General Standards for treatment requirements by collecting stormwater runoff and routing it to a proposed underdrained chamber system which will provide both treatment and detention.

Alterations to Land Cover: Completion of the proposed project will result in required treatment of 17,460 square feet of impervious area. The total impervious area for pre-development conditions is 41.31% of the total area and post-development is increased to 67.37% of the total area.

### **IV. Downstream Ponds and Waterbodies**

The site is tributary to Casco Bay.

### **V. Regulatory Requirements**

#### **A. City of Portland, Maine**

The proposed development will require Site & Subdivision Plan approval from the City of Portland and must comply with the performance standards specified in the City’s Site Plan Review Ordinance.

#### **B. Maine Department of Environmental Protection (Maine DEP)**



The City of Portland has delegated stormwater capacity over MDEP. Based on the amount of newly created non-vegetated area and the watershed which the project is located in, the proposed development shall comply with the Basic Standards and the General Standards as described below. The City also requires Flooding Standards to be met.

Basic Standards: These standards include various erosion and sedimentation controls, inspection and maintenance procedures, and general housekeeping requirements. These performance standards are addressed in the Erosion and Sedimentation Control Plan within the enclosed plan set and in the Inspection, Maintenance, and Housekeeping Plan attached. Please refer to these documents for more detailed information.

General Standards: These standards require that a minimum of 95% of all new non-vegetated areas and at least 80% of all new developed areas are designed to be treated by stormwater Best Management Practices (BMPs). The site is also listed as an impaired stream and is required to meet those standards.

General Standard BMPs have been defined by the MDEP and are described thoroughly in their publication “Stormwater Management for Maine: Best Management Practices Manual”. Volume III of this manual contains additional information and sizing requirements for the treatment measures proposed for the proposed development.

Flooding Standards: These standards require detention of stormwater to meet pre-development conditions peak flow analysis.

## **VI. Stormwater Management BMPs**

In order to meet the applicable regulations, the project will utilize a StormTech chamber system with an underdrain to treat and detain runoff from the majority of the developed area.

### **A. StormTech Chamber System & Underdrained Subsurface Sand Filter**

The chambers combined with the underdrained subsurface sand filter have been designed to have a treatment volume equal to one inch of runoff times the tributary impervious area and 0.4 inches of runoff times the tributary landscaped area. Additional storage provided above the treatment volume will be utilized for controlling the peak runoff from the site to meet the peak discharge requirement under the City of Portland’s Site Plan review.

The areas treated by this BMP are summarized in the stormwater treatment calculations attached in Attachment 1: *Stormwater Quality Calculations* and are shown on the Watershed/Treatment Plan attached to this application.

## VII. Peak Flow Analysis

This section has been prepared to discuss the proposed modifications to peak flow rates as a result of the development.

### A. Modeling Technique

In order to evaluate drainage characteristics in pre and post-development conditions, a quantitative analysis was performed to determine peak rates of runoff for the 2, 10, and 25-year storm events. Runoff calculations were performed following the methodology outlined in the USDA Soil Conservation Service's "Urban Hydrology for Small Watersheds, Technical Release #55" and HydroCAD Stormwater Modeling System Software. A 24-hour, SCS Type III storm distribution for the 2, 10, and 25-year storm frequencies were used for analysis.

The current 24-hour rainfall values utilized in the hydrologic model for Cumberland County are as follows.

| Table 2 - Storm Frequency Precipitation (in./24 hr) |      |
|-----------------------------------------------------|------|
| 2-year                                              | 3.10 |
| 10-year                                             | 4.60 |
| 25-year                                             | 5.80 |

### B. Drainage Characteristics (Pre and Post-Development Watershed Delineation)

One watershed point of analysis (POA1) was established to evaluate the pre-development and post-development peak runoff conditions for compliance with the City Stormwater Compliance.

Point of analysis one (POA1) is located at the southern corner of the property where stormwater runoff collects and enters into an existing catch basin connected to the City's stormdrain infrastructure.

### C. Pre-Development

Pre-development is defined by three (3) subareas (1S, 2S & 3S). Subarea 1S includes undeveloped wooded area; Subarea 2S includes the existing residence, driveway, outbuilding and wooded and lawn areas; Subarea 3S includes the offsite developed adjacent to Anderson Street.

### D. Post-Development

Post-development is defined by eight (8) subareas (1S through 8S). Subarea 1S, 2S & 3S includes undeveloped wooded area and the offsite developed adjacent to Anderson Street as it did in pre-development but with reduced areas. Subareas 4S, 5S, 6S & 7S contain the impervious areas created from the development. Subarea 8S contains the landscape area between Washington Avenue and the proposed building.

E. Comparison

The watershed areas and times of concentration of the post-development watersheds vary from the existing conditions based on the proposed site development and grading. Table 3 summarizes the results of the hydrologic analysis of the project under pre-development and post-development conditions.

| Table 3 – Stormwater Runoff Summary Table<br>Pre-Development vs. Post-Development |                           |      |                    |        |                            |      |         |      |         |      |
|-----------------------------------------------------------------------------------|---------------------------|------|--------------------|--------|----------------------------|------|---------|------|---------|------|
| Study Point                                                                       | Total Watershed Area (Ac) |      | Percent Impervious |        | Peak Rates of Runoff (cfs) |      |         |      |         |      |
|                                                                                   |                           |      |                    |        | 2-year                     |      | 10-year |      | 25-year |      |
|                                                                                   | Pre                       | Post | Pre                | Post   | Pre                        | Post | Pre     | Post | Pre     | Post |
| POA1                                                                              | 1.59                      | 1.59 | 41.31%             | 67.37% | 1.88                       | 1.91 | 3.37    | 3.23 | 4.74    | 4.31 |

As depicted in the above table, post-development peak runoff rates at the study point will be at or below pre-development levels for the 10-year and 25-year storm events with the exception of the 2-year event where the 5% increase is due to the subsurface underdrained sand filter which cannot be eliminated.

To achieve the required water quality treatment, an underdrained subsurface sand filter is proposed to treat a vast majority of the development. The proposed filter has been designed and sized in accordance with the current Maine DEP Stormwater Best Management Practices handbook.

The provided treatment percentages are indicated in the below table:

| <b>Table 4 – General Standards Treatment Level</b> |                        |                    |                      |                         |                         |                    |                      |
|----------------------------------------------------|------------------------|--------------------|----------------------|-------------------------|-------------------------|--------------------|----------------------|
| <b>Developed</b>                                   |                        |                    |                      | <b>Non-Vegetated</b>    |                         |                    |                      |
| Created Developed (ac)                             | Treated Developed (ac) | Required % Treated | Provided % Treatment | Created Impervious (ac) | Treated Impervious (ac) | Required % Treated | Provided % Treatment |
| 0.457                                              | 0.401                  | 80%                | 88%                  | 0.457                   | 0.441                   | 95%                | 97%                  |

From the table above, the proposed project has been designed to exceed the required treatment levels with the applied credit for existing impervious area. Water Quality Volumes and BMP sizing volume calculations are attached to this report.

IX. Conclusions

The proposed development has been designed to meet the requirements of the City of Portland's Site Plan Ordinance. The stormwater management system will treat 97% of the created impervious surface and 88% of the total developed area. Almost all the peak flow rates have been controlled to below or equal to the pre-development rates. Additionally, erosion and sedimentation controls have been outlined to prevent unreasonable impacts on the site and to the surrounding environment.

Prepared by,

SEBAGO TECHNICS, INC.

A handwritten signature in black ink, appearing to read "Keith D. Gray", with a long horizontal flourish extending to the right.

Keith D. Gray, P.E.  
Project Engineer

KDG/WTC:



# **Attachment A**

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## **Inspection, Maintenance, and Housekeeping**

# Exhibit 1

06172

## INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

### Proposed Development at 218 Washington Ave. Portland, ME

#### Introduction

Upon completion of the proposed development, the owner, 218-220 Washington Avenue, LLC will be the responsible party for maintaining the stormwater management system. The owner shall be responsible for maintaining the stormwater management system. The responsible party shall schedule maintenance of all stormwater management structures, the establishment of any contract services required to implement the program, and the keeping of records and maintenance logbook.

Records of all inspections and maintenance work accomplished must be kept on file and retained for a minimum 5-year time span. The maintenance logbook will be made available to the Maine Department of Environmental Protection (MDEP) and the City of Portland upon request. At a minimum, the appropriate and relevant activities for each of the stormwater management systems will be performed on the prescribed schedule.

The following plan outlines the anticipated inspection, maintenance, and housekeeping procedures for the erosion and sedimentation controls as well as stormwater management devices for the project site. Also, this plan outlines several housekeeping requirements that shall be followed during and after construction. These procedures should be followed in order to ensure the intended function of the designed measures and to prevent unreasonable adverse impacts to the surrounding environment.

The procedures outlined in the Inspection, Maintenance, and Housekeeping Plan is provided as an overview of the anticipated practices to be used on this site. In some instances, additional measures may be required due to unexpected conditions. For additional details on any of the erosion and sedimentation control measures or stormwater management devices to be utilized on this project, refer to the most recently revised edition of the "Maine Erosion and Sedimentation Control BMP" manual and/or the "Stormwater Management for Maine: Best Management Practices" manual as published by the MDEP.

#### During Construction

1. **Inspection:** During the construction process, it is the Contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. These responsibilities include inspecting disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control,

including the standards and conditions in any applicable permits, shall conduct the inspections.

2. **Maintenance:** All measures shall be maintained in an effective operating condition until areas are permanently stabilized. If Best Management Practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within seven (7) calendar days and prior to any storm event (rainfall).
3. **Documentation:** A log summarizing the inspections and any corrective action taken must be maintained on-site. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, material storage areas, and vehicle access points to the site. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

The log must be made accessible to the appropriate regulatory agency upon request. The permittee shall retain a copy of the log for a period of at least three (3) years from the completion of permanent stabilization.

4. **Specific Inspection and Maintenance Tasks:** The following is a list of erosion control and stormwater management measures and the specific inspection and maintenance tasks to be performed during construction.

A. Sediment Barriers:

- Hay bale barriers, silt fences, and filter berms shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- If the fabric on silt fence or filter barrier should decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, it shall be replaced.
- Sediment deposits should be removed after each storm event. They must be removed before deposits reach approximately one-half the height of the barrier.
- Filter berms shall be reshaped as needed.
- Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared, and seeded.

B. Riprap Materials:

- Once a riprap installation has been completed, it should require very little maintenance. It shall, however, be inspected periodically to determine if high flows have caused scour beneath the riprap or dislodged any of the stone.

C. Erosion Control Blankets:

- Inspect these reinforced areas semi-annually and after significant rainfall events for slumping, sliding, seepage, and scour. Pay close attention to unreinforced areas adjacent to the erosion control blankets, which may experience accelerated erosion.
- Review all applicable inspection and maintenance procedures recommended by the specific blanket manufacturer. These tasks shall be included in addition to this plan.

D. Temporary Storm Drain Inlet Protection:

- The inlet protection structure shall be inspected before each rain event and repaired as necessary.
- Sediment shall be removed and the storm drain sediment barrier restored to its original dimensions when the sediment has accumulated to half of the design depth of the trap.
- Structures shall be removed upon permanent stabilization of the tributary area.
- Upon removal of the structure, all accumulated sediments downstream of the structure shall be cleaned from the storm drain system.

E. Stabilized Construction Entrances/Exits:

- The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way.
- When the control pad becomes ineffective, the stone shall be removed along with the collected soil material. The entrance should then be reconstructed.
- Areas that have received mud-tracking or sediment deposits shall be swept or washed. Washing shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device (not into storm drains, ditches, or waterways).

F. Temporary Seed and Mulch:

- Mulched areas should be inspected after rain events to check for rill erosion.
- If less than 90% of the soil surface is covered by mulch, additional mulch shall be applied in bare areas.
- In applications where seeding and mulch have been applied in conjunction with erosion control blankets, the blankets must be inspected after rain events for dislocation or undercutting.
- Mulch shall continue to be reapplied until 95% of the soil surface has established temporary vegetative cover.

G. Stabilized Drainage Swales:



- Sediment accumulation in the swale shall be removed once the cross section of the swale is reduced by 25%.
- The swales shall be inspected after rainfall events. Any evidence of sloughing of the side slopes or channel erosion shall be repaired and corrective action should be taken to prevent reoccurrence of the problem.
- In addition to the stabilized lining of the channel (i.e. erosion control blankets), stone check dams may be needed to further reduce channel velocity.

5. **Housekeeping:** The following general performance standards apply to the proposed project.

- A. Spill Prevention: Controls must be used to prevent pollutants from being discharged from materials on-site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.
- B. Groundwater Protection: During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors, accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.
- C. Fugitive Sediment and Dust: Actions must be taken to insure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.
- D. Debris and Other Materials: Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.
- E. Trench or Foundation Dewatering: Trench dewatering is the removal of water from trenches, foundations, cofferdams, ponds, and other areas within the construction area that retain water after excavation. In most cases, the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved.

## **After Construction**

1. **Inspection:** After construction, the owner or operator shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMPs, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
2. **Maintenance, and repair:** If a BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator shall take corrective actions to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide a record of the deficiency and corrective actions to the Department of Public Services (DPS). The following is a list of permanent erosion control and stormwater management measures and the inspection, maintenance, and housekeeping tasks to be performed after construction.

### A. Vegetated Areas:

- Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems.
- Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.

### B. Ditches, Swales and Other Open Channels:

- Inspect ditches, swales, and other open stormwater channels in the spring, in the late fall, and after heavy rains to remove any obstructions to the flow. Remove accumulated sediments and debris, remove woody vegetative growth that could obstruct flow and repair any erosion of the ditch lining.
- Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity.
- Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable.
- Replace riprap in areas where any underlying filter fabric or underlying gravel is showing through the stone or where stones have dislodged.

### C. Winter Sanding:

- Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.
- Accumulations on pavement may be removed by pavement sweeping.
- Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader or other acceptable method.

D. Stormtech Chambers/Isolator Row:

- Stormtech Chambers shall be inspected and maintained according to manufacturer's recommendations.
- Recommended maintenance includes, but not limited to, visual inspection of accumulated sediment within isolator row and jet-vac flushing when required.

E. Catch Basins:

- Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring.
- Clean out must include the removal and legal disposal of accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins.

3. **Annual Report:** The owner or operator or a qualified post-construction stormwater inspector hired by that person, shall, on or by June 30 of each year, provide a completed and signed certification that the person has inspected the BMPs and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective actions taken. Annual reporting shall be submitted to the City of South Portland Director of Water Resource Protection.
4. **Duration of Maintenance:** Perform maintenance as described and required for any associated permits unless and until the system is formally accepted by a municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. If a municipality or quasi-municipal district chooses to accept a stormwater management system, or a component of a stormwater system, it must provide a letter to the MDEP stating that it assumes responsibility for the system. The letter must specify the components of the system for which the municipality or district will assume responsibility, and that the municipality or district agrees to maintain those components of the system in compliance with MDEP standards. Upon such assumption of responsibility, and approval by the MDEP, the municipality, quasi-municipal district, or association becomes a co-permittee for this purpose only and must comply with all terms and conditions of the permit.

## **Attachments**

Attachment 1 – Sample Stormwater Inspection and Maintenance Form

## Sample Stormwater Inspection and Maintenance Form

### Proposed Development; 218 Washington Ave. Portland, ME Attachment 1

This log is intended to accompany the stormwater Inspection, Maintenance and Housekeeping Plan for the Proposed Development. The following items shall be checked, cleaned and maintained on a regular basis as specified in the Maintenance Plan and as described in the table below. This log shall be kept on file for a minimum of five (5) years and shall be available for review. Qualified personnel familiar with drainage systems and soils shall perform all inspections. Attached is a copy of the construction and post-construction maintenance logs.

| <b>Item</b>                  | <b>Maintenance Required<br/>&amp; Frequency</b>    | <b>Date<br/>Completed</b> | <b>Maintenance<br/>Personnel</b> | <b>Comments</b> |
|------------------------------|----------------------------------------------------|---------------------------|----------------------------------|-----------------|
| Catch Basins<br>and Culverts | Remove accumulated sediment<br>and debris          |                           |                                  |                 |
|                              | Sump depth                                         |                           |                                  |                 |
| Vegetated<br>Areas           | Inspect Slopes                                     |                           |                                  |                 |
|                              | Replant Bare Areas                                 |                           |                                  |                 |
|                              | Check after Major Storms                           |                           |                                  |                 |
| Winter Sanding               | Clean annually (Spring)                            |                           |                                  |                 |
|                              | Remove sand and sediment<br>from roadway shoulders |                           |                                  |                 |
| Stormtech                    | Follow manufacturer's<br>recommendations           |                           |                                  |                 |



## **Attachment B**

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### **Stormwater Quality Calculations**

**TABLE 2: GENERAL STANDARD CALCULATIONS**  
**218 Washington Avenue**  
**JOB #06172**

| SUBAREA ID         | TOTAL AREA   | TOTAL IMPERVIOUS AREA | IMPERVIOUS AREA REQUIRING TREATMENT | IMPERVIOUS AREA RECEIVING TREATMENT | NEW LANDSCAPED AREA | TOTAL DEVELOPED AREA | DEVELOPED AREA REQUIRING TREATMENT | DEVELOPED AREA RECEIVING TREATMENT | TREATMENT METHOD |
|--------------------|--------------|-----------------------|-------------------------------------|-------------------------------------|---------------------|----------------------|------------------------------------|------------------------------------|------------------|
|                    | (S.F.)       | (S.F.)                | (S.F.)                              | (S.F.)                              |                     | (S.F.)               | (S.F.)                             | (S.F.)                             | ID (PRIMARY)     |
| 1                  | 5926         | 1458                  | 1458                                | 0                                   | 0                   | 1458                 | 1458                               | 0                                  | NONE             |
| 2                  | 18465        | 985                   | 985                                 | 0                                   | 0                   | 985                  | 985                                | 0                                  | NONE             |
| 3                  | 25411        | 25411                 | 0                                   | 0                                   | 0                   | 25411                | 0                                  | 0                                  | NONE             |
| 4                  | 6785         | 6785                  | 6785                                | 6785                                | 0                   | 6785                 | 6785                               | 6785                               | SSF #1           |
| 5                  | 7524         | 7524                  | 7524                                | 7524                                | 0                   | 7524                 | 7524                               | 7524                               | SSF #1           |
| 6                  | 2604         | 2604                  | 2604                                | 2604                                | 0                   | 2604                 | 2604                               | 2604                               | SSF #1           |
| 7                  | 547          | 547                   | 547                                 | 547                                 | 0                   | 547                  | 547                                | 547                                | SSF #1           |
| 8                  | 2116         | 428                   | 0                                   | 0                                   | 1688                | 2116                 | 0                                  | 0                                  | NONE             |
| EXISTING HOUSE     | 2911         | 2911                  | 0                                   | 1747                                | 0                   | 0                    | 0                                  | 0                                  | CREDIT           |
| <b>TOTAL (AC.)</b> | <b>1.660</b> | <b>1.117</b>          | <b>0.457</b>                        | <b>0.441</b>                        | <b>0.039</b>        | <b>1.089</b>         | <b>0.457</b>                       | <b>0.401</b>                       |                  |

\*IMPERVIOUS AND DEVELOPED AREAS TO BE TREATED ARE ASSOCIATED WITH THE DEVELOPMENT. OFFSITE AREAS NOT INCLUDED IN THE SITE TREATMENT CALCULATION

\*THE EXISTING HOUSE TO BE DEMOLISHED IS NOT REQUIRED TO BE TREATED AS IT WAS CONSTRUCTED PRIOR TO STORMWATER LAW. THE EXISTING HOUSE AREA EQUALS A TOTAL OF 2,911 S.F. TIMES 60% ALLOWED FOR CREDIT EQUALS 1,747 S.F. CREDIT TOWARDS PROPOSED IMPERVIOUS

|                                                |        |
|------------------------------------------------|--------|
| TOTAL IMPERVIOUS AREA REQUIRING TREATMENT (SF) | 19,903 |
| TOTAL IMPERVIOUS AREA RECEIVING TREATMENT (SF) | 19,207 |
| % OF IMPERVIOUS AREA RECEIVING TREATMENT (SF)  | 97%    |

|                                               |        |
|-----------------------------------------------|--------|
| TOTAL DEVELOPED AREA REQ. TREATMENT (SF)      | 19,903 |
| TOTAL DEVELOPED AREA RECEIVING TREATMENT (SF) | 17,460 |
| % OF DEVELOPED AREA RECEIVING TREATMENT (SF)  | 88%    |

**SEBAGO TECHNICS, INC.**

75 John Roberts Road Suite 1A

South Portland, Maine 04106

Tel. (207) 200-2100

JOB 06172 - 218 Washington Ave.

SHEET NO. 1 OF 1

CALCULATED BY KDG DATE 11/29/2016

FILE NAME 06172\_Subsurface Sand Filter BMP.xls PRINT DATE 12/15/2016

|                                                         |                                          |                                                                                                                                                               |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|---------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------|--|--|--|--|--|---------|-------|--------|-------------------|----|--|--|--|--|--|
|                                                         |                                          |                                                                                                                                                               |  |  | UNDERDRAINED SUBSURFACE SAND FILTER |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
| Task:                                                   |                                          | Calculate water quality volume per MDEP chapter 500 regulations                                                                                               |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
| References                                              |                                          | 1. Maine DEP Chapter 500, Section 4.B.(2)(b)                                                                                                                  |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         |                                          | a. "must detain a runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area"            |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         |                                          | 2. Maine DEP Best Management Practices Stormwater Manual, Section 7.3.2                                                                                       |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         |                                          | a. "detain runoff volume equal to 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped area"                   |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         |                                          | b. "surface area of the sand filter bed and chamber system must be at least equal to 5% of the impervious area draining to it and 2% of the landscaped area." |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         |                                          | c. "treatment flow rate for the Stormtech Isolator Row is the projected one year peak flow rate for the drainage area feeding the Isolator Row"               |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         |                                          | Flow rates:                                                                                                                                                   |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         |                                          | SC-310 0.10 cfs/chamber                                                                                                                                       |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         |                                          | SC-740 0.20 cfs/chamber                                                                                                                                       |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         |                                          | DC-780 0.20 cfs/chamber                                                                                                                                       |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         |                                          | MC-3500 0.30 cfs/chamber                                                                                                                                      |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
| Tributary to Subsurface Sand Filter                     |                                          | #1                                                                                                                                                            |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         | Landscaped Area                          | 0                                                                                                                                                             |  |  |                                     |  |  |  |  |  |         | SF    |        |                   |    |  |  |  |  |  |
|                                                         | Impervious Area                          | 17,460                                                                                                                                                        |  |  |                                     |  |  |  |  |  |         | SF    |        |                   |    |  |  |  |  |  |
| Minimum Surface Area for sand filter and chamber system |                                          |                                                                                                                                                               |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         | Required                                 | (2% X Landscaped + 5% X Impervious)                                                                                                                           |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         | Total Landscaped Area                    | 0                                                                                                                                                             |  |  |                                     |  |  |  |  |  |         | SF    | Area   | 0                 | SF |  |  |  |  |  |
|                                                         | Total Impervious Area                    | 17,460                                                                                                                                                        |  |  |                                     |  |  |  |  |  |         | SF    | Area   | 873               | SF |  |  |  |  |  |
|                                                         | Required Minimum Surface Area            |                                                                                                                                                               |  |  |                                     |  |  |  |  |  |         | 873   | SF     |                   |    |  |  |  |  |  |
|                                                         | Provided Surface Area                    |                                                                                                                                                               |  |  |                                     |  |  |  |  |  |         | 1,541 | SF     |                   |    |  |  |  |  |  |
| Channel Protection Volume (CPV)                         |                                          |                                                                                                                                                               |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         | Required                                 | (0.4" X Landscaped + 1.0" X Impervious)                                                                                                                       |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         | Landscaped Area                          | 0                                                                                                                                                             |  |  |                                     |  |  |  |  |  |         | SF    | Volume | 0                 |    |  |  |  |  |  |
|                                                         | Impervious Area                          | 17,460                                                                                                                                                        |  |  |                                     |  |  |  |  |  |         | SF    | Volume | 1,455             |    |  |  |  |  |  |
|                                                         | CPV Required                             |                                                                                                                                                               |  |  |                                     |  |  |  |  |  |         | 1,455 | CF     | 0.033             | AF |  |  |  |  |  |
|                                                         | Provided CPV                             |                                                                                                                                                               |  |  |                                     |  |  |  |  |  |         | 1,489 | CF     | (Elevation 52.06) |    |  |  |  |  |  |
| Sediment Pre-Treatment                                  |                                          |                                                                                                                                                               |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         | Per Reference 2.c above                  |                                                                                                                                                               |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |
|                                                         | One year flow rate output from HydroCAD: |                                                                                                                                                               |  |  |                                     |  |  |  |  |  | 1.04    | cfs   |        |                   |    |  |  |  |  |  |
|                                                         | Iso Row sizing for:                      |                                                                                                                                                               |  |  |                                     |  |  |  |  |  | MC-3500 | 0.3   | cfs    |                   |    |  |  |  |  |  |
| Total number of Isolator Row Chambers required: 4       |                                          |                                                                                                                                                               |  |  |                                     |  |  |  |  |  |         |       |        |                   |    |  |  |  |  |  |

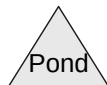
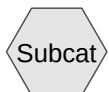
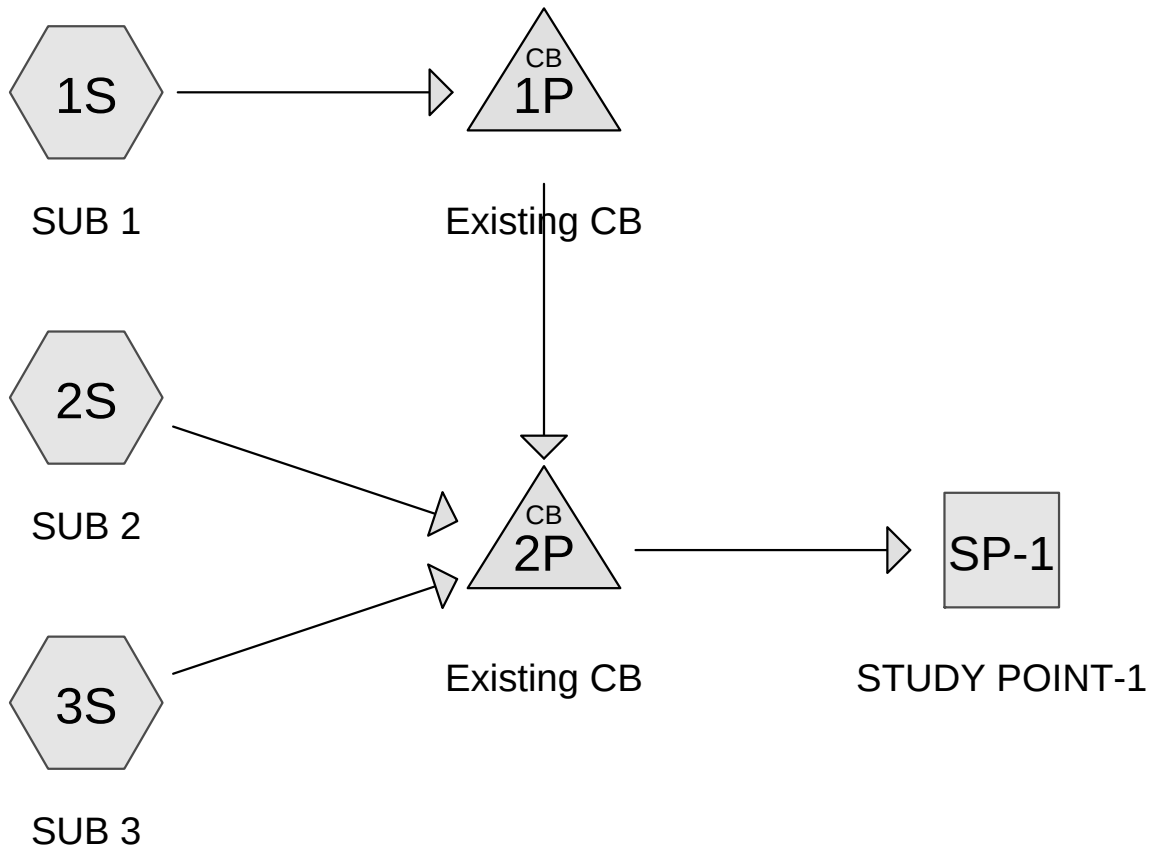
## **Attachment C**

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### **HydroCAD Output**



## **Pre Development**



**06172 Pre Development**

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*Type III 24-hr 2-YR Rainfall=3.10"*

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment1S: SUB 1**

Runoff Area=17,396 sf 0.00% Impervious Runoff Depth=0.28"  
Flow Length=309' Tc=7.0 min CN=57 Runoff=0.05 cfs 402 cf

**Subcatchment2S: SUB 2**

Runoff Area=26,571 sf 12.22% Impervious Runoff Depth=0.44"  
Flow Length=338' Tc=12.0 min CN=62 Runoff=0.16 cfs 972 cf

**Subcatchment3S: SUB 3**

Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=2.87"  
Flow Length=338' Tc=5.0 min CN=98 Runoff=1.82 cfs 6,073 cf

**Reach SP-1: STUDY POINT-1**

Inflow=1.88 cfs 7,447 cf  
Outflow=1.88 cfs 7,447 cf

**Pond 1P: Existing CB**

Peak Elev=12.78' Inflow=0.05 cfs 402 cf  
12.0" Round Culvert n=0.013 L=93.0' S=0.0054 '/' Outflow=0.05 cfs 402 cf

**Pond 2P: Existing CB**

Peak Elev=12.78' Inflow=1.88 cfs 7,447 cf  
12.0" Round Culvert n=0.013 L=50.0' S=0.0100 '/' Outflow=1.88 cfs 7,447 cf

**Total Runoff Area = 69,378 sf Runoff Volume = 7,447 cf Average Runoff Depth = 1.29"**  
**58.69% Pervious = 40,721 sf 41.31% Impervious = 28,657 sf**

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Type III 24-hr 2-YR Rainfall=3.10"

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**Summary for Subcatchment 1S: SUB 1**

Runoff = 0.05 cfs @ 12.31 hrs, Volume= 402 cf, Depth= 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-YR Rainfall=3.10"

| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 17,396    | 57 | Woods/grass comb., Poor, HSG A |
| 17,396    |    | 100.00% Pervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 6.3      | 95            | 0.4000        | 0.25              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                   |
| 0.2      | 73            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.74              | 14.80          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 20.0 ' Top.W=11.50'<br>n= 0.013 Asphalt, smooth |
| 7.0      | 309           | Total         |                   |                |                                                                                                                    |

**Summary for Subcatchment 2S: SUB 2**

Runoff = 0.16 cfs @ 12.23 hrs, Volume= 972 cf, Depth= 0.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-YR Rainfall=3.10"

| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 23,325    | 57 | Woods/grass comb., Poor, HSG A |
| 3,246     | 98 | Paved parking, HSG A           |
| 26,571    | 62 | Weighted Average               |
| 23,325    |    | 87.78% Pervious Area           |
| 3,246     |    | 12.22% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 11.4     | 150           | 0.2300        | 0.22              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                   |
| 0.1      | 47            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.68              | 20.46          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 ' Top.W=16.50'<br>n= 0.013 Asphalt, smooth |
| 12.0     | 338           | Total         |                   |                |                                                                                                                    |



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Type III 24-hr 2-YR Rainfall=3.10"

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**Summary for Subcatchment 3S: SUB 3**

Runoff = 1.82 cfs @ 12.07 hrs, Volume= 6,073 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-YR Rainfall=3.10"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,411    | 98 | Paved parking, HSG A    |
| 25,411    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 1.3      | 150           | 0.0400        | 1.94              |                | <b>Sheet Flow,</b><br>Smooth surfaces n= 0.011 P2= 3.10"                                                           |
| 0.1      | 47            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.68              | 20.46          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 ' Top.W=16.50'<br>n= 0.013 Asphalt, smooth |
| 3.1      |               |               |                   |                | <b>Direct Entry,</b>                                                                                               |
| 5.0      | 338           | Total         |                   |                |                                                                                                                    |

**Summary for Reach SP-1: STUDY POINT-1**

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 1.29" for 2-YR event  
 Inflow = 1.88 cfs @ 12.07 hrs, Volume= 7,447 cf  
 Outflow = 1.88 cfs @ 12.07 hrs, Volume= 7,447 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

**Summary for Pond 1P: Existing CB**

Inflow Area = 17,396 sf, 0.00% Impervious, Inflow Depth = 0.28" for 2-YR event  
 Inflow = 0.05 cfs @ 12.31 hrs, Volume= 402 cf  
 Outflow = 0.05 cfs @ 12.31 hrs, Volume= 402 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 0.05 cfs @ 12.31 hrs, Volume= 402 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 12.78' @ 12.09 hrs  
 Flood Elev= 59.66'

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                                         |
|--------|---------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 12.50' | <b>12.0" Round Culvert</b><br>L= 93.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 12.50' / 12.00' S= 0.0054 ' S= 0.0054 ' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |

Primary OutFlow Max=0.05 cfs @ 12.31 hrs HW=12.67' TW=12.48' (Dynamic Tailwater)

1=Culvert (Outlet Controls 0.05 cfs @ 0.89 fps)

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Type III 24-hr 2-YR Rainfall=3.10"

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**Summary for Pond 2P: Existing CB**

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 1.29" for 2-YR event  
 Inflow = 1.88 cfs @ 12.07 hrs, Volume= 7,447 cf  
 Outflow = 1.88 cfs @ 12.07 hrs, Volume= 7,447 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 1.88 cfs @ 12.07 hrs, Volume= 7,447 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 12.78' @ 12.07 hrs

Flood Elev= 59.66'

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                              |
|--------|---------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 12.00' | <b>12.0" Round Culvert</b><br>L= 50.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 12.00' / 11.50' S= 0.0100 '/ Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |

**Primary OutFlow** Max=1.87 cfs @ 12.07 hrs HW=12.78' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** (Barrel Controls 1.87 cfs @ 3.93 fps)

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*Type III 24-hr 10-YR Rainfall=4.60"*

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment1S: SUB 1**

Runoff Area=17,396 sf 0.00% Impervious Runoff Depth=0.90"  
Flow Length=309' Tc=7.0 min CN=57 Runoff=0.32 cfs 1,303 cf

**Subcatchment2S: SUB 2**

Runoff Area=26,571 sf 12.22% Impervious Runoff Depth=1.20"  
Flow Length=338' Tc=12.0 min CN=62 Runoff=0.62 cfs 2,653 cf

**Subcatchment3S: SUB 3**

Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=4.36"  
Flow Length=338' Tc=5.0 min CN=98 Runoff=2.72 cfs 9,241 cf

**Reach SP-1: STUDY POINT-1**

Inflow=3.37 cfs 13,196 cf  
Outflow=3.37 cfs 13,196 cf

**Pond 1P: Existing CB**

Peak Elev=13.40' Inflow=0.32 cfs 1,303 cf  
12.0" Round Culvert n=0.013 L=93.0' S=0.0054 '/' Outflow=0.32 cfs 1,303 cf

**Pond 2P: Existing CB**

Peak Elev=13.38' Inflow=3.37 cfs 13,196 cf  
12.0" Round Culvert n=0.013 L=50.0' S=0.0100 '/' Outflow=3.37 cfs 13,196 cf

**Total Runoff Area = 69,378 sf Runoff Volume = 13,196 cf Average Runoff Depth = 2.28"**  
**58.69% Pervious = 40,721 sf 41.31% Impervious = 28,657 sf**

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Type III 24-hr 10-YR Rainfall=4.60"

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**Summary for Subcatchment 1S: SUB 1**

Runoff = 0.32 cfs @ 12.12 hrs, Volume= 1,303 cf, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-YR Rainfall=4.60"

| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 17,396    | 57 | Woods/grass comb., Poor, HSG A |
| 17,396    |    | 100.00% Pervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 6.3      | 95            | 0.4000        | 0.25              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                   |
| 0.2      | 73            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.74              | 14.80          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 20.0 ' Top.W=11.50'<br>n= 0.013 Asphalt, smooth |
| 7.0      | 309           | Total         |                   |                |                                                                                                                    |

**Summary for Subcatchment 2S: SUB 2**

Runoff = 0.62 cfs @ 12.18 hrs, Volume= 2,653 cf, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-YR Rainfall=4.60"

| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 23,325    | 57 | Woods/grass comb., Poor, HSG A |
| 3,246     | 98 | Paved parking, HSG A           |
| 26,571    | 62 | Weighted Average               |
| 23,325    |    | 87.78% Pervious Area           |
| 3,246     |    | 12.22% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 11.4     | 150           | 0.2300        | 0.22              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                   |
| 0.1      | 47            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.68              | 20.46          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 ' Top.W=16.50'<br>n= 0.013 Asphalt, smooth |
| 12.0     | 338           | Total         |                   |                |                                                                                                                    |



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Type III 24-hr 10-YR Rainfall=4.60"

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**Summary for Subcatchment 3S: SUB 3**

Runoff = 2.72 cfs @ 12.07 hrs, Volume= 9,241 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-YR Rainfall=4.60"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,411    | 98 | Paved parking, HSG A    |
| 25,411    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 1.3      | 150           | 0.0400        | 1.94              |                | <b>Sheet Flow,</b><br>Smooth surfaces n= 0.011 P2= 3.10"                                                           |
| 0.1      | 47            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.68              | 20.46          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 ' Top.W=16.50'<br>n= 0.013 Asphalt, smooth |
| 3.1      |               |               |                   |                | <b>Direct Entry,</b>                                                                                               |
| 5.0      | 338           | Total         |                   |                |                                                                                                                    |

**Summary for Reach SP-1: STUDY POINT-1**

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 2.28" for 10-YR event  
 Inflow = 3.37 cfs @ 12.08 hrs, Volume= 13,196 cf  
 Outflow = 3.37 cfs @ 12.08 hrs, Volume= 13,196 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

**Summary for Pond 1P: Existing CB**

Inflow Area = 17,396 sf, 0.00% Impervious, Inflow Depth = 0.90" for 10-YR event  
 Inflow = 0.32 cfs @ 12.12 hrs, Volume= 1,303 cf  
 Outflow = 0.32 cfs @ 12.12 hrs, Volume= 1,303 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 0.32 cfs @ 12.12 hrs, Volume= 1,303 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 13.40' @ 12.09 hrs  
 Flood Elev= 59.66'

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                                         |
|--------|---------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 12.50' | <b>12.0" Round Culvert</b><br>L= 93.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 12.50' / 12.00' S= 0.0054 ' S= 0.0054 ' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |

**Primary OutFlow** Max=0.51 cfs @ 12.12 hrs HW=13.25' TW=13.17' (Dynamic Tailwater)↑ **1=Culvert** (Outlet Controls 0.51 cfs @ 1.13 fps)

**06172 Pre Development**

Type III 24-hr 10-YR Rainfall=4.60"

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**Summary for Pond 2P: Existing CB**

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 2.28" for 10-YR event  
 Inflow = 3.37 cfs @ 12.08 hrs, Volume= 13,196 cf  
 Outflow = 3.37 cfs @ 12.08 hrs, Volume= 13,196 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 3.37 cfs @ 12.08 hrs, Volume= 13,196 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 13.38' @ 12.08 hrs

Flood Elev= 59.66'

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                              |
|--------|---------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 12.00' | <b>12.0" Round Culvert</b><br>L= 50.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 12.00' / 11.50' S= 0.0100 '/ Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |

**Primary OutFlow** Max=3.37 cfs @ 12.08 hrs HW=13.38' TW=0.00' (Dynamic Tailwater)↑ **1=Culvert** (Barrel Controls 3.37 cfs @ 4.29 fps)

**06172 Pre Development**

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*Type III 24-hr 25-YR Rainfall=5.80"*

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment1S: SUB 1**

Runoff Area=17,396 sf 0.00% Impervious Runoff Depth=1.56"  
Flow Length=309' Tc=7.0 min CN=57 Runoff=0.64 cfs 2,256 cf

**Subcatchment2S: SUB 2**

Runoff Area=26,571 sf 12.22% Impervious Runoff Depth=1.95"  
Flow Length=338' Tc=12.0 min CN=62 Runoff=1.09 cfs 4,329 cf

**Subcatchment3S: SUB 3**

Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=5.56"  
Flow Length=338' Tc=5.0 min CN=98 Runoff=3.43 cfs 11,778 cf

**Reach SP-1: STUDY POINT-1**

Inflow=4.74 cfs 18,362 cf  
Outflow=4.74 cfs 18,362 cf

**Pond 1P: Existing CB**

Peak Elev=14.28' Inflow=0.64 cfs 2,256 cf  
12.0" Round Culvert n=0.013 L=93.0' S=0.0054 '/' Outflow=0.64 cfs 2,256 cf

**Pond 2P: Existing CB**

Peak Elev=14.24' Inflow=4.74 cfs 18,362 cf  
12.0" Round Culvert n=0.013 L=50.0' S=0.0100 '/' Outflow=4.74 cfs 18,362 cf

**Total Runoff Area = 69,378 sf Runoff Volume = 18,362 cf Average Runoff Depth = 3.18"**  
**58.69% Pervious = 40,721 sf 41.31% Impervious = 28,657 sf**

**06172 Pre Development**

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Type III 24-hr 25-YR Rainfall=5.80"

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**Summary for Subcatchment 1S: SUB 1**

Runoff = 0.64 cfs @ 12.11 hrs, Volume= 2,256 cf, Depth= 1.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"

| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 17,396    | 57 | Woods/grass comb., Poor, HSG A |
| 17,396    |    | 100.00% Pervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 6.3      | 95            | 0.4000        | 0.25              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                   |
| 0.2      | 73            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.74              | 14.80          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 20.0 ' Top.W=11.50'<br>n= 0.013 Asphalt, smooth |
| 7.0      | 309           | Total         |                   |                |                                                                                                                    |

**Summary for Subcatchment 2S: SUB 2**

Runoff = 1.09 cfs @ 12.18 hrs, Volume= 4,329 cf, Depth= 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"

| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 23,325    | 57 | Woods/grass comb., Poor, HSG A |
| 3,246     | 98 | Paved parking, HSG A           |
| 26,571    | 62 | Weighted Average               |
| 23,325    |    | 87.78% Pervious Area           |
| 3,246     |    | 12.22% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 11.4     | 150           | 0.2300        | 0.22              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                   |
| 0.1      | 47            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.68              | 20.46          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 ' Top.W=16.50'<br>n= 0.013 Asphalt, smooth |
| 12.0     | 338           | Total         |                   |                |                                                                                                                    |



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Type III 24-hr 25-YR Rainfall=5.80"

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**Summary for Subcatchment 3S: SUB 3**

Runoff = 3.43 cfs @ 12.07 hrs, Volume= 11,778 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,411    | 98 | Paved parking, HSG A    |
| 25,411    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 1.3      | 150           | 0.0400        | 1.94              |                | <b>Sheet Flow,</b><br>Smooth surfaces n= 0.011 P2= 3.10"                                                           |
| 0.1      | 47            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.68              | 20.46          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 ' Top.W=16.50'<br>n= 0.013 Asphalt, smooth |
| 3.1      |               |               |                   |                | <b>Direct Entry,</b>                                                                                               |
| 5.0      | 338           | Total         |                   |                |                                                                                                                    |

**Summary for Reach SP-1: STUDY POINT-1**

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 3.18" for 25-YR event  
 Inflow = 4.74 cfs @ 12.08 hrs, Volume= 18,362 cf  
 Outflow = 4.74 cfs @ 12.08 hrs, Volume= 18,362 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

**Summary for Pond 1P: Existing CB**

Inflow Area = 17,396 sf, 0.00% Impervious, Inflow Depth = 1.56" for 25-YR event  
 Inflow = 0.64 cfs @ 12.11 hrs, Volume= 2,256 cf  
 Outflow = 0.64 cfs @ 12.11 hrs, Volume= 2,256 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 0.64 cfs @ 12.11 hrs, Volume= 2,256 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 14.28' @ 12.09 hrs  
 Flood Elev= 59.66'

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                                         |
|--------|---------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 12.50' | <b>12.0" Round Culvert</b><br>L= 93.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 12.50' / 12.00' S= 0.0054 ' S= 0.0054 ' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |

Primary OutFlow Max=1.05 cfs @ 12.11 hrs HW=14.22' TW=14.09' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 1.05 cfs @ 1.33 fps)

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Type III 24-hr 25-YR Rainfall=5.80"

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**Summary for Pond 2P: Existing CB**

Inflow Area = 69,378 sf, 41.31% Impervious, Inflow Depth = 3.18" for 25-YR event  
 Inflow = 4.74 cfs @ 12.08 hrs, Volume= 18,362 cf  
 Outflow = 4.74 cfs @ 12.08 hrs, Volume= 18,362 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 4.74 cfs @ 12.08 hrs, Volume= 18,362 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

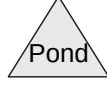
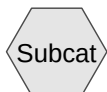
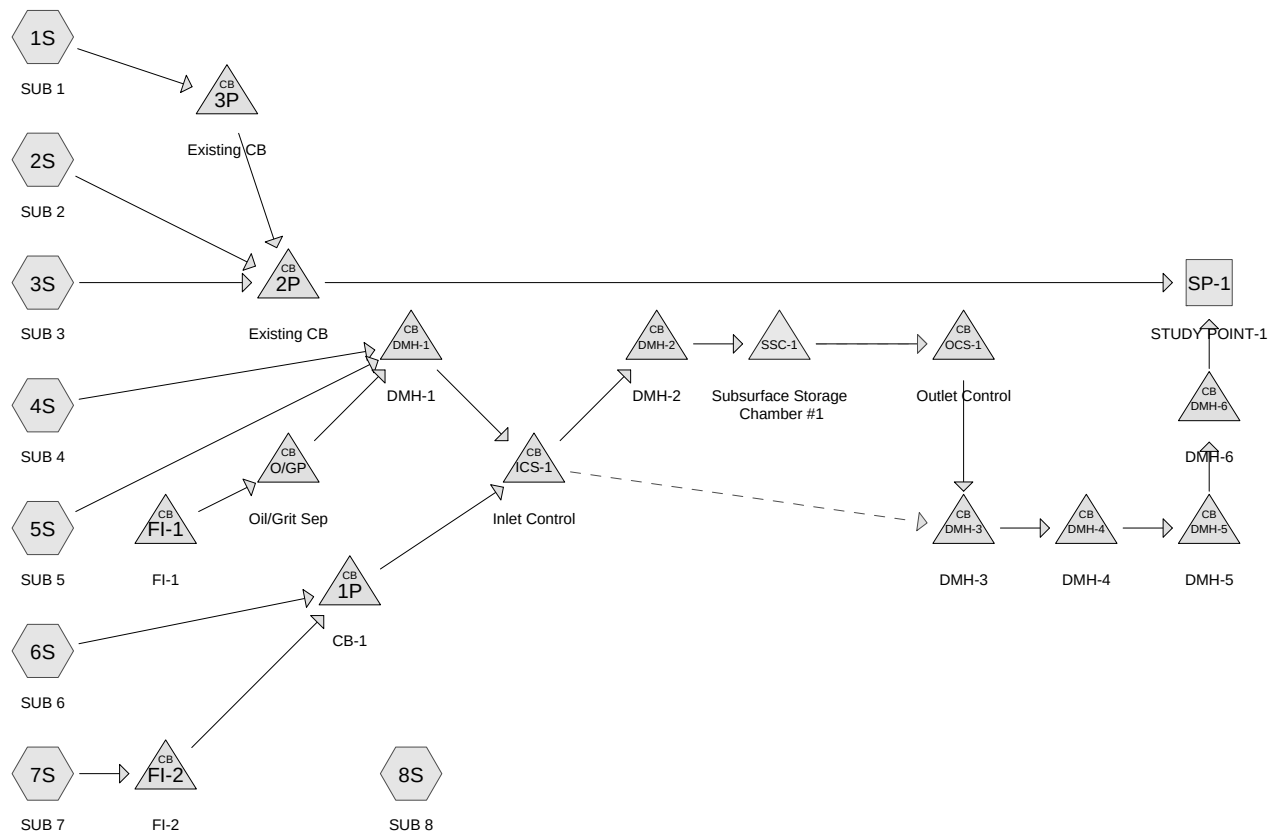
Peak Elev= 14.24' @ 12.08 hrs

Flood Elev= 59.66'

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                              |
|--------|---------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 12.00' | <b>12.0" Round Culvert</b><br>L= 50.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 12.00' / 11.50' S= 0.0100 '/ Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |

**Primary OutFlow** Max=4.74 cfs @ 12.08 hrs HW=14.23' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** (Barrel Controls 4.74 cfs @ 6.03 fps)

## **Post Development**





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**Area Listing (all nodes)**

| Area<br>(sq-ft) | CN        | Description<br>(subcatchment-numbers)             |
|-----------------|-----------|---------------------------------------------------|
| 1,688           | 74        | >75% Grass cover, Good, HSG C (8S)                |
| 44,284          | 98        | Paved parking, HSG A (2S, 3S, 4S, 5S, 6S, 7S, 8S) |
| 1,458           | 98        | Paved parking, HSG C (1S)                         |
| 21,948          | 57        | Woods/grass comb., Poor, HSG A (1S, 2S)           |
| <b>69,378</b>   | <b>84</b> | <b>TOTAL AREA</b>                                 |

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## **Soil Listing (all nodes)**

| Area<br>(sq-ft) | Soil<br>Group | Subcatchment<br>Numbers        |
|-----------------|---------------|--------------------------------|
| 66,232          | HSG A         | 1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S |
| 0               | HSG B         |                                |
| 3,146           | HSG C         | 1S, 8S                         |
| 0               | HSG D         |                                |
| 0               | Other         |                                |
| <b>69,378</b>   |               | <b>TOTAL AREA</b>              |

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## **Ground Covers (all nodes)**

| HSG-A<br>(sq-ft) | HSG-B<br>(sq-ft) | HSG-C<br>(sq-ft) | HSG-D<br>(sq-ft) | Other<br>(sq-ft) | Total<br>(sq-ft) | Ground<br>Cover            |
|------------------|------------------|------------------|------------------|------------------|------------------|----------------------------|
| 0                | 0                | 1,688            | 0                | 0                | 1,688            | >75% Grass<br>cover, Good  |
| 44,284           | 0                | 1,458            | 0                | 0                | 45,742           | Paved parking              |
| 21,948           | 0                | 0                | 0                | 0                | 21,948           | Woods/grass<br>comb., Poor |
| <b>66,232</b>    | <b>0</b>         | <b>3,146</b>     | <b>0</b>         | <b>0</b>         | <b>69,378</b>    | <b>TOTAL AREA</b>          |

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**Pipe Listing (all nodes)**

| Line# | Node<br>Number | In-Invert<br>(feet) | Out-Invert<br>(feet) | Length<br>(feet) | Slope<br>(ft/ft) | n     | Diam/Width<br>(inches) | Height<br>(inches) | Inside-Fill<br>(inches) |
|-------|----------------|---------------------|----------------------|------------------|------------------|-------|------------------------|--------------------|-------------------------|
| 1     | 1P             | 52.90               | 51.32                | 29.0             | 0.0545           | 0.012 | 12.0                   | 0.0                | 0.0                     |
| 2     | 2P             | 11.80               | 11.50                | 50.0             | 0.0060           | 0.013 | 12.0                   | 0.0                | 0.0                     |
| 3     | 3P             | 12.50               | 11.80                | 93.0             | 0.0075           | 0.013 | 12.0                   | 0.0                | 0.0                     |
| 4     | DMH-1          | 52.50               | 51.32                | 16.0             | 0.0737           | 0.012 | 12.0                   | 0.0                | 0.0                     |
| 5     | DMH-2          | 51.28               | 51.25                | 6.0              | 0.0050           | 0.012 | 15.0                   | 0.0                | 0.0                     |
| 6     | DMH-3          | 47.00               | 43.37                | 30.0             | 0.1210           | 0.020 | 15.0                   | 0.0                | 0.0                     |
| 7     | DMH-4          | 37.96               | 33.00                | 42.0             | 0.1181           | 0.013 | 14.0                   | 0.0                | 0.0                     |
| 8     | DMH-5          | 18.31               | 14.00                | 36.0             | 0.1197           | 0.020 | 15.0                   | 0.0                | 0.0                     |
| 9     | DMH-6          | 13.90               | 7.45                 | 55.0             | 0.1173           | 0.020 | 15.0                   | 0.0                | 0.0                     |
| 10    | FI-1           | 55.30               | 54.52                | 97.0             | 0.0080           | 0.013 | 10.0                   | 0.0                | 0.0                     |
| 11    | FI-2           | 53.80               | 53.00                | 58.0             | 0.0138           | 0.012 | 12.0                   | 0.0                | 0.0                     |
| 12    | ICS-1          | 51.32               | 51.28                | 4.0              | 0.0100           | 0.013 | 15.0                   | 0.0                | 0.0                     |
| 13    | ICS-1          | 51.32               | 47.00                | 127.0            | 0.0340           | 0.013 | 12.0                   | 0.0                | 0.0                     |
| 14    | O/GP           | 54.52               | 54.41                | 14.0             | 0.0079           | 0.013 | 10.0                   | 0.0                | 0.0                     |
| 15    | OCS-1          | 47.57               | 47.10                | 11.0             | 0.0427           | 0.012 | 15.0                   | 0.0                | 0.0                     |
| 16    | SSC-1          | 51.25               | 50.80                | 8.0              | 0.0563           | 0.012 | 15.0                   | 0.0                | 0.0                     |



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Type III 24-hr 2-YR Rainfall=3.10"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

|                                  |                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment1S: SUB 1</b>     | Runoff Area=5,926 sf 24.60% Impervious Runoff Depth=0.64"<br>Flow Length=333' Tc=5.0 min CN=67 Runoff=0.09 cfs 314 cf     |
| <b>Subcatchment2S: SUB 2</b>     | Runoff Area=18,465 sf 5.33% Impervious Runoff Depth=0.34"<br>Flow Length=338' Tc=12.0 min CN=59 Runoff=0.07 cfs 520 cf    |
| <b>Subcatchment3S: SUB 3</b>     | Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=2.87"<br>Flow Length=338' Tc=5.0 min CN=98 Runoff=1.82 cfs 6,073 cf |
| <b>Subcatchment4S: SUB 4</b>     | Runoff Area=6,785 sf 100.00% Impervious Runoff Depth=2.87"<br>Tc=5.0 min CN=98 Runoff=0.49 cfs 1,622 cf                   |
| <b>Subcatchment5S: SUB 5</b>     | Runoff Area=7,524 sf 100.00% Impervious Runoff Depth=2.87"<br>Tc=5.0 min CN=98 Runoff=0.54 cfs 1,798 cf                   |
| <b>Subcatchment6S: SUB 6</b>     | Runoff Area=2,604 sf 100.00% Impervious Runoff Depth=2.87"<br>Tc=5.0 min CN=98 Runoff=0.19 cfs 622 cf                     |
| <b>Subcatchment7S: SUB 7</b>     | Runoff Area=547 sf 100.00% Impervious Runoff Depth=2.87"<br>Tc=5.0 min CN=98 Runoff=0.04 cfs 131 cf                       |
| <b>Subcatchment8S: SUB 8</b>     | Runoff Area=2,116 sf 20.23% Impervious Runoff Depth=1.26"<br>Tc=5.0 min CN=79 Runoff=0.07 cfs 223 cf                      |
| <b>Reach SP-1: STUDY POINT-1</b> | Inflow=1.91 cfs 6,907 cf<br>Outflow=1.91 cfs 6,907 cf                                                                     |
| <b>Pond 1P: CB-1</b>             | Peak Elev=54.45' Inflow=0.23 cfs 753 cf<br>12.0" Round Culvert n=0.012 L=29.0' S=0.0545 '/' Outflow=0.23 cfs 753 cf       |
| <b>Pond 2P: Existing CB</b>      | Peak Elev=12.68' Inflow=1.91 cfs 6,907 cf<br>12.0" Round Culvert n=0.013 L=50.0' S=0.0060 '/' Outflow=1.91 cfs 6,907 cf   |
| <b>Pond 3P: Existing CB</b>      | Peak Elev=12.77' Inflow=0.09 cfs 314 cf<br>12.0" Round Culvert n=0.013 L=93.0' S=0.0075 '/' Outflow=0.09 cfs 314 cf       |
| <b>Pond DMH-1: DMH-1</b>         | Peak Elev=54.45' Inflow=1.02 cfs 3,420 cf<br>12.0" Round Culvert n=0.012 L=16.0' S=0.0737 '/' Outflow=1.02 cfs 3,420 cf   |
| <b>Pond DMH-2: DMH-2</b>         | Peak Elev=54.49' Inflow=1.25 cfs 4,171 cf<br>15.0" Round Culvert n=0.012 L=6.0' S=0.0050 '/' Outflow=1.25 cfs 4,171 cf    |
| <b>Pond DMH-3: DMH-3</b>         | Peak Elev=47.00' Inflow=0.00 cfs 0 cf<br>15.0" Round Culvert n=0.020 L=30.0' S=0.1210 '/' Outflow=0.00 cfs 0 cf           |
| <b>Pond DMH-4: DMH-4</b>         | Peak Elev=37.96' Inflow=0.00 cfs 0 cf<br>14.0" Round Culvert n=0.013 L=42.0' S=0.1181 '/' Outflow=0.00 cfs 0 cf           |

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**Pond DMH-5: DMH-5**

Peak Elev=18.31' Inflow=0.00 cfs 0 cf  
15.0" Round Culvert n=0.020 L=36.0' S=0.1197 '/' Outflow=0.00 cfs 0 cf

**Pond DMH-6: DMH-6**

Peak Elev=13.90' Inflow=0.00 cfs 0 cf  
15.0" Round Culvert n=0.020 L=55.0' S=0.1173 '/' Outflow=0.00 cfs 0 cf

**Pond FI-1: FI-1**

Peak Elev=0.00'  
10.0" Round Culvert n=0.013 L=97.0' S=0.0080 '/' Primary=0.00 cfs 0 cf

**Pond FI-2: FI-2**

Peak Elev=54.45' Inflow=0.04 cfs 131 cf  
12.0" Round Culvert n=0.012 L=58.0' S=0.0138 '/' Outflow=0.04 cfs 131 cf

**Pond ICS-1: Inlet Control**

Peak Elev=54.45' Inflow=1.25 cfs 4,172 cf  
Primary=1.25 cfs 4,171 cf Secondary=0.00 cfs 0 cf Outflow=1.25 cfs 4,171 cf

**Pond O/GP: Oil/Grit Sep**

Peak Elev=54.52' Inflow=0.00 cfs 0 cf  
10.0" Round Culvert n=0.013 L=14.0' S=0.0079 '/' Outflow=0.00 cfs 0 cf

**Pond OCS-1: Outlet Control**

Peak Elev=54.50' Inflow=0.00 cfs 0 cf  
Outflow=0.00 cfs 0 cf

**Pond SSC-1: Subsurface Storage Chamber #1** Peak Elev=54.50' Storage=4,171 cf Inflow=1.25 cfs 4,171 cf  
Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 0 cf

**Total Runoff Area = 69,378 sf Runoff Volume = 11,302 cf Average Runoff Depth = 1.95"**  
**34.07% Pervious = 23,636 sf 65.93% Impervious = 45,742 sf**

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*Type III 24-hr 10-YR Rainfall=4.60"*

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

|                                  |                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment1S: SUB 1</b>     | Runoff Area=5,926 sf 24.60% Impervious Runoff Depth=1.53"<br>Flow Length=333' Tc=5.0 min CN=67 Runoff=0.24 cfs 756 cf     |
| <b>Subcatchment2S: SUB 2</b>     | Runoff Area=18,465 sf 5.33% Impervious Runoff Depth=1.01"<br>Flow Length=338' Tc=12.0 min CN=59 Runoff=0.34 cfs 1,561 cf  |
| <b>Subcatchment3S: SUB 3</b>     | Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=4.36"<br>Flow Length=338' Tc=5.0 min CN=98 Runoff=2.72 cfs 9,241 cf |
| <b>Subcatchment4S: SUB 4</b>     | Runoff Area=6,785 sf 100.00% Impervious Runoff Depth=4.36"<br>Tc=5.0 min CN=98 Runoff=0.73 cfs 2,467 cf                   |
| <b>Subcatchment5S: SUB 5</b>     | Runoff Area=7,524 sf 100.00% Impervious Runoff Depth=4.36"<br>Tc=5.0 min CN=98 Runoff=0.80 cfs 2,736 cf                   |
| <b>Subcatchment6S: SUB 6</b>     | Runoff Area=2,604 sf 100.00% Impervious Runoff Depth=4.36"<br>Tc=5.0 min CN=98 Runoff=0.28 cfs 947 cf                     |
| <b>Subcatchment7S: SUB 7</b>     | Runoff Area=547 sf 100.00% Impervious Runoff Depth=4.36"<br>Tc=5.0 min CN=98 Runoff=0.06 cfs 199 cf                       |
| <b>Subcatchment8S: SUB 8</b>     | Runoff Area=2,116 sf 20.23% Impervious Runoff Depth=2.46"<br>Tc=5.0 min CN=79 Runoff=0.15 cfs 434 cf                      |
| <b>Reach SP-1: STUDY POINT-1</b> | Inflow=9.32 cfs 14,377 cf<br>Outflow=9.32 cfs 14,377 cf                                                                   |
| <b>Pond 1P: CB-1</b>             | Peak Elev=54.53' Inflow=0.34 cfs 1,146 cf<br>12.0" Round Culvert n=0.012 L=29.0' S=0.0545 '/' Outflow=0.34 cfs 1,146 cf   |
| <b>Pond 2P: Existing CB</b>      | Peak Elev=13.26' Inflow=3.15 cfs 11,558 cf<br>12.0" Round Culvert n=0.013 L=50.0' S=0.0060 '/' Outflow=3.15 cfs 11,558 cf |
| <b>Pond 3P: Existing CB</b>      | Peak Elev=13.28' Inflow=0.24 cfs 756 cf<br>12.0" Round Culvert n=0.013 L=93.0' S=0.0075 '/' Outflow=0.24 cfs 756 cf       |
| <b>Pond DMH-1: DMH-1</b>         | Peak Elev=54.54' Inflow=1.53 cfs 5,204 cf<br>12.0" Round Culvert n=0.012 L=16.0' S=0.0737 '/' Outflow=1.53 cfs 5,204 cf   |
| <b>Pond DMH-2: DMH-2</b>         | Peak Elev=54.53' Inflow=1.87 cfs 6,349 cf<br>15.0" Round Culvert n=0.012 L=6.0' S=0.0050 '/' Outflow=1.87 cfs 6,349 cf    |
| <b>Pond DMH-3: DMH-3</b>         | Peak Elev=50.10' Inflow=9.30 cfs 2,819 cf<br>15.0" Round Culvert n=0.020 L=30.0' S=0.1210 '/' Outflow=9.30 cfs 2,819 cf   |
| <b>Pond DMH-4: DMH-4</b>         | Peak Elev=40.30' Inflow=9.30 cfs 2,819 cf<br>14.0" Round Culvert n=0.013 L=42.0' S=0.1181 '/' Outflow=9.30 cfs 2,819 cf   |

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*Type III 24-hr 10-YR Rainfall=4.60"*

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**Pond DMH-5: DMH-5**

Peak Elev=20.27' Inflow=9.30 cfs 2,819 cf  
15.0" Round Culvert n=0.020 L=36.0' S=0.1197 ' /' Outflow=9.30 cfs 2,819 cf

**Pond DMH-6: DMH-6**

Peak Elev=17.00' Inflow=9.30 cfs 2,819 cf  
15.0" Round Culvert n=0.020 L=55.0' S=0.1173 ' /' Outflow=9.30 cfs 2,819 cf

**Pond FI-1: FI-1**

Peak Elev=0.00'  
10.0" Round Culvert n=0.013 L=97.0' S=0.0080 ' /' Primary=0.00 cfs 0 cf

**Pond FI-2: FI-2**

Peak Elev=54.53' Inflow=0.06 cfs 199 cf  
12.0" Round Culvert n=0.012 L=58.0' S=0.0138 ' /' Outflow=0.06 cfs 199 cf

**Pond ICS-1: Inlet Control**

Peak Elev=54.53' Inflow=1.87 cfs 6,349 cf  
Primary=1.87 cfs 6,349 cf Secondary=0.00 cfs 0 cf Outflow=1.87 cfs 6,349 cf

**Pond O/GP: Oil/Grit Sep**

Peak Elev=54.53' Inflow=0.00 cfs 0 cf  
10.0" Round Culvert n=0.013 L=14.0' S=0.0079 ' /' Outflow=0.00 cfs 0 cf

**Pond OCS-1: Outlet Control**

Peak Elev=55.20' Inflow=9.30 cfs 2,819 cf  
Outflow=9.30 cfs 2,819 cf

**Pond SSC-1: Subsurface Storage Chamber #1** Peak Elev=54.52' Storage=4,190 cf Inflow=1.87 cfs 6,349 cf  
Primary=9.22 cfs 2,517 cf Secondary=0.09 cfs 302 cf Outflow=9.30 cfs 2,819 cf

**Total Runoff Area = 69,378 sf Runoff Volume = 18,341 cf Average Runoff Depth = 3.17"**  
**34.07% Pervious = 23,636 sf 65.93% Impervious = 45,742 sf**



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*Type III 24-hr 25-YR Rainfall=5.80"*

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

|                                  |                                                                                                                            |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment1S: SUB 1</b>     | Runoff Area=5,926 sf 24.60% Impervious Runoff Depth=2.38"<br>Flow Length=333' Tc=5.0 min CN=67 Runoff=0.39 cfs 1,175 cf    |
| <b>Subcatchment2S: SUB 2</b>     | Runoff Area=18,465 sf 5.33% Impervious Runoff Depth=1.71"<br>Flow Length=338' Tc=12.0 min CN=59 Runoff=0.64 cfs 2,635 cf   |
| <b>Subcatchment3S: SUB 3</b>     | Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=5.56"<br>Flow Length=338' Tc=5.0 min CN=98 Runoff=3.43 cfs 11,778 cf |
| <b>Subcatchment4S: SUB 4</b>     | Runoff Area=6,785 sf 100.00% Impervious Runoff Depth=5.56"<br>Tc=5.0 min CN=98 Runoff=0.92 cfs 3,145 cf                    |
| <b>Subcatchment5S: SUB 5</b>     | Runoff Area=7,524 sf 100.00% Impervious Runoff Depth=5.56"<br>Tc=5.0 min CN=98 Runoff=1.02 cfs 3,487 cf                    |
| <b>Subcatchment6S: SUB 6</b>     | Runoff Area=2,604 sf 100.00% Impervious Runoff Depth=5.56"<br>Tc=5.0 min CN=98 Runoff=0.35 cfs 1,207 cf                    |
| <b>Subcatchment7S: SUB 7</b>     | Runoff Area=547 sf 100.00% Impervious Runoff Depth=5.56"<br>Tc=5.0 min CN=98 Runoff=0.07 cfs 254 cf                        |
| <b>Subcatchment8S: SUB 8</b>     | Runoff Area=2,116 sf 20.23% Impervious Runoff Depth=3.50"<br>Tc=5.0 min CN=79 Runoff=0.21 cfs 617 cf                       |
| <b>Reach SP-1: STUDY POINT-1</b> | Inflow=11.45 cfs 20,152 cf<br>Outflow=11.45 cfs 20,152 cf                                                                  |
| <b>Pond 1P: CB-1</b>             | Peak Elev=54.77' Inflow=0.43 cfs 1,461 cf<br>12.0" Round Culvert n=0.012 L=29.0' S=0.0545 '/' Outflow=0.43 cfs 1,461 cf    |
| <b>Pond 2P: Existing CB</b>      | Peak Elev=13.88' Inflow=4.22 cfs 15,589 cf<br>12.0" Round Culvert n=0.013 L=50.0' S=0.0060 '/' Outflow=4.22 cfs 15,589 cf  |
| <b>Pond 3P: Existing CB</b>      | Peak Elev=13.89' Inflow=0.39 cfs 1,175 cf<br>12.0" Round Culvert n=0.013 L=93.0' S=0.0075 '/' Outflow=0.39 cfs 1,176 cf    |
| <b>Pond DMH-1: DMH-1</b>         | Peak Elev=54.85' Inflow=1.93 cfs 6,632 cf<br>12.0" Round Culvert n=0.012 L=16.0' S=0.0737 '/' Outflow=1.93 cfs 6,632 cf    |
| <b>Pond DMH-2: DMH-2</b>         | Peak Elev=54.72' Inflow=2.36 cfs 8,093 cf<br>15.0" Round Culvert n=0.012 L=6.0' S=0.0050 '/' Outflow=2.36 cfs 8,093 cf     |
| <b>Pond DMH-3: DMH-3</b>         | Peak Elev=50.23' Inflow=9.54 cfs 4,564 cf<br>15.0" Round Culvert n=0.020 L=30.0' S=0.1210 '/' Outflow=9.54 cfs 4,564 cf    |
| <b>Pond DMH-4: DMH-4</b>         | Peak Elev=40.39' Inflow=9.54 cfs 4,564 cf<br>14.0" Round Culvert n=0.013 L=42.0' S=0.1181 '/' Outflow=9.54 cfs 4,564 cf    |

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*Type III 24-hr 25-YR Rainfall=5.80"*

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**Pond DMH-5: DMH-5**

Peak Elev=20.34' Inflow=9.54 cfs 4,564 cf  
15.0" Round Culvert n=0.020 L=36.0' S=0.1197 '/' Outflow=9.54 cfs 4,564 cf

**Pond DMH-6: DMH-6**

Peak Elev=17.13' Inflow=9.54 cfs 4,564 cf  
15.0" Round Culvert n=0.020 L=55.0' S=0.1173 '/' Outflow=9.54 cfs 4,564 cf

**Pond FI-1: FI-1**

Peak Elev=0.00'  
10.0" Round Culvert n=0.013 L=97.0' S=0.0080 '/' Primary=0.00 cfs 0 cf

**Pond FI-2: FI-2**

Peak Elev=54.77' Inflow=0.07 cfs 254 cf  
12.0" Round Culvert n=0.012 L=58.0' S=0.0138 '/' Outflow=0.07 cfs 254 cf

**Pond ICS-1: Inlet Control**

Peak Elev=54.77' Inflow=2.36 cfs 8,093 cf  
Primary=2.36 cfs 8,093 cf Secondary=0.00 cfs 0 cf Outflow=2.36 cfs 8,093 cf

**Pond O/GP: Oil/Grit Sep**

Peak Elev=54.70' Inflow=0.00 cfs 0 cf  
10.0" Round Culvert n=0.013 L=14.0' S=0.0079 '/' Outflow=0.00 cfs 0 cf

**Pond OCS-1: Outlet Control**

Peak Elev=55.21' Inflow=9.54 cfs 4,564 cf  
Outflow=9.54 cfs 4,564 cf

**Pond SSC-1: Subsurface Storage Chamber #1** Peak Elev=54.68' Storage=4,311 cf Inflow=2.36 cfs 8,093 cf  
Primary=9.45 cfs 4,175 cf Secondary=0.09 cfs 389 cf Outflow=9.54 cfs 4,564 cf

**Total Runoff Area = 69,378 sf Runoff Volume = 24,299 cf Average Runoff Depth = 4.20"**  
**34.07% Pervious = 23,636 sf 65.93% Impervious = 45,742 sf**

**06172 Post Development**

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*Type III 24-hr 50-YR Rainfall=6.90"*

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

|                                  |                                                                                                                            |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment1S: SUB 1</b>     | Runoff Area=5,926 sf 24.60% Impervious Runoff Depth=3.23"<br>Flow Length=333' Tc=5.0 min CN=67 Runoff=0.53 cfs 1,594 cf    |
| <b>Subcatchment2S: SUB 2</b>     | Runoff Area=18,465 sf 5.33% Impervious Runoff Depth=2.44"<br>Flow Length=338' Tc=12.0 min CN=59 Runoff=0.95 cfs 3,750 cf   |
| <b>Subcatchment3S: SUB 3</b>     | Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=6.66"<br>Flow Length=338' Tc=5.0 min CN=98 Runoff=4.09 cfs 14,105 cf |
| <b>Subcatchment4S: SUB 4</b>     | Runoff Area=6,785 sf 100.00% Impervious Runoff Depth=6.66"<br>Tc=5.0 min CN=98 Runoff=1.09 cfs 3,766 cf                    |
| <b>Subcatchment5S: SUB 5</b>     | Runoff Area=7,524 sf 100.00% Impervious Runoff Depth=6.66"<br>Tc=5.0 min CN=98 Runoff=1.21 cfs 4,176 cf                    |
| <b>Subcatchment6S: SUB 6</b>     | Runoff Area=2,604 sf 100.00% Impervious Runoff Depth=6.66"<br>Tc=5.0 min CN=98 Runoff=0.42 cfs 1,445 cf                    |
| <b>Subcatchment7S: SUB 7</b>     | Runoff Area=547 sf 100.00% Impervious Runoff Depth=6.66"<br>Tc=5.0 min CN=98 Runoff=0.09 cfs 304 cf                        |
| <b>Subcatchment8S: SUB 8</b>     | Runoff Area=2,116 sf 20.23% Impervious Runoff Depth=4.49"<br>Tc=5.0 min CN=79 Runoff=0.26 cfs 792 cf                       |
| <b>Reach SP-1: STUDY POINT-1</b> | Inflow=9.40 cfs 25,901 cf<br>Outflow=9.40 cfs 25,901 cf                                                                    |
| <b>Pond 1P: CB-1</b>             | Peak Elev=55.12' Inflow=0.51 cfs 1,749 cf<br>12.0" Round Culvert n=0.012 L=29.0' S=0.0545 '/' Outflow=0.51 cfs 1,749 cf    |
| <b>Pond 2P: Existing CB</b>      | Peak Elev=14.63' Inflow=5.25 cfs 19,449 cf<br>12.0" Round Culvert n=0.013 L=50.0' S=0.0060 '/' Outflow=5.25 cfs 19,449 cf  |
| <b>Pond 3P: Existing CB</b>      | Peak Elev=14.66' Inflow=0.53 cfs 1,594 cf<br>12.0" Round Culvert n=0.013 L=93.0' S=0.0075 '/' Outflow=0.53 cfs 1,594 cf    |
| <b>Pond DMH-1: DMH-1</b>         | Peak Elev=55.44' Inflow=2.30 cfs 7,943 cf<br>12.0" Round Culvert n=0.012 L=16.0' S=0.0737 '/' Outflow=2.30 cfs 7,943 cf    |
| <b>Pond DMH-2: DMH-2</b>         | Peak Elev=54.99' Inflow=2.71 cfs 9,556 cf<br>15.0" Round Culvert n=0.012 L=6.0' S=0.0050 '/' Outflow=2.71 cfs 9,555 cf     |
| <b>Pond DMH-3: DMH-3</b>         | Peak Elev=50.10' Inflow=9.30 cfs 6,452 cf<br>15.0" Round Culvert n=0.020 L=30.0' S=0.1210 '/' Outflow=9.30 cfs 6,452 cf    |
| <b>Pond DMH-4: DMH-4</b>         | Peak Elev=40.30' Inflow=9.30 cfs 6,452 cf<br>14.0" Round Culvert n=0.013 L=42.0' S=0.1181 '/' Outflow=9.30 cfs 6,452 cf    |

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*Type III 24-hr 50-YR Rainfall=6.90"*

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**Pond DMH-5: DMH-5**

Peak Elev=20.27' Inflow=9.30 cfs 6,452 cf  
15.0" Round Culvert n=0.020 L=36.0' S=0.1197 '/' Outflow=9.30 cfs 6,452 cf

**Pond DMH-6: DMH-6**

Peak Elev=17.00' Inflow=9.30 cfs 6,452 cf  
15.0" Round Culvert n=0.020 L=55.0' S=0.1173 '/' Outflow=9.30 cfs 6,452 cf

**Pond FI-1: FI-1**

Peak Elev=0.00'  
10.0" Round Culvert n=0.013 L=97.0' S=0.0080 '/' Primary=0.00 cfs 0 cf

**Pond FI-2: FI-2**

Peak Elev=55.12' Inflow=0.09 cfs 304 cf  
12.0" Round Culvert n=0.012 L=58.0' S=0.0138 '/' Outflow=0.09 cfs 304 cf

**Pond ICS-1: Inlet Control**

Peak Elev=55.11' Inflow=2.81 cfs 9,692 cf  
Primary=2.71 cfs 9,556 cf Secondary=0.57 cfs 136 cf Outflow=2.81 cfs 9,692 cf

**Pond O/GP: Oil/Grit Sep**

Peak Elev=54.79' Inflow=0.00 cfs 0 cf  
10.0" Round Culvert n=0.013 L=14.0' S=0.0079 '/' Outflow=0.00 cfs 0 cf

**Pond OCS-1: Outlet Control**

Peak Elev=55.20' Inflow=9.30 cfs 6,316 cf  
Outflow=9.30 cfs 6,316 cf

**Pond SSC-1: Subsurface Storage Chamber #1** Peak Elev=54.89' Storage=4,453 cf Inflow=2.71 cfs 9,555 cf  
Primary=9.22 cfs 5,784 cf Secondary=0.09 cfs 532 cf Outflow=9.30 cfs 6,316 cf

**Total Runoff Area = 69,378 sf Runoff Volume = 29,933 cf Average Runoff Depth = 5.18"**  
**34.07% Pervious = 23,636 sf 65.93% Impervious = 45,742 sf**



**06172 Post Development**

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*Type III 24-hr 100-YR Rainfall=8.10"*

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

|                                  |                                                                                                                            |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment1S: SUB 1</b>     | Runoff Area=5,926 sf 24.60% Impervious Runoff Depth=4.20"<br>Flow Length=333' Tc=5.0 min CN=67 Runoff=0.69 cfs 2,076 cf    |
| <b>Subcatchment2S: SUB 2</b>     | Runoff Area=18,465 sf 5.33% Impervious Runoff Depth=3.30"<br>Flow Length=338' Tc=12.0 min CN=59 Runoff=1.32 cfs 5,072 cf   |
| <b>Subcatchment3S: SUB 3</b>     | Runoff Area=25,411 sf 100.00% Impervious Runoff Depth=7.86"<br>Flow Length=338' Tc=5.0 min CN=98 Runoff=4.81 cfs 16,645 cf |
| <b>Subcatchment4S: SUB 4</b>     | Runoff Area=6,785 sf 100.00% Impervious Runoff Depth=7.86"<br>Tc=5.0 min CN=98 Runoff=1.28 cfs 4,444 cf                    |
| <b>Subcatchment5S: SUB 5</b>     | Runoff Area=7,524 sf 100.00% Impervious Runoff Depth=7.86"<br>Tc=5.0 min CN=98 Runoff=1.42 cfs 4,928 cf                    |
| <b>Subcatchment6S: SUB 6</b>     | Runoff Area=2,604 sf 100.00% Impervious Runoff Depth=7.86"<br>Tc=5.0 min CN=98 Runoff=0.49 cfs 1,706 cf                    |
| <b>Subcatchment7S: SUB 7</b>     | Runoff Area=547 sf 100.00% Impervious Runoff Depth=7.86"<br>Tc=5.0 min CN=98 Runoff=0.10 cfs 358 cf                        |
| <b>Subcatchment8S: SUB 8</b>     | Runoff Area=2,116 sf 20.23% Impervious Runoff Depth=5.60"<br>Tc=5.0 min CN=79 Runoff=0.33 cfs 988 cf                       |
| <b>Reach SP-1: STUDY POINT-1</b> | Inflow=10.37 cfs 31,990 cf<br>Outflow=10.37 cfs 31,990 cf                                                                  |
| <b>Pond 1P: CB-1</b>             | Peak Elev=55.19' Inflow=0.60 cfs 2,064 cf<br>12.0" Round Culvert n=0.012 L=29.0' S=0.0545 '/' Outflow=0.60 cfs 2,064 cf    |
| <b>Pond 2P: Existing CB</b>      | Peak Elev=15.66' Inflow=6.40 cfs 23,793 cf<br>12.0" Round Culvert n=0.013 L=50.0' S=0.0060 '/' Outflow=6.40 cfs 23,793 cf  |
| <b>Pond 3P: Existing CB</b>      | Peak Elev=15.71' Inflow=0.69 cfs 2,076 cf<br>12.0" Round Culvert n=0.013 L=93.0' S=0.0075 '/' Outflow=0.69 cfs 2,076 cf    |
| <b>Pond DMH-1: DMH-1</b>         | Peak Elev=55.68' Inflow=2.71 cfs 9,373 cf<br>12.0" Round Culvert n=0.012 L=16.0' S=0.0737 '/' Outflow=2.71 cfs 9,373 cf    |
| <b>Pond DMH-2: DMH-2</b>         | Peak Elev=55.04' Inflow=2.36 cfs 11,028 cf<br>15.0" Round Culvert n=0.012 L=6.0' S=0.0050 '/' Outflow=2.36 cfs 11,028 cf   |
| <b>Pond DMH-3: DMH-3</b>         | Peak Elev=50.10' Inflow=9.30 cfs 8,197 cf<br>15.0" Round Culvert n=0.020 L=30.0' S=0.1210 '/' Outflow=9.30 cfs 8,197 cf    |
| <b>Pond DMH-4: DMH-4</b>         | Peak Elev=40.30' Inflow=9.30 cfs 8,197 cf<br>14.0" Round Culvert n=0.013 L=42.0' S=0.1181 '/' Outflow=9.30 cfs 8,197 cf    |

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*Type III 24-hr 100-YR Rainfall=8.10"*

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**Pond DMH-5: DMH-5**

Peak Elev=20.27' Inflow=9.30 cfs 8,197 cf  
15.0" Round Culvert n=0.020 L=36.0' S=0.1197 '/' Outflow=9.30 cfs 8,197 cf

**Pond DMH-6: DMH-6**

Peak Elev=17.00' Inflow=9.30 cfs 8,197 cf  
15.0" Round Culvert n=0.020 L=55.0' S=0.1173 '/' Outflow=9.30 cfs 8,197 cf

**Pond FI-1: FI-1**

Peak Elev=0.00'  
10.0" Round Culvert n=0.013 L=97.0' S=0.0080 '/' Primary=0.00 cfs 0 cf

**Pond FI-2: FI-2**

Peak Elev=55.20' Inflow=0.10 cfs 358 cf  
12.0" Round Culvert n=0.012 L=58.0' S=0.0138 '/' Outflow=0.10 cfs 358 cf

**Pond ICS-1: Inlet Control**

Peak Elev=55.17' Inflow=3.30 cfs 11,437 cf  
Primary=2.36 cfs 11,028 cf Secondary=1.14 cfs 409 cf Outflow=3.30 cfs 11,437 cf

**Pond O/GP: Oil/Grit Sep**

Peak Elev=54.87' Inflow=0.00 cfs 0 cf  
10.0" Round Culvert n=0.013 L=14.0' S=0.0079 '/' Outflow=0.00 cfs 0 cf

**Pond OCS-1: Outlet Control**

Peak Elev=55.20' Inflow=9.30 cfs 7,788 cf  
Outflow=9.30 cfs 7,788 cf

**Pond SSC-1: Subsurface Storage Chamber**

Peak Elev=54.90' Storage=4,461 cf Inflow=2.36 cfs 11,028 cf  
Primary=9.22 cfs 7,143 cf Secondary=0.09 cfs 645 cf Outflow=9.30 cfs 7,788 cf

**Total Runoff Area = 69,378 sf Runoff Volume = 36,217 cf Average Runoff Depth = 6.26"**  
**34.07% Pervious = 23,636 sf 65.93% Impervious = 45,742 sf**

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Type III 24-hr 25-YR Rainfall=5.80"

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**Summary for Subcatchment 1S: SUB 1**

Runoff = 0.39 cfs @ 12.08 hrs, Volume= 1,175 cf, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"

| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 4,468     | 57 | Woods/grass comb., Poor, HSG A |
| 1,458     | 98 | Paved parking, HSG C           |
| 5,926     | 67 | Weighted Average               |
| 4,468     |    | 75.40% Pervious Area           |
| 1,458     |    | 24.60% Impervious Area         |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 2.6      | 35            | 0.5000        | 0.22              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                   |
| 0.5      | 157           | 0.0600        | 4.97              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.74              | 14.80          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 20.0 ' Top.W=11.50'<br>n= 0.013 Asphalt, smooth |
| 1.4      |               |               |                   |                | <b>Direct Entry,</b>                                                                                               |
| 5.0      | 333           | Total         |                   |                |                                                                                                                    |

**Summary for Subcatchment 2S: SUB 2**

Runoff = 0.64 cfs @ 12.18 hrs, Volume= 2,635 cf, Depth= 1.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"

| Area (sf) | CN | Description                    |
|-----------|----|--------------------------------|
| 17,480    | 57 | Woods/grass comb., Poor, HSG A |
| 985       | 98 | Paved parking, HSG A           |
| 18,465    | 59 | Weighted Average               |
| 17,480    |    | 94.67% Pervious Area           |
| 985       |    | 5.33% Impervious Area          |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 11.4     | 150           | 0.2300        | 0.22              |                | <b>Sheet Flow,</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                   |
| 0.1      | 47            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.68              | 20.46          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 ' Top.W=16.50'<br>n= 0.013 Asphalt, smooth |
| 12.0     | 338           | Total         |                   |                |                                                                                                                    |

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Type III 24-hr 25-YR Rainfall=5.80"

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**Summary for Subcatchment 3S: SUB 3**

Runoff = 3.43 cfs @ 12.07 hrs, Volume= 11,778 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 25,411    | 98 | Paved parking, HSG A    |
| 25,411    |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                        |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| 1.3      | 150           | 0.0400        | 1.94              |                | <b>Sheet Flow,</b><br>Smooth surfaces n= 0.011 P2= 3.10"                                                           |
| 0.1      | 47            | 0.1200        | 7.03              |                | <b>Shallow Concentrated Flow,</b><br>Paved Kv= 20.3 fps                                                            |
| 0.5      | 141           | 0.0100        | 4.68              | 20.46          | <b>Trap/Vee/Rect Channel Flow,</b><br>Bot.W=1.00' D=0.50' Z= 1.0 & 30.0 ' Top.W=16.50'<br>n= 0.013 Asphalt, smooth |
| 3.1      |               |               |                   |                | <b>Direct Entry,</b>                                                                                               |
| 5.0      | 338           | Total         |                   |                |                                                                                                                    |

**Summary for Subcatchment 4S: SUB 4**

Runoff = 0.92 cfs @ 12.07 hrs, Volume= 3,145 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 6,785     | 98 | Paved parking, HSG A    |
| 6,785     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description          |
|----------|---------------|---------------|-------------------|----------------|----------------------|
| 5.0      |               |               |                   |                | <b>Direct Entry,</b> |

**Summary for Subcatchment 5S: SUB 5**

Runoff = 1.02 cfs @ 12.07 hrs, Volume= 3,487 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"



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Type III 24-hr 25-YR Rainfall=5.80"

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| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 7,524     | 98 | Paved parking, HSG A    |
| 7,524     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 5.0      |               |               |                   |                | Direct Entry, |

**Summary for Subcatchment 6S: SUB 6**

Runoff = 0.35 cfs @ 12.07 hrs, Volume= 1,207 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 2,604     | 98 | Paved parking, HSG A    |
| 2,604     |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 5.0      |               |               |                   |                | Direct Entry, |

**Summary for Subcatchment 7S: SUB 7**

Runoff = 0.07 cfs @ 12.07 hrs, Volume= 254 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"

| Area (sf) | CN | Description             |
|-----------|----|-------------------------|
| 547       | 98 | Paved parking, HSG A    |
| 547       |    | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 5.0      |               |               |                   |                | Direct Entry, |

**Summary for Subcatchment 8S: SUB 8**

Runoff = 0.21 cfs @ 12.07 hrs, Volume= 617 cf, Depth= 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
Type III 24-hr 25-YR Rainfall=5.80"

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Type III 24-hr 25-YR Rainfall=5.80"

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| Area (sf) | CN | Description                   |
|-----------|----|-------------------------------|
| 428       | 98 | Paved parking, HSG A          |
| 1,688     | 74 | >75% Grass cover, Good, HSG C |
| 2,116     | 79 | Weighted Average              |
| 1,688     |    | 79.77% Pervious Area          |
| 428       |    | 20.23% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 5.0      |               |               |                   |                | Direct Entry, |

**Summary for Reach SP-1: STUDY POINT-1**

Inflow Area = 67,262 sf, 67.37% Impervious, Inflow Depth = 3.60" for 25-YR event  
 Inflow = 11.45 cfs @ 12.30 hrs, Volume= 20,152 cf  
 Outflow = 11.45 cfs @ 12.30 hrs, Volume= 20,152 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

**Summary for Pond 1P: CB-1**

Inflow Area = 3,151 sf, 100.00% Impervious, Inflow Depth = 5.56" for 25-YR event  
 Inflow = 0.43 cfs @ 12.07 hrs, Volume= 1,461 cf  
 Outflow = 0.43 cfs @ 12.07 hrs, Volume= 1,461 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 0.43 cfs @ 12.07 hrs, Volume= 1,461 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.77' @ 12.18 hrs

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                  |
|--------|---------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 52.90' | <b>12.0" Round Culvert</b><br>L= 29.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 52.90' / 51.32' S= 0.0545 ' / ' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf |

Primary OutFlow Max=0.00 cfs @ 12.07 hrs HW=54.19' TW=54.27' (Dynamic Tailwater)

1=Culvert ( Controls 0.00 cfs)

**Summary for Pond 2P: Existing CB**

Inflow Area = 49,802 sf, 55.93% Impervious, Inflow Depth = 3.76" for 25-YR event  
 Inflow = 4.22 cfs @ 12.08 hrs, Volume= 15,589 cf  
 Outflow = 4.22 cfs @ 12.08 hrs, Volume= 15,589 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 4.22 cfs @ 12.08 hrs, Volume= 15,589 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 13.88' @ 12.08 hrs

Flood Elev= 59.66'

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| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                              |
|--------|---------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 11.80' | <b>12.0" Round Culvert</b><br>L= 50.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 11.80' / 11.50' S= 0.0060 '/ Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |

**Primary OutFlow** Max=4.21 cfs @ 12.08 hrs HW=13.87' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** (Barrel Controls 4.21 cfs @ 5.37 fps)**Summary for Pond 3P: Existing CB**

Inflow Area = 5,926 sf, 24.60% Impervious, Inflow Depth = 2.38" for 25-YR event  
Inflow = 0.39 cfs @ 12.08 hrs, Volume= 1,175 cf  
Outflow = 0.39 cfs @ 12.08 hrs, Volume= 1,176 cf, Atten= 0%, Lag= 0.0 min  
Primary = 0.39 cfs @ 12.08 hrs, Volume= 1,176 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 13.89' @ 12.09 hrs

Flood Elev= 59.66'

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                              |
|--------|---------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 12.50' | <b>12.0" Round Culvert</b><br>L= 93.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 12.50' / 11.80' S= 0.0075 '/ Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf |

**Primary OutFlow** Max=0.25 cfs @ 12.08 hrs HW=13.88' TW=13.87' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 0.25 cfs @ 0.31 fps)**Summary for Pond DMH-1: DMH-1**

Inflow Area = 14,309 sf, 100.00% Impervious, Inflow Depth = 5.56" for 25-YR event  
Inflow = 1.93 cfs @ 12.07 hrs, Volume= 6,632 cf  
Outflow = 1.93 cfs @ 12.07 hrs, Volume= 6,632 cf, Atten= 0%, Lag= 0.0 min  
Primary = 1.93 cfs @ 12.07 hrs, Volume= 6,632 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.85' @ 12.16 hrs

| Device | Routing | Invert | Outlet Devices                                                                                                                                                               |
|--------|---------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 52.50' | <b>12.0" Round Culvert</b><br>L= 16.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 52.50' / 51.32' S= 0.0737 '/ Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf |

**Primary OutFlow** Max=1.57 cfs @ 12.07 hrs HW=54.44' TW=54.27' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 1.57 cfs @ 1.99 fps)

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**Summary for Pond DMH-2: DMH-2**

Inflow Area = 17,460 sf, 100.00% Impervious, Inflow Depth = 5.56" for 25-YR event  
 Inflow = 2.36 cfs @ 12.07 hrs, Volume= 8,093 cf  
 Outflow = 2.36 cfs @ 12.07 hrs, Volume= 8,093 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 2.36 cfs @ 12.07 hrs, Volume= 8,093 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 54.72' @ 12.18 hrs

| Device | Routing | Invert | Outlet Devices                                                                                                                                                              |
|--------|---------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 51.28' | <b>15.0" Round Culvert</b><br>L= 6.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 51.28' / 51.25' S= 0.0050 '/ Cc= 0.900<br>n= 0.012, Flow Area= 1.23 sf |

**Primary OutFlow** Max=1.60 cfs @ 12.07 hrs HW=54.20' TW=54.12' (Dynamic Tailwater)  
 ↑ **1=Culvert** (Inlet Controls 1.60 cfs @ 1.30 fps)

**Summary for Pond DMH-3: DMH-3**

Inflow Area = 17,460 sf, 100.00% Impervious, Inflow Depth = 3.14" for 25-YR event  
 Inflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf  
 Outflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 50.23' @ 12.30 hrs

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                                  |
|--------|---------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 47.00' | <b>15.0" Round Culvert</b><br>L= 30.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 47.00' / 43.37' S= 0.1210 '/ Cc= 0.900<br>n= 0.020 Corrugated PE, corrugated interior, Flow Area= 1.23 sf |

**Primary OutFlow** Max=9.54 cfs @ 12.30 hrs HW=50.23' TW=40.39' (Dynamic Tailwater)  
 ↑ **1=Culvert** (Inlet Controls 9.54 cfs @ 7.77 fps)

**Summary for Pond DMH-4: DMH-4**

Inflow Area = 17,460 sf, 100.00% Impervious, Inflow Depth = 3.14" for 25-YR event  
 Inflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf  
 Outflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 40.39' @ 12.30 hrs

| Device | Routing | Invert | Outlet Devices             |
|--------|---------|--------|----------------------------|
| #1     | Primary | 37.96' | <b>14.0" Round Culvert</b> |



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L= 42.0' RCP, rounded edge headwall, Ke= 0.100  
 Inlet / Outlet Invert= 37.96' / 33.00' S= 0.1181 '/' Cc= 0.900  
 n= 0.013 Cast iron, coated, Flow Area= 1.07 sf

**Primary OutFlow** Max=9.54 cfs @ 12.30 hrs HW=40.39' TW=20.34' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 9.54 cfs @ 8.92 fps)

**Summary for Pond DMH-5: DMH-5**

Inflow Area = 17,460 sf, 100.00% Impervious, Inflow Depth = 3.14" for 25-YR event  
 Inflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf  
 Outflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 20.34' @ 12.30 hrs

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                                    |
|--------|---------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 18.31' | <b>15.0" Round Culvert</b><br>L= 36.0' RCP, rounded edge headwall, Ke= 0.100<br>Inlet / Outlet Invert= 18.31' / 14.00' S= 0.1197 '/' Cc= 0.900<br>n= 0.020 Corrugated PE, corrugated interior, Flow Area= 1.23 sf |

**Primary OutFlow** Max=9.54 cfs @ 12.30 hrs HW=20.34' TW=17.13' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 9.54 cfs @ 7.77 fps)

**Summary for Pond DMH-6: DMH-6**

Inflow Area = 17,460 sf, 100.00% Impervious, Inflow Depth = 3.14" for 25-YR event  
 Inflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf  
 Outflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 17.13' @ 12.30 hrs

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                                                  |
|--------|---------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 13.90' | <b>15.0" Round Culvert</b><br>L= 55.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 13.90' / 7.45' S= 0.1173 '/' Cc= 0.900<br>n= 0.020 Corrugated PE, corrugated interior, Flow Area= 1.23 sf |

**Primary OutFlow** Max=9.54 cfs @ 12.30 hrs HW=17.13' TW=0.00' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 9.54 cfs @ 7.77 fps)

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**Summary for Pond FI-1: FI-1**

| Device | Routing | Invert | Outlet Devices                                                                                                                                                               |
|--------|---------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 55.30' | <b>10.0" Round Culvert</b><br>L= 97.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 55.30' / 54.52' S= 0.0080 '/ Cc= 0.900<br>n= 0.013, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=0.00' TW=54.52' (Dynamic Tailwater)↑**1=Culvert** ( Controls 0.00 cfs)**Summary for Pond FI-2: FI-2**

Inflow Area = 547 sf, 100.00% Impervious, Inflow Depth = 5.56" for 25-YR event  
Inflow = 0.07 cfs @ 12.07 hrs, Volume= 254 cf  
Outflow = 0.07 cfs @ 12.07 hrs, Volume= 254 cf, Atten= 0%, Lag= 0.0 min  
Primary = 0.07 cfs @ 12.07 hrs, Volume= 254 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.77' @ 12.19 hrs

| Device | Routing | Invert | Outlet Devices                                                                                                                                                               |
|--------|---------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 53.80' | <b>12.0" Round Culvert</b><br>L= 58.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 53.80' / 53.00' S= 0.0138 '/ Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.07 hrs HW=54.12' TW=54.19' (Dynamic Tailwater)↑**1=Culvert** ( Controls 0.00 cfs)**Summary for Pond ICS-1: Inlet Control**

Inflow Area = 17,460 sf, 100.00% Impervious, Inflow Depth = 5.56" for 25-YR event  
Inflow = 2.36 cfs @ 12.07 hrs, Volume= 8,093 cf  
Outflow = 2.36 cfs @ 12.07 hrs, Volume= 8,093 cf, Atten= 0%, Lag= 0.0 min  
Primary = 2.36 cfs @ 12.07 hrs, Volume= 8,093 cf  
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.77' @ 12.17 hrs

Flood Elev= 61.25'

| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                                             |
|--------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 51.32' | <b>15.0" Round Culvert</b><br>L= 4.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 51.32' / 51.28' S= 0.0100 '/ Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf |
| #2     | Secondary | 51.32' | <b>12.0" Round By-pass Pipe</b><br>L= 127.0' CPP, square edge headwall, Ke= 0.500                                                                                                                          |

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Inlet / Outlet Invert= 51.32' / 47.00' S= 0.0340 ' S= 0.0340 ' Cc= 0.900  
 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf  
 #3 Device 2 55.00' **5.0' long Overflow Weir** 2 End Contraction(s)

**Primary OutFlow** Max=1.60 cfs @ 12.07 hrs HW=54.27' TW=54.20' (Dynamic Tailwater)

↑ **1=Culvert** (Inlet Controls 1.60 cfs @ 1.30 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=51.32' TW=47.00' (Dynamic Tailwater)

↑ **2=By-pass Pipe** ( Controls 0.00 cfs)

↑ **3=Overflow Weir** ( Controls 0.00 cfs)

### Summary for Pond O/GP: Oil/Grit Sep

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf  
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.70' @ 12.31 hrs

| Device | Routing | Invert | Outlet Devices                                                                                                                                                                          |
|--------|---------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary | 54.52' | <b>10.0" Round Culvert</b><br>L= 14.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 54.52' / 54.41' S= 0.0079 ' S= 0.0079 ' Cc= 0.900<br>n= 0.013, Flow Area= 0.55 sf |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=54.52' TW=52.50' (Dynamic Tailwater)

↑ **1=Culvert** ( Controls 0.00 cfs)

### Summary for Pond OCS-1: Outlet Control

Inflow Area = 17,460 sf, 100.00% Impervious, Inflow Depth = 3.14" for 25-YR event  
 Inflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf  
 Outflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf, Atten= 0%, Lag= 0.0 min  
 Primary = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 55.21' @ 12.30 hrs

Flood Elev= 61.25'

| Device | Routing  | Invert | Outlet Devices                                                                                                                                                                              |
|--------|----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary  | 47.57' | <b>15.0" Round Outlet Pipe</b><br>L= 11.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 47.57' / 47.10' S= 0.0427 ' S= 0.0427 ' Cc= 0.900<br>n= 0.012, Flow Area= 1.23 sf |
| #2     | Device 1 | 54.50' | <b>5.0' long Overflow Weir</b> 2 End Contraction(s)                                                                                                                                         |

**Primary OutFlow** Max=9.54 cfs @ 12.30 hrs HW=55.21' TW=50.23' (Dynamic Tailwater)

↑ **1=Outlet Pipe** (Passes 9.54 cfs of 13.19 cfs potential flow)

↑ **2=Overflow Weir** (Weir Controls 9.54 cfs @ 2.76 fps)

**06172 Post Development**

Prepared by Sebago Technics, Inc.

HydroCAD® 10.00-18 s/n 01856 © 2016 HydroCAD Software Solutions LLC

Type III 24-hr 25-YR Rainfall=5.80"

Printed 6/14/2017

Page 17

**Summary for Pond SSC-1: Subsurface Storage Chamber #1**

Inflow Area = 17,460 sf, 100.00% Impervious, Inflow Depth = 5.56" for 25-YR event  
 Inflow = 2.36 cfs @ 12.07 hrs, Volume= 8,093 cf  
 Outflow = 9.54 cfs @ 12.30 hrs, Volume= 4,564 cf, Atten= 0%, Lag= 13.8 min  
 Primary = 9.45 cfs @ 12.30 hrs, Volume= 4,175 cf  
 Secondary = 0.09 cfs @ 12.14 hrs, Volume= 389 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Peak Elev= 54.68' @ 12.18 hrs Surf.Area= 1,541 sf Storage= 4,311 cf

Flood Elev= 61.25' Surf.Area= 1,541 sf Storage= 5,142 cf

Plug-Flow detention time= 333.7 min calculated for 4,563 cf (56% of inflow)

Center-of-Mass det. time= 215.8 min ( 960.5 - 744.7 )

| Volume   | Invert | Avail.Storage | Storage Description                                                                                                                                                                                                                                         |
|----------|--------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1A      | 50.50' | 2,224 cf      | <b>15.58'W x 98.91'L x 5.50'H Field A</b><br>8,477 cf Overall - 2,918 cf Embedded = 5,559 cf x 40.0% Voids                                                                                                                                                  |
| #2A      | 51.25' | 2,918 cf      | <b>ADS StormTech MC-3500 d +Cap x 26 Inside #1</b><br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>2 Rows of 13 Chambers<br>Cap Storage= +14.9 cf x 2 x 2 rows = 59.6 cf |
| 5,142 cf |        |               | Total Available Storage                                                                                                                                                                                                                                     |

Storage Group A created with Chamber Wizard

| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                             |
|--------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Secondary | 47.67' | <b>6.0" Vert. 6" Underdrain</b> C= 0.600                                                                                                                                                   |
| #2     | Device 1  | 50.50' | <b>2.410 in/hr Filtration to Underdrains over Surface area</b>                                                                                                                             |
| #3     | Primary   | 51.25' | <b>15.0" Round Chamber Outlet Pipe</b><br>L= 8.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 51.25' / 50.80' S= 0.0563 ' / ' Cc= 0.900<br>n= 0.012, Flow Area= 1.23 sf |

**Primary OutFlow** Max=0.00 cfs @ 12.30 hrs HW=54.43' TW=55.21' (Dynamic Tailwater)↑ **3=Chamber Outlet Pipe** ( Controls 0.00 cfs)**Secondary OutFlow** Max=0.00 cfs @ 12.14 hrs HW=54.63' TW=54.77' (Dynamic Tailwater)↑ **1=6" Underdrain** ( Controls 0.00 cfs)↑ **2=Filtration to Underdrains** (Passes 0.00 cfs of 0.09 cfs potential flow)

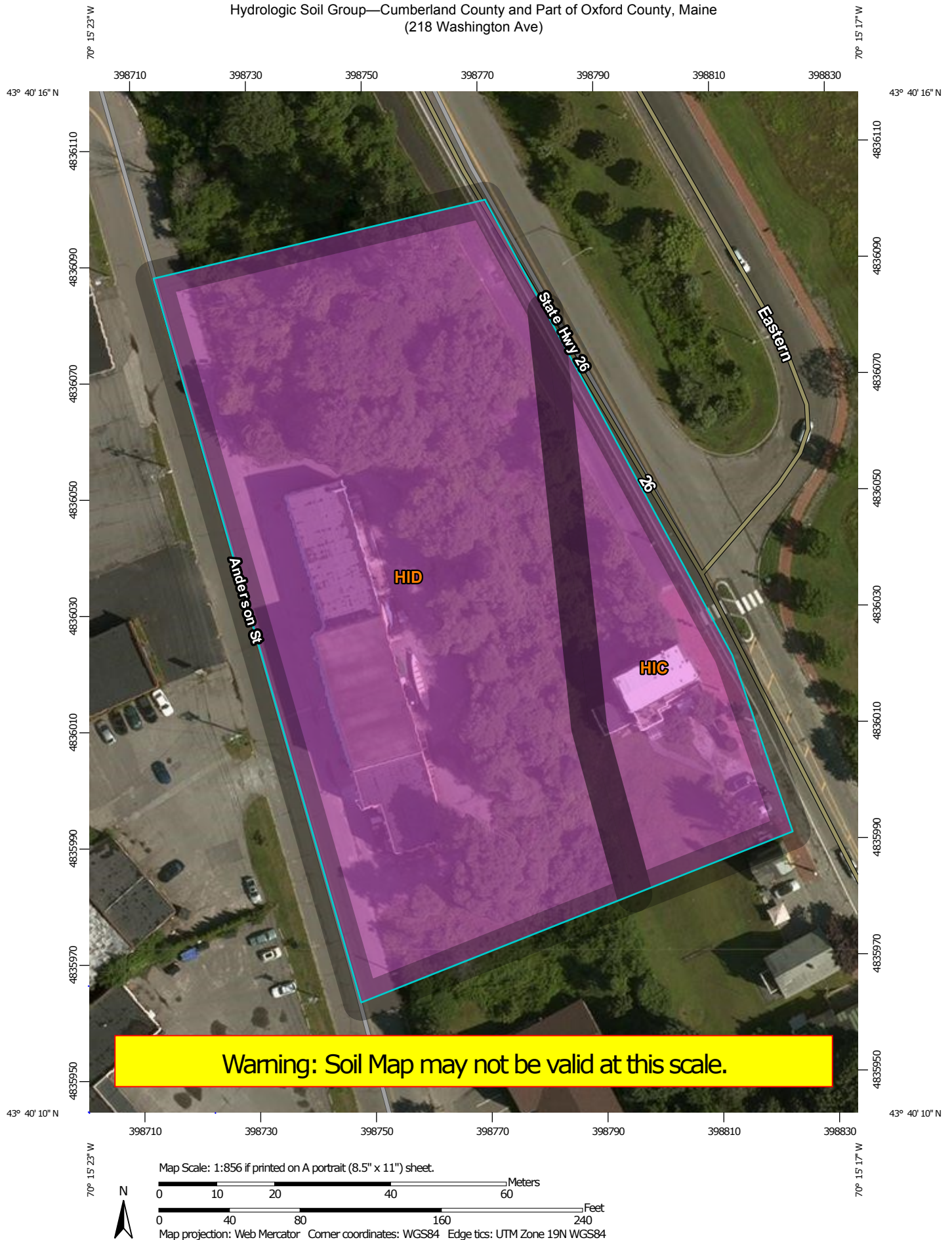


# **Attachment D**

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## **Soils Report**

Hydrologic Soil Group—Cumberland County and Part of Oxford County, Maine  
(218 Washington Ave)



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons

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

#### Soil Rating Lines

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

#### Soil Rating Points

 A  
 A/D  
 B  
 B/D

 C  
 C/D  
 D  
 Not rated or not available

### Water Features

 Streams and Canals

### Transportation

 Rails  
 Interstate Highways  
 US Routes  
 Major Roads  
 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 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 11, Sep 17, 2015

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

Date(s) aerial images were photographed: Jul 31, 2013—Aug 11, 2013

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

## Hydrologic Soil Group

| Hydrologic Soil Group— Summary by Map Unit — Cumberland County and Part of Oxford County, Maine (ME005) |                                              |        |              |                |
|---------------------------------------------------------------------------------------------------------|----------------------------------------------|--------|--------------|----------------|
| Map unit symbol                                                                                         | Map unit name                                | Rating | Acres in AOI | Percent of AOI |
| HIC                                                                                                     | Hinckley loamy sand, 8 to 15 percent slopes  | A      | 0.4          | 20.3%          |
| HID                                                                                                     | Hinckley loamy sand, 15 to 25 percent slopes | A      | 1.8          | 79.7%          |
| <b>Totals for Area of Interest</b>                                                                      |                                              |        | <b>2.2</b>   | <b>100.0%</b>  |

## Description

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

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

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

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

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

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

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

## Rating Options

*Aggregation Method:* Dominant Condition



SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION M – CITY MASTER PLANS

THERE ARE NO CITY MASTER PLANS RELATED TO THIS SITE .

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION N - UTILITIES

THIS PROJECT WILL BE SERVED WITH WATER SUPPLY FROM THE PORTLAND WATER DISTRICT – AN ABILITY TO SERVE LETTER IS ATTACHED.

PUBLIC SEWER WILL BE PROVIDED BY THE CITY OF PORTLAND – A WASTEWATER CAPACITY APPLICATION IS ATTACHED.

ELECTRICAL SERVICE WILL BE PROVIDED BY CENTRAL MAINE POWER, NATURAL GAS WILL BE SERVED BY UNITIL, PHONE AND DATA WILL BE PROVIDED BY FAIRPOINT AND TIME WARNER CABLE.



## Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

November 3, 2016

Will Conway  
75 John Roberts Road Suite 1A  
South Portland, ME 04106

Re: 218 Washington Avenue, PO  
Ability to Serve with PWD Water

Dear Mr. Conway:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on August 24, 2016. Based on the information provided per concept plans submitted to PWD 11/1/16, 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 does not constitute approval of this project from the District. Review and approval of final plans is required.**

### Conditions of Service

The following conditions of service apply:

- A new 4-inch domestic service may be installed from the water main in Washington Avenue. A separate fire service line to be sized by your sprinkler designer will need to be approved by PWD when this becomes available. Backflow prevention devices are required on both service lines. The services should enter through the properties frontage on Washington Avenue at least 10-feet from any side property lines and at least 3-feet face to face separation between service lines.
- The existing building 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.
- Water District approval of water infrastructure plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our current standards.
- Once the project is ready for construction, the owner or contractor will need to make an appointment to come in and complete a service application form and pay the necessary fees.



### Existing Site Service

According to District records, the project site does currently have existing water service. A 3/4-inch diameter copper water service line, located as shown on the attached water service card, provides water service to this 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 cast iron water main in Washington Avenue and a public fire hydrant located 430 feet from the site. The most recent static pressure reading was 80 psi on August 25, 2016.

### 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 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.

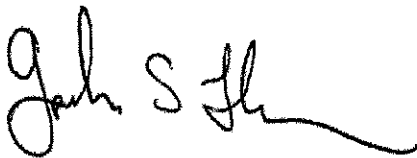
### Private Fire Protection Water Needs

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](mailto: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 "Gordon S. Johnson", with a long, sweeping horizontal line extending to the right.

Gordon S. Johnson, P.E.  
Engineering Services Manager



# CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,  
55 Portland Street,  
Portland, Maine 04101-2991



Bradley Roland, P.E.  
Water Resources Division

Date: \_\_\_\_\_

## 1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 218 - 220 Washington Avenue

Chart Block Lot Number: Map 10 Block A Lot 10  
+15

Proposed Use: 45 Residential Condos

Previous Use: 1 2 bedroom home

Existing Sanitary Flows: 180 GPD

Existing Process Flows: 0 GPD

Description and location of City sewer that is to receive the proposed building sewer lateral.

Site Category  
Commercial (see part 4 below)  
Industrial (complete part 5 below)  
Governmental  
Residential  
Other (specify)

|                                     |
|-------------------------------------|
| <input type="checkbox"/>            |
| <input type="checkbox"/>            |
| <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> |
| <input type="checkbox"/>            |

Clearly, indicate the proposed connections, on the submitted plans.

## 2. Please, Submit Contact Information.

City Planner's Name: TBD Phone: -

Owner/Developer Name: 218 - 220 Washington Avenue LLC

Owner/Developer Address: 199 Elderberry Road South Portland ME 04106

Phone: 719. 0000 Fax: - E-mail: Marietta.R@aol.com

Engineering Consultant Name: Sedago Technics Inc - Will Conway

Engineering Consultant Address: 75 John Roberts Road So. Portland ME 04106

Phone: 200. 2055 Fax: 856. 2206 E-mail: Wconway@sedagotechnics.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

## 3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 6780 GPD

Peaking Factor/ Peak Times: N/A

Specify the source of design guidelines: (i.e. "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify) \_\_\_\_\_

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

(22) One Bedroom Units @ 120 gpd = 2640 gpd

(23) Two Bedroom Units @ 180 gpd = 4140 "

6780 gpd Total

#### 4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: \_\_\_\_\_

Size of External Grease Interceptor: \_\_\_\_\_

Retention Time: \_\_\_\_\_

Peaking Factor/ Peak Times: \_\_\_\_\_

*Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.*

#### 5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: \_\_\_\_\_ GPD

Do you currently hold Federal or State discharge permits? \_\_\_\_\_

Yes \_\_\_\_\_ No \_\_\_\_\_

Is the process wastewater termed categorical under CFR 40? \_\_\_\_\_

Yes \_\_\_\_\_ No \_\_\_\_\_

OSHA Standard Industrial Code (SIC): \_\_\_\_\_

(<http://www.osha.gov/oshstats/sicser.html>)

Peaking Factor/Peak Process Times: \_\_\_\_\_

*Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.*

*Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.*

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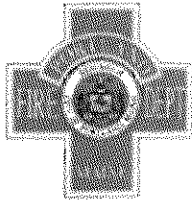
SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION O- SOLID WASTE

THIS PROJECT WILL GENERATE APPROXIMATELY 1500 CUBIC YARDS OF CONSTRUCTION DEBRIS.  
NORMAL HOUSEHOLD WASTE WILL BE GENERATED AT A RATE OF 150 CUBIC YARDS PER MONTH. ALL  
CONSTRUCTION DEBRIS AND HOUSEHOLD WASTES WILL BE TRANSPORTED TO AN APPROVED SOLID  
WASTE HANDLING FACILITY.

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION P - FIRE

THE PORTLAND FIRE DEPARTMENT CHECKLIST AND REQUESTED INFORMATION IS ATTACHED.





PORTLAND FIRE DEPARTMENT  
SITE REVIEW  
FIRE DEPARTMENT CHECKLIST

( See next 2 pages )

A separate drawing[s] shall be provided as part of the site plan application for the Portland Fire Department's review.

1. Name, address, telephone number of applicant
- 2.
3. Name address, telephone number of architect
4. Proposed uses of any structures [NFPA and IBC classification]
- 5.
6. Square footage of all structures [total and per story]
7. Elevation of all structures
8. Proposed fire protection of all structures
  - As of September 16, 2010 all new construction of one and two family homes are required to be sprinkled in compliance with NFPA 13D. This is required by City Code. (NFPA 101 2009 ed.)
9. Hydrant locations
10. Water main[s] size and location
11. Access to all structures [min. 2 sides]
12. A code summary shall be included referencing NFPA 1 and all fire department. Technical standards.

Some structures may require Fire flows using annex H of NFPA 1

# A R C H E T Y P E

## **Portland Fire Department Site Review - Checklist**

---

Project: 218 Washington Ave  
To: Portland Fire Department

### **Site Review Checklist:**

---

1. Applicant Information:  
218 Washington Avenue LLC  
199 Elderberry Rd  
South Portland, ME 04106
- 2.
3. Architect Information:  
Archetype Architects  
48 Union Wharf  
Portland, ME 04101  
207-772-6022
4. Proposed Use: Apartment (R-2) over Garage (S-2)
- 5.
6. Square Footage:  
Ground Level/Parking: 13,625 sqft  
First Floor: 13,750 sqft  
Second Floor: 14,300 sqft  
Third Floor: 14,300 sqft  
Fourth Floor: 13,445 sqft  
  
Total: 69,420 sqft
7. Building Elevations:  
See 'Building Elevations' sheet (Sheet A2.01) in submitted set.
8. Proposed fire protection:  
NFPA 13-R Sprinkler System
9. Hydrant Locations:  
See submitted utility/site plan.
10. Water main size:  
See submitted utility/site plan.
11. Access to structure  
See submitted site plan.
12. Code Summary:  
See below.

# A R C H E T Y P E

## **NFPA 1 – Chapter 18: Fire Department Access and Water Supply**

### 18.2 Fire Department Access:

The project is fully accessible on two sides.

## **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).*

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, success roads, emergency access lanes, or parking areas.*

As depicted on site plans, the proposed building layout provides for a minimum of two sides of access to all structures.

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 Structure
- Safety Features Provided

There are no required building setbacks by zoning.

3.4.4 *Fire Department access roads shall extend to within 50' of an exterior door providing access to the interior structure.*

The building will provide an exterior door on public sidewalk.

3.4.5 *Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.*

N/A. Access to building is through doors on public sidewalk.

3.4.6 *Elevators shall be sized to accommodate an 80 x 24 inch stretcher.*

Elevator with be 2500#, which meets the standard.

3.4.7 *All structures are required to display the assigned street number. Number shall be clearly visible from the public right of way.*

The applicant will work with the City's Public Services Division to assign street addresses and numbering to meet City Standards.

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION Q – DESIGN REVIEW

DESIGN REVIEW IS NOT REQUIRED FOR THIS PROJECT.



SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION R - HVAC

THE HVAC EQUIPMENT HAS NOT BEEN SELECTED AT THIS TIME. THE APPLICANT REQUESTS THAT THIS INFORMATION BE PROVIDED PRIOR TO ISSUANCE OF A FULL BUILDING PERMIT.

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION S -1 SITE LIGHTING

THERE ARE ONLY TWO SITE LIGHTING FIXTURES PROPOSED FOR THIS PROJECT, AT THE SITE ENTRANCE DRIVEWAY. THESE WILL BE SPAULDING CIMMARON LED FIXTURES ON 20 FOOT POLES, A CUT SHEET OF THE FIXTURE IS ATTACHED.

|                 |       |      |           |                               |
|-----------------|-------|------|-----------|-------------------------------|
| CIMARRON<br>LED | Cat.# |      | Approvals | <b>SPAULDING<br/>LIGHTING</b> |
|                 | Job   | Type |           |                               |

#### SPECIFICATIONS

##### Construction:

- Stylish vertically finned die-cast solid top housing for maximum heat dissipation; Stops collection of unsightly debris from gathering on top of the housing
- Rugged lower die-cast aluminum heat sink accelerates thermal management and optimizes PCB and optical performance
- Separate optical and electrical compartment for optimum component operation
- One piece die cut silicone gasket ensures weather proof seal around each individual LED for IP65 rating
- Backlight Control (BC) option available for 85% spill light reduction, doesn't change fixture appearance or EPA, recommended for Type III and Type IV distributions
- Stamped bezel provides mechanical compression to seal the optical assembly
- Complements the Hubbell Southwest series of outdoor fixtures
- Weight - 45.0 pounds, EPA - 1.3 ft<sup>2</sup>
- Features exclusive wiHUBB technology
  - Wireless system for On/Off and 0-10VDC full range dimming control
  - Programmable autonomous operation
- Suitable for applications requiring 3G testing prescribed by ANSI C136.31

##### Optics:

- Choice of 72 high brightness LED configurations with individual acrylic lenses specially designed for IES Type II, III, IV and V distributions
- CCT: 3000K (80 CRI), 4200K (70 CRI), 5100K (67 CRI), and turtle friendly Amber LED options
- CRI: 70

##### Electrical:

- Universal input voltage 120-277 VAC, 50/60 Hz
- Integral step-down transformer for 347V & 480V
- Ambient operating temperature -40° C to 40° C
- Automatic thermal self-protection
- Drivers have greater than 90% power factor and less than 10% THD

- Optional continuous dimming to 10% or dual circuitry available
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- 1050 mA driver available with 90L configuration for increased lumen output
- LED electrical assembly, including PR devices, consumes no power in the 'off' state
- Surge protection of 10KA 8/20 µSec wave; clamping voltage of 320V & surge rating of 273J

##### Lumen maintenance:

- L90 at 60,000 hours (Projected per IESNA TM-21-11)

##### Installation:

- Two die-cast aluminum arm designs: The decorative arm offers a sleek upswept look while the straight arm follows the housing's contoured lines for continuity of style
- Fixture ships with arm installed for ease of installation and mounts to #2 drill pattern
- Wall bracket, mast arm fitter and pole accessories are also available allowing easy mounting for virtually any application

##### Finish:

- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

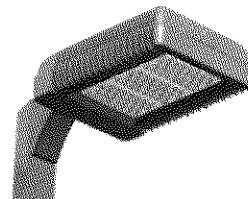
##### Warranty:

Five year limited warranty (for more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>)

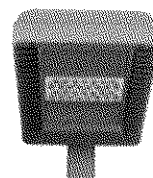
##### Listings:

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations
- Models meet DesignLights Consortium (DLC) qualifications, consult DLC website for more details: <http://www.designlights.org/QPL>
- IDA approved • IP65

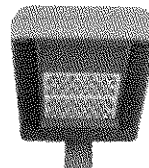
#### PRODUCT IMAGE(S)



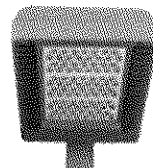
90 LED 3/4 VIEW



30 LED

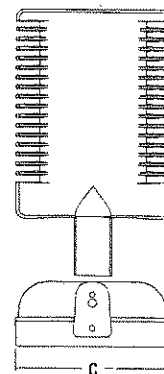
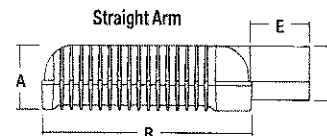
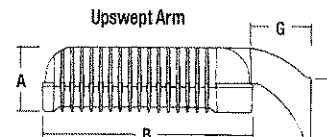


60 LED



90 LED

#### DIMENSIONS



| A               | B                | C            | D               | E                | F               | G               |
|-----------------|------------------|--------------|-----------------|------------------|-----------------|-----------------|
| 6 3/4"<br>171mm | 21 3/4"<br>552mm | 16"<br>406mm | 6 5/8"<br>168mm | 6 5/16"<br>160mm | 5 5/8"<br>143mm | 6 1/8"<br>155mm |

#### CERTIFICATIONS/LISTINGS



#### ORDERING INFORMATION SEE NEXT PAGE

**SPAULDING  
LIGHTING**

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CL1LED-SPEC 4/14

## ORDERING INFORMATION

ORDERING EXAMPLE: CL1-A-90LU-5K-3-DB-RPA3

| CL1 - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]                                                  |                             |                                              |                                                                                               |                                                         |                                                                                                     |
|------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| SERIES                                                                                               | NO. OF LEDS                 | VOLTAGE                                      | CCT                                                                                           | DRIVE CURRENT                                           | OPTIONS                                                                                             |
| CL1 Cimarron LED                                                                                     | 90L 90 High brightness LEDs | U <sup>1</sup> Universal 120V-277V, 50/60 Hz | 3K 3000K                                                                                      | Leave blank for 700mA (standard)                        | BC <sup>5</sup> Backlight control                                                                   |
|                                                                                                      | 60L 60 High brightness LEDs | 1 <sup>7</sup> 120V                          | 4K 4200K                                                                                      | 035 350mA Amber CCT only                                | BL <sup>1,2,5</sup> Bi-level control                                                                |
|                                                                                                      | 30L 30 High brightness LEDs | 2 <sup>2</sup> 208V                          | 5K 5100K                                                                                      | 105 1050 mA (use with 90L only for higher lumen output) | CD <sup>2</sup> Continuous dimming                                                                  |
| MOUNTING                                                                                             |                             | 3 <sup>2</sup> 240V                          | AM <sup>6</sup> Amber (590 nm available for "Turtle Friendly" applications (consult factory)) |                                                         | WB Wall bracket                                                                                     |
| A Arm mount construction (6" straight rigid arm included & acceptable for 90° configurations)        |                             | 4 <sup>7</sup> 277V                          |                                                                                               |                                                         | RPA3 3" Round pole adapter                                                                          |
| AD Decorative arm mount const. (6" decorative upswept arm incl. & acceptable for 90° configurations) |                             | 5 480V, 60 Hz                                |                                                                                               |                                                         | RPA4 4" Round pole adapter                                                                          |
| MAF Mast arm fitter for mounting to standard 2 3/8" mast arm bracket, includes 6" straight rigid arm |                             | F 347V, 60 Hz                                |                                                                                               |                                                         | RPA5 5" Round pole adapter                                                                          |
|                                                                                                      |                             | E <sup>4</sup> 220V, 50 Hz                   |                                                                                               |                                                         | RPA6 6" Round pole adapter                                                                          |
|                                                                                                      |                             |                                              | DISTRIBUTION                                                                                  |                                                         | F(X) <sup>3,4</sup> Fusing (replace X with voltage: 1-120V, 2-208V, 3-240V, 4-277V, 5-480V, 6-347V) |
|                                                                                                      |                             |                                              | 2 Type II                                                                                     |                                                         | SSB Stainless steel LED bezel                                                                       |
|                                                                                                      |                             |                                              | 3 Type III                                                                                    |                                                         | VG Vandal guard                                                                                     |
|                                                                                                      |                             |                                              | 4 Type IV                                                                                     |                                                         | CONTROL OPTIONS                                                                                     |
|                                                                                                      |                             |                                              | 5M Type V Medium                                                                              |                                                         | SCO Motion sensor On/Off control, No light output when no motion detected                           |
|                                                                                                      |                             |                                              | 5S Type V Short                                                                               |                                                         | SCP Programmable motion control, factory default is 50%                                             |
|                                                                                                      |                             |                                              | 5W Type V Wide                                                                                |                                                         | PR(X) <sup>5</sup> NEMA Photo cell receptacle (replace X with voltage: U=120-277, 5=480, 6=347)     |
|                                                                                                      |                             |                                              | 2L Type II Rotated 90° left                                                                   |                                                         | WIH <sup>7</sup> In-fixture wireless control module (120, 277, 347 & 480V)                          |
|                                                                                                      |                             |                                              | 3L Type III Rotated 90° left                                                                  |                                                         |                                                                                                     |
|                                                                                                      |                             |                                              | 4L Type IV Rotated 90° left                                                                   |                                                         |                                                                                                     |
|                                                                                                      |                             |                                              | 2R Type II Rotated 90° right                                                                  |                                                         |                                                                                                     |
|                                                                                                      |                             |                                              | 3R Type III Rotated 90° right                                                                 |                                                         |                                                                                                     |
|                                                                                                      |                             |                                              | 4R Type IV Rotated 90° right                                                                  |                                                         |                                                                                                     |
|                                                                                                      |                             |                                              |                                                                                               | COLOR                                                   |                                                                                                     |
|                                                                                                      |                             |                                              |                                                                                               | DB Dark Bronze                                          |                                                                                                     |
|                                                                                                      |                             |                                              |                                                                                               | BL Black                                                |                                                                                                     |
|                                                                                                      |                             |                                              |                                                                                               | WH White                                                |                                                                                                     |
|                                                                                                      |                             |                                              |                                                                                               | GR Gray                                                 |                                                                                                     |
|                                                                                                      |                             |                                              |                                                                                               | PS Platinum Silver                                      |                                                                                                     |
|                                                                                                      |                             |                                              |                                                                                               | RD Red (premium color)                                  |                                                                                                     |
|                                                                                                      |                             |                                              |                                                                                               | FG Forest Green (premium color)                         |                                                                                                     |
|                                                                                                      |                             |                                              |                                                                                               | CC Custom Color                                         |                                                                                                     |

Notes: 1 - For BL option 30L and 60L; MAF 347V & 480V  
2 - BL & CD cannot be combined  
3 - Fuse option not available with universal voltage  
4 - Select F3 fusing option for 220V

Notes: 1- For BL option 50L and 50L; I/A 347V & 480V  
2- BL & CD cannot be combined  
3- Fuse option not available with universal voltage  
4- Select F3 fusing option for 220V  
5- Photocell retracts not available with BL option  
6- Recommended for Type III and IV distributions only  
7- Select only when using voltage sensitive option (E or WiFi)  
8- Available in 350mA drive current only Type IV, 5M

### ENERGY SAVING DATA

| ENERGY DATA               |      | LIGHT<br>ENGINE | INPUT WATTS |           | LUMENS DELIVERED |        |        |         |         | DRIVERS<br>CURRENT |          |
|---------------------------|------|-----------------|-------------|-----------|------------------|--------|--------|---------|---------|--------------------|----------|
| Power Factor              | >.9  |                 | 120V-277V   | 347V-480V | TYPE 2           | TYPE 3 | TYPE 4 | TYPE 5M | TYPE 5S |                    | TYPE 5W  |
| Total Harmonic Distortion | <10% | 30L-5K          | 70          | 87        | 6384             | 8164   | 6641   | 7108    | 6999    | 6619               | 2@700mA  |
|                           |      | 60L-5K          | 140         | 157       | 13300            | 12842  | 13125  | 13185   | 13675   | 12954              | 4@700mA  |
|                           |      | 90L-5K          | 210         | 227       | 19684            | 19006  | 19202  | 20592   | 19610   | 18973              | 6@700mA  |
|                           |      | 90L-5K-105      | 336         | 363       | 26974            | 25351  | 26548  | 25793   | 27445   | 25195              | 6@1050mA |
|                           |      | 30L-4K          | 70          | 87        | 6089             | 6109   | 6104   | 6417    | 6439    | 6046               | 2@700mA  |
|                           |      | 60L-4K          | 140         | 157       | 11583            | 11468  | 12036  | 12038   | 12581   | 11807              | 4@700mA  |
|                           |      | 90L-4K          | 210         | 227       | 17143            | 16973  | 17648  | 18521   | 20220   | 17394              | 6@700mA  |
|                           |      | 90L-4K-105      | 336         | 363       | 23896            | 23912  | 24199  | 24583   | 25357   | 23128              | 6@1050mA |
|                           |      | 30L-3K          | 70          | 87        | 4606             | 4668   | 4686   | 4858    | 4902    | 4601               | 2@700mA  |
|                           |      | 60L-3K          | 140         | 157       | 9013             | 9175   | 9216   | 9409    | 9461    | 8844               | 4@700mA  |
|                           |      | 90L-3K          | 210         | 227       | 13360            | 13601  | 13575  | 13923   | 14004   | 13902              | 6@700mA  |
|                           |      | 90L-3K-105      | 336         | 363       | 17645            | 17612  | 17469  | 17950   | 18271   | 17330              | 6@1050mA |

**ACCESSORIES SEE NEXT PAGE**

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CL1LED-SPEC 4/14



## ACCESSORIES

| Catalog Number           | Description                                                                                    |
|--------------------------|------------------------------------------------------------------------------------------------|
| CR-RPA3-XX <sup>1</sup>  | Round pole adapter for straight arm (3¼ - 3¾")                                                 |
| CR-RPA4-XX <sup>1</sup>  | Round pole adapter for straight arm (3¾ - 4½")                                                 |
| CR-RPA5-XX <sup>1</sup>  | Round pole adapter for straight arm (5")                                                       |
| CR-RPA6-XX <sup>1</sup>  | Round pole adapter for straight arm (6")                                                       |
| CRD-RPA2-XX <sup>1</sup> | Round pole adapter for upswept arm (2¼ - 3¼")                                                  |
| CRD-RPA3-XX <sup>1</sup> | Round pole adapter for upswept arm (3¼ - 3¾")                                                  |
| CRD-RPA4-XX <sup>1</sup> | Round pole adapter for upswept arm (3¾ - 4½")                                                  |
| CRD-RPA5-XX <sup>1</sup> | Round pole adapter for upswept arm (5")                                                        |
| CRD-RPA6-XX <sup>1</sup> | Round pole adapter for upswept arm (6")                                                        |
| WB-CR-XX <sup>1</sup>    | Wall bracket                                                                                   |
| TPLB-XX <sup>1</sup>     | Twin parallel luminaire bracket                                                                |
| MAF-CL-XX <sup>1</sup>   | Horizontal mast arm fitter for 2 3/8" OD arm. Mounts to standard 6" arm (ordered with fixture) |

- 1 Replace XX with color choice, eg.: DB for Dark Bronze  
 2 When ordering poles, specify Pole Drill Pattern #2  
 3 Fixture must include standard 6" arm

## MOUNTING ACCESSORIES

| Catalog Number               | Description                                                                      |
|------------------------------|----------------------------------------------------------------------------------|
| ARM-CL-K-TA-XX <sup>1</sup>  | Adjustable mounting arm for single fixture (2-3/8 tenon) – 5 lbs. 2.3 kgs.       |
| ARM-CL-TK-TA-XX <sup>1</sup> | Adjustable mounting arm for two fixtures at 180° (2-3/8 tenon) – 7 lbs. 3.2 kgs. |
| ARM-CL-K-S-XX <sup>1</sup>   | 10" adjustable arm – .5 lbs. .05 kgs. – 5.75 lbs. 2.6 kgs.                       |

- 1 Replace XX with color choice, eg.: DB for Dark Bronze  
 2 Fixture must include standard 6" straight arm

ARM-CL-K-TA-XX  
 ARM-CL-TK-TA-XX



ARM-CL-K-S-XX



## TENON TOP POLE BRACKET ACCESSORIES

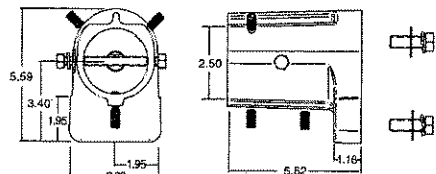
(2 3/8" OD tenon) (RSS version requires 4" round pole adapter)

| Catalog Number       | Description                                     |
|----------------------|-------------------------------------------------|
| SETA-XX <sup>1</sup> | Square pole tenon adapter (4 at 90 degrees)     |
| RETA-XX <sup>1</sup> | Round pole tenon adapter (4 at 90 degrees)      |
| TETA-XX <sup>1</sup> | Hexagonal pole tenon adapter (3 at 120 degrees) |

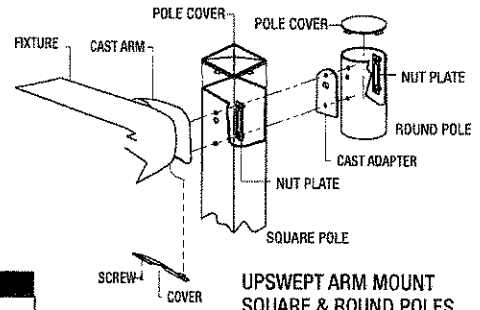
- 1 Replace XX with color choice, eg.: DB for Dark Bronze

## PHOTOCONTROL EQUIPMENT

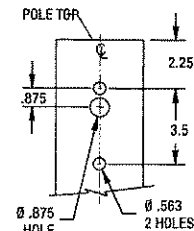
| Catalog Number | Description                               |
|----------------|-------------------------------------------|
| PTL-1          | Photocontrol - twist-lock cell (120V)     |
| PTL-8          | Photocontrol - twist-lock cell (120-277V) |
| PTL-5          | Photocontrol - twist-lock cell (480V)     |
| PTL-6          | Photocontrol - twist-lock cell (347V)     |
| PSC            | Shorting cap - twist-lock                 |



MAF - HORIZONTAL MAST ARM FITTER



UPSWEPT ARM MOUNT  
 SQUARE & ROUND POLES



#2 DRILL PATTERN FOR POLES

## LIGHTING FACTS

|                              |                     |
|------------------------------|---------------------|
| Light Output (Lumens)        | 6278                |
| Watts                        | 68.4                |
| Lumens per Watt (Efficiency) | 91                  |
| Color Accuracy               | 74                  |
| Light Color                  | 4021 (Bright White) |
| Warranty                     | Yes                 |

See [www.lightingfacts.com/specs/leds](http://www.lightingfacts.com/specs/leds) for details.

|                              |                 |
|------------------------------|-----------------|
| Light Output (Lumens)        | 6882            |
| Watts                        | 69.7            |
| Lumens per Watt (Efficiency) | 98              |
| Color Accuracy               | 68              |
| Light Color                  | 5005 (Daylight) |
| Warranty                     | Yes             |

See [www.lightingfacts.com/specs/leds](http://www.lightingfacts.com/specs/leds) for details.

|                              |                 |
|------------------------------|-----------------|
| Light Output (Lumens)        | 15068           |
| Watts                        | 289.5           |
| Lumens per Watt (Efficiency) | 72              |
| Color Accuracy               | 76              |
| Light Color                  | 5433 (Daylight) |
| Warranty                     | Yes             |

See [www.lightingfacts.com/specs/leds](http://www.lightingfacts.com/specs/leds) for details.

|                              |                     |
|------------------------------|---------------------|
| Light Output (Lumens)        | 22898               |
| Watts                        | 338.5               |
| Lumens per Watt (Efficiency) | 67                  |
| Color Accuracy               | 75                  |
| Light Color                  | 4192 (Bright White) |
| Warranty                     | Yes                 |

See [www.lightingfacts.com/specs/leds](http://www.lightingfacts.com/specs/leds) for details.

# PITCH SINGLE WALL SCONCE



An architectural profile reminiscent of beautifully classic roof lines delivers significant light output in this modern LED wall sconce suitable for both indoor and outdoor applications. The Pitch Single's die-cast metal body houses powerful LED light sources that create visual appeal as light cascades down along a wall.

## High quality LM80-tested LEDs

for consistent long-life performance and color

## Outstanding protection against the elements:

- Marine-grade powder coat finishes
- Stainless Steel mounting hardware
- Impact-resistant, UV stabilized frosted acrylic lensing

## Can be mounted for up lighting or down lighting

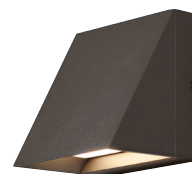
## SPECIFICATIONS

|                       |                          |
|-----------------------|--------------------------|
| DELIVERED LUMENS      | 823                      |
| WATTS                 | 26.1                     |
| VOLTAGE               | 120V, 277V               |
| DIMMING               | ELV                      |
| LIGHT DISTRIBUTION    | Symmetric                |
| MOUNTING OPTIONS      | Downlight or Uplight     |
| CCT                   | 3000K                    |
| CRI                   | 80+                      |
| COLOR BINNING         | 3 Step                   |
| BUG RATING            | B1-U0-G0                 |
| DARK SKY              | Compliant (Downlight)    |
| WET LISTED            | IP65                     |
| GENERAL LISTING       | ETL, Title 24            |
| START TEMP            | -30°C                    |
| FIELD SERVICEABLE LED | No                       |
| CONSTRUCTION          | Aluminum                 |
| HARDWARE              | Stainless Steel          |
| FINISH                | Marine Grade Powder Coat |
| LED LIFETIME          | L70; 70,000 Hours        |
| WARRANTY*             | 5 Years                  |

\* Visit [techlighting.com](http://techlighting.com) for specific warranty limitations and details.



PITCH SINGLE  
shown in black



PITCH SINGLE  
shown in bronze



PITCH SINGLE  
shown in charcoal

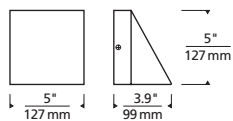


PITCH SINGLE  
shown in silver

## ORDERING INFORMATION

| 700WSPIT | SIZE     | FINISH     | LAMP                              |
|----------|----------|------------|-----------------------------------|
|          | S SINGLE | B BLACK    | -LED830 LED 80 CRI, 3000K 120V    |
|          |          | Z BRONZE   | -LED830277 LED 80 CRI, 3000K 277V |
|          |          | H CHARCOAL |                                   |
|          |          | I SILVER   |                                   |

# PITCH SINGLE WALL SCONCE

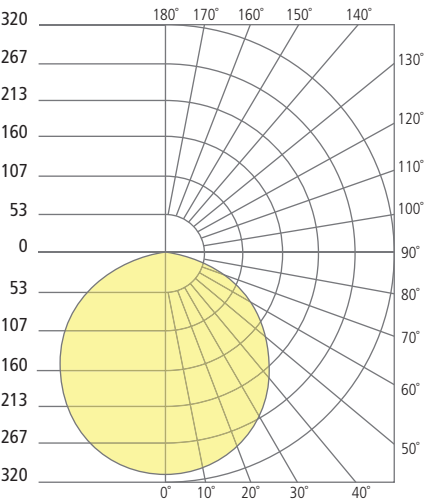


Pitch Single

## PHOTOMETRICS\*

\*For latest photometrics, please visit [www.techlighting.com/OUTDOOR](http://www.techlighting.com/OUTDOOR)

|                     |          |
|---------------------|----------|
| <b>PITCH SINGLE</b> |          |
| Total Lumen Output: | 823      |
| Total Power:        | 26.2     |
| Luminaire Efficacy: | 31.4     |
| Color Temp:         | 3000K    |
| CRI:                | 80+      |
| BUG Rating:         | B1-U0-G0 |



## PROJECT INFO

| FIXTURE TYPE & QUANTITY | JOB NAME & INFO | NOTES |
|-------------------------|-----------------|-------|
|                         |                 |       |
|                         |                 |       |



GENERATION BRANDS  
7400 Linder Avenue, Skokie, Illinois 60077  
T 847.410.4400 F 847.410.4500



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SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION S-2A RETAINING WALL

THE RETAINING WALL AT THE REAR OF THE BUILDING IS A VERY IMPORTANT ELEMENT OF THIS PROJECT. THE SELECTED PRODUCT IS MANUFACTURED BY REDI ROCK, BLOCK STYLE "LEDGEWOOD", DARK BROWN COLOR, AS DEPICTED IN WRITTEN SUBMISSION S – 2B.



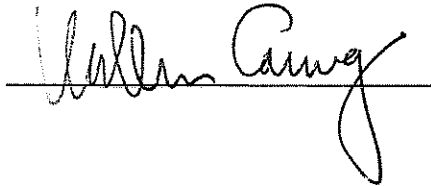


I, William Conway of Sebago Technics Inc., hereby certify that a neighborhood meeting was held on January 4, 2017 at 5:30 PM , at the Portland Public Library, Meeting Room No. 3 .

I also certify that on 12/15/16, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.
2. Residents on the "interested parties" list.
3. A digital copy of the notice was also provided to the Planning Division (imy@portlandmaine.gov and Idobson@portlandmaine.gov) and the assigned planner to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,

A handwritten signature in black ink, appearing to read "William Conway", is written over a horizontal line.

11/5/17 (date)

Attached to this certification are:

1. Copy of the invitation sent
2. Sign – in sheet
3. Meeting minutes



December 15, 2016

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for residential condominiums to be located at **218-220 Washington Ave.**

Meeting Location: **Portland Public Library, 5 Monument Square, Meeting Room #3**

Meeting Date: **January 4, 2017**

Meeting Time: **5:30 pm – 6:30 pm**

The City requires that the property owners with 500 feet of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in-sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions, please call, William Conway (Sebago Technics) 207-200-2055.

Sincerely,

SEBAGO TECHNICS, INC.

A handwritten signature in black ink that reads "William T. Conway". The signature is fluid and cursive, with the first and last names being more prominent.

William T. Conway, RLA / LEED AP

Neighborhood Meeting Sign In Sheet

218-220 Washington Avenue Project

January 4, 2017 Portland Public Library 5:30 Pm

Name and Address

Craig Church 192 Washington Ave / adcope1@yahoo.co

Allan Tager 219 Anderson St.

DAN GREENSTEIN 420 BAKER BLVD

Glen Morse 218 Washington Ave

Stephen & Sheila Sewall 203 Anderson St



Neighborhood Meeting Minutes  
218 – 220 Washington Avenue Project  
January 4 , 2017   Portland Public Library   5:30 PM

---

The meeting convened with an introduction of the site plan and architectural design by William Conway, Sebago Technics and Michael Coyne, Archetype Architects.

Approximately six members of the public attended the meeting ; following are the topics discussed :

1. Building materials proposed are fiber cement siding, metal panels and wood elements to accent building entrances. Final design and color selection pending Planning Board review.
2. Building will have a central corridor with units facing Washington Avenue and Anderson Street.
3. Building width approximately 68 feet , all living areas and bedrooms will have windows and natural lighting.
4. Construction of the project will be challenging given the sloping terrain. At the rear of the building a retaining wall will be constructed to create a level platform for the building. The retaining wall will be built using precast concrete segmented blocks with grid reinforcing. The face of the wall will be textured for an appearance of natural stone. Many noted this is common in the neighborhood.
5. The building will not block any views from existing nearby homes.
6. Many complimented the project and stated it will be a nice improvement to the neighborhood.
7. The applicant has yet to determine if units will be condos or apartments, and price ranges have not been determined.

The meeting concluded at approximately 6: 15 PM.

## Washington Ave

### Site Standard Compliance

The site standards that applies to multiple-family development in Portland include a requirement asking for open space on the site. This open space is to complement and enhance the building form and development. Open space can include buffers and screening from the streets and neighboring properties, yard space for residents, play area and planting strips along the perimeter.

The site sits on Washington Ave where the building is held back from the property line to allow for plantings to buffer the building from the sidewalk. The new sidewalk going in is also going to include an esplanade with street trees offering a second layer of buffer from the street. One of the great benefits of this site is that directly across Washington Ave from the building is the Easter Promenade park, accessible by a designated crosswalk giving the residents immediate access to green space far greater than is typical for urban living. The vehicular access to the site is also located along Washington Ave, and where the drive turns back to the building and creates a patch of land, planted areas are proposed. This will act as a buffer and a focal point at the entry.

On the north side of the parcel, the property line abuts a State of Maine Parcel that is currently covered in natural vegetation including mature trees and this area would remain undisturbed. The west side of the building faces 295 and the Back Cove so the vegetation would create a dense buffer.

The west façade is the most complicated in terms of site work because there is a steep slope which will be addressed with a retaining wall running all the way from the northern end of the building to the outer edge of the vehicular access at the south end. In order to build the wall, approximately 10' of earth in front will have to be disrupted – Along the other sides of the building and the drive access, the foundation/retaining wall will be built from the inside. The wall will be held back 10' from the property line to achieve this and then that swath of land will be replanted with evergreen to create a year-round buffer against the retaining wall. The property line on this side is neighbored by the Rockingham Electric Co which has similar vegetation to the State of Maine Parcel and which would also remain. This buffer would help to shield views of the retaining wall but the slope would allow the vegetation to drop below the height of the building to the architecture would be distantly visible from the highway and Back Cove. This is one of the great benefits of this site, it's residents will be able to take full advantage of the beautiful views.

At the driveway end of the west façade, there is an area of land that has been designated as a no-build zone. This area will remain as it is with grasses and shrubs and there will be a break in the retaining wall to allow access to the green space. This driveway also runs alongside the residential property on the south side of the site. The benefit of this is that the building is held back a good distance from the residence keeping it from block the views down to the Back Cove.

Along with all of the buffering and green space surrounding the building, the majority of the units are designed with decks so the users have their own personal outdoor space to enjoy.



June 14, 2017  
06172

Jean Fraser, City Planner  
City of Portland  
City Hall, 389 Congress Street  
Portland, ME 04101

**Level III Site Plan Application, 218-220 Washington Avenue, LLC**  
**218-220 Washington Ave, Tax Map 10, Block A, Lot 10 & 15**

Dear Jean:

This letter, associated materials and the enclosed plans are provided in response to the Level III Site Plan Application engineering review comments for 218-220 Washington Ave, the 45-unit residential condominium building off from Washington Avenue.

The following itemized responses correspond to the review comments as contained in the memorandum dated April 21, 2017. The comments are shown below with our responses to follow.

**City Planner Memorandum – Woodard & Curran Review Comments – Dated April 21, 2017:**

- 1) In general, we have constructability concerns with this project. There are varying steep slopes on the site, and significant features proposed for construction, including a tall retaining wall and deep stormdrain features. These features may be constructible, but larger impact areas and limits of work may be required than what is currently shown on the plans. We understand that maintenance of existing vegetation is proposed, so it will be important to ensure that these areas can be maintained.
  - We recognize the constructability concerns given the challenging site topography. The proposed retaining wall will be constructed from the inside, within the building footprint, with minimal disturbance to the embankment below. The proposed tree line, shown on the Utility Plan, identifies the limit of disturbance.
- 2) In accordance with Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. We offer the following comments:
  - b) Basic Standard: Plans, notes, and details have been provided to address erosion and sediment control requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with Appendix A, B, & C of MaineDEP Chapter 500. No erosion control has been specified associated with the proposed stormdrain installation, and additional clarification will be required in this area.
    - A sediment barrier and silt protection for the existing catch basin on Anderson Street has been added to the Grading and Utility Plan.
  - c) General Standard: The project will result in a net increase in impervious area of approximately 17,460 square feet. As such, the project is required to include stormwater management features for stormwater quality control. The Applicant has proposed an

Underdrained Subsurface Sand Filter. The stormwater system is required to comply with the requirements of Chapter 7.3 of Volume III of the MaineDEP Stormwater BMP Manual. In general, we are in agreement with the stormwater management approach. We recommend that the applicant review the project layout with the Stormtech manufacturer to ensure that the design is in conformance with the manufacturer's standards. The Applicant should confirm that adequate access for maintenance will be provided. We are completing further review of the stormwater model, and will provide additional comments following the workshop.

- The engineering support team from Stormtech has reviewed the layout/design to ensure sizing and conformance. We will continue to coordinate with Mr. Cheever from Advanced Drainage Systems throughout the design process. The access manholes are located in the garage which can be accessed by a maintenance vehicle and/or small equipment.
- d) Flooding Standard: The project will result in a net increase in impervious area of approximately 17,460 square feet. As such, the project is required to control the rate or quantity of stormwater runoff from the site. Stormwater flow will increase during the 2-year storm event. We agree that the impact will be minimal, but we do recommend that the Applicant review their stormwater system for potential changes.
- The stormwater runoff from the proposed development is detained within the Underdrained Subsurface Sand Filter and slowly released through the filter media and the underdrain outlet. The HydroCAD model routing was refined and now indicates a stormwater peak flow increase of 1.6% under proposed conditions. The increase is considered "insignificant" in relation to the accuracy of the HydroCAD computations.
- 3) The Applicant is proposing to connect their stormdrain system to the City's infrastructure in Anderson Street. The City has been completing a project on Anderson Street, and the street will be under a moratorium.
- The proposed stormdrain is shown to connect into the stormdrain infrastructure in Anderson Street via gravity flow. The applicant understands that any trench repair/repaving that may be required will have to be completed according to the City's moratorium standards.
- 4) The Applicant should review their stormdrain design relative to the depth of structures and pipes. DMH 4 is proposed with nearly 45' in depth, and DMH 5 is proposed with nearly a 28' depth. These are unreasonable for construction. Other structures are not as deep, but still deep enough to require a fairly significant trench width. The Applicant should review all structure depths and provide a realistic impact width to manage construction of stormwater systems at these depths.
- The rim and invert elevations have been revised for stormdrain structures DMH-4 and DMH-5. An additional manhole was added between the downslope of the retaining wall and Anderson Street to reduce the depth of excavation. The proposed depth from rim to invert for DMH-4 is nearly 21 feet. The existing grade at the manhole is approximately 5 feet lower so the depth of excavation is approximately 15 feet. The proposed depth from rim to invert and depth of excavation for DMH-5 is nearly 19 feet.
  - In accordance to OSHA requirements, we anticipate stormdrain excavation of 20 feet to consist of a 6 foot high trench box at the bottom of the excavation with ¾:1 sloping (Type A soils) to existing grade. The proposed tree line shown on the Utility Plan defines the approximate limits of excavation.



- 5) Relative to the depths discussed above, pipes will also be installed with steep slopes. The Applicant should address concerns associated with steep slopes (internal pipe scour, trench backfill erosion, etc.).
  - The maximum slope of the proposed stormdrain installation is approximately 12 percent which flows at around 9 fps on a hundred year storm event. Based upon a recommendation from engineering at Advanced Drainage Systems, HP Storm (polypropylene) pipe is proposed, which has a higher pipe stiffness and superior joint performance. We have also specified concrete anchoring used for steep slope installation to ensure pipe stability and reduce the potential trench erosion.
- 6) A stormwater inspection and maintenance plan is required in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances. A plan has been provided, but it should be updated to reflect the current proposed stormwater treatment systems.
  - The Inspection, Maintenance, and Housekeeping Plan has been updated.
- 7) Per the City of Portland's recently adopted modifications to the sidewalk standards, the driveway apron must match the sidewalk material.
  - The driveway apron has been revised to show a continuous brick sidewalk crossing the apron.
- 8) All work within the City of Portland right-of-way must meet the City of Portland Technical standards. The Applicant should review this standards relative to pipe installation and pavement. Specifically note, that 9.5 mm HMA is not the City's standard for surface pavement.
  - The details have been revised to reflect the current City's standards.
- 9) Additional geotechnical information will be required for the retaining wall design.
  - Additional geotechnical information will be provided as part of the wall design.

We are hopeful that we have adequately addressed the review comments such that the Planning Board may consider the Site Plan Application. Upon your review of the enclosed plans and information, please call with any questions or if you require additional information. Thank you for your consideration.

Sincerely,

SEBAGO TECHNICS, INC.



Keith D. Gray, P.E.  
Project Engineer

KDG/SMF  
Enc.



# 218-220 WASHINGTON AVENUE

218-220 WASHINGTON AVENUE  
PORTLAND, MAINE

APPLICANT:  
218-220 WASHINGTON  
AVENUE LLC  
199 ELDERBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

ENGINEER/SURVEYOR:

**SEBAGO**  
TECHNICS

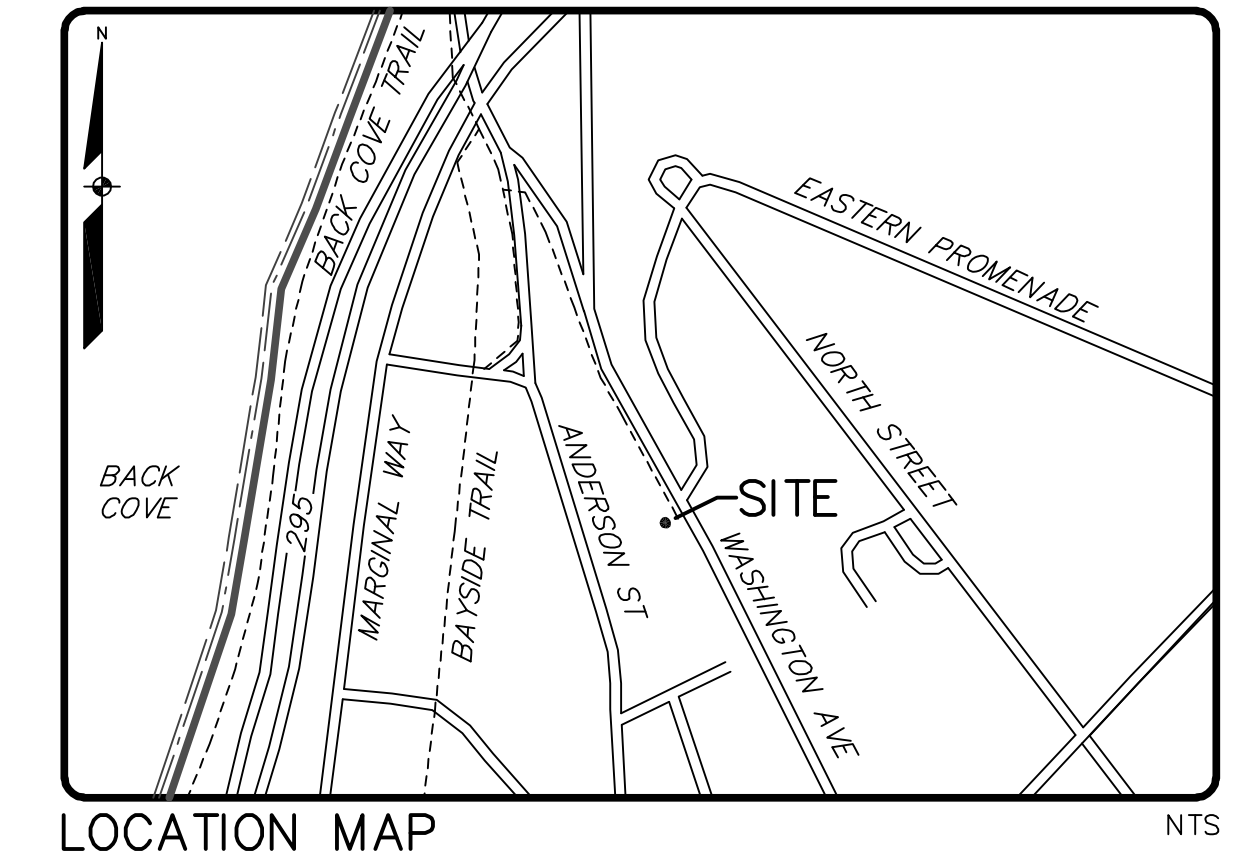
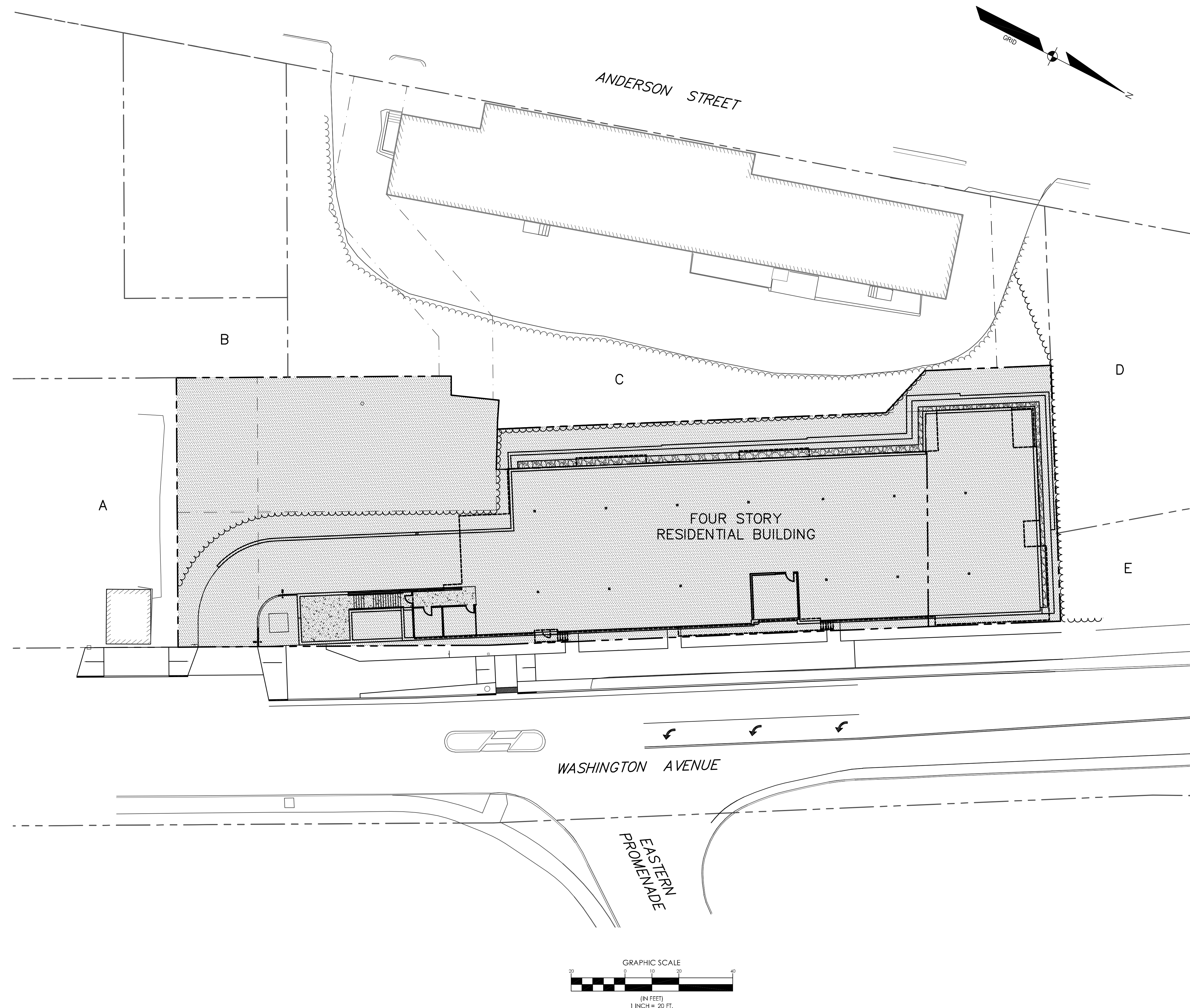
WWW.SEBAGOTECHNICS.COM  
75 John Roberts Rd. Suite 1A South Portland, ME 04106 Tel. 207-200-2100  
250 Goddard Rd. Suite B Lewiston, ME 04240 Tel. 207-763-5656

PROJECT ARCHITECT:

ARCHETYPE  
ARCHITECTS  
48 UNION WHARF  
PORTLAND, MAINE

LIST OF ABUTTERS:

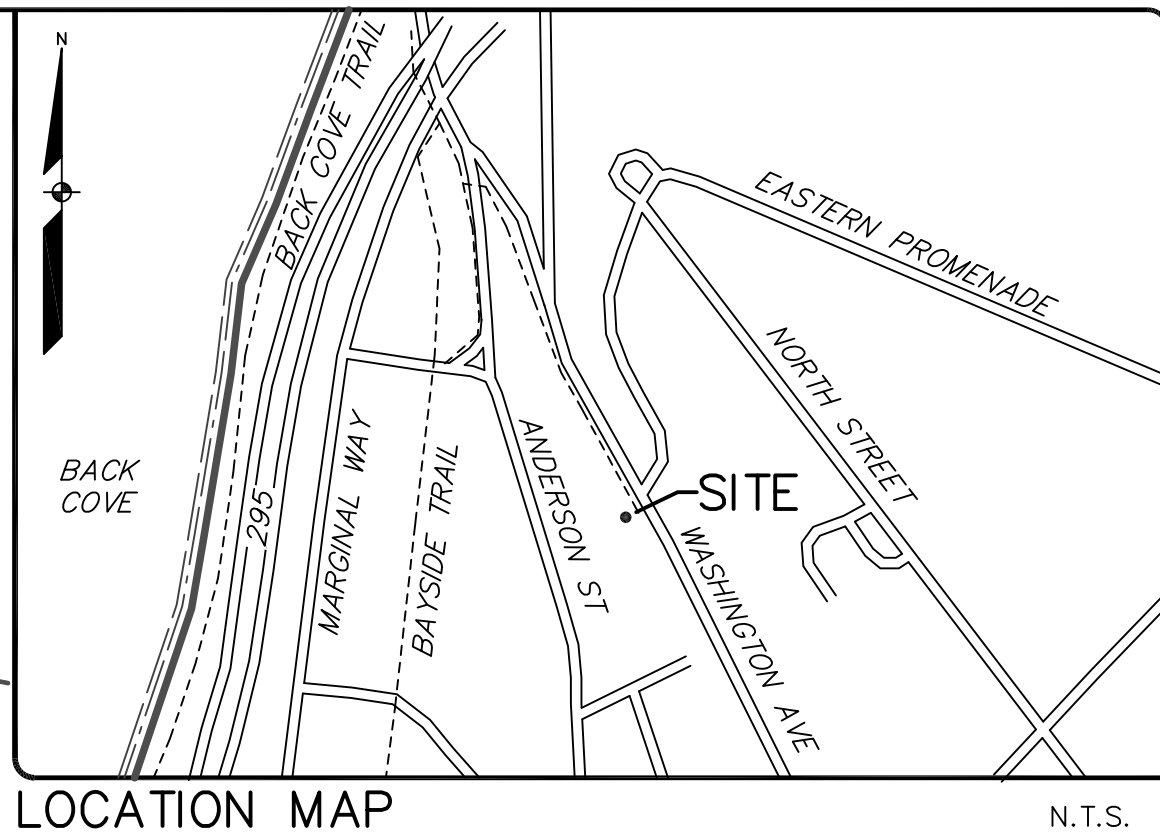
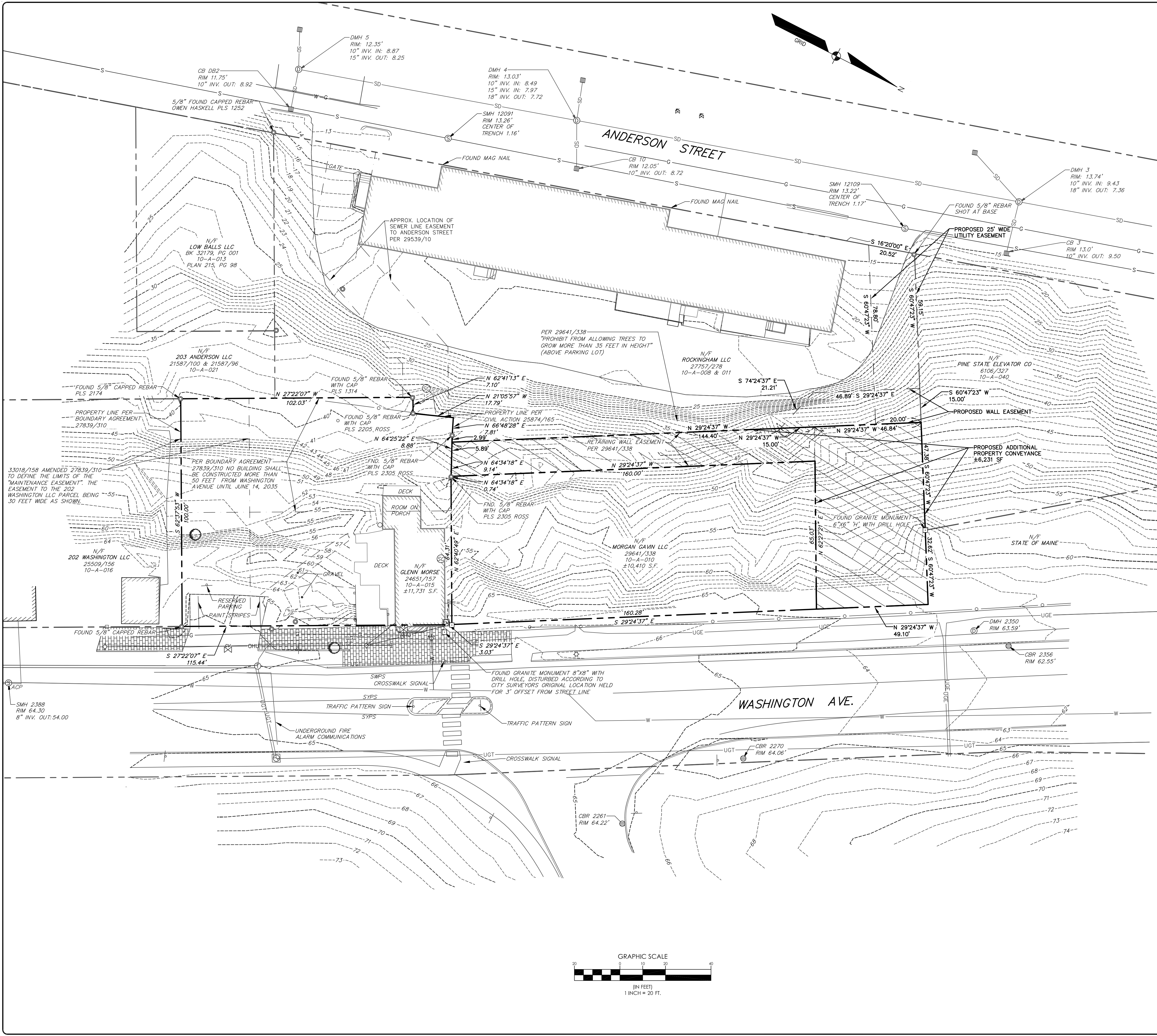
| KEY | ABUTTER                 | BOOK/PAGE            |
|-----|-------------------------|----------------------|
| A   | 202 WASHINGTON LLC      | 25509/156            |
| B   | 203 ANDERSON LLC        | 21587/100 & 21587/96 |
| C   | ROCKINGHAM LLC          | 27757/278            |
| D   | PINE STATE ELEVATOR CO. | 6106/327             |
| E   | STATE OF MAINE          | -                    |



## INDEX OF PLANS

| SHEET NO. | SHEET TITLE                     |
|-----------|---------------------------------|
| 1         | COVER SHEET                     |
| 2         | DEMOLITION PLAN                 |
| 3         | SITE PLAN LOWER LEVEL           |
| 4         | SITE PLAN UPPER LEVEL           |
| 5         | UTILITY PLAN                    |
| 6         | GRADING PLAN LOWER LEVEL        |
| 7         | GRADING PLAN UPPER LEVEL        |
| 8         | LANDSCAPE PLAN                  |
| 9         | DETAILS                         |
| 10        | DETAILS                         |
| 11        | DETAILS                         |
| 12        | DETAILS                         |
| 1.        | PRE DEVELOPMENT WATERSHED PLAN  |
| 2.        | POST-DEVELOPMENT WATERSHED PLAN |





- GENERAL NOTES:**
- THE RECORD OWNERS OF THE PARCELS ARE AS FOLLOWS:  
TAX MAP 10 BLOCK A LOT 15: GLENN MORSE PER DEED BOOK 24651 PAGE 157 WITH REVISIONS IN DEED BOOK 25874 PAGE 165 AND 27839 PAGE 310.  
TAX MAP 10 BLOCK A LOT 10: MORGAN GAVIN LLC PER DEED BOOK 29641 PAGE 338.  
• ALL DEEDS REFERENCED ARE RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD)
  - BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND SURVEY BY SEBAGO TECHNICS, INC. WITH SUPPLEMENTAL TOPOGRAPHY OBTAINED FROM LIDAR INFORMATION.
  - PLAN REFERENCES:  
A. STANDARD BOUNDARY SURVEY, AS-BUILT TOPOGRAPHY AND DEED ANALYSIS LOT AT 218 WASHINGTON AVENUE, PORTLAND FOR GLENN MORSE, BY ROSS BOUNDARY SURVEYS, (JOB NO. 20604P), LAST DATED JULY 2013.  
B. WASHINGTON AVENUE SIDE PATH EXISTING SITE CONDITIONS BETWEEN #198 AND INTERSTATE 295 OFF RAMP, BY THE CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT ENGINEERING DIVISION, PLAN NUMBER 881/35, LAST DATED OCTOBER 28, 2010.  
C. STREET LINE RETRACEMENT AND EXISTING MONUMENTATION PLAN, ANDERSON STREET, FOX STREET, GOULD STREET & PLOWMAN STREET, BY THE CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT ENGINEERING DIVISION, PLAN NUMBER 1017/29, LAST DATED FEBRUARY 27, 2005.  
D. SITE PLAN OF TAX MAP 10 BLOCK A LOT 10, WASHINGTON AVE, PORTLAND MAINE FOR GLENN MORSE, BY STEPHEN SELLECK, JOB NUMBER 2013, LAST DATED FEBRUARY 17, 2013.  
E. BOUNDARY SURVEY AT 207 ANDERSON STREET, FOR ROCKINGHAM LLC, BY OWEN HASKELL, INC. LAST DATED MARCH 25, 2013, AND RECORDED IN CCRD PLAN BOOK 215 PAGE 98.
  - PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, BASED ON DUAL FREQUENCY GPS OBSERVATIONS AND CHECKED WITH CITY CONTROL POINTS. ELEVATIONS DEPICTED HEREON ARE ON THE CITY OF PORTLAND DATUM BASED UPON 2 BENCHMARKS PROVIDED BY THE CITY.
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| LEGEND   |                      |
|----------|----------------------|
| EXISTING |                      |
|          | PROPERTY LINE/R.O.W. |
|          | ABUTTER LINE/R.O.W.  |
|          | EASEMENT             |
|          | MONUMENT             |
|          | IRON PIPE/ROD        |
|          | CURVE/LINE NO.       |
|          | BUILDING             |
|          | DECK/STEPS/OVERHANG  |
|          | EDGE PAVEMENT        |
|          | EDGE CONCRETE        |
|          | PAVEMENT PAINT       |
|          | EDGE GRAVEL          |
|          | CURB LINE            |
|          | CONTOURS             |
|          | CHAIN LINK FENCE     |
|          | STOCKADE FENCE       |
|          | RETAINING WALL       |
|          | DECIDUOUS TREE       |
|          | BOLLARD              |
|          | SIGN                 |
|          | GAS                  |
|          | GAS GATE VALVE       |
|          | WATER                |
|          | WATER SHUT OFF       |
|          | SANITARY SEWER       |
|          | SANITARY MANHOLE     |
|          | SANITARY CLEANOUT    |
|          | STORM DRAIN          |
|          | DRAINAGE MANHOLE     |
|          | CATCH BASIN          |
|          | OVERHEAD UTILITY     |
|          | UNDERGROUND UTILITY  |
|          | TRANSFORMER PAD      |
|          | TELEPHONE MANHOLE    |
|          | LIGHT POLE           |
|          | UTILITY POLE         |
|          | GUY WIRE             |

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MWE

CHECKED  
CDM

PROJECT NO.  
06172

SCALE  
1" = 20'

SHEET 2 OF 23

EXISTING CONDITIONS PLAN  
OF:  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE  
FOR:  
218-220 WASHINGTON AVENUE LLC  
199 ELDERBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

SEBAGO TECHNICS  
WWW.SEBAGOTECHNICS.COM  
75 John Roberts Rd.  
Suite 1A  
South Portland, ME 04106  
Tel: 207-200-2100

REVISIONS  
REV. BY: DATE: STATUS:  
A. WTC 12/15/16 CITY SUBMITTAL NO. 1  
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

MATTHEW W. EK, PLS2117

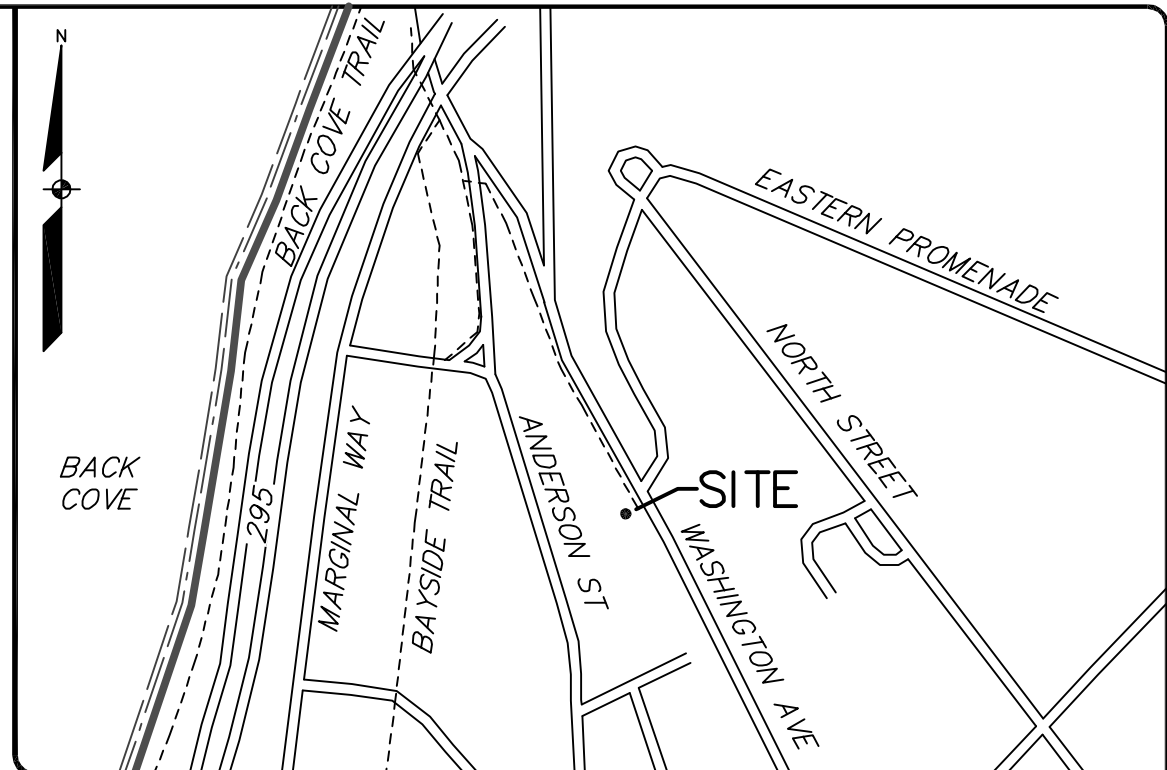
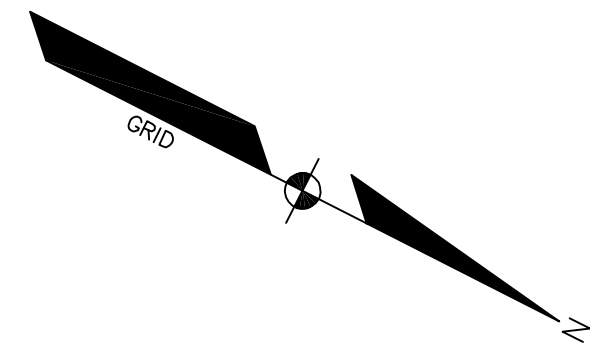






WAIVERS GRANTED

|           |     |      |         |
|-----------|-----|------|---------|
| 4TH FLOOR | 401 | 2 BR | 1245 SF |
| 4TH FLOOR | 402 | 2 BR | 1478 SF |
| 4TH FLOOR | 403 | 1 BR | 786 SF  |
| 4TH FLOOR | 404 | 2 BR | 1500 SF |
| 4TH FLOOR | 405 | 2 BR | 1171 SF |
| 4TH FLOOR | 406 | 2 BR | 1507 SF |
| 4TH FLOOR | 407 | 1 BR | 787 SF  |
| 4TH FLOOR | 408 | 2 BR | 1342 SF |
| 4TH FLOOR | 409 | 2 BR | 1076 SF |



LOCATION MAP

N.T.S.

GENERAL NOTES:

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- E. BOUNDARY SURVEY AT 207 ANDERSON STREET, FOR ROCKINGHAM LLC, BY OWEN HASSELL, INC. LAST DATED MARCH 25, 2013, AND RECORDED IN CCRD PLAN BOOK 2315 PAGE 98.
4. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802N. BASED ON DUAL FREQUENCY GPS OBSERVATIONS AND CHECKED WITH CITY CONTROL POINTS. ELEVATIONS DEPICTED HEREON ARE ON THE CITY OF PORTLAND DATUM BASED UPON 2 BENCHMARKS PROVIDED BY THE CITY. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD TOGETHER WITH PLANS PROVIDED BY THE CITY.
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6. TOTAL AREA OF SITE IS 28,372 SQUARE FEET.
7. SITE IS LOCATED IN THE B1b ZONE.
8. B1b DIMENSIONAL REQUIREMENTS :
- |                       | (REQUIRED) | (PROPOSED) |
|-----------------------|------------|------------|
| MIN. LOT SIZE         | NONE       | 28,372 SF  |
| MIN LOT AREA PER DU   | 435 SF     | 630 SF     |
| MIN. STREET FRONTAGE  | 20 FT      | 327.85 FT  |
| MIN. LOT WIDTH        | NONE       | 327.85 FT  |
| MAX. FRONT YARD       | 10 FT      | 5 FT       |
| MIN. REAR YARD        | NONE       | NONE       |
| MIN. SIDE YARD        | NONE       | NONE       |
| STRUCTURE SETBACKS    | N / A      | N / A      |
| MAX. STRUCTURE HEIGHT | 45 FT      | 45 FT      |
| MAX FLOOR AREA        | N / A      | N / A      |
| MAX. IMPIEVIOUS AREA  | 90 %       | 79 %       |
9. PLAN DEPICTS FIRST FLOOR LEVEL OF BUILDING. BUILDING INCLUDES FOUR FLOORS AND A TOTAL AREA OF 99,493 SQUARE FEET. 45 TOTAL RESIDENTIAL UNITS PROPOSED - 22 ONE BEDROOM UNITS AND 23 TWO BEDROOM UNITS.
10. OFF STREET PARKING REQUIRED - 1 SPACE PER UNIT - 45 SPACES REQUIRED 45 SPACES PROPOSED BELOW FIRST FLOOR LEVEL.
11. BICYCLE SPACES REQUIRED - 18 SPACES / 18 SPACES PROPOSED.
12. PLAN DEPICTS A LICENSE AREA TO ALLOW BUILDING FOUNDATIONS AND LANDSCAPING WITHIN THE STREET RIGHT OF WAY.
13. THE NEAREST FIRE HYDRANT IS LOCATED AT THE I-295 NORTHBOUND ON - RAMP, APPROXIMATELY 240 FEET NORTH OF THE GUILD SITE. A SECOND HYDRANT IS LOCATED AT THE ONE END OF WASHINGTON AVENUE AND SOULD STREET, APPROXIMATELY 330 FEET SOUTH OF THE SITE.

|                       | (REQUIRED) | (PROPOSED) |
|-----------------------|------------|------------|
| MIN. LOT SIZE         | NONE       | 28,372 SF  |
| MIN. LOT AREA PER DU  | 435 SF     | 630 SF     |
| MIN. STREET FRONTAGE  | 20 FT      | 327.85 FT  |
| MIN. LOT WIDTH        | NONE       | 327.85 FT  |
| MAX. FRONT YARD       | 10 FT      | 5 FT       |
| MIN. REAR YARD        | NONE       | NONE       |
| MIN. SIDE YARD        | NONE       | NONE       |
| STRUCTURE SETBACKS    | N / A      | N / A      |
| MAX. STRUCTURE HEIGHT | 45 FT      | 45 FT      |
| MAX FLOOR AREA        | N / A      | N / A      |
| MAX. IMPERVIOUS AREA  | 90 %       | 79 %       |

APPROVAL-  
CITY OF PORTLAND  
PLANNING BOARD

DATE \_\_\_\_\_

CHAIRPERSON

STATE OF MAINE

CUMBERLAND COUNTY SS REGISTRY OF DEEDS  
RECEIVED \_\_\_\_\_, 20\_\_\_\_  
AT \_\_\_\_h \_\_\_\_m \_\_\_\_M. AND RECORDED IN  
PLAN BOOK \_\_\_\_\_ PAGE \_\_\_\_\_

ATTEST \_\_\_\_\_ REGISTRAR

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John Roberts Rd.  
Suite 1A  
Portland, ME 04106  
Tel. 207-200-2100

218-220 WASHINGTON AVENUE LLC  
99 ELDERBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

SUBDIVISION PLAT

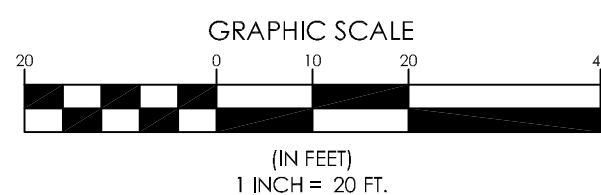
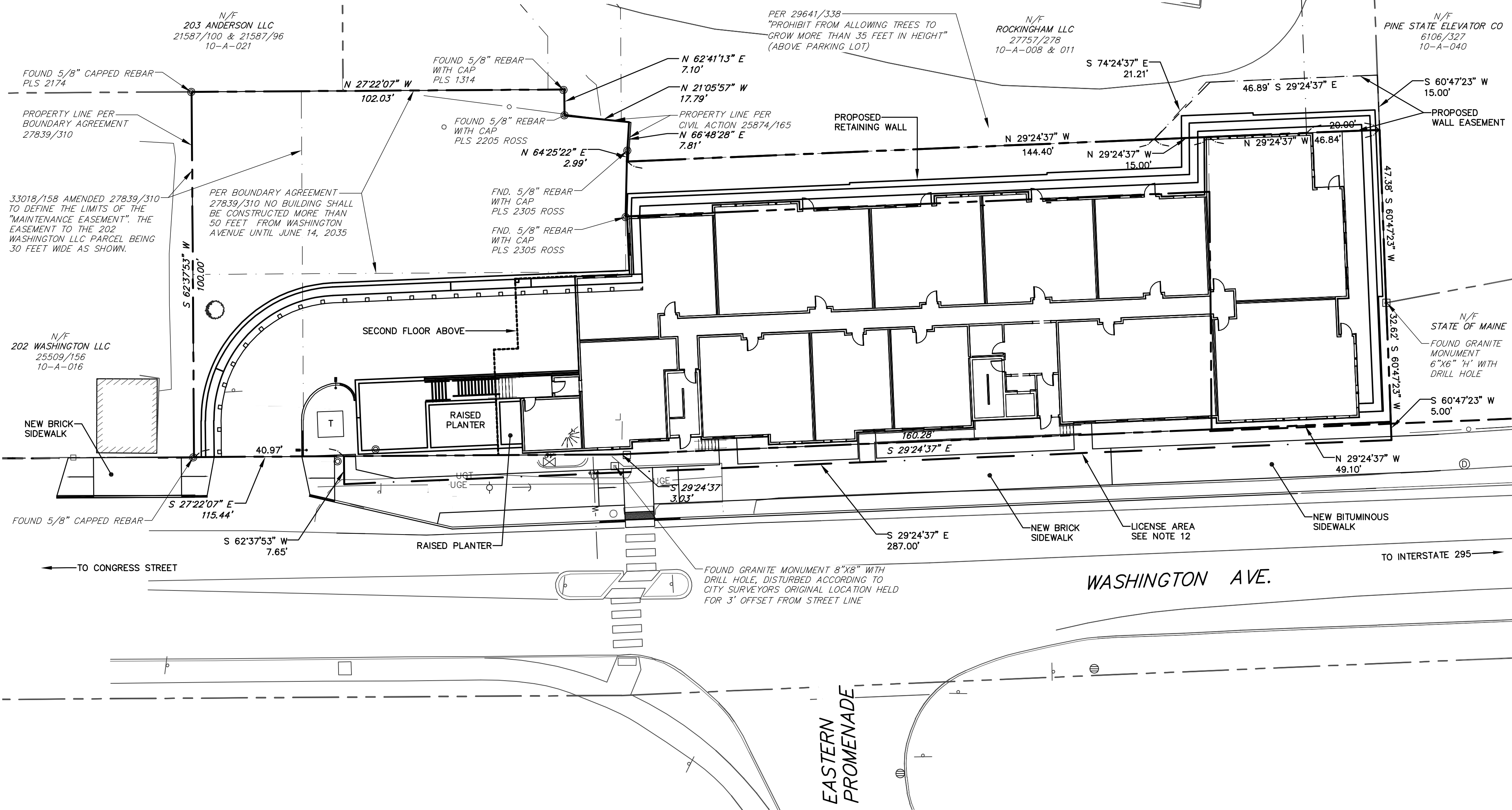
|             |          |
|-------------|----------|
| PROJECT NO. | SCALE    |
| 06172       | 1" = 20' |

SHEET 3 OF 23

### LEGEND

EXISTING

|                     |                         |           |
|---------------------|-------------------------|-----------|
| — — — — —           | PROPERTY LINE/R.O.W.    | — — — — — |
| — — — — —           | ABUTTER LINE/R.O.W.     | — — — — — |
|                     | EASEMENT                |           |
| □                   | MONUMENT                |           |
| ⊙                   | IRON PIPE/ROD           |           |
| C1/L1               | CURVE/LINE NO.          |           |
| =====               | BUILDING                |           |
| _____               | DECK/STEPS/<br>OVERHANG |           |
| _____               | EDGE PAVEMENT           |           |
| _____               | EDGE CONCRETE           |           |
| _____               | PAVEMENT PAINT          |           |
| _____               | EDGE GRAVEL             |           |
| =====               | CURB LINE               |           |
| ---120--- ---118--- | CONTOURS                |           |
| ○                   | CHAIN LINK FENCE        |           |
| □                   | STOCKADE FENCE          |           |
| =====               | RETAINING WALL          |           |
| ⊙                   | DECIDUOUS TREE          |           |
| ○                   | BOLLARD                 |           |
| — — — — —           | SIGN                    |           |
| — — — — —           | GAS                     |           |
| ⊗                   | GAS GATE VALVE          |           |
| — — — — —           | WATER                   |           |
| ⊕                   | WATER SHUT OFF          |           |
| — — — — —           | SANITARY SEWER          |           |
| ⊙                   | SANITARY MANHOLE        |           |
| ⊙                   | SANITARY CLEANOUT       |           |
| — — — — —           | STORM DRAIN             |           |
| ⊙                   | DRAINAGE MANHOLE        |           |
| ⊕    ⊞              | CATCH BASIN             |           |
| —OHU—               | OVERHEAD UTILITY        |           |
| —UOU—               | UNDERGROUND UTILITY     |           |
| ⊞                   | TRANSFORMER PAD         | T         |
| ①                   | TELEPHONE MANHOLE       |           |
| ☆                   | LIGHT POLE              | ■ — ●     |
| —O—                 | UTILITY POLE            |           |
| ←                   | GUY WIRE                |           |
|                     | GUARD RAIL              | — — — — — |
|                     | LICENSE AREA            | — — — — — |



D6172SB.dwg, TAB: SB

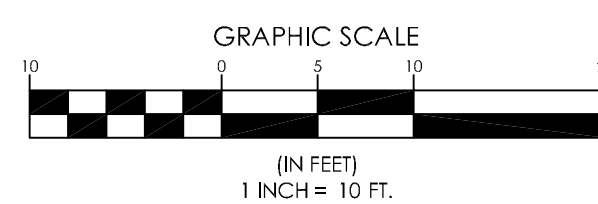












| LEGEND                                                                              |                         |
|-------------------------------------------------------------------------------------|-------------------------|
| EXISTING                                                                            | PROPOSED                |
| _____                                                                               | PROPERTY LINE / R.O.W.  |
| _____                                                                               | ABUTTER LINE / R.O.W.   |
| _____                                                                               | EASEMENT                |
|  | BUILDING                |
| _____                                                                               | DECK / STEPS / OVERHANG |
| _____                                                                               | EDGE PAVEMENT           |
| _____                                                                               | PAVEMENT SAWCUT         |
| _____                                                                               | EDGE CONCRETE           |
|  | EDGE BRICK              |
| _____                                                                               | PAVEMENT PAINT          |
| _____                                                                               | EDGE GRAVEL             |
| _____                                                                               | CURB LINE               |
| _____                                                                               | RETAINING WALL          |
|  | DECIDUOUS TREE          |
|  | SIGN                    |

[illegible]

**SEBAGO**  
TECHNICS

---

[WWW.SEBAGOTECHNICS.COM](http://WWW.SEBAGOTECHNICS.COM)

75 John Roberts Rd.  
Suite 1A  
South Portland, ME 04106  
Tel. 207-200-2100

250 Goodard Rd.  
Suite B  
Lewiston, ME 04240  
Tel. 207-783-5856

SITE PLAN UPPER LEVEL

OF:

218-220 WASHINGTON AVENUE  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE

FOR:

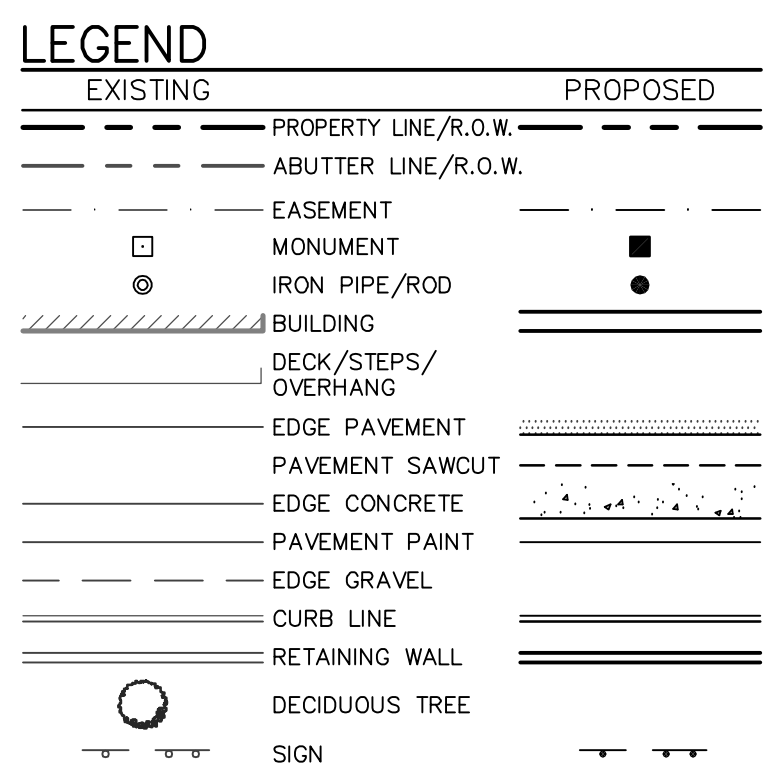
218-220 WASHINGTON AVENUE LLC  
199 ELDERBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

|             |        |
|-------------|--------|
| PROJECT NO. | SCALE  |
| 06172       | 1"=10' |

SHEET 4 OF 12

06172S2.dwg, TAB: S2





1. TRENCHING AND SAND PADDING BY CONTRACTOR GAS LINE MATERIAL AND INSTALLATION BY UNITIL.
2. CONTRACTOR SHALL INSTALL FIELD LOCK GASKETS ON SLIP JOINTS FROM VALVE TO BUILDING.
3. INSTALL 8"x8" TAPPING SLEEVE AND 8" GATE VALVE.
4. 4" DOMESTIC WITH 2" METER INSTALLED IN UTILITY ROOM.

### SANITARY SEWER PIPE DATA

| STORM DRAIN STRUCTURE DATA |       |                                              |                               |       |
|----------------------------|-------|----------------------------------------------|-------------------------------|-------|
| STRUCTURE                  | RIM   | INV. IN                                      | INV. OUT:                     | DIAM. |
| CB-1                       | 58.70 | 53.00 (SD-8)<br>52.50 (SD-3)<br>54.00 (SD-2) | 52.90 (SD-7)                  | 48"   |
| DMH-1                      | 58.90 | 51.28 (SD-5)                                 | 52.10 (SD-4)                  | 48"   |
| DMH-2                      | 58.60 | 51.28 (SD-5)                                 | 51.28 (SD-6)<br>51.65 (SD-16) | 48"   |
| DMH-3                      | 58.40 | 47.00 (SD-8)<br>47.10 (SD-11)                | 47.00 (SD-12)                 | 48"   |
| DMH-4                      | 58.70 | 43.37 (SD-12)                                | 37.96 (SD-13)                 | 60"   |
| DMH-5                      | 37.00 | 33.00 (SD-13)                                | 18.31 (SD-14)                 | 60"   |
| DMH-6                      | 18.50 | 14.00 (SD-14)                                | 13.90 (SD-15)                 | 48"   |
| DMH-7                      | 12.80 | 7.45 (SD-15)                                 |                               |       |
| FI-1                       | 58.30 |                                              | 55.30 (SD-1)                  | 2'x2' |
| FI-2                       | 62.55 |                                              | 53.80 (SD-8)                  | 2'x2' |
| ICS-1                      | 58.60 | 51.42 (SD-7)<br>51.42 (SD-4)                 | 51.32 (SD-9)<br>51.32 (SD-5)  | 60"   |
| OCS-1                      | 58.60 | 50.80 (SD-10)                                | 47.57 (SD-11)                 | 60"   |
| OIL-GRI separator          | 58.30 | 54.52 (SD-1)                                 | 54.42 (SD-2)                  | 48"   |

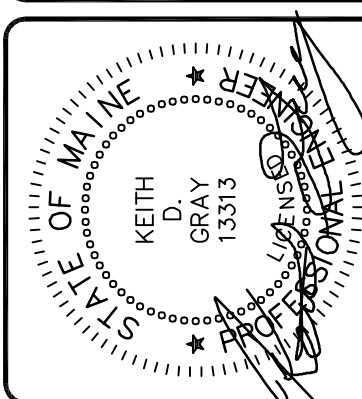
STORM DRAIN PIPE DATA

| NAME  | SIZE | LENGTH | SLOPE   |
|-------|------|--------|---------|
| SD-1  | 10"  | 94'    | 0.830%  |
| SD-2  | 10"  | 25'    | 1.689%  |
| SD-3  | 12"  | 62'    | 2.067%  |
| SD-4  | 12"  | 12'    | 5.549%  |
| SD-5  | 15"  | 3'     | 1.256%  |
| SD-6  | 15"  | 6'     | 0.481%  |
| SD-7  | 12"  | 29'    | 5.058%  |
| SD-8  | 12"  | 58'    | 1.372%  |
| SD-9  | 12"  | 127'   | 3.408%  |
| SD-10 | 15"  | 7'     | 6.192%  |
| SD-11 | 15"  | 11'    | 4.407%  |
| SD-12 | 15"  | 30'    | 12.202% |
| SD-13 | 14"  | 40'    | 12.298% |
| SD-14 | 15"  | 35'    | 12.170% |
| SD-15 | 15"  | 34'    | 11.895% |
| SD-16 | 12"  | 5'     | 3.655%  |
| SD-17 | 12"  | 6'     | 3.518%  |

GRADING & UTILITY NOTES:

1. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD AND PRECEDING PLANS. UTILITIES DEPICTED HEREON MAY NOT BE ACCURATE REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DUG-SAFE SYSTEMS, INC. (1-888-DUG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
2. THE PROJECT IS TO BE SERVED BY PUBLIC WATER AND SEWER. PRIOR TO INSTALLATION, COORDINATE WATER SERVICE WITH THE PORTLAND WATER DISTRICT AND THE SEWER SERVICE WITH THE CITY OF PORTLAND. THE CITY OF PORTLAND HAS EXTENSIONS SHOWN THAT MAY MEET THE CITY OF PORTLAND WATER AND SEWER DISTRICT STANDARDS.
3. ALL SEWAGE AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE PROTECTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES" PUBLISHED BY LAND AND WATER QUALITY MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003 OR LATER. IF IT IS SHOWN THAT THE CITY OF PORTLAND HAS A CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
4. ALL SLOPESOSPEAKER THICKER THAN 3" (H) SHALL BE LINED WITH EROSION CONTROL BLANKET OR ROCK WALK AS SHOWN ON THIS PLAN.
5. INSTALL HALF SALE BARRIER AROUND ALL CATCH BASIN IN PAYMENT.
6. INSTALL SALT BARS IN ALL CATCH BASINS IN PAYMENT.
7. SEE DETAIL SHEETS FOR EROSION CONTROL NOTES
8. SOIL STOCKPILES SHALL NOT BE LOCATED WITHIN 100 FEET OF ANY WATER DRAIN. STOCKPILES SHALL BE CONTAINED WITH A DOUBLE BOUNDARY OF FILTRATION BARRIER. SEE EROSION CONTROL NOTES.
9. PIPE MATERIALS:
  - STORM DRAIN: HDPE WITH THE EXCEPTION OF:
    - SD-13 SHALL BE 14" DUCTILE IRON LINED AND COATED
    - SD-12, SD-14 & SD-15 SHALL BE 15" ADS HP STORM
  - WATER DRAIN: PERFORATED HDPE TYPE "D"
  - SANITARY SEWER: SD-35 HDPE
  - WATER MAIN: PER. PORTLAND WATER DISTRICT STANDARDS
  - DUCTS: SCH 40

KEITH D. GRAY, PE#13313 PLS OR PE PLS OR PE



|          |         |
|----------|---------|
| DESIGNED | CHECKED |
| KDG      | KDG     |

|                                                                                                        |              |                      |
|--------------------------------------------------------------------------------------------------------|--------------|----------------------|
| C                                                                                                      | WTC 06-15-17 | CITY SUBMITTAL NO. 5 |
| B                                                                                                      | WTC 04/11/17 | CITY SUBMITTAL NO. 3 |
| A                                                                                                      | WTC 12/15/16 | CITY SUBMITTAL NO. 1 |
| REV:                                                                                                   | BY:          | DATE:                |
| STATUS:                                                                                                |              |                      |
| THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS: |              |                      |

**SEBAGO**  
TECHNICS  
WWW.SEBAGOTECHNICS.COM

75 John Roberts Rd.  
Suite 1A  
South Portland, ME 04106

250 Goddard Rd.  
Suite B  
Lewiston, ME 04225

UTILITY PLAN

OF:  
2118-220 WASHINGTON AVENUE  
2118-220 WASHINGTON AVENUE  
PORTLAND, MAINE

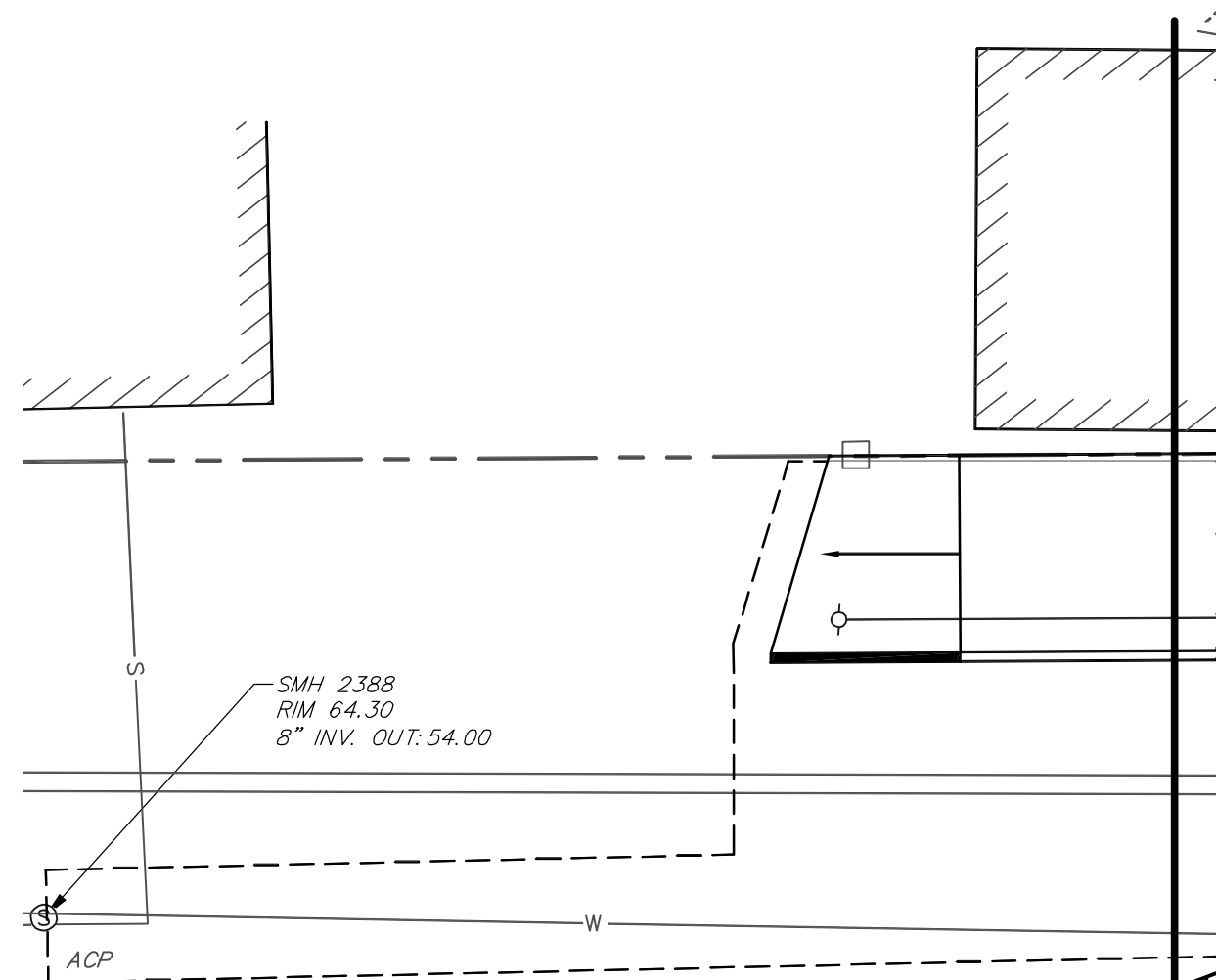
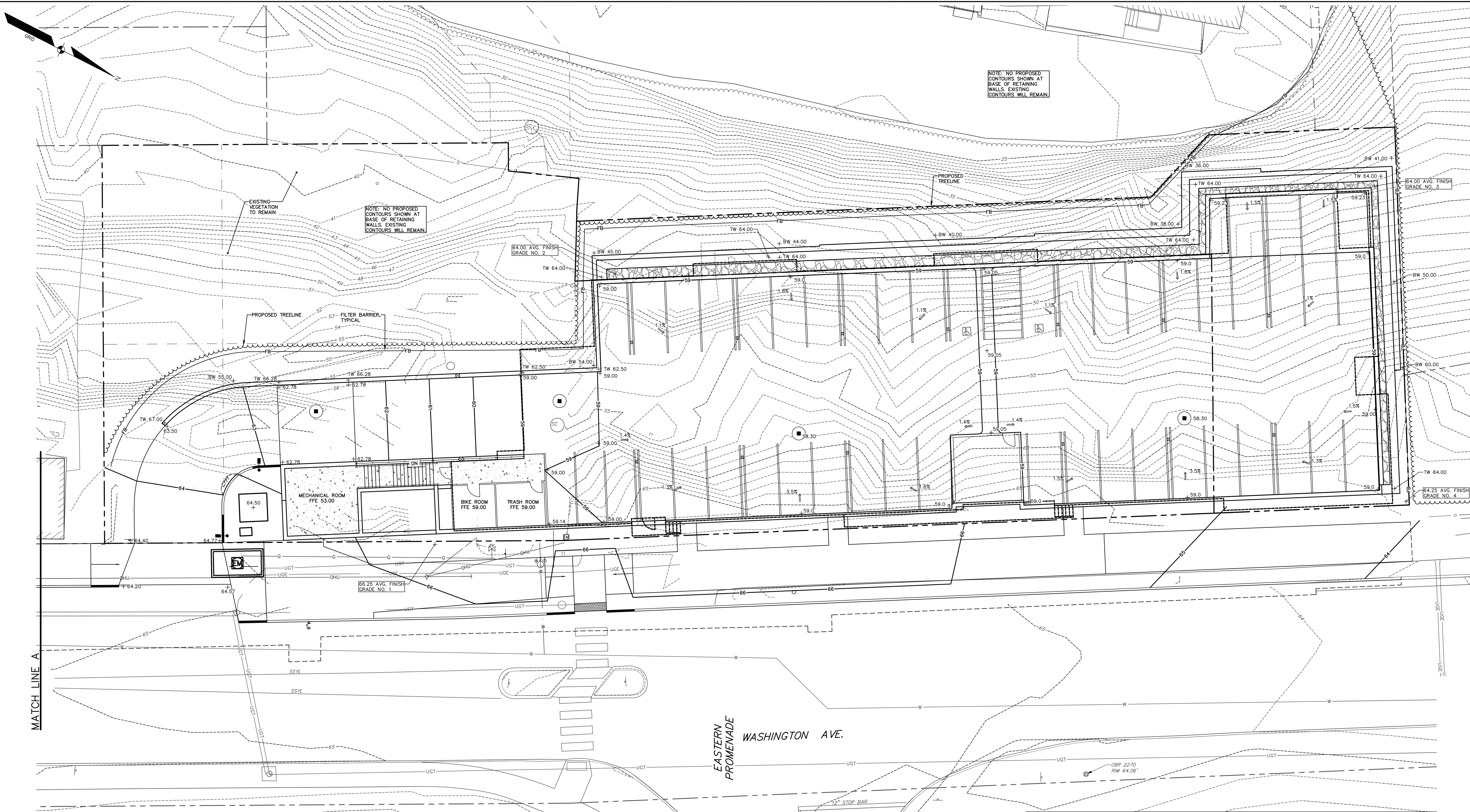
FOR:  
2118-220 WASHINGTON AVENUE LLC  
98 ELDERSBURY ROAD  
PORTLAND, MAINE 04106

|             |          |
|-------------|----------|
| PROJECT NO. | SCALE    |
| 06172       | 1" = 20' |

SHEET 5 OF 12

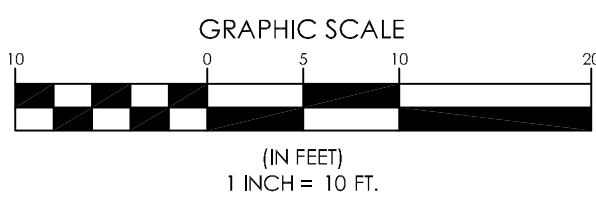
06172GU.dwg, TAB: 06172GU-1





WASHINGTON AVENUE

| LEGEND   |                         |
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| EXISTING | PROPOSED                |
| —        | PROPERTY LINE/R.O.W.    |
| —        | ABUTTER LINE/R.O.W.     |
| —        | EASEMENT                |
| □        | MONUMENT                |
| ○        | IRON PIPE/ROD           |
| ■        | BUILDING                |
| —        | DECK/STEPS/<br>OVERHANG |
| —        | EDGE PAVEMENT           |
| —        | PAVEMENT SAWCUT         |
| —        | EDGE CONCRETE           |
| —        | EDGE BRICK              |
| —        | PAVEMENT PAINT          |
| —        | EDGE GRAVEL             |
| —        | CURB LINE               |
| —        | RETAINING WALL          |
| ○        | DECIDUOUS TREE          |
| —        | SIGN                    |
| —        | CONTOURS                |
| —        | SPOT GRADE              |
| —        | FILTER BARRIER          |



PLS OR PE

NOT FOR CONSTRUCTION

KETH D. GRAY, PE#13313

DESIGNED: KDG  
CHECKED: KDG

|   |              |                      |
|---|--------------|----------------------|
| C | W/C 08-15-17 | CITY SUBMITTAL NO. 5 |
| B | W/C 04-11-17 | CITY SUBMITTAL NO. 3 |
| A | W/C 12-15-16 | CITY SUBMITTAL NO. 1 |

REC'D BY: DATE: STATUS:

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

SEBAGO  
TECHNIQUES

WWW.SEAGOTECHNIQUES.COM  
75 John Sullivan Rd.  
South Portland, ME 04106  
Tel: 207-200-2100

75 John Sullivan Rd.  
South Portland, ME 04106  
Tel: 207-783-5556

GRADING PLAN LOWER LEVEL

OF:  
218-220 WASHINGTON AVENUE  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE

FOR:  
218-220 WASHINGTON AVENUE LLC  
190 ELDERBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

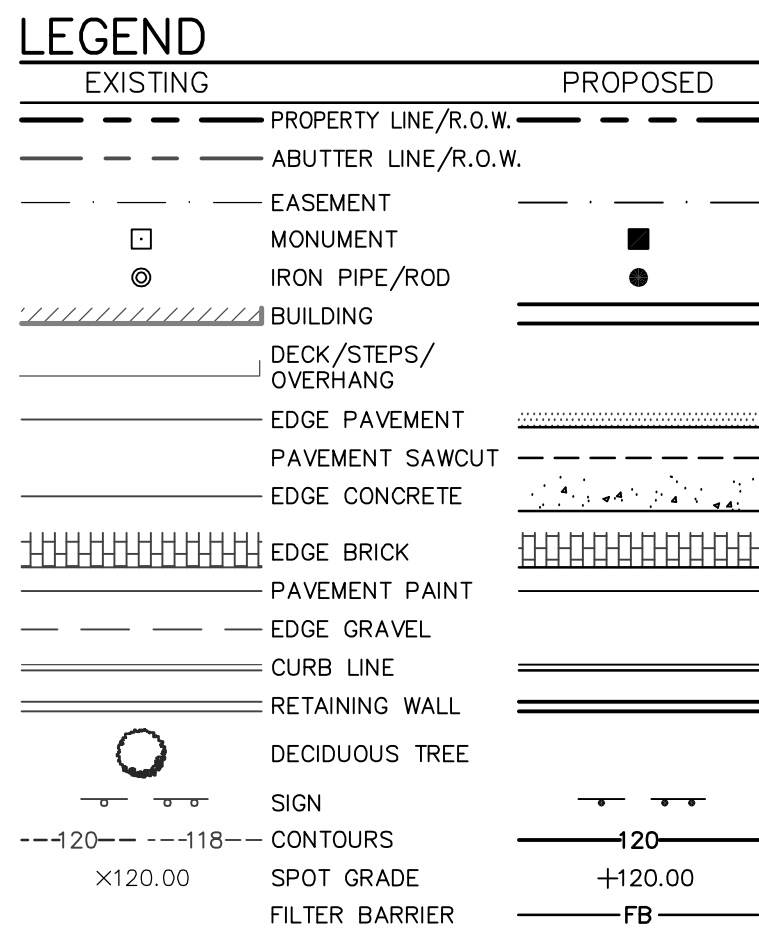
PROJECT NO. 06172

SCALE 1" = 10'

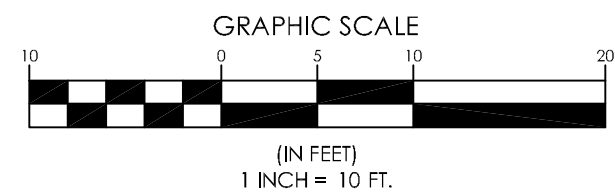
SHEET 6 OF 12

0617200.dwg T48:0617200-2





| AVERAGE FINISH GRADE |                         |
|----------------------|-------------------------|
| 66.25                | AVG. FINISH GRADE NO. 1 |
| 64.00                | AVG. FINISH GRADE NO. 2 |
| 64.00                | AVG. FINISH GRADE NO. 3 |
| 64.25                | AVG. FINISH GRADE NO. 4 |
| <hr/>                |                         |
| 258.50               | SUM OF (4) CORNERS/4 =  |
| 64.63                | AVERAGE FINISH GRADE    |



NOTE: NO PROPOSED  
CONTOURS SHOWN AT  
BASE OF RETAINING  
WALLS. EXISTING  
CONTOURS WILL REMAIN.

NOTE: NO PROPOSED  
CONTOURS SHOWN AT  
BASE OF RETAINING  
WALLS. EXISTING  
CONTOURS WILL REMAIN.

EXISTING  
VEGETATION  
TO REMAIN

64.00 AVG. FINISH  
GRADE NO. 2

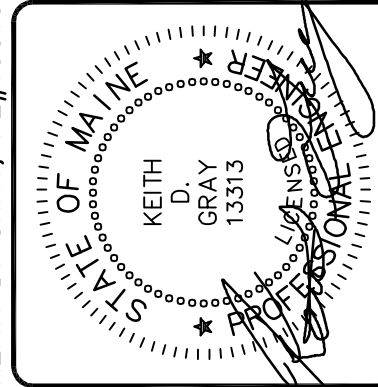
GRADE NO. 3

64.25 AVG. GRADE NO. 4

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1000



|                                                                                                                                                                          | DESIGNED                          | CHECKED |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------|
| KDG                                                                                                                                                                      | KDG                               | KDG     |
| C                                                                                                                                                                        | W/C 08-15-17 CITY SUBMITTAL NO. 5 |         |
| B                                                                                                                                                                        | W/C 04/11/17 CITY SUBMITTAL NO. 3 |         |
| A                                                                                                                                                                        | W/C 12/15/16 CITY SUBMITTAL NO. 1 |         |
| REV:                                                                                                                                                                     | BY: DATE: STATUS:                 |         |
| THIS PLAN SHALL NOT BE MOVED WITHOUT WRITTEN PERMISSION FROM SEADCO ENGINEERING INC. ANY REVISIONS TO THIS PLAN WILL BE INDICATED BY A CIRCLE WITH AN "X" IN THE CORNER. |                                   |         |

REV: BY: DATE: STATUS:

**SEBAGO**  
TECHNICS

[WWW.SEBAGOTECHNICS.COM](http://WWW.SEBAGOTECHNICS.COM)

75 John Roberts Rd.  
Suite 1A  
South Portland, ME 04106  
Tel. 207-200-2100

250 Goddard Rd.  
Suite B  
Lewiston, ME 04203  
Tel. 207-783-5610

GRADING PLAN UPPER LEVEL  
OF:  
218-220 WASHINGTON AVENUE  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE  
FOR:  
218-220 WASHINGTON AVENUE LLC  
199 ELDERBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

|             |          |
|-------------|----------|
| PROJECT NO. | SCALE    |
| 06172       | 1" = 10' |

SHEET 7 OF 12

06172GU.dwg, TAB: 06172GU-4



EROSION CONTROL MEASURES

PRE-CONSTRUCTION PHASE

PRIOR TO CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE DOWNGRADE DGE OF ANY AREA TO BE DISTURBED AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA. SEDIMENT BARRIERS SHOULD BE INSTALLED DOWNGRA DIENT OF SOIL OR SEDIMENT STOCKPILES AND STORMWATER PREVENTED FROM RUNNING ONTO THE STOCKPILE. MAINTAIN THE SEDIMENT BARRIERS BY REMOVING ACCUMULATED SEDIMENT, OR REMOVING AND REPLACING THE BARRIER UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. WHERE A DISCHARGE TO A STORM DRAIN INLET OCCURS, IF THE STORM DRAIN CARRIES WATER DIRECTLY TO A SURFACE WATER AND YOU HAVE AUTHORITY TO ACCESS THE STORM DRAIN INLET, YOU MUST INSTALL AND MAINTAIN PROTECTION MEASURES THAT REMOVE SEDIMENT FROM THE DISCHARGE.

PRIOR TO CONSTRUCTION, PROPERLY INSTALL A STABILIZED CONSTRUCTION ENTRANCE (SCE) AT ALL POINTS OF EGRESS FROM THE SITE. THE SCE IS A STABILIZED PAD OF AGGREGATE, UNDERLAIN BY A GEOTEXTILE FILTER FABRIC, USED TO PREVENT TRAFFIC FROM TRACKING MATERIAL AWAY FROM THE SITE ONTO PUBLIC ROWS. MAINTAIN THE SCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE AND MARKED UP PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL STAFF. THREE COPIES OF THE SCHEDULE AND MARKED UP PLAN SHALL BE PROVIDED TO THE MUNICIPALITY THREE DAYS PRIOR TO THE SCHEDULED PRE-CONSTRUCTION MEETING. SPECIAL ATTENTION SHALL BE GIVEN TO THE 14 DAY LIMIT OF DISTURBANCE IN THE SCHEDULE ADDRESSING TEMPORARY AND PERMANENT VEGETATION MEASURES.

CONSTRUCTION AND POST-CONSTRUCTION PHASE

DURING CONSTRUCTION

- INSPECTION AND CORRECTIVE ACTION:  
INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, MATERIALS STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. INSPECT THESE AREAS AT LEAST ONCE A WEEK AS WELL AS BEFORE AND WITHIN 24 HOURS AFTER A STORM EVENT (RAINFALL). PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES, A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS.
- MAINTENANCE:  
IF BEST MANAGEMENT PRACTICES (BMPs) NEED TO BE REPAIRED, THE REPAIR WORK SHOULD BE INITIATED UPON DISCOVERY OF THE PROBLEM BUT NO LATER THAN THE END OF THE NEXT WORKDAY. IF ADDITIONAL BMPs OR SIGNIFICANT REPAIR OF BMPs ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.
- DOCUMENTATION:  
KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN. THE LOG MUST INCLUDE THE NAME(S) AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS, THE DATE(S) OF THE INSPECTIONS, AND MAJOR OBSERVATIONS ABOUT THE OPERATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES, MATERIALS STORAGE AREAS, AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPs THAT NEED MAINTENANCE, BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPs ARE NEEDED. FOR EACH BMP REQUIRING MAINTENANCE, BMP NEEDING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMPs, NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN.

THE LOG MUST BE MADE ACCESSIBLE TO DEPARTMENT STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.

POST-CONSTRUCTION

- PLAN:  
I. CARRY OUT AN APPROVED INSPECTION AND MAINTENANCE PLAN THAT IS CONSISTENT WITH THE MINIMUM REQUIREMENTS OF THIS SECTION. THE PLAN MUST ADDRESS INSPECTION AND MAINTENANCE OF THE PROJECTS PERMANENT EROSION CONTROL MEASURES AND STORMWATER MANAGEMENT SYSTEM. THIS PLAN MAY BE COMBINED WITH THE PLAN LISTED IN SECTION 2(A) OF THIS APPENDIX. SEE SECTION 701(V) FOR SUBMISSION REQUIREMENTS.
- INSPECTION AND MAINTENANCE:  
ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS, THE FOLLOWING AREAS, FACILITIES, AND MEASURES MUST BE INSPECTED AND IDENTIFIED DEFICIENCIES MUST BE CORRECTED. AREAS, FACILITIES, AND MEASURES OTHER THAN THOSE LISTED BELOW MAY ALSO REQUIRE INSPECTION ON A SPECIFIC SITE. INSPECTION OR MAINTENANCE TASKS OTHER THAN THOSE DISCUSSED BELOW MUST BE INCLUDED IN THE MAINTENANCE PLAN DEVELOPED FOR A SPECIFIC SITE.
- REGULAR MAINTENANCE:  
I. CLEAR ACCUMULATIONS OF WINTER SAND IN PARKING LOTS AND ALONG ROADWAYS AT LEAST ONCE A YEAR, PREFERABLY IN THE SPRING. ACCUMULATIONS ON PAVEMENT MAY BE REMOVED BY PAVEMENT SWEEPING. ACCUMULATIONS OF SAND ALONG ROAD SHOULDERS MAY BE REMOVED BY GRADING OR TO THE PAVEMENT EDGE AND REMOVING IT MANUALLY OR BY A FRONT-END LOADER. GRADE OF GRAVEL ROADS, OR GRADING OF THE GRAVEL SHOULDERS OF GRAVEL OR PAVED ROADS, MUST BE ROUTINELY PERFORMED TO ENSURE THAT STORMWATER DRAINS IMMEDIATELY OFF THE ROAD SURFACE TO ADJACENT BUFFER AREAS OR STABLE DITCHES, AND IS NOT IMPROPERLY DISCHARGED INTO ADJACENT BUFFER AREAS OR DITCHES. IF THE ROAD SHOULDER OR DITCH IS DAMAGED, IT SHALL BE REPAIRED. IF WATER BARS OR OPEN-TOPO CULVERTS ARE USED TO DIVERT RUNOFF FROM ROAD SURFACES, CLEAN-OUT ANY SEDIMENTS WITHIN OR AT THE OUTLET OF THESE STRUCTURES TO RESTORE THEIR FUNCTION.
- DOCUMENTATION:  
KEEP A LOG (REPORT) SUMMARIZING INSPECTIONS, MAINTENANCE, AND ANY CORRECTIVE ACTIONS TAKEN. THE LOG MUST INCLUDE THE DATE ON WHICH EACH INSPECTION OR MAINTENANCE TASK WAS PERFORMED, A DESCRIPTION OF THE INSPECTION FINDINGS OR MAINTENANCE COMPLETED, AND THE NAME OF THE INSPECTOR OR MAINTENANCE PERSONNEL PERFORMING THE TASK. IF A MAINTENANCE TASK REQUIRES THE CLEAN-OUT OF ANY SEDIMENTS OR DEBRIS, INDICATE WHERE THE SEDIMENT AND DEBRIS WAS DISPOSED AFTER REMOVAL. THE LOG MUST BE MADE ACCESSIBLE TO DEPARTMENT STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST FIVE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.

EROSION CONTROL APPLICATIONS & MEASURES

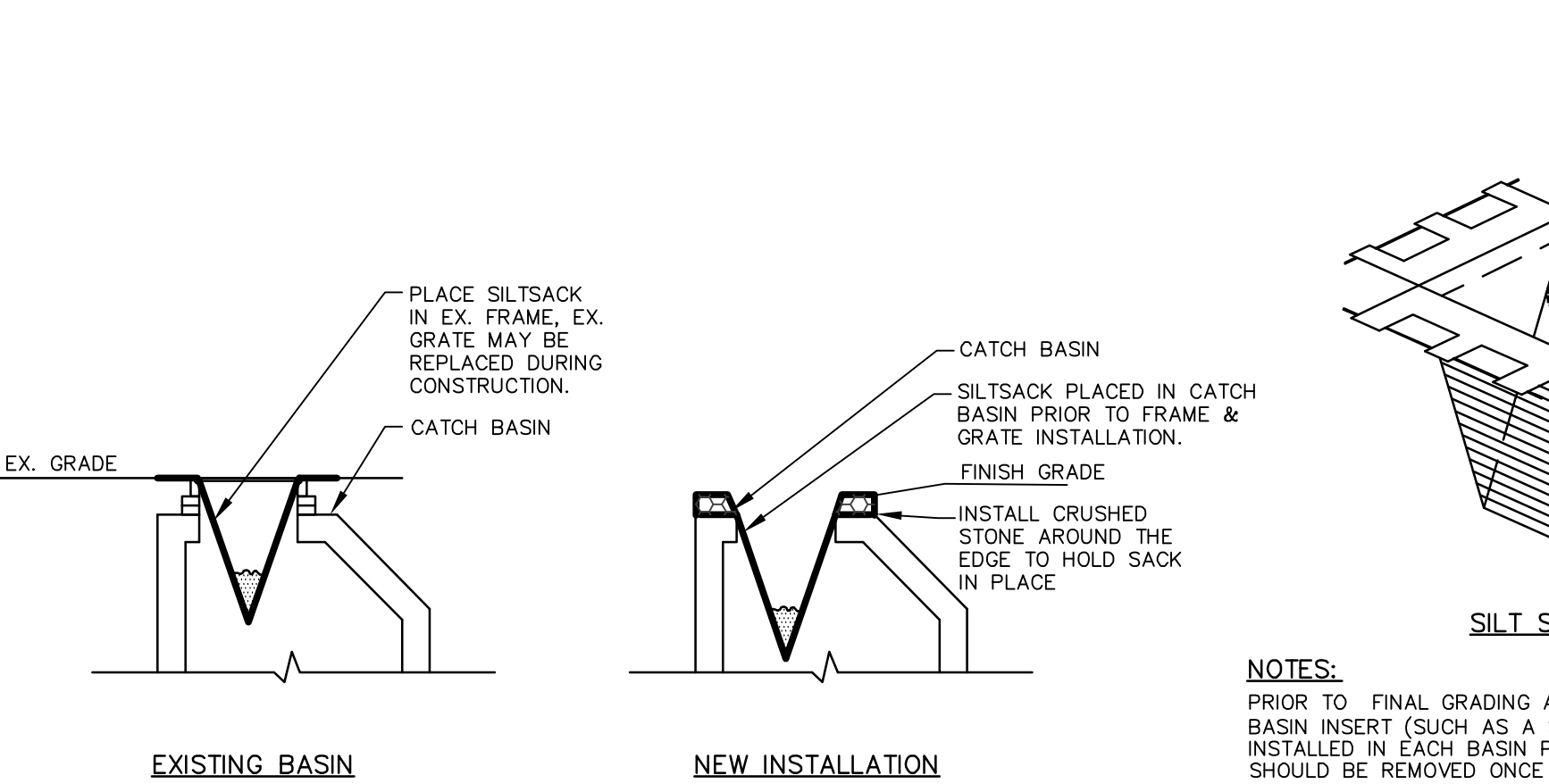
THE PLACEMENT OF EROSION CONTROL MEASURES SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED WITHIN THE CURRENT MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION CHAPTER 500 RULES, THE DEPARTMENTS BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THE STANDARDS AND DETAILS IN THE PLAN SET. EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE THE ACTIVITY BEGINS. MEASURES MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL THE SITE IS PERMANENTLY STABILIZED. ADEQUATE AND TIMELY TEMPORARY AND PERMANENT STABILIZATION MEASURES MUST BE TAKEN.

- POLLUTION PREVENTION:  
WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE, IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERMITTER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERMITTER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 48 HOURS.
- TEMPORARY MULCHING:  
ALL DISTURBED AREAS SHALL BE MULCHED WITH MATERIALS SPECIFIED BELOW PRIOR TO ANY STORM EVENT. ALL DISTURBED AREAS NOT FINAL GRADED WITHIN 7 DAYS SHALL BE MULCHED. ALSO, AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED, SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING. EROSION CONTROL BLANKETS ARE RECOMMENDED TO BE USED AT THE BASE OF GRASSED WATERWAYS AND ON SLOPES GREATER THAN 15%. MULCH ANCHORING SHOULD BE USED ON SLOPES GREATER THAN 5% AFTER SEPTEMBER 15TH OF THE CONSTRUCTION YEAR (SEE WINTER EROSION CONTROL NOTES).  
TYPES OF MULCH:  
HAY OR STRAW SHALL BE APPLIED AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE).  
EROSION CONTROL MIX SHALL BE PLACED EVENLY AND MUST PROVIDE 100% SOIL COVERAGE. EROSION CONTROL MIX SHALL BE APPLIED SUCH THAT THE THICKNESS ON SLOPES 3:1 OR LESS IS 2 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THE THICKNESS ON SLOPES BETWEEN 3:1 AND 2:1 SHALL BE 4 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THIS SHALL NOT BE USED ON SLOPES GREATER THAN 2:1.  
EROSION CONTROL BLANKETS SHALL BE INSTALLED SUCH THAT CONTINUOUS CONTACT BETWEEN THE MAT AND THE SOIL IS OBTAINED. INSTALL BARRIERS AND STAPLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- SOIL STOCKPILES:  
STACKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED WITH HAY OR STRAW AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.
- NATURAL RESOURCES PROTECTION:  
ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE STABILIZED USING TEMPORARY MULCHING (AS DESCRIBED IN PART 1. OF THIS SECTION) OR OTHER NON-ERODIBLE COVER WITHIN 48 HOURS OF EXPOSURE OR PRIOR TO ANY STORM EVENT. SEDIMENT BARRIERS (AS DESCRIBED IN PART 4. OF THIS SECTION) SHALL BE PLACED BETWEEN SOURCE AND THE DISTURBED AREA. IF THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. IF DISTURBANCE TAKES PLACE LESS THAN 30 FEET FROM A PROTECTED RESOURCE AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TO THE RESOURCE, PERMITTER EROSION CONTROLS MUST BE DOUBLED.
- SEDIMENT BARRIERS:  
PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS SHALL BE STAKED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. SEDIMENT BARRIERS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 85%-90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.  
SILT FENCE, SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE EFFECTIVE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES. IT IS RECOMMENDED THAT SILT FENCE BE REMOVED BY CUTTING THE FENCE MATERIALS AT GROUND LEVEL SO AS TO AVOID ADDITIONAL SOIL DISTURBANCE.  
HAY BALES, SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. BALES SHALL BE WIRE-BOUND OR STRING-TIED AND THESE BINDINGS MUST REMAIN PARALLEL WITH THE GROUND SURFACE DURING INSTALLATION TO PREVENT DETERIORATION OF THE BINDINGS. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

EROSION CONTROL MIX SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. THE MIX COMPOSITION SHALL MEET THE STANDARDS DESCRIBED WITHIN THE MDEP BEST MANAGEMENT PRACTICES. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER.

CONTINUOUS CONTAINED BERM SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THIS SEDIMENT BARRIER BARRIERS IS EROSION CONTROL MIX PLACED WITHIN A SYNTHETIC TUBULAR NETTING AND PERFORMS AS A STURDY SEDIMENT BARRIER THAT WORKS WELL ON HARD GROUND SUCH AS FROZEN CONDITIONS, TRAVELED AREAS OR PAVEMENT. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER.

- TEMPORARY CHECK DAMS:  
SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. CHECK DAMS ARE TO BE PLACED WITHIN DITCHES/ SWALES AS SPECIFIED ON THE DESIGN PLANS IMMEDIATELY AFTER FINAL GRADING. CHECK DAMS SHALL BE 2 FEET HIGH. TEMPORARY CHECK DAMS MAY BE REMOVED ONLY AFTER THE ROADWAYS ARE PAVED AND THE VEGETATED SWALES ARE ESTABLISHED WITH AT LEAST 85%-90% OF VIGOROUS PERENNIAL GROWTH. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER REMOVAL OF THE CHECK DAM.



CATCH BASIN PROTECTION DETAIL (FOR PAVED AREAS)

NOT TO SCALE

STONE CHECK DAMS, SHOULD BE CONSTRUCTED OF 2 TO 3 INCH STONE AND PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

HAY BALE CHECK DAMS, WE DO NOT RECOMMEND THE USE OF HAY BALES AS CHECK DAMS.

MANUFACTURED CHECK DAMS, MANUFACTURED CHECK DAMS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF AUTHORIZED BY THE PROPER LOCAL, STATE OR FEDERAL REGULATING AGENCIES. THESE UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

- STORMDRAIN INLET PROTECTION:  
INLET PROTECTION SHALL BE PLACED AROUND A STORMDRAIN DROP INLET OR CURB INLET PRIOR TO PERMANENT STABILIZATION OF THE IMMEDIATE AND UPSTREAM DISTURBED AREAS. THEY SHALL BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN-OUT AND DISPOSAL OF TRAPPED SEDIMENTS AND MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES. ANY RESULTANT PONDING OF WATER FROM THE PROTECTION METHOD MUST NOT CAUSE EXCESSIVE INCORPORATION OR DAMAGE TO ADJACENT AREAS OR STRUCTURES.

HAY BALE DROP INLET PROTECTION: WE DO NOT RECOMMEND THE USE OF HAY BALES AS INLET PROTECTION.

CONCRETE BLOCK AND STONE INLET SEDIMENT FILTER (DROP OR CURB INLET), SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE HEIGHT OF THE CONCRETE BLOCK BARRIER CAN VARY BUT MUST BE BETWEEN 12 AND 24 INCHES TALL. A MINIMUM OF 1 INCH CRUSHED STONE SHALL BE USED.

MANUFACTURED SEDIMENT BARRIERS AND FILTER (DROP OR CURB INLET), MANUFACTURED FILTERS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

- STABILIZED CONSTRUCTION EXIT:  
PRIOR TO CLEARING AND/OR GRUBBING THE SITE A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED WHEREVER TRAFFIC WILL EXIT THE CONSTRUCTION SITE ONTO A PAVED ROADWAY IN ORDER TO MINIMIZE THE TRACKING OF SEDIMENT AND DEBRIS FROM THE CONSTRUCTION SITE ONTO PUBLIC ROADWAYS. THE ENTRANCES AND ADJACENT ROADWAY AREAS SHALL BE PERIODICALLY SWEEP OR WASHED TO FURTHER MINIMIZE THE TRACKING OF MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. STABILIZED CONSTRUCTION EXITS SHALL BE CONSTRUCTED IN AREAS SPECIFIED ON THE PLANS AND AS DETAILED ON THE PLANS.

- DUST CONTROL:  
DUST CONTROL DURING CONSTRUCTION SHALL BE ACHIEVED BY THE USE OF A WATERING TRUCK TO PERIODICALLY SPRINKLE THE EXPOSED ROADWAY AREAS AS NECESSARY TO REDUCE DUST DURING THE DRY MONTHS. APPLYING OTHER DUST CONTROL PRODUCTS SUCH AS CALCIUM CHLORIDE OR OTHER MANUFACTURED PRODUCTS ARE ALLOWED IF AUTHORIZED BY THE PROPER LOCAL, STATE AND/OR FEDERAL REGULATING AGENCIES. HOWEVER, IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO MITIGATE DUST AND SOIL LOSS FROM THE SITE.

- TEMPORARY VEGETATION:  
TEMPORARY VEGETATION SHALL BE APPLIED TO DISTURBED AREAS THAT WILL NOT RECEIVE FINAL GRADING FOR PERIODS UP TO 12 MONTHS. TEMPORARY VEGETATION SHALL BE USED EXTENSIVELY IN AREAS ADJACENT TO NATURAL RESOURCES. SEEDING PREPARATION AND APPLICATION OF SEED SHALL BE CONDUCTED AS INDICATED IN THE PERMANENT VEGETATION SECTION OF THIS NARRATIVE. SPECIFIC SEEDS (FAST GROWING AND SHORT LIVING) SHALL BE SELECTED FROM THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 3/2003 OR LATER. ALTERNATIVE EROSION CONTROL MEASURES SHOULD BE USED IF SEEDING CAN NOT BE DONE BEFORE SEPTEMBER 15TH OF THE CONSTRUCTION YEAR.

- PERMANENT VEGETATION:  
REVEGETATION MEASURES SHALL COMMENCE IMMEDIATELY UPON COMPLETION OF FINAL GRADING OF AREAS TO BE LOAMED AND SEEDED. APPLICATION OF SEED SHALL CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR. PLEASE REFER TO THE WINTER EROSION CONTROL NOTES FOR MORE DETAIL. REVEGETATION MEASURES SHALL CONSIST OF THE FOLLOWING:

SEEDBED PREPARATION:  
A. FOUR (4) INCHES OF LOAM SHALL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE. LOAM SHALL BE FREE OF SUBSOIL, CLAY LUMPS, STONES AND OTHER OBJECTS OVER 2 INCHES OR LARGER IN ANY DIMENSION, AND WITHOUT WEEDS, ROOTS OR OTHER EROSIONABLE MATERIAL.

B. SOIL TESTS SHALL BE TAKEN AT THE TIME OF SOIL STRIPPING TO DETERMINE FERTILIZATION REQUIREMENTS. SOIL TESTS SHALL BE TAKEN PROMPTLY AS TO NOT INTERFERE WITH THE 14-DAY LIMIT ON SOIL EXPOSURE BASED UPON TEST RESULTS. SOIL AMENDMENTS SHALL BE INCORPORATED INTO THE SOIL PRIOR TO FINAL SEEDING. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS MAY BE APPLIED AS FOLLOWS:

| ITEM                                                                                                                                                                                            | APPLICATION RATE     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 10-20-20 FERTILIZER (N-P205-K20 OR EQUAL)                                                                                                                                                       | 18.4 LBS./1,000 S.F. |
| GROUND LIMESTONE (50% CALCIUM & MAGNESIUM OXIDE)                                                                                                                                                | 138 LBS./1,000 S.F.  |
| C. WORK LINE AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL, TO A DEPTH OF 4 INCHES WITH PROPER EQUIPMENT. ROLL THE AREA TO FIRM THE SEEDBED EXCEPT ON CLAY OR SILTY SOILS OR COARSE SAND. |                      |

APPLICATION OF SEED:  
A. SEEDING, SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR. GENERALLY A SEED MIXTURE MAY BE APPLIED AS FOLLOWS: (MDEP SEED MIX 2 IS DISPLAYED)

| SEED TYPE           | APPLICATION RATE                    |
|---------------------|-------------------------------------|
| CREeping RED FESCUE | 0.48 LBS./1,000 S.F. (20 LBS./ACRE) |
| REDO TOP            | 0.05 LBS./1,000 S.F. ( 2 LBS./ACRE) |
| TALL FESCUE         | 0.48 LBS./1,000 S.F. (20 LBS./ACRE) |
| TOTAL               | 0.97 LBS./1,000 S.F. (42 LBS./ACRE) |

NOTE: A SPECIFIC SEED MIXTURE SHOULD BE CHOSEN TO MATCH THE SOILS CONDITION OF THE SITE. VARIOUS AGENCIES CAN RECOMMEND SEED MIXTURES. MDEP RECOMMENDED SEED MIXTURES ARE IN THE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 3/2003 OR LATER.

- HYDROSEEDING: SHALL BE CONDUCTED ON PREPARED AREAS WITH SLOPES LESS THAN 2:1. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. RECOMMENDED SEEDING RATES MUST BE INCREASED BY 10X WHEN HYDROSEEDING.
- MULCHING: SHALL COMMENCE IMMEDIATELY AFTER SEED IS APPLIED. REFER TO THE TEMPORARY MULCHING SECTION OF THIS NARRATIVE FOR DETAILS.

FOLLOWING SEEDBED PREPARATION, SOD CAN BE APPLIED IN LIEU OF SEEDING IN AREAS WHERE IMMEDIATE VEGETATION IS MOST BENEFICIAL, SUCH AS DITCHES, AROUND STORMWATER DRAINAGE AREAS AND AREAS OF AESTHETIC VALUE. SOD SHOULD BE LAID AT RIGHT ANGLES TO THE DIRECTION OF FLOW, STARTING AT THE LOWEST ELEVATION. SOD SHOULD BE ROLLED OR TAMPED DOWN TO EVEN OUT THE JOINTS ONCE LAID DOWN. WHERE THE SOD DOES NOT PROPERLY ANCHOR DOWN, IRRIGATE THE SOD IMMEDIATELY AFTER INSTALLATION. IN MOST CASES, SOD CAN BE ESTABLISHED BETWEEN APRIL 1ST AND NOVEMBER 15TH OF THE CONSTRUCTION YEAR, HOWEVER, REFER TO THE WINTER EROSION CONTROL NOTES FOR ANY ACTIVITIES AFTER OCTOBER 1ST.

TRENCH DEWATERING AND TEMPORARY STREAM DIVERSION.

WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAMINANT STRUCTURE (E.G. HAY BALE LINER POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN ANY CASE SHALL THE FILTER BAG OR CONTAMINANT STRUCTURE BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.

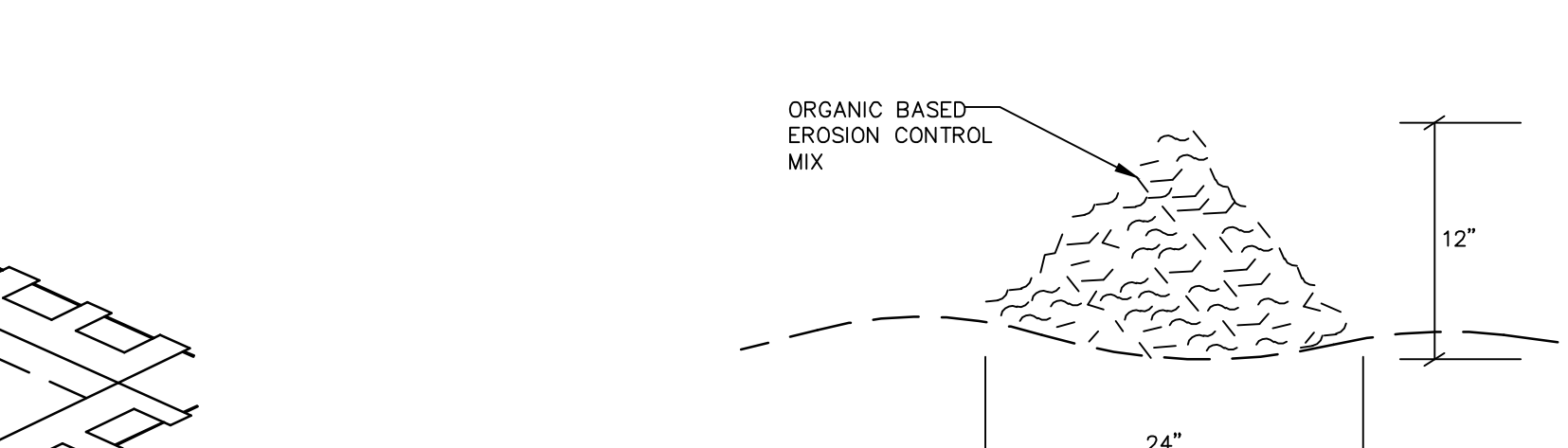
STANDARDS FOR TIMELY STABILIZATION:

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE CONTRACTOR WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE MDEP WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 8% (12.5H:1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

- STABILIZE THE SLOPE WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX AS DESCRIBED IN ITEM 2(C) OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM 2(D) OF THIS STANDARD.
- STABILIZE THE SLOPE WITH SOD -- THE CONTRACTOR WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY NOVEMBER 15. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE-SEASON SOD TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).
- STABILIZE THE SLOPE WITH EROSION CONTROL MIX -- THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF EROSION CONTROL MIX ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE EROSION CONTROL MIX, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. DO NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 33% (3H:1V).
- STABILIZE THE SLOPE WITH STONE RIPRAP -- THE CONTRACTOR WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE CONTRACTOR WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 8%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1,000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM 3(C) OF THIS STANDARD.
- STABILIZE THE SOIL WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1,000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH EROSION CONTROL MIX -- THE CONTRACTOR WILL PLACE A MINIMUM TWO-INCH LAYER OF EROSION CONTROL MIX ON THE SOIL BY NOVEMBER 15. PRIOR TO PLACING THE EROSION CONTROL MIX, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE.



EROSION CONTROL MIX BERM

NOT TO SCALE

CONSTRUCTION SCHEDULE

SITE IMPROVEMENTS WILL MOST LIKELY BEGIN IN \_\_\_\_\_ DEPENDING UPON FINAL PROJECT APPROVAL. THE FOLLOWING SCHEDULE IS ANTICIPATED:

- ESTIMATED CONSTRUCTION TIME:  
EROSION CONTROL MEASURES TO BE PLACED  
SITE CLEARING AND GRUBBING  
CONSTRUCTION OF ROAD SURFACES FOR ACCESS  
STORMWATER MANAGEMENT AREA CONSTRUCTION  
UTILITY IMPROVEMENTS AND ROADWAY CONSTRUCTION  
MULCH SPREAD FOR EROSION CONTROL  
START FINAL SEEDING ON PREPARED AREAS  
(DURING GROWING SEASON)  
BIWEEKLY MONITORING OF VEGETATIVE GROWTH  
RE-SEEDING OF AREAS, IF NEEDED  
REMOVAL OF EROSION CONTROL DEVICES

\* HOME CONSTRUCTION ON INDIVIDUAL LOTS MAY BEGIN ONCE THE ROADWAY BASE HAS BEEN SUFFICIENTLY CONSTRUCTED TO ALLOW VEHICLE ACCESS TO THE LOTS. HOME CONSTRUCTION MAY CONTINUE BEYOND THE ESTIMATED COMPLETION DATE FOR ROADWAY CONSTRUCTION. DISTURBED AREAS ON INDIVIDUAL LOTS MAY ALSO BE SUBJECT TO THE EROSION AND SEDIMENTATION CONTROL PROVISIONS CONTAINED HEREIN.

\*\* DATES ARE SUBJECT TO CHANGE AT THE DISCRETION OF THE ENGINEER, DEPENDING ON CONSTRUCTION PROGRESS.

HOUSEKEEPING:

THE FOLLOWING GENERAL PERFORMANCE STANDARDS APPLY TO THE PROPOSED PROJECT.

- SPILL PREVENTION:  
CONTROLS MUST BE TAKEN TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO PREVENT LEAKS OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAMINATION, AND RESPONSE PLANNING MEASURES.
- GROUNDWATER PROTECTION:  
DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL FOR CONTAMINATING GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN INFILTRATION AREA IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL, DIKES, BERMS, SLUMPS, AND OTHER FORMS OF SECONDARY STORAGE. PUBLIC ROADS SHOULD BE SWEEPED IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE EXISTING DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.
- FUGITIVE SEDIMENT AND DUST:  
ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EMISSIONS OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NECESSARY. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEEPED IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE EXISTING DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

- DEBRIS AND OTHER MATERIALS:  
MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, AND OTHER MATERIALS TO WIND. CONSTRUCTION DEBRIS, INCLUDING WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

- EXCAVATION DE-WATERING:  
EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SITED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGHOUT NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN, AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

- AUTHORIZED NON-STORMWATER DISCHARGES:  
IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:

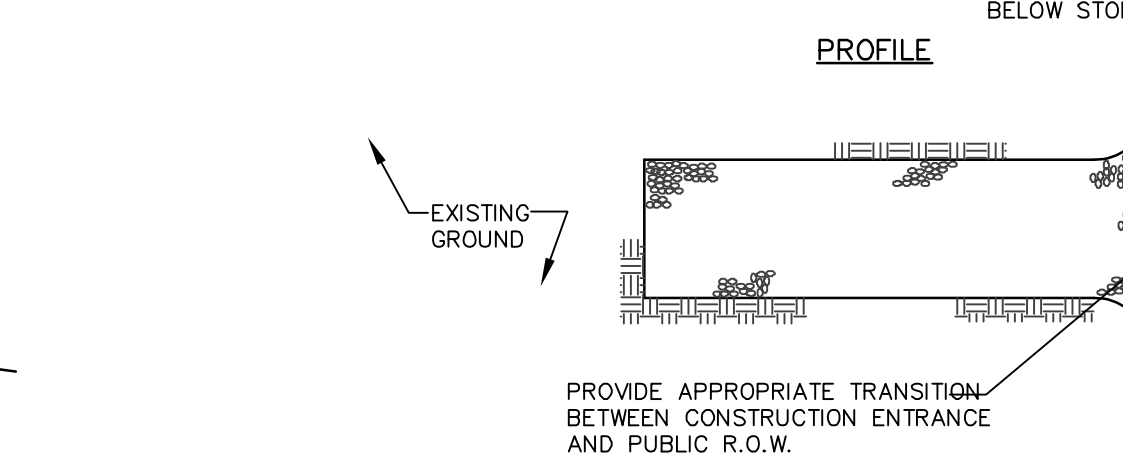
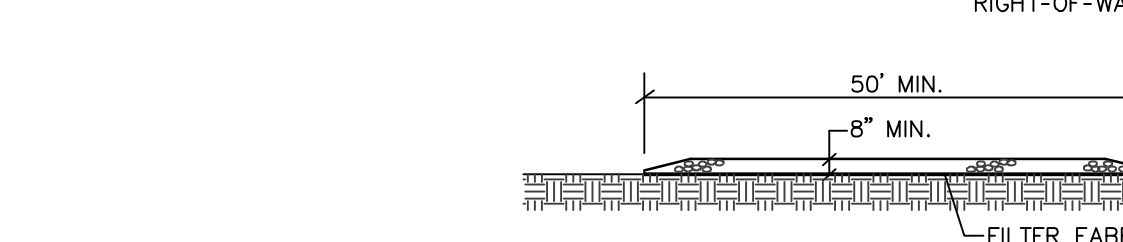
DISCHARGES FROM FIREFIGHTING ACTIVITY: FIRE HYDRANT FLUSHINGS, VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHWATER IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE, AND TRANSMISSION WASHING IS PROHIBITED). UNCONTAMINATED GROUNDWATER OR SPRING WATER. FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED. UNCONTAMINATED EXCAVATION DEWATERING. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; LANDSCAPE IRRIGATION.

- UNAUTHORIZED NON-STORMWATER DISCHARGES:  
THE DEP DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, SPECIFICALLY, THE DEPARTMENTS APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:  
WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS.  
FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE.  
SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING.  
TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

DISCHARGES FROM FIREFIGHTING ACTIVITY: FIRE HYDRANT FLUSHINGS, VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHWATER IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE, AND TRANSMISSION WASHING IS PROHIBITED). UNCONTAMINATED GROUNDWATER OR SPRING WATER. FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED. UNCONTAMINATED EXCAVATION DEWATERING. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; LANDSCAPE IRRIGATION.

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THE DEP DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, SPECIFICALLY, THE DEPARTMENTS APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:  
WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS.  
FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE.  
SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING.  
TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

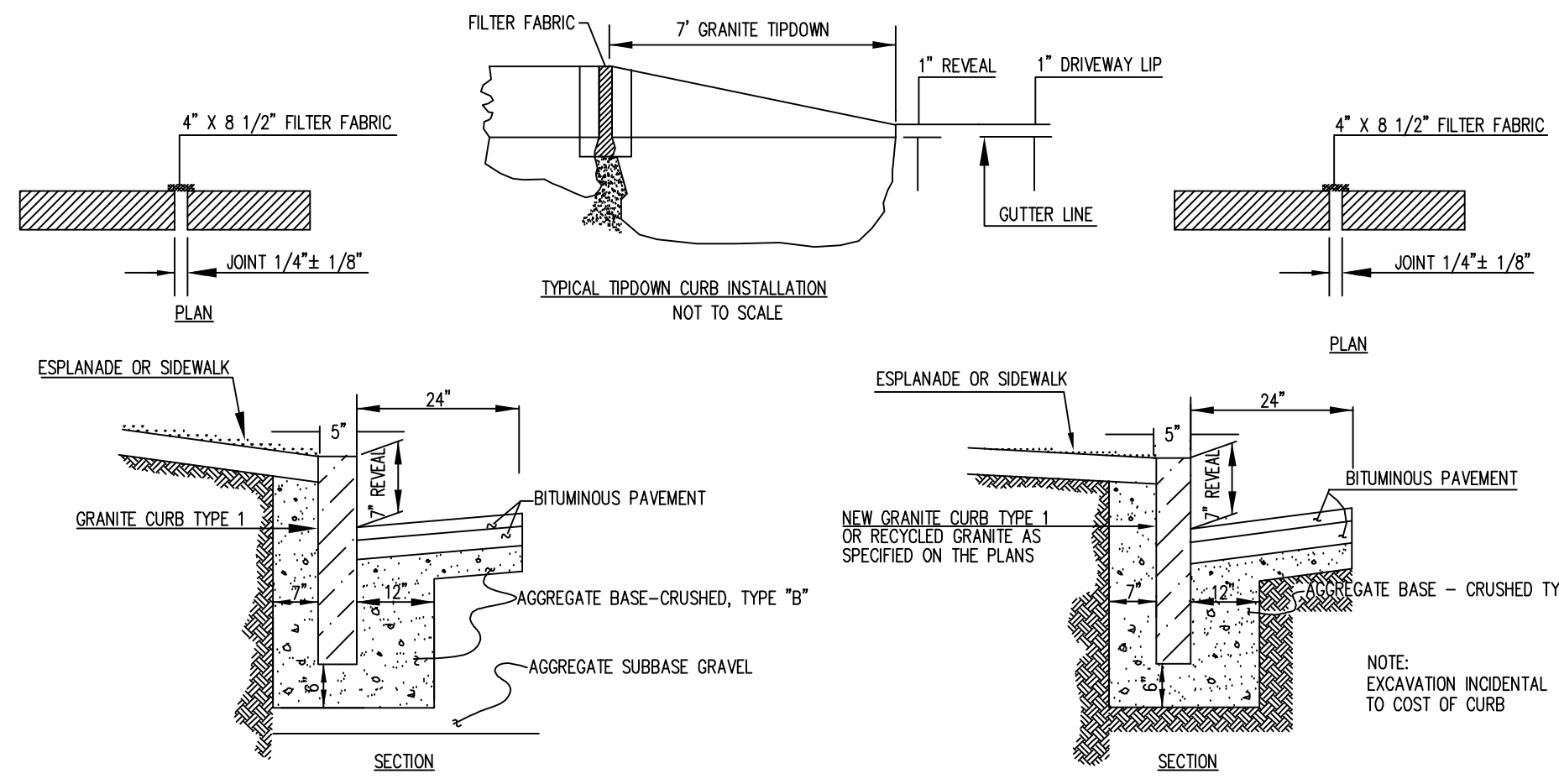
- UNAUTHORIZED NON-STORMWATER DISCHARGES:  
THE DEP DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, SPECIFICALLY, THE DEPARTMENTS APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:  
WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS.  
FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE.  
SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING.  
TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.



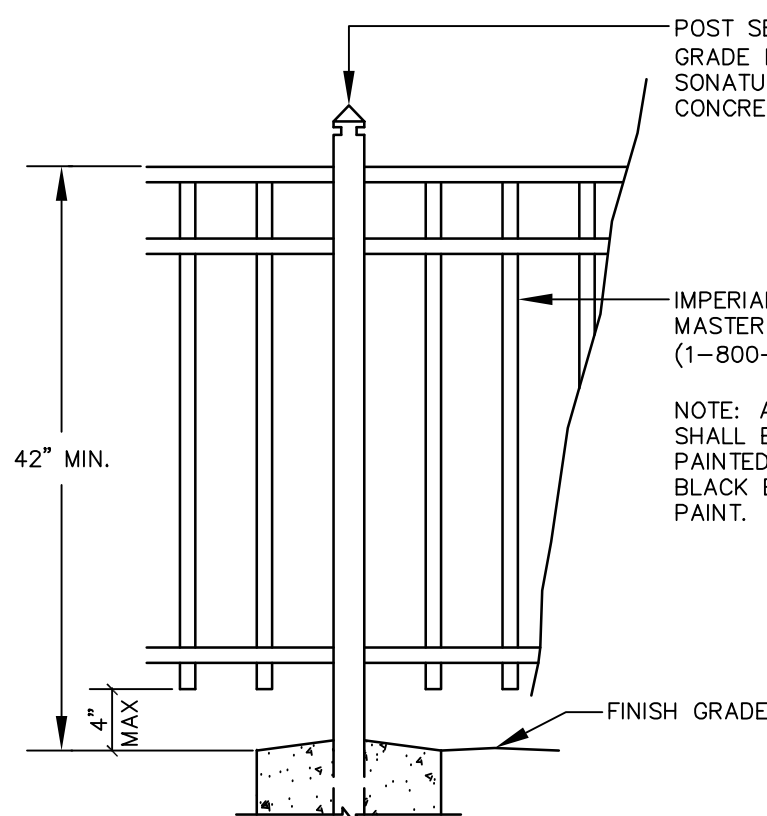
COMPOSITION  
EROSION CONTROL MIX SHALL BE MANUFACTURED ON OR OFF THE PROJECT SITE SUCH THAT ITS COMPOSITION IS IN ACCORDANCE WITH THE MDEP MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL, LAST REVISED 3/2003 OR LATER. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

- INSTALLATION:  
1. THE BARRIER MUST BE PLACED ACROSS THE SLOPE, ALONG THE CONTOUR.  
2. EXISTING GROUND SHALL BE PREPARED SUCH THAT THE BARRIER MAY LIE NEARLY FLAT ALONG THE GROUND TO AVOID THE CREATION OF VOIDS AND BRIDGES IN ORDER TO MINIMIZE THE POTENTIAL OF WASH OUTS UNDER THE BARRIER.  
3. THE BARRIER SHALL BE A MINIMUM OF 1 FOOT HIGH (AS MEASURED ON THE UPHILL SIDE) AND 2 FEET WIDE FOR SLOPES LESS THAN 5% IN GRADE AND SHALL BE WIDER TO ACCOMMODATE THE ADDITIONAL RUNOFF.  
4. EROSION CONTROL MIX CAN BE INSTALLED WHERE SILT FENCE IS ILLUSTRATED ON THE DESIGN PLANS IN AREAS EXCEPT IN, BUT NOT LIMITED TO, THE FOLLOWING AREAS: WETLAND AREAS, AT POINTS OF CONCENTRATED FLOW, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS AND CLOSED STORM SYSTEMS AND AT THE BOTTOM OF STEEP SLOPES THAT ARE MORE

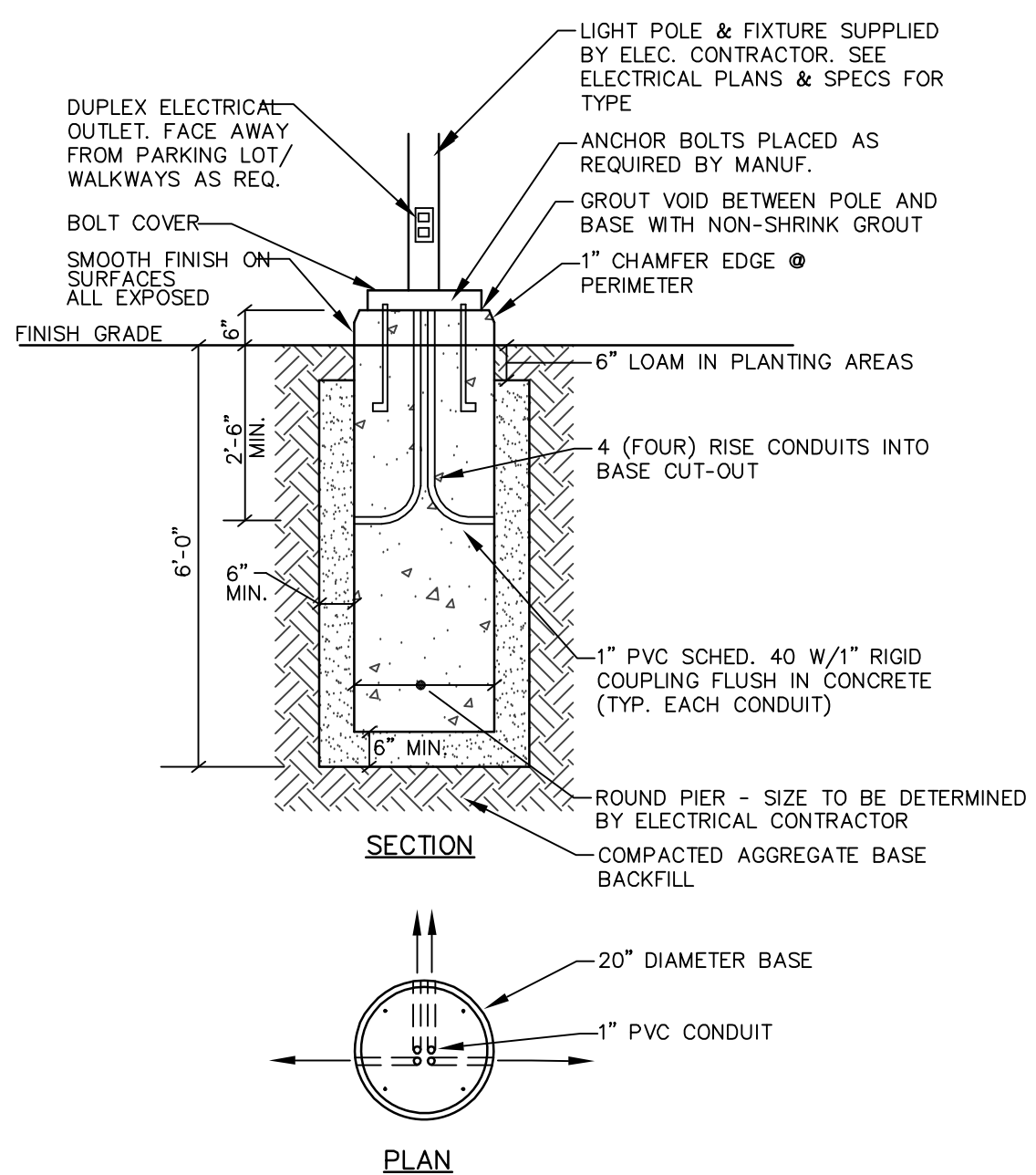




INSTALLATION OF CURB, TYPE 1  
NOT TO SCALE

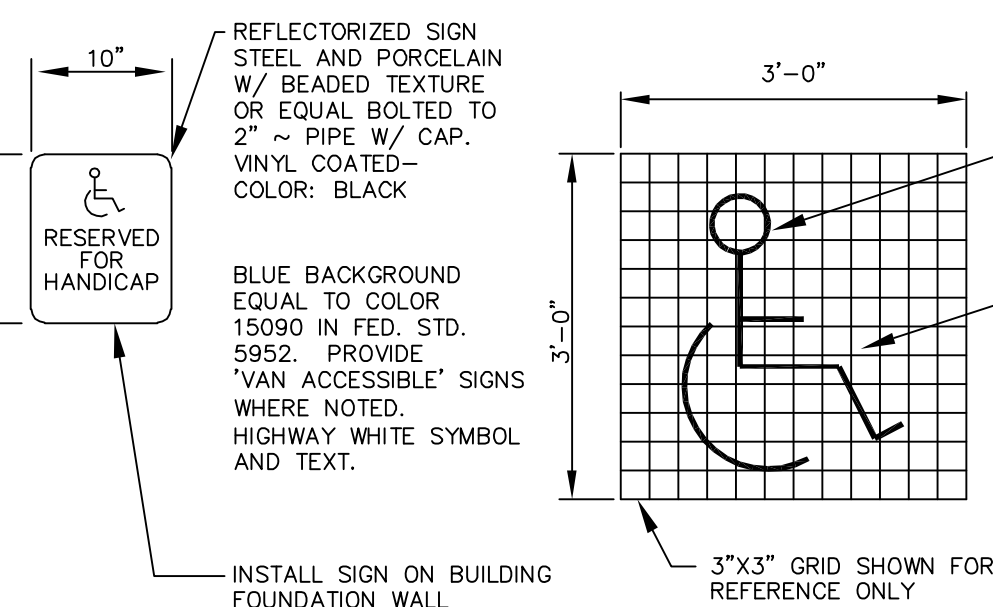


PEDESTRIAN GUARDRAIL  
(ALUMINUM TUBING)  
NOT TO SCALE

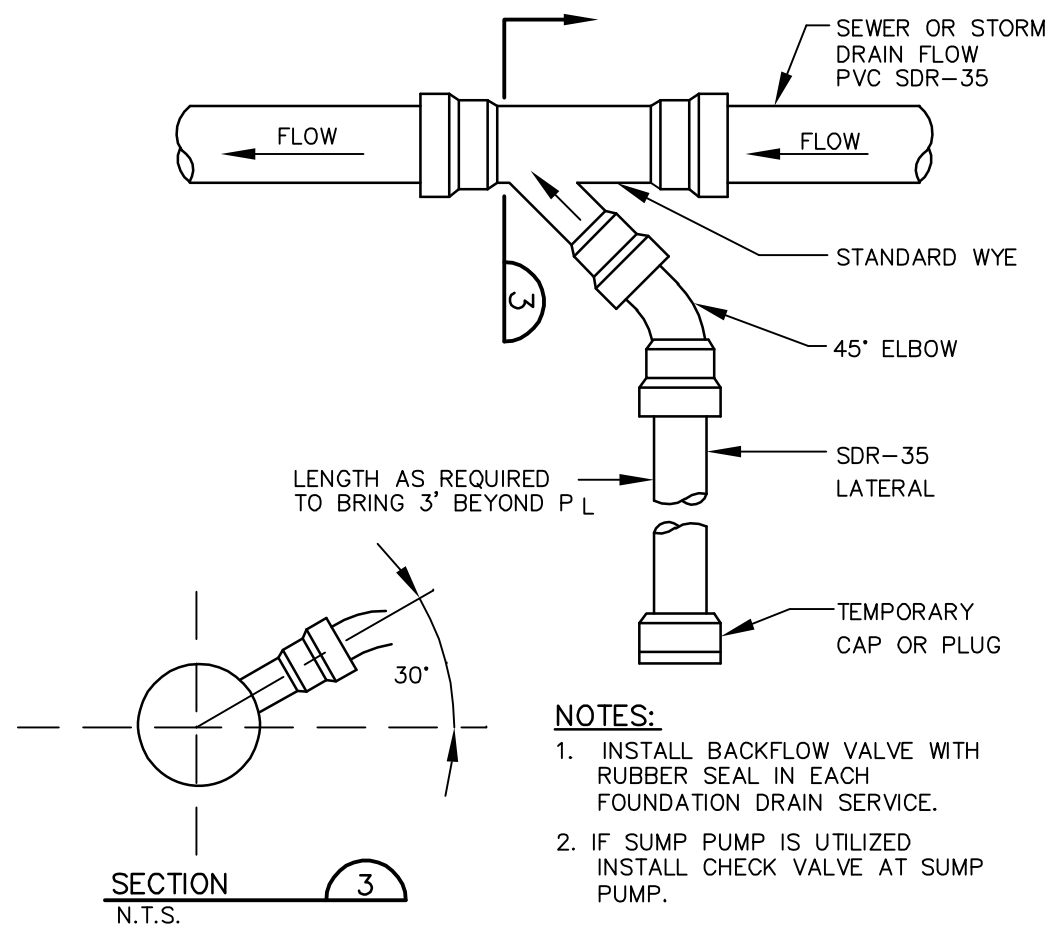


- NOTES:
1. CONCRETE  $f'_c$  = 5000 psi,  $\phi$  28 DAYS WITH STEEL REINFORCEMENT.
  2. CONDUIT AND ANCHOR BOLTS PLACED AS REQUIRED PROVIDED BY ELECTRICAL CONTRACTOR.
  3. PROVIDE 2 COATS BITUMINOUS DAMPROOFING FOR ALL CONCRETE BELOW GRADE.
  4. INSTALL BASE 3'-0" ABOVE FINISH GRADE IN LOCATIONS WHERE POLES ARE IN PARKING LOT PAVEMENT.
  5. LIGHT POLE BASE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.

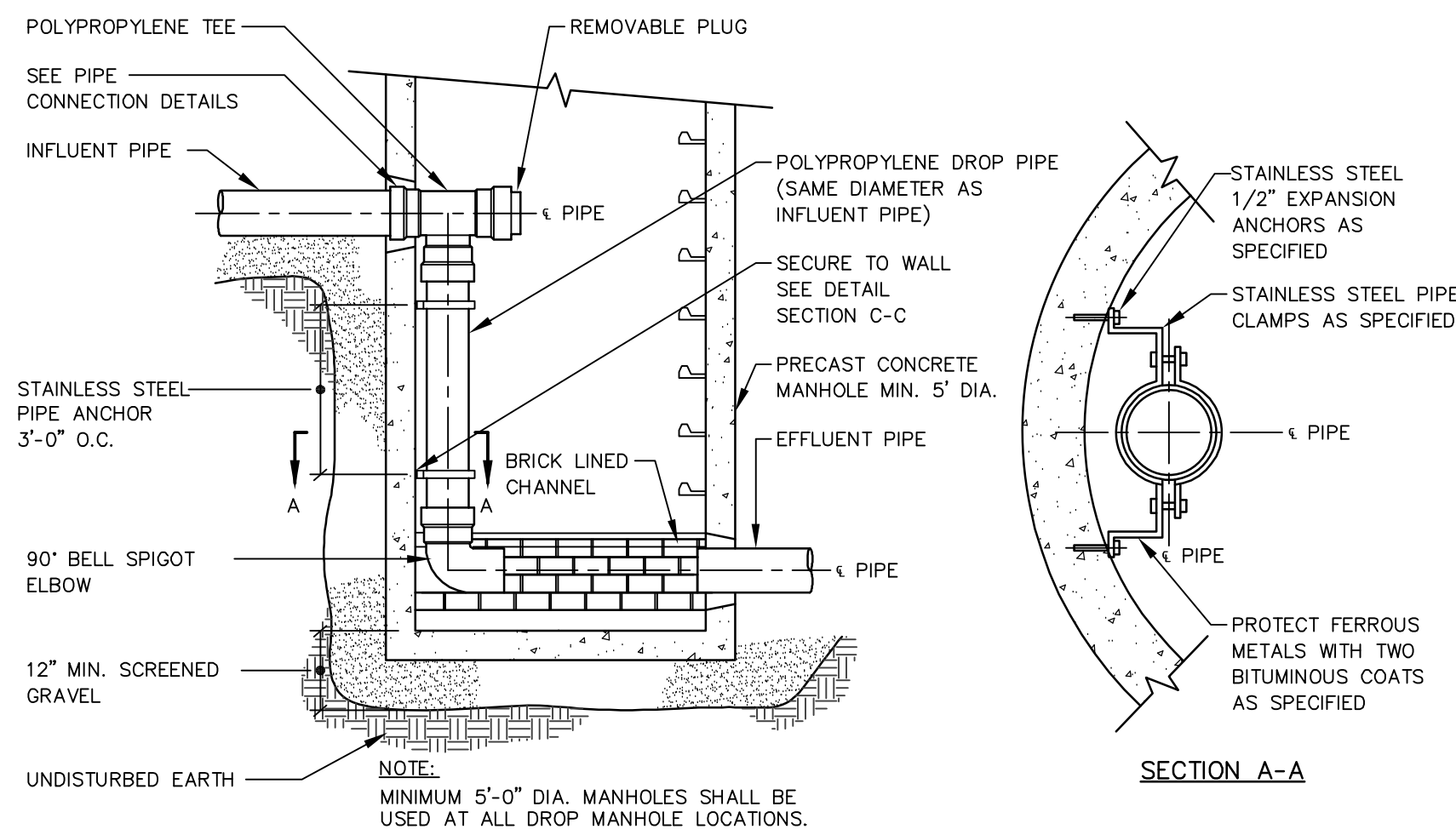
20" ROUND LIGHT POLE BASE  
NOT TO SCALE



HANDICAP SIGNS AND STRIPING  
NOT TO SCALE

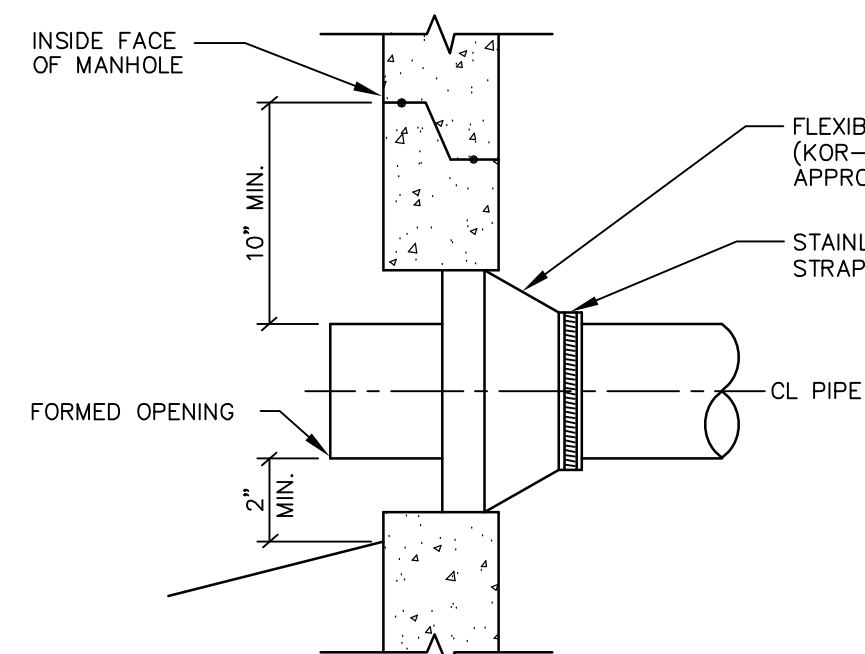


SEWER / FOUNDATION DRAIN  
SERVICE CONNECTION  
NOT TO SCALE



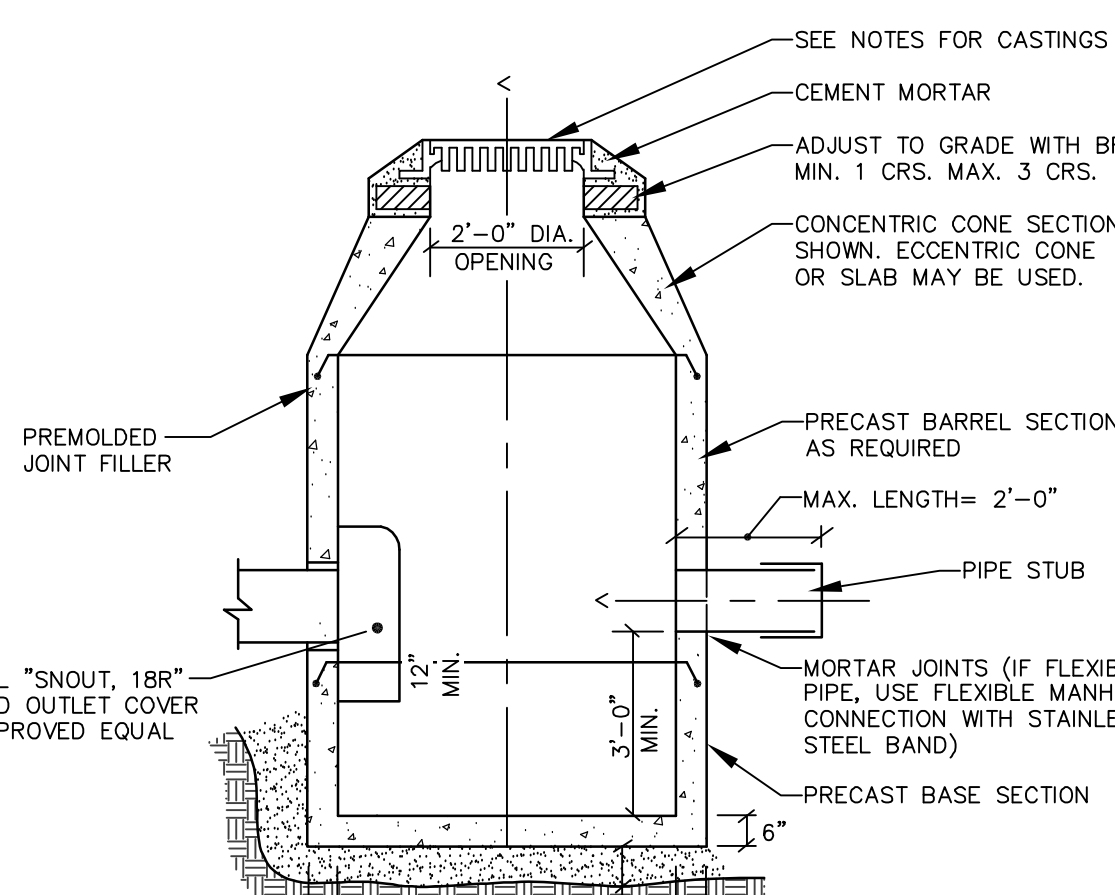
- NOTES:
1. THE INTERNAL DROP CONNECTION IS REQUIRED FOR DMH-4 (5.4' DROP) AND DMH-5 (14.7' DROP).

PVC DROP CONNECTION (INTERNAL)  
NOT TO SCALE



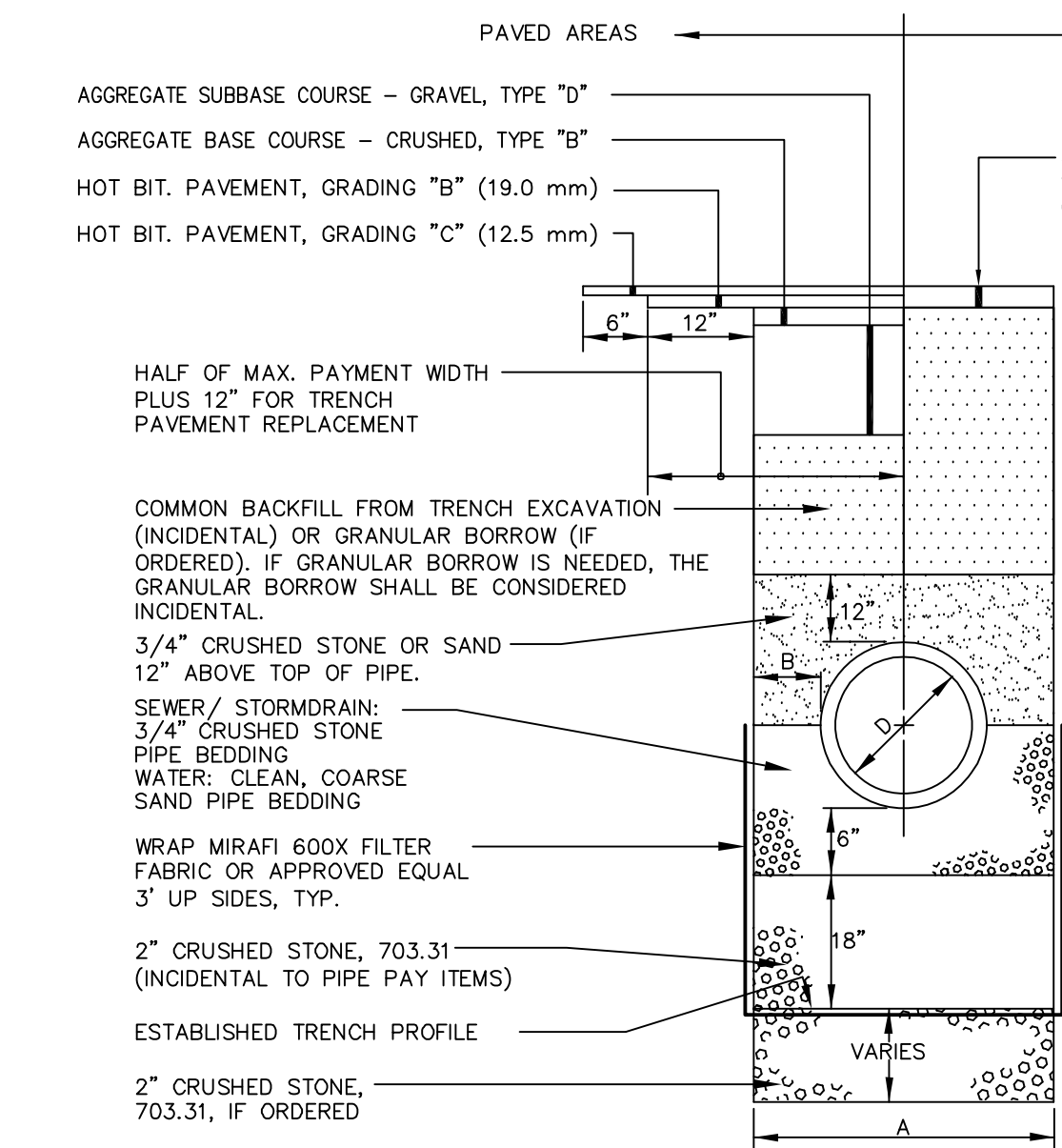
- NOTES:
1. ALL NEW PENETRATIONS INTO EXISTING MANHOLES SHALL BE PERFORMED BY PORTLAND WATER DISTRICT CREWS. TO SCHEDULE WORK, CONTACT THE DISTRICT'S WASTEWATER OPERATIONS DIVISION AT LEAST TWO WORKING DAYS PRIOR TO THE DATE THE WORK IS TO BE PERFORMED.

NEW PIPE TO EXISTING MANHOLE  
CONNECTION - 4" TO 24"  
NOT TO SCALE

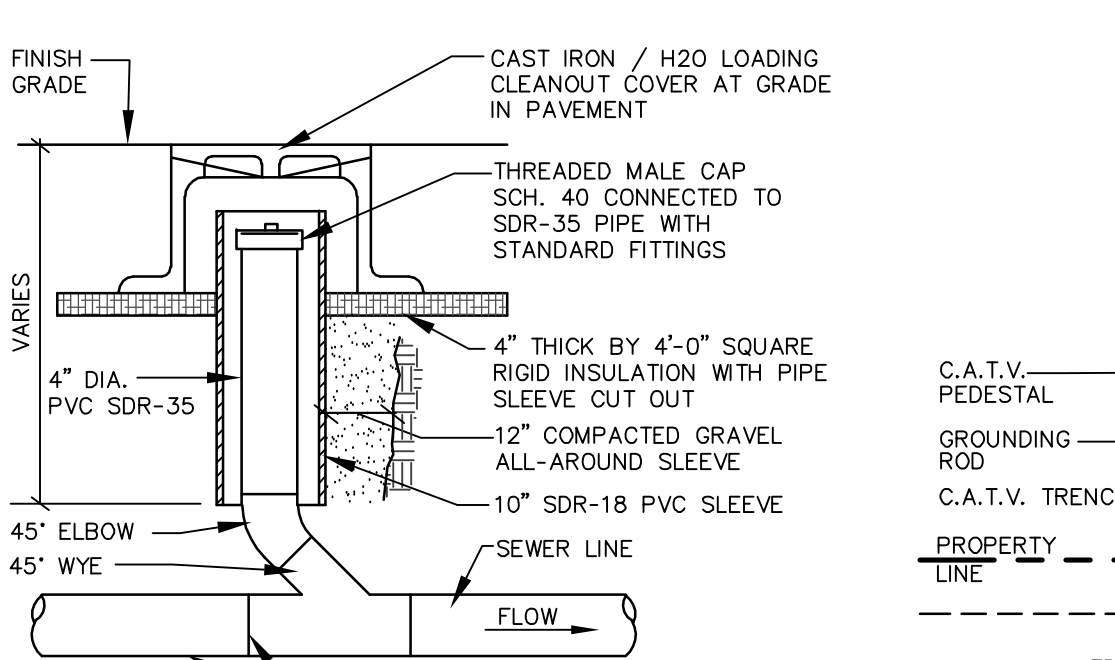


- NOTES:
1. 4'-0" I.D. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER I.D. PROVIDE SHOP DRAWINGS.
  2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.
  3. PIPE SIZES AND INVERTS AS NOTED ON PLANS.
  4. CATCH BASIN FRAME AND GRATE TO BE EAST JORDAN FOUNDRY S250, OR APPROVED EQUAL.
  5. DRAIN MANHOLE FRAME AND GRATE TO BE EAST JORDAN FOUNDRY 1080, TYPE A OR APPROVED EQUAL. COVER SHALL BE MARKED "DRAIN".

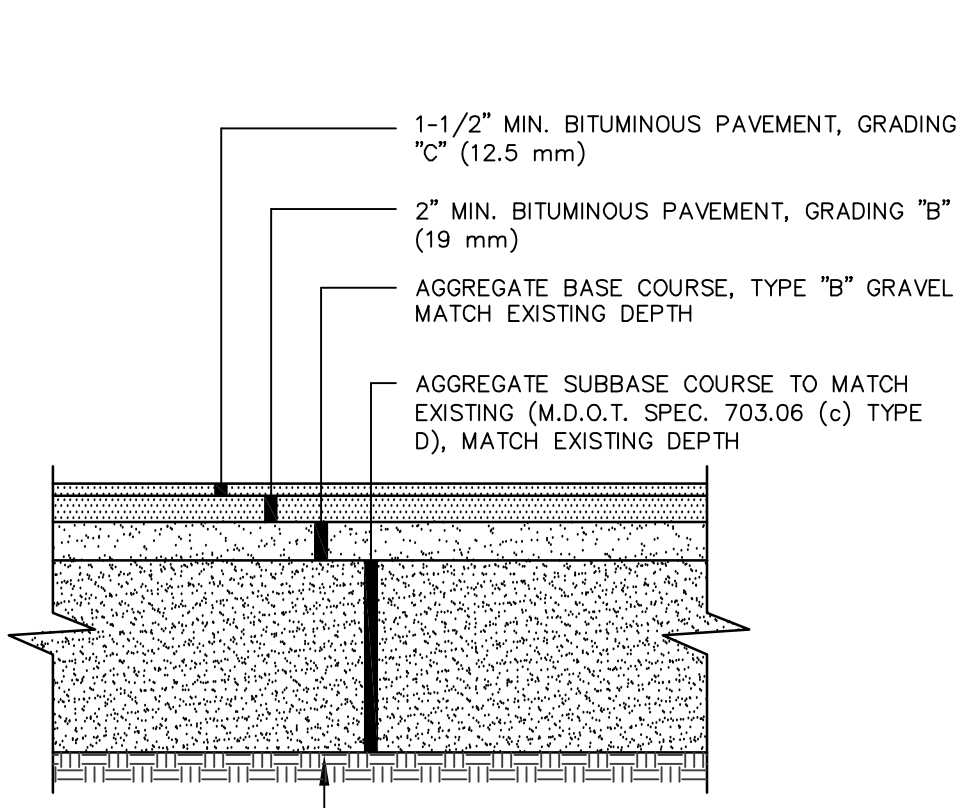
TYPICAL DRAINAGE  
MANHOLE/CATCH BASIN  
NOT TO SCALE



TYPICAL PIPE INSTALLATION DETAIL  
NOT TO SCALE

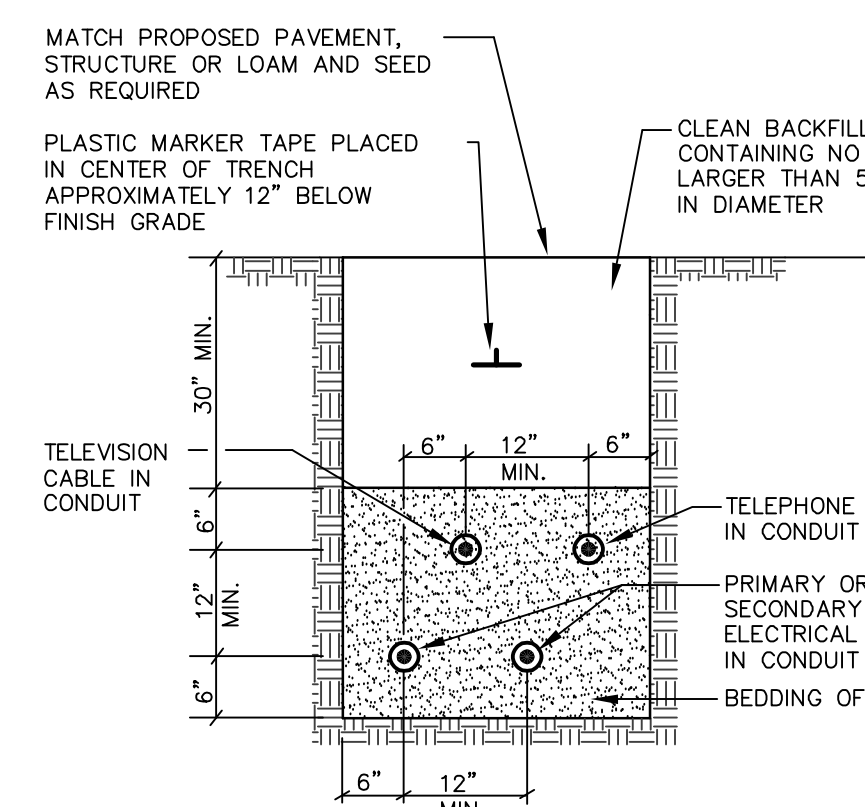


SEWER CLEANOUT IN  
PAVEMENT AREAS  
NOT TO SCALE



- NOTES:
1. CONTRACTOR SHALL VERIFY DEPTHS WITH TOWN ENGINEER PRIOR TO PLACEMENT.
  2. COMPACT GRAVEL SUBBASE AND BASE COURSES TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
  3. HOT MIX ASPHALT SURFACE COARSE SHALL BE COMPACTED TO 95% OF ITS THEORETICAL MAXIMUM DENSITY (ASTM D-2041). BASE COARSE SHALL BE COMPACTED TO 95%  $\pm$  2.5% OF ITS THEORETICAL MAXIMUM DENSITY (ASTM D-2041).
  4. APPLY TACK COAT BETWEEN SUCCESSIVE LIFTS OF BITUMINOUS PAVEMENT AND ALL EXISTING PAVEMENT SURFACES WHICH ABUTS PLACEMENT OF NEW PAVEMENT.

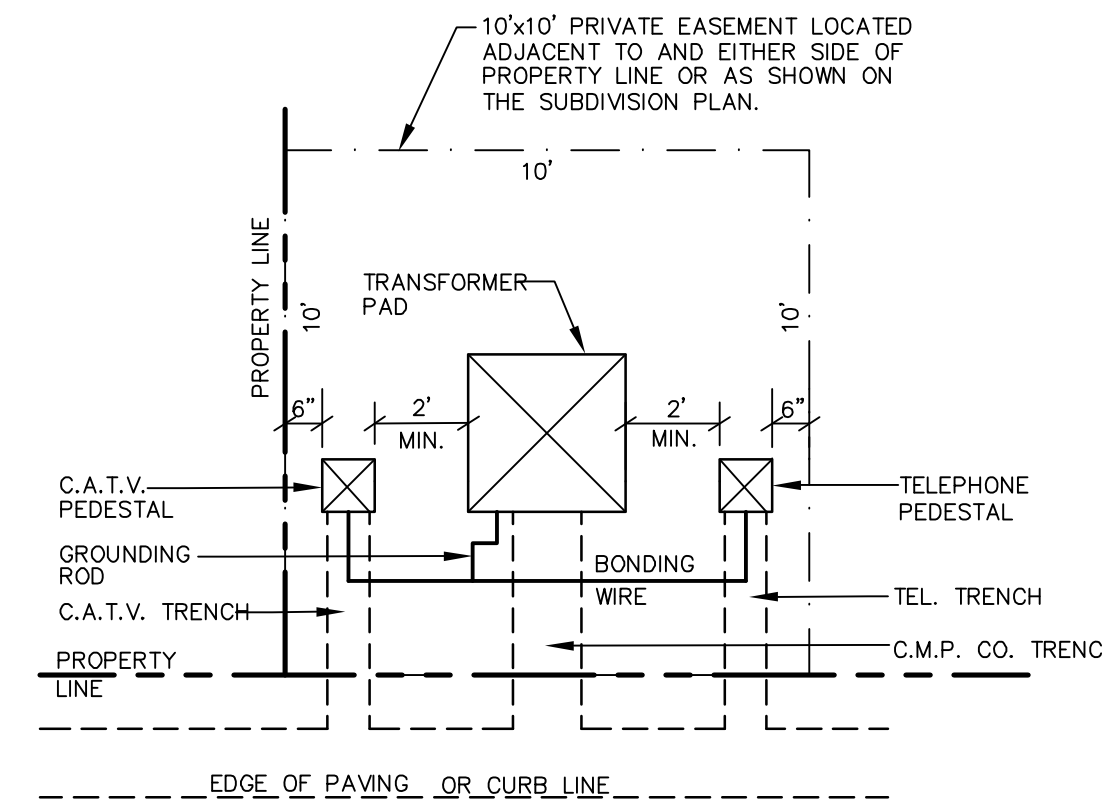
TRENCH REPAIR IN PUBLIC R.O.W.  
NOT TO SCALE



TYPICAL UNDERGROUND  
CABLE INSTALLATION  
NOT TO SCALE

- NOTES:
1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
  2. IN PAVED AREAS REFER TO BITUMINOUS PAVEMENT SECTION FOR DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT BASED ON THE CORRESPONDING STREET CLASSIFICATION.
  3. DIMENSION "B" SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE MANHOLES OF THE PIPE, BUT IN ALL CASES "B" SHALL BE AT LEAST 9".
  4. DIMENSION "A" IS THE MAXIMUM WIDTH ALLOWED FOR CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE MANHOLES OF THE PIPE, BUT IN ALL CASES "A" SHALL BE BASED ON PIPE DIAMETER "D", AS SET FORTH IN THE FOLLOWING TABLE.

| PIPE DIAMETER, "D"<br>(INCHES) | MAX. TRENCH WIDTH, "A"<br>(FEET) |
|--------------------------------|----------------------------------|
| 4                              | 4.0                              |
| 6                              | 4.0                              |
| 8                              | 4.0                              |
| 10                             | 4.0                              |
| 12                             | 4.0                              |
| 15                             | 4.0                              |
| 18                             | 5.0                              |
| 21                             | 5.0                              |
| 24                             | 5.5                              |
| 27                             | 6.0                              |
| 30                             | 6.0                              |
| 36                             | 7.0                              |
| 42                             | 8.0                              |
| 48                             | 8.0                              |



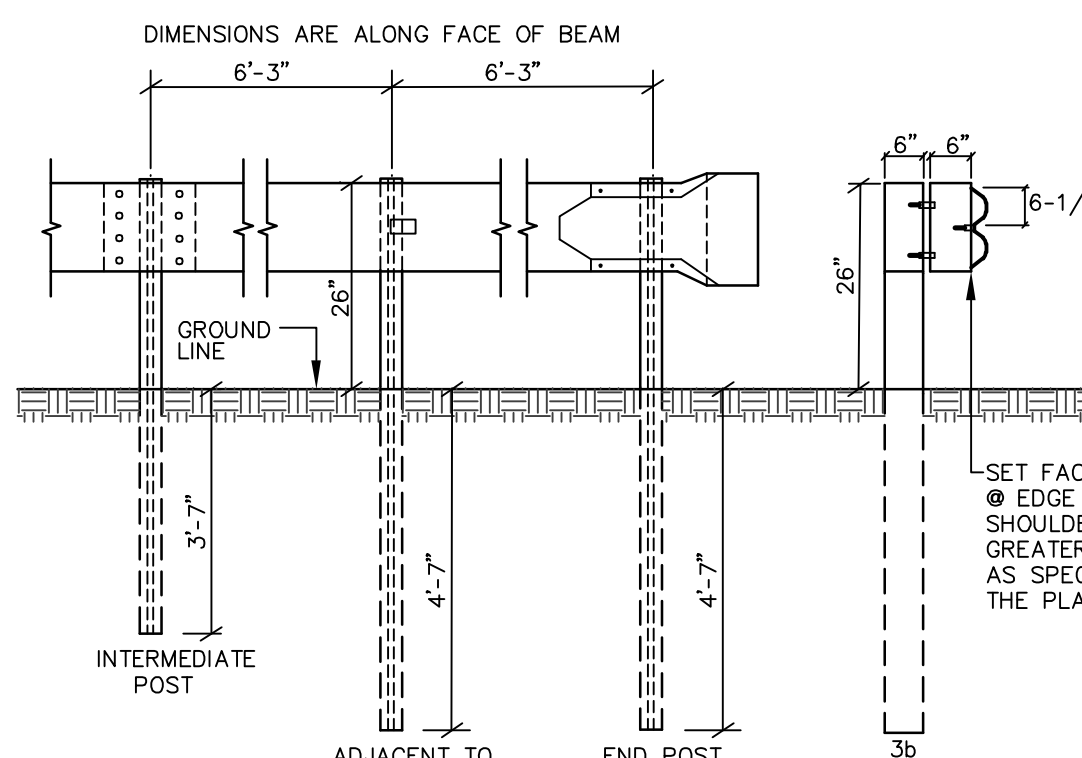
TRANSFORMER DETAIL  
NOT TO SCALE

## CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO THE APPLICABLE LOCAL AND STATE CODES AND ORDINANCES.
2. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
3. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.
4. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
6. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.
7. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.
8. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.
9. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PUBLISHED BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 1991 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
10. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
11. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTING NON-MEMBER UTILITIES TO OBTAIN AUTHORIZATION FOR RELOCATION OF ANY EXISTING DIRECTLY, NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.
12. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION FOR RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.
13. ALL PAVEMENT MARKINGS AND DIRECTIONAL SIGNAGE SHOWN ON THE PLAN SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.
14. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
15. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
16. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE PERMIT FROM THE TOWN OF BRUNSWICK.
17. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.
18. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
19. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.
20. WHERE THE TERMS "APPROVED EQUAL," "OTHER APPROVED," "EQUAL TO," "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RULING AND JUDGMENT OF SEBAGO TECHNIQS, INC.
21. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.
22. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.
23. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
24. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.
25. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY WHICH MAY HAVE BEEN DAMAGED OR DESTROYED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.
26. ALL SUBSURFACE UTILITY LINES SHOWN HEREON ARE BASED SOLELY ON THE FIELD LOCATION OF VISIBLE STRUCTURES, SMH'S, CB'S, HYDRANTS, ETC. IN CONJUNCTION WITH DESIGN AND OR AS-BUILT PLANS SUPPLIED TO SEBAGO TECHNIQS INC. BY OTHERS. PRIOR TO ANY CONSTRUCTION, EXCAVATION, TEST BORINGS, DRILLING, ETC., DIG SAFE MUST BE NOTIFIED AND A SITE IDENTIFICATION NUMBER ALONG WITH A SAFE TO DIG DATE OBTAINED. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION, DEPTH AND MATERIAL OF ALL SUBSURFACE UTILITY LINES SHOWN HEREON AND ANY AND ALL OTHERS LOCATED ON SITE WITHIN THE CONSTRUCTION AREA.

## INSPECTIONS/MONITORING:

1. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, OR AT LEAST EVERY SEVEN (7) DAYS, THE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PERFORM REPAIRS AS NEEDED TO ALLOW CONTINUED PROPER FUNCTIONING OF THE EROSION CONTROL MEASURE. THE CONTRACTOR SHALL PROVIDE THE NECESSARY REGULATING AGENCIES WITH WRITTEN DOCUMENTATION DESCRIBING DATES OF INSPECTIONS AND NECESSARY FOLLOW-UP WORK TO MAINTAIN EROSION CONTROL MEASURES MEETING THE REQUIREMENTS OF THIS PLAN.
  2. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA SEMI-MONTHLY UNTIL THE SEEDINGS HAVE BEEN ESTABLISHED. ESTABLISHED MEANS A MINIMUM OF 85%-90% OF AREAS VEGETATED WITH VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW-UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.
- ## HOUSEKEEPING:
- A. **SPILL PREVENTION:** CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON-SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.
  - B. **GROUNDWATER PROTECTION:** DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO GROUNDWATER CONTAMINATION THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.
  - C. **FUGITIVE SEDIMENT AND DUST:** ACTIONS MUST BE TAKEN TO INSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.
  - D. **DEBRIS AND OTHER MATERIALS:** LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
  - E. **TRENCH DEWATERING:** TRENCH DEWATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFERDAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES, THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER MUST BE REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, AND MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED.



- NOTES:
1. INTERMEDIATE POST SPACING SHALL BE 6'-3" UNLESS OTHERWISE SHOWN.
  2. POSTS AND OFFSET BRACKETS FOR TYPE 3b GUARD RAIL SHALL BE W 6x9.
  3. ALL HOLES IN BEAM TO BE SHOP-PUNCHED BEFORE GALVANIZING.
  4. STATIONS 0+00 TO 26+00: INSTALL LOW VOLUME FLARED TERMINAL END PER MAINE DOT STANDARDS AT GUARDRAIL START. INSTALL TERMINAL END RWE03A PER MAINE DOT STANDARDS AT GUARDRAIL END. REFER TO PLAN AND PROFILE DRAWINGS FOR START/ END STATIONING ALONG ACCESS DRIVE.
  5. STATIONS 26+00 TO 55+20: INSTALL SEQUENTIAL KINKING TANGENT TERMINAL END SKT-SP MANUFACTURED BY ROAD SYSTEMS, INC. OR APPROVED EQUAL AT GUARDRAIL START. INSTALL TERMINAL END RWE03A PER MAINE DOT STANDARDS AT GUARDRAIL END. REFER TO PLAN AND PROFILE DRAWINGS FOR START/ END STATIONING ALONG ACCESS DRIVE.
  6. FOR ALL OTHER AREAS NOT ALONG MAIN AND SECONDARY ACCESS DRIVES, REFER TO SITE PLANS FOR TYPE OF TERMINAL ENDS.
  7. PROVIDE MINIMUM 3' WIDE SHOULDER BEHIND FACE OF BEAM.

VEHICULAR GUARDRAIL (MDOT TYPE 3b)  
NOT TO SCALE

PLS OR PE

PROGRESS PRINT

PLS OR PE

NOT FOR CONSTRUCTION

KEITH D. GRAY, P.E. #1333

DESIGNED  
KDG

CHECKED  
KDG

B. WTC 06-15-17 CITY SUBMITTAL NO. 1

A. WTC 12-15-16 CITY SUBMITTAL NO. 5

REV. BY: DATE: STATUS:

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

SEBAGO TECHNIQS, INC.

75 Jan. Mills Rd.  
Salem, ME 04460  
South Portland, ME 04106  
Tel. 207-200-2100  
Fax. 207-783-5656

DETAILS OF

218-220 WASHINGTON AVENUE  
PORTLAND, MAINE

FOR:

218-220 WASHINGTON AVENUE LLC  
190 ELDERBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

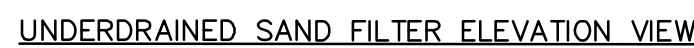
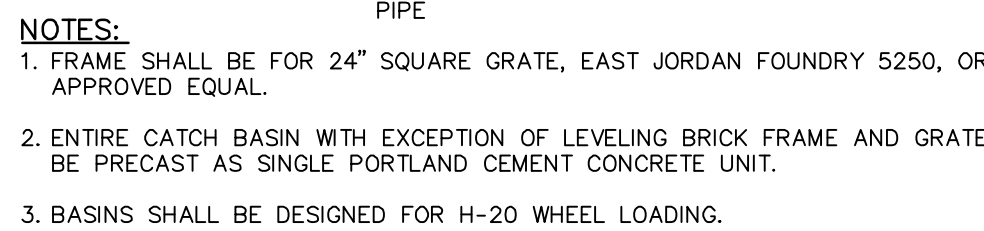
PROJECT NO. 06172

SCALE AS SHOWN

SHEET 1100F 12

061720.dwg 1/15/02





**A. SPILL PREVENTION:** CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON-SITE, INCLUDING BUT NOT LIMITED TO: OIL, FUEL, AND OTHER LIQUIDS, SOLIDS, AND GASES. STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.

**B. GROUNDWATER PROTECTION:** DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN AQUIFER. OTHER THAN THE STORAGE OF LIQUID PETROLEUM PRODUCTS, ALL MATERIALS MUST BE STORED ON A SURFACE TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, OR OTHER METHODS AND OTHER FACTORS MUST BE USED TO PREVENT MATERIALS FROM BEING USED TO COVER OR BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

**C. EROSION/ SEDIMENT AND DUST:** ACTIONS MUST BE TAKEN TO INSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.

**D. DEBRIS AND OTHER MATERIALS:** LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

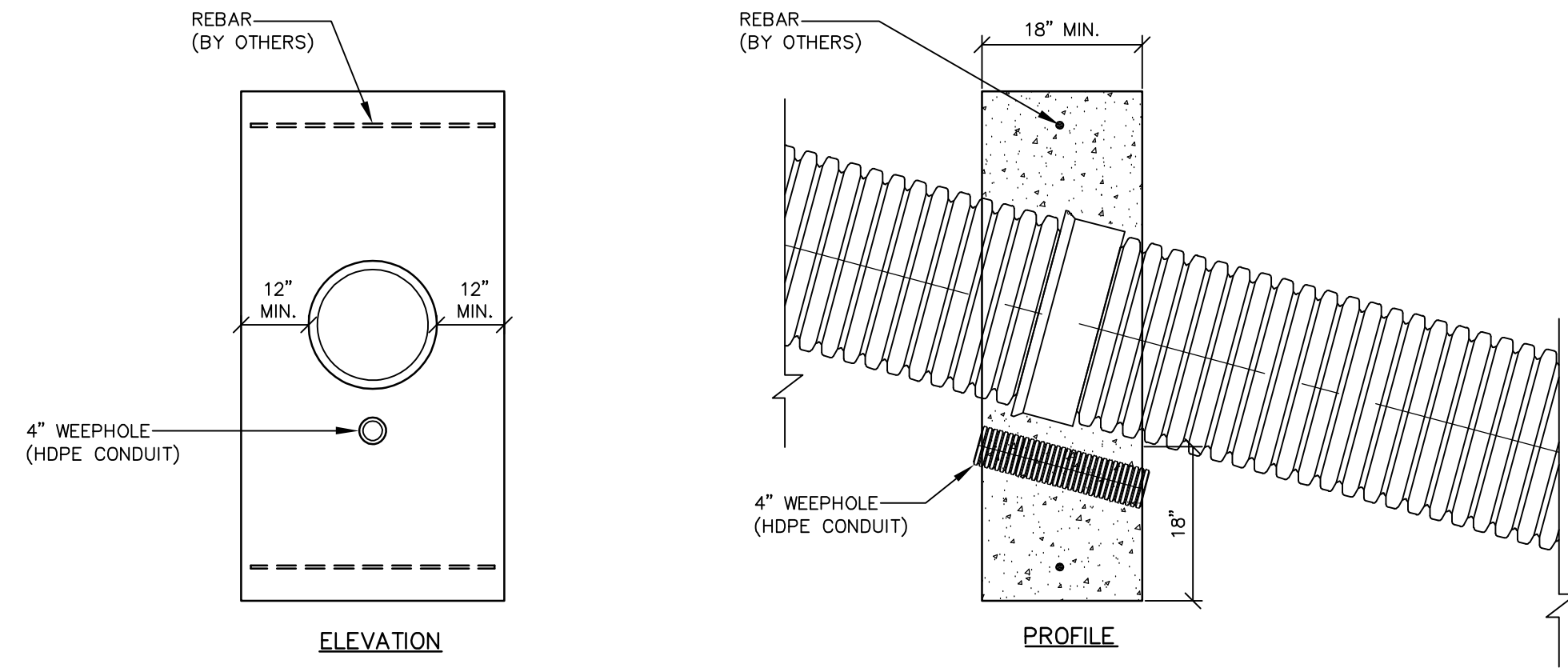
**E. TRENCH DEWATERING:** TRENCH DEWATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFERDAMS, PONDINGS, AND OTHER AREAS OF THE SITE. TRENCH DEWATERING IS A COMMON PRACTICE THAT RETAIN WATER AFTER EXCAVATION IN MOST CASES. THE COLLECTED WATER IS HEAVILY SITED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER MUST BE REMOVED FROM THE SITE AND NOT ALLOWED TO REMAIN ON-SITE. TRENCH DEWATERING MUST BE CONDUCTED IN A NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN, ALLOWING THE WATER TO FLOW OVER DISTURBED AREA OF THE SITE. EQUIPMENT MUST BE USED TO PREVENT EROSION AND APPROVED.



1. THE STORMWATER CHAMBER SHALL BE A STORMTRENCH MC-3500 OR EQUIVALENT SUBSURFACE STORAGE CHAMBER APPROVED BY THE ENGINEER.
2. THE ENTIRE SUBSURFACE SYSTEM, INCLUDING THE CRUSHED STONE SURROUNDING THE CHAMBER, SHALL BE NON-FLAMMABLE MATERIALS. SHALL BE WRAPPED IN A NON-REINFORCED 30-MIL PVC LINER.
3. A STRIP OF WOVEN GEOTEXTILE THAT MEETS ASTM0288 CLASS 2 REQUIREMENTS (MIRAFI #P404 OR EQUIVALENT) MUST BE PLACED BETWEEN THE BOTTOM OF THE CHAMBER AND ITS STONE SURROUNDING. THE STRIP SHALL BE 18 INCHES WIDE AND 18 INCHES UNDERLYING CRUSHED STONE. A SECOND STRIP OF NON-WOVEN ASTM0288 CLASS 2 GEOTEXTILE (MIRAFI 160N OR EQUIVALENT) SHALL BE PLACED BETWEEN THE CHAMBER AND THE CRUSHED STONE. THIS FABRIC WILL ALSO TRAP SEDIMENTS AND PROVIDE SEPARATION BETWEEN THE CHAMBERS AND SURROUNDING STONE.
4. THE EMBEDEDMENT STONE SURROUNDING THE CHAMBERS SHALL BE 18 INCHES THICK. THE STONE SHALL BE 1 1/2 INCHES DIAMETER. THE CHAMBERS SHALL BE SURROUNDED BY 3/4 INCH AND 2 INCH. THE BOTTOM 6 INCH LAYER OF CRUSHED STONE SHALL BE 1/2 INCHES DIAMETER. THE REMAINING SHALL BE COMPACTED TO ACHIEVE A 95% STANDARD PROCTOR DENSITY.
5. THE SAND FILTER MATERIAL SHALL BE A UNIFORM MIX, FREE OF LARGER THAN 2 INCH STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS. THE MATERIAL SHALL MEET THE SPECIFICATION FOR MOST AGGREGATE SAND (M801 070.01). HOWEVER, THIS MATERIAL SHALL BE 18 INCHES THICK. THE REMAINING 18 INCH MATERIAL WITH BETWEEN SIX AND 10% PASSING THE #200 SIEVE. THE REMAINING 18 INCH LAYER SHALL BE 1/2 INCHES DIAMETER. THIS 18 INCH LAYER OF SAND FILTRATION MEDIA SHALL BE PLACED TO ACHIEVE A LEVEL OF COMPACTION BETWEEN 92% AND 95% STANDARD PROCTOR DENSITY.

WEEKLY VISITS TO THE SITE TO INSPECT THE CONSTRUCTION AND STABILIZATION OF THE PROPOSED SUBSURFACE CHAMBERS AND FILTER COURSE MATERIAL TO BE BUILT ON THE SITE. INSPECTION SHALL CONSIST OF AN APPROPRIATE NUMBER OF VISITS TO THE SITE TO INSPECT THE INSTALLATION OF THE SUBGRADE, FILTER MATERIAL PLACEMENT, INSTALLATION OF STONE, ISOLATOR ROW A CHAMBER, SURROUNDING STONE, FABRIC LAYMENT AND STORMWATER OVERFLOW BYPASS CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL PAVEMENT PLACEMENT.



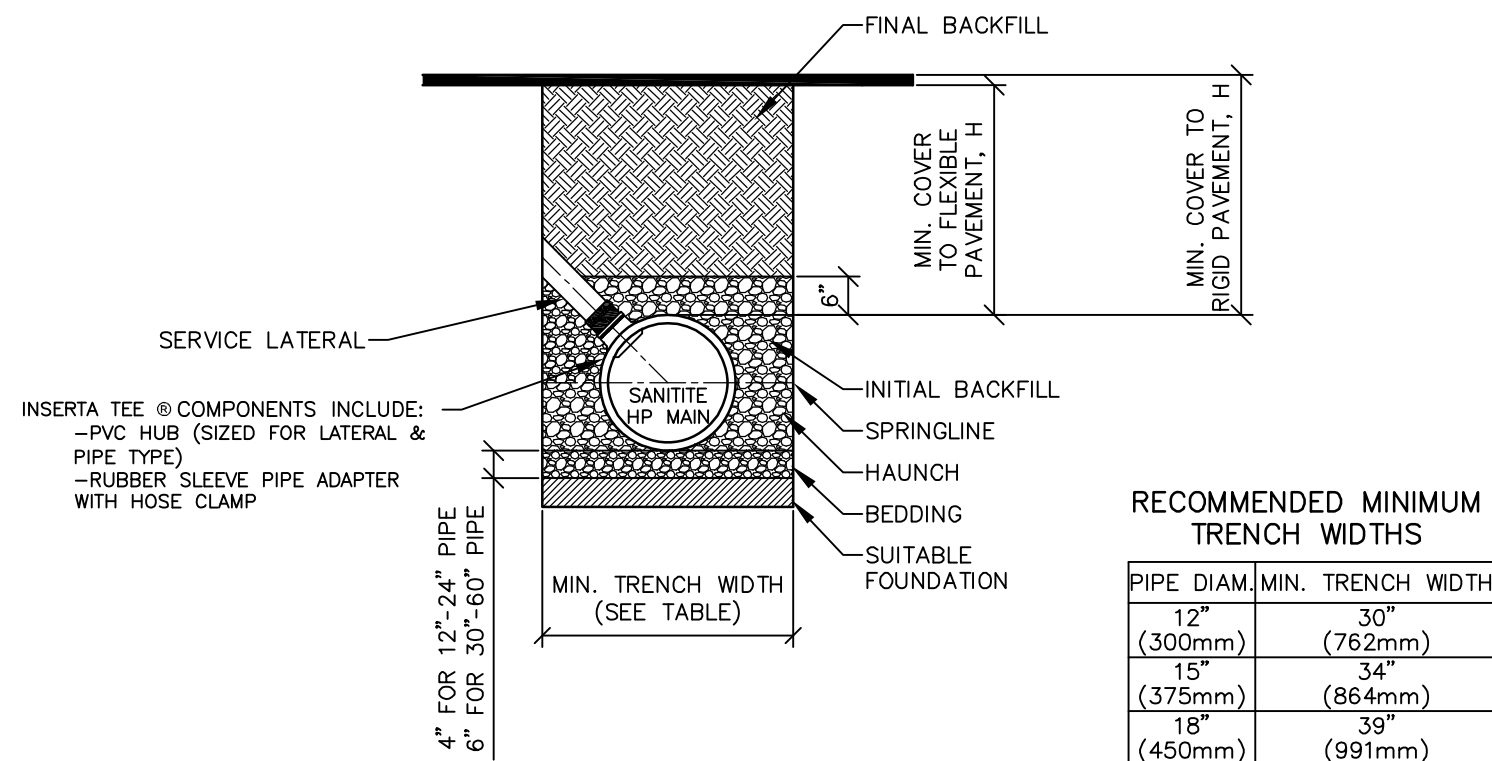


#### NOTES:

- PIPE TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS. SEE STD-101.
- ANCHORS SHALL BE PLACED EVERY JOINT.
- VELOCITY REDUCTION METHODS SHALL BE TAKEN WHEN SLOPE CREATES VELOCITY GREATER THAN 20 FPS.

### CONCRETE ANCHORS FOR STEEPLY SLOPED PIPES INSTALLATION

NOT TO SCALE



#### NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION.
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- THE INSERTA TEE® CONNECTION SHOULD NOT BE PLACED AT AN ANGLE EXCEEDING 45° FROM THE SPRINGLINE. GREATER ANGLES ARE SUBJECT TO DESIGN ENGINEER APPROVAL AND MAY REQUIRE PREMIUM BACKFILL.
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL, AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6' ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

### INSERTA TEE DETAIL

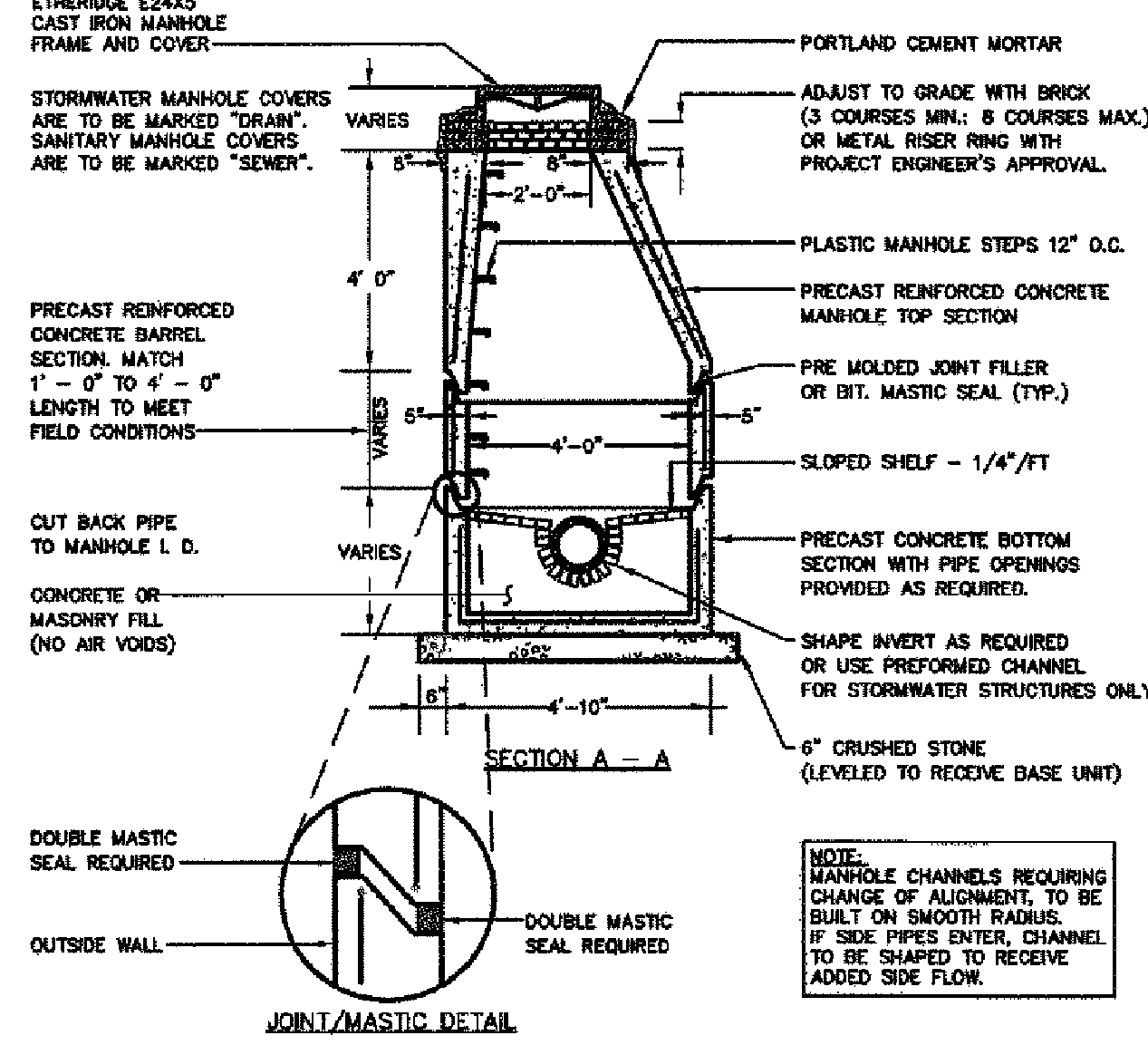
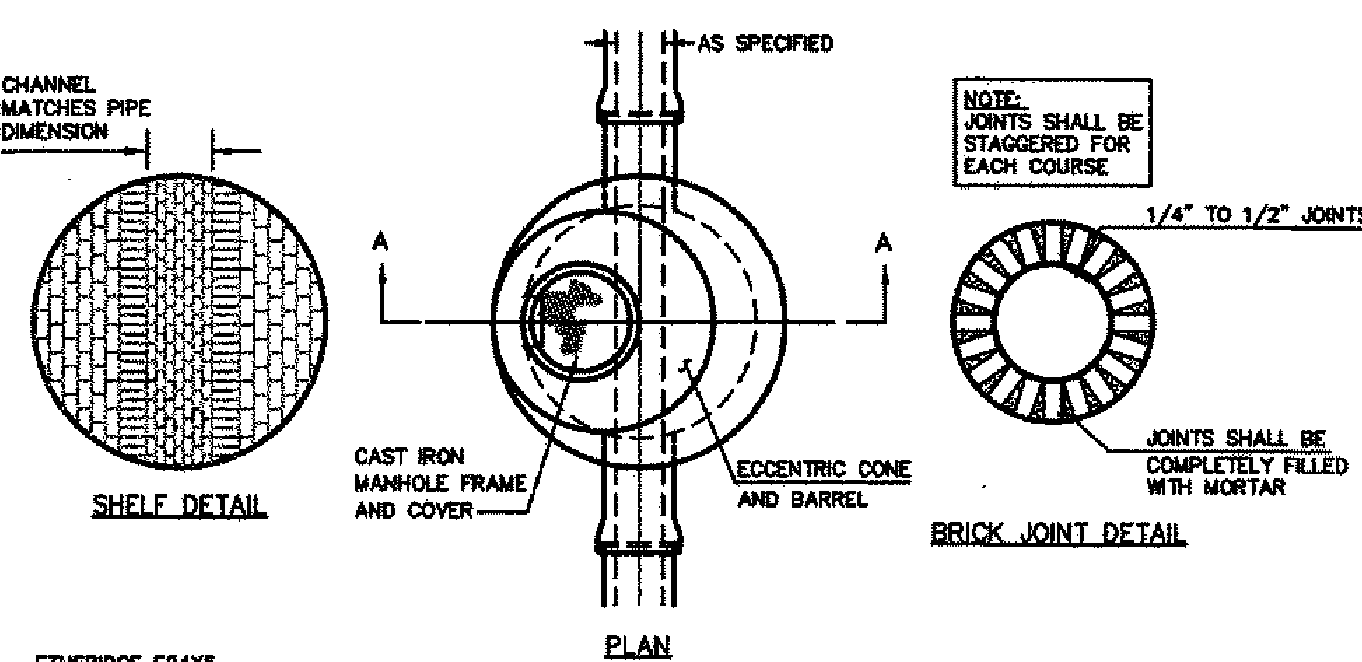
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#### NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION. WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS I/II MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL, AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE; 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
- MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 90% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
- FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04.

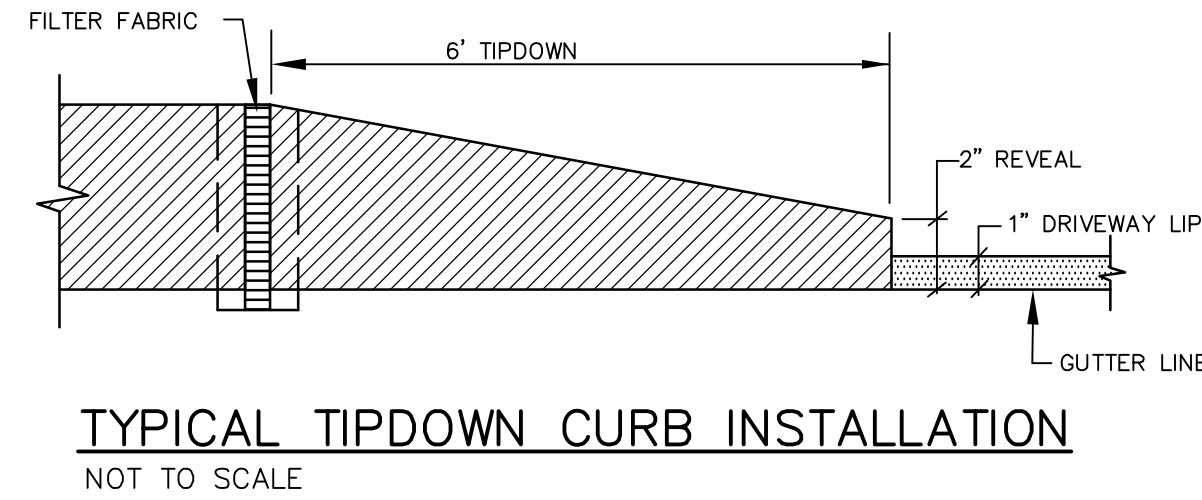
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NOT TO SCALE



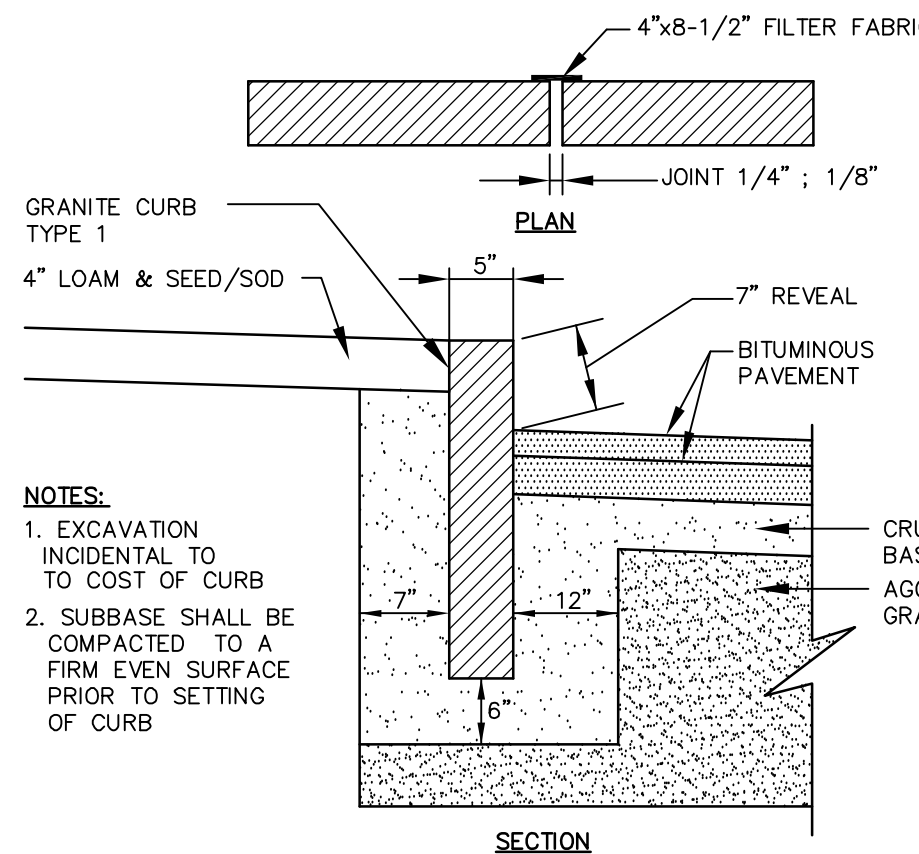
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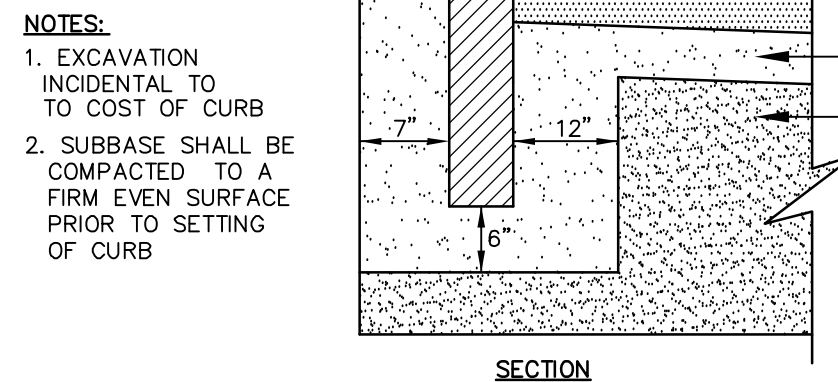
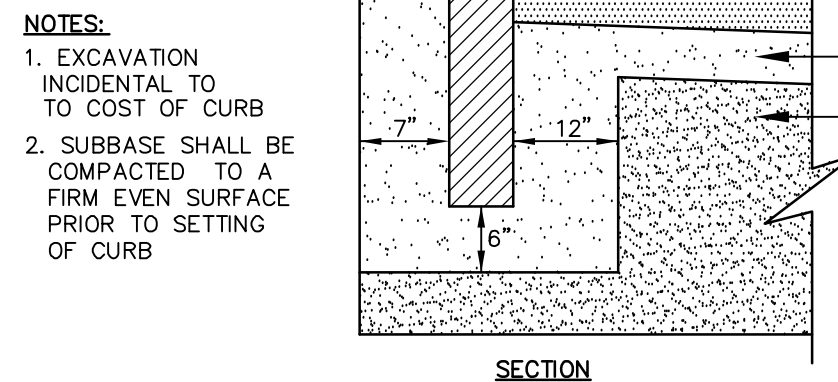
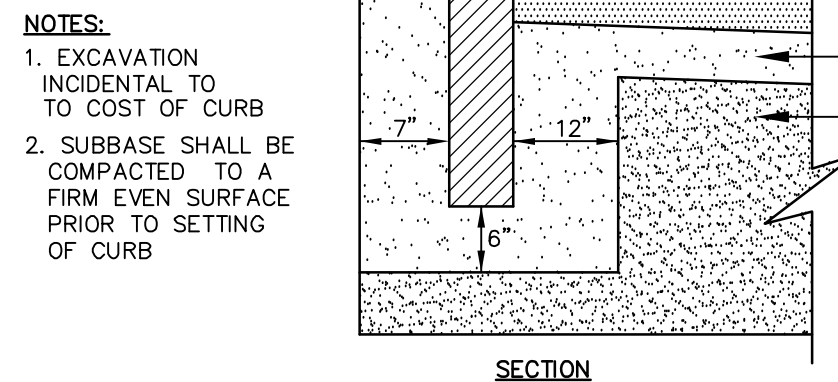
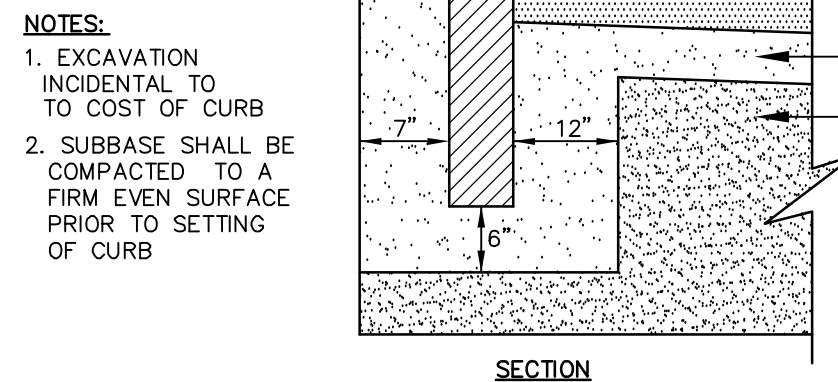
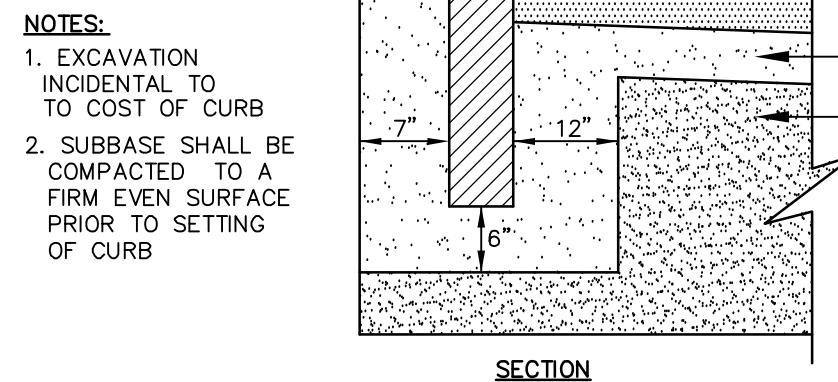
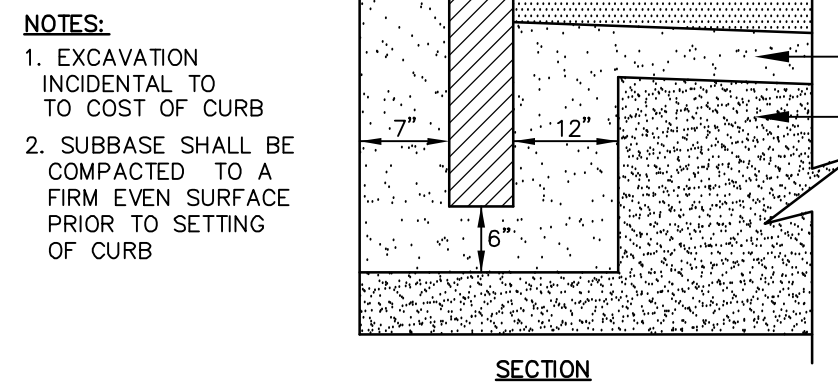
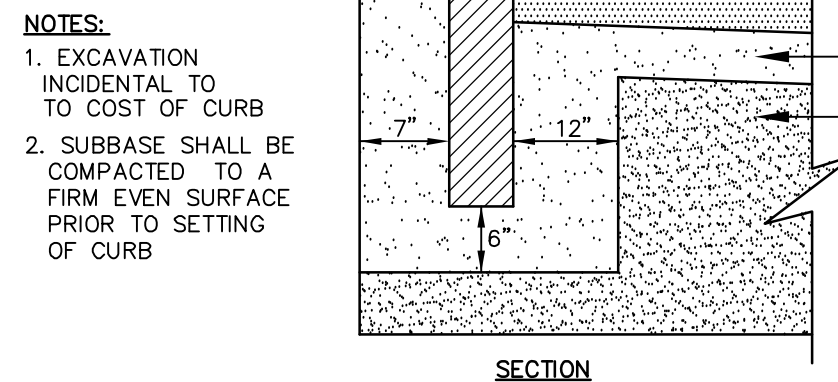
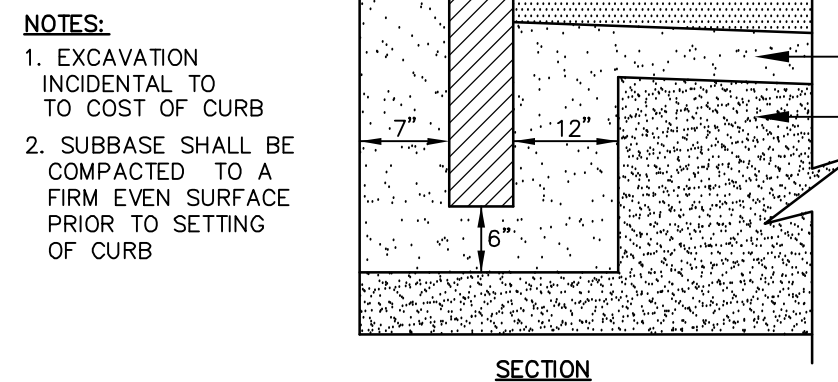
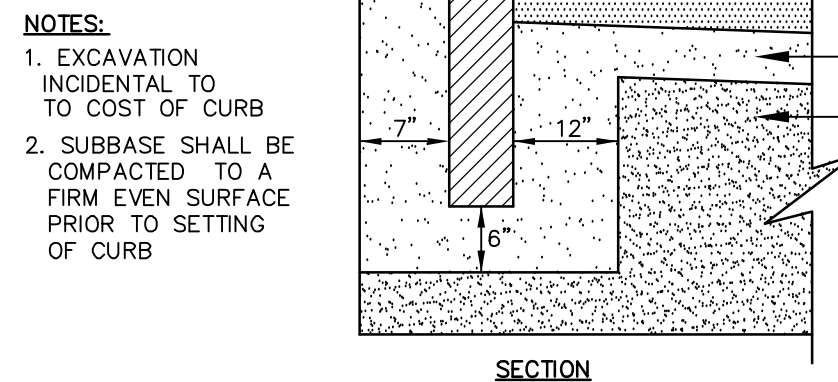
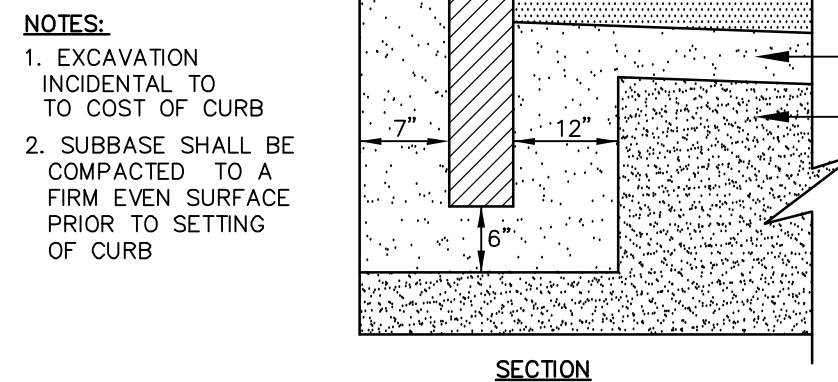
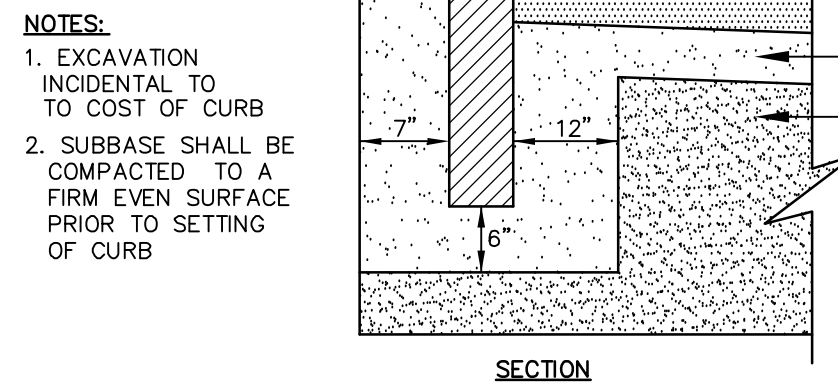
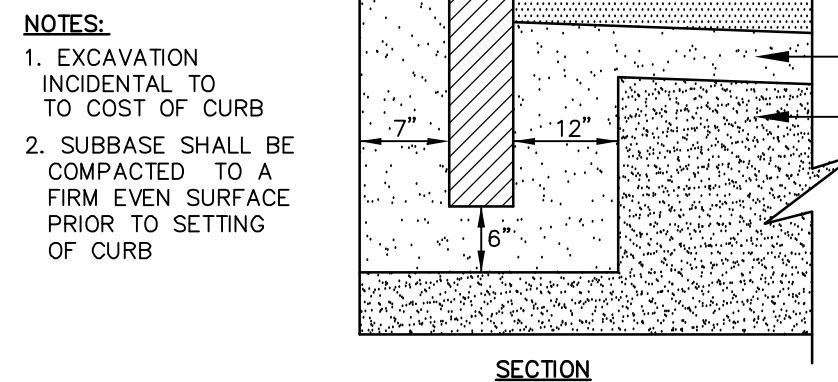
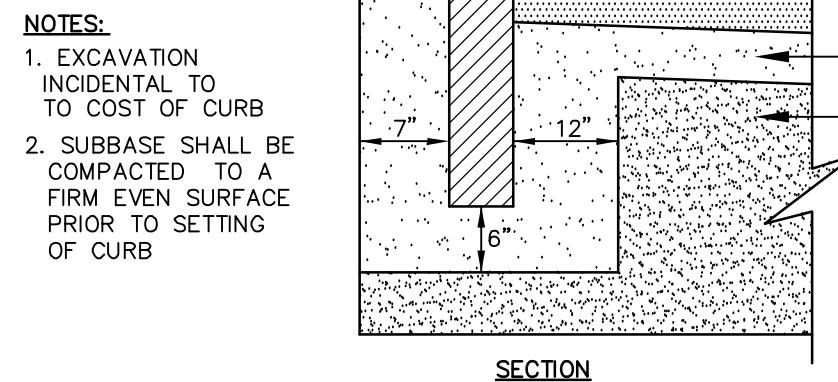
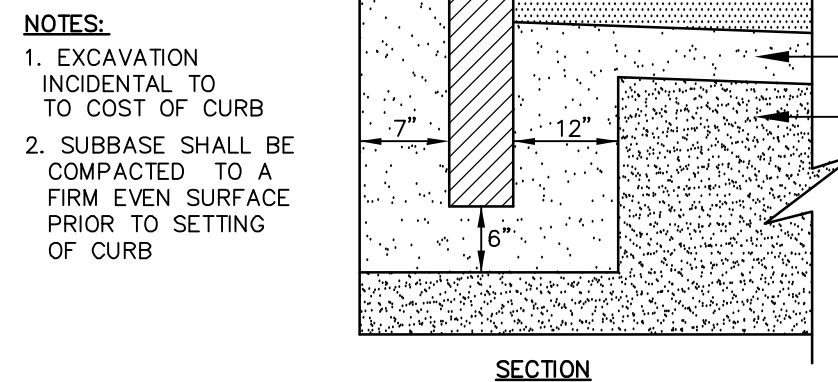
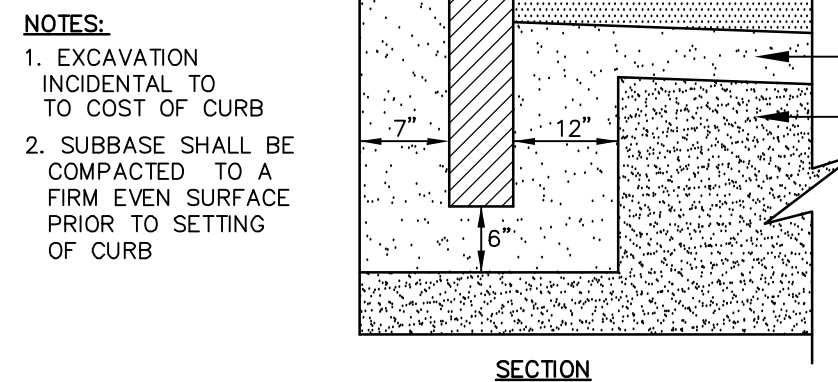
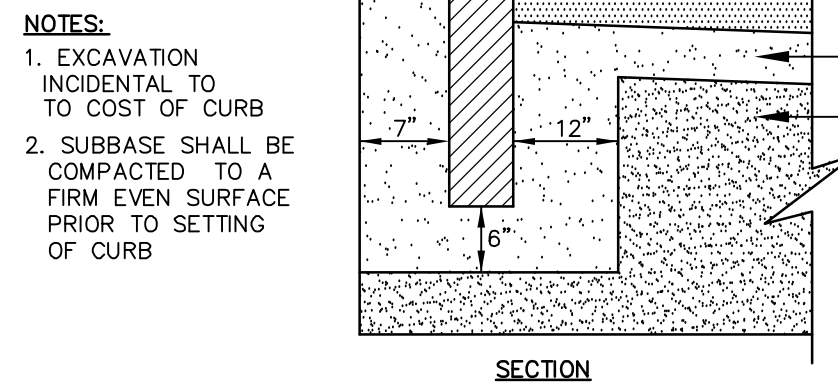
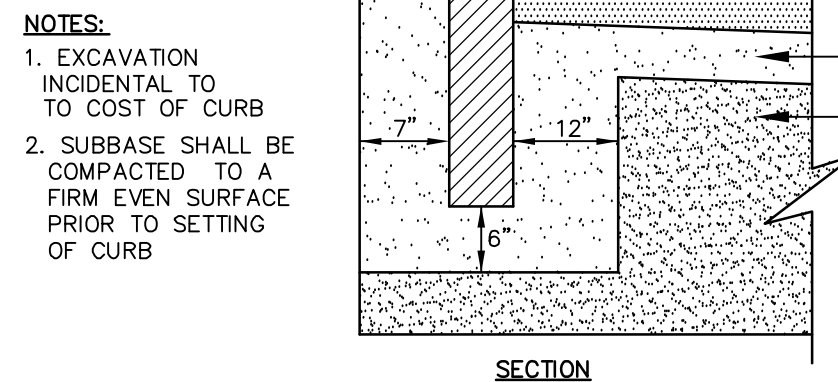
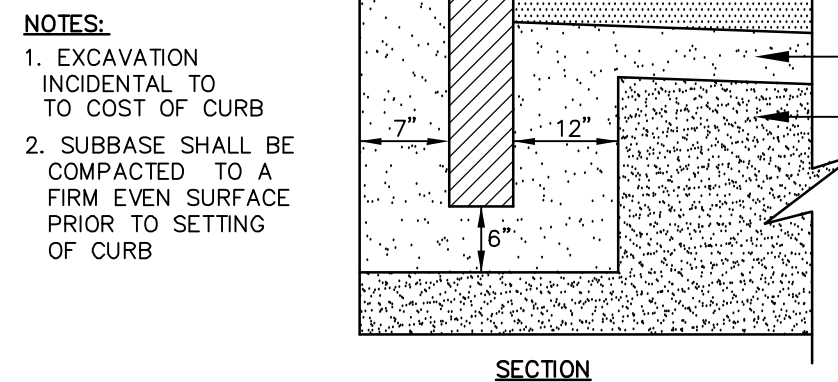
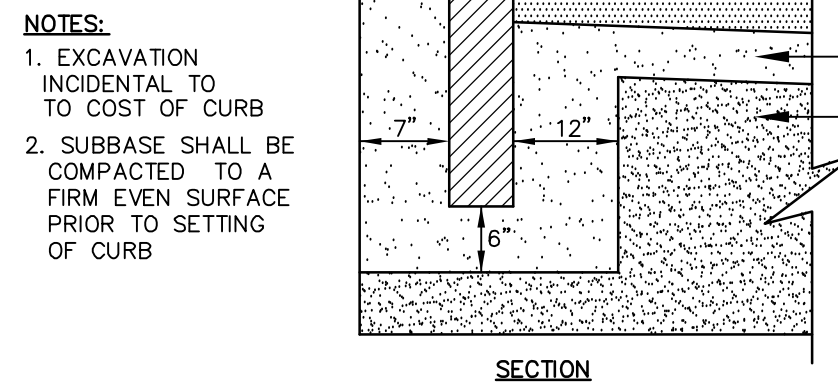
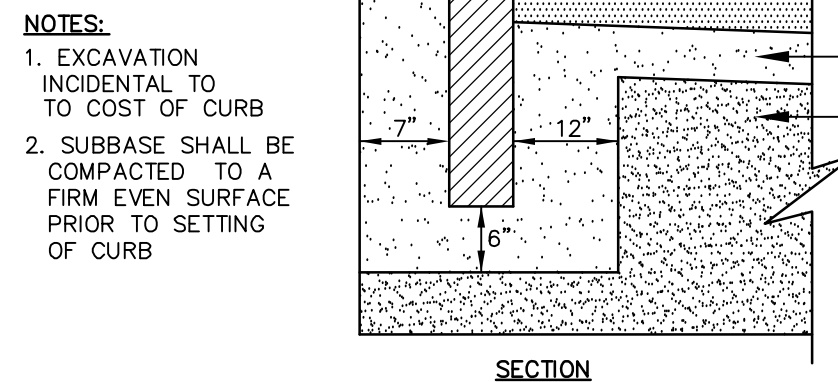
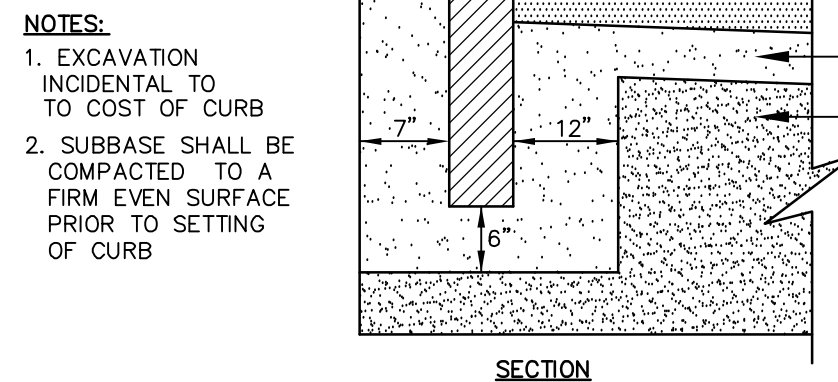
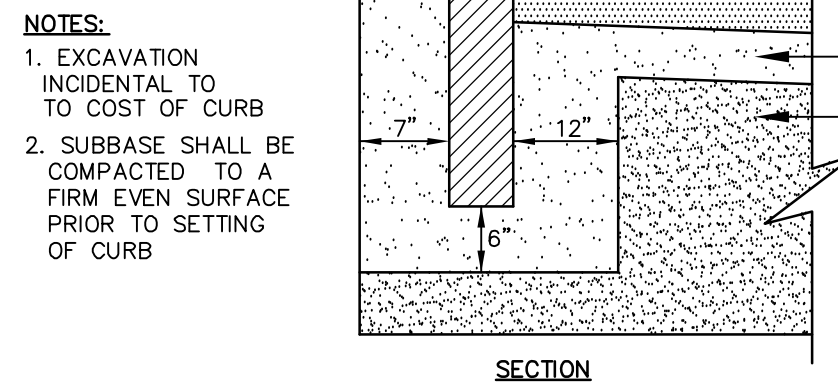
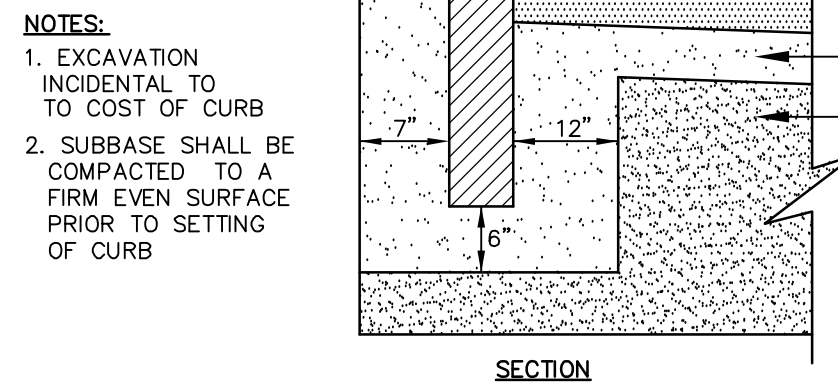
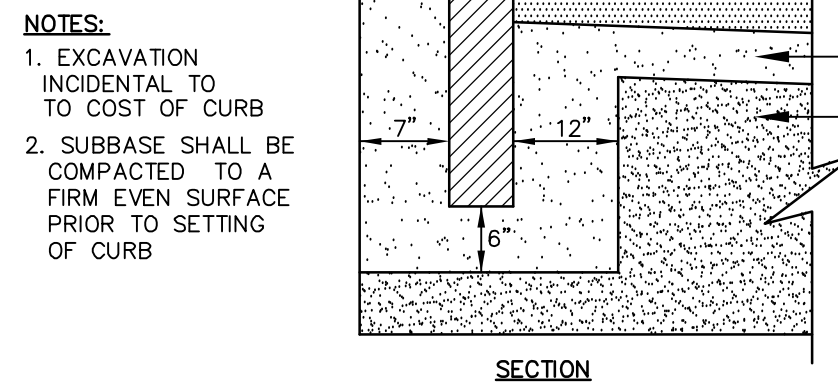
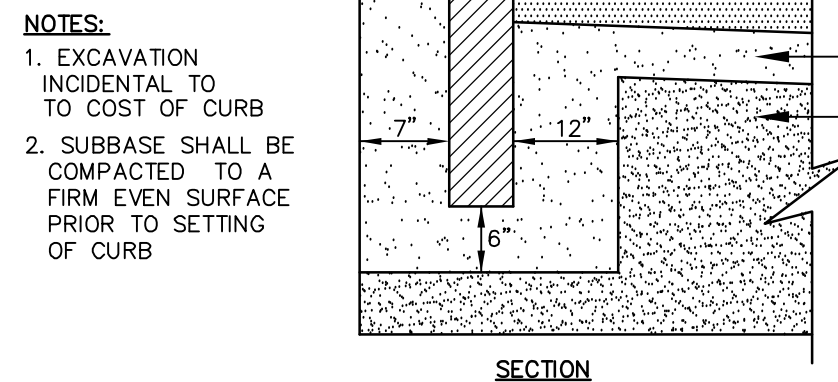
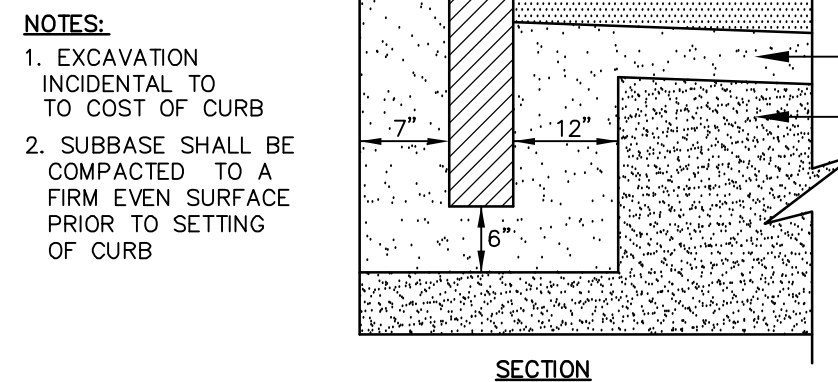
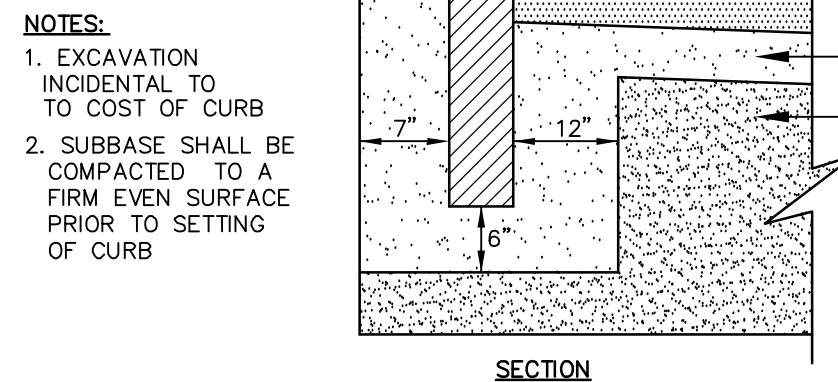
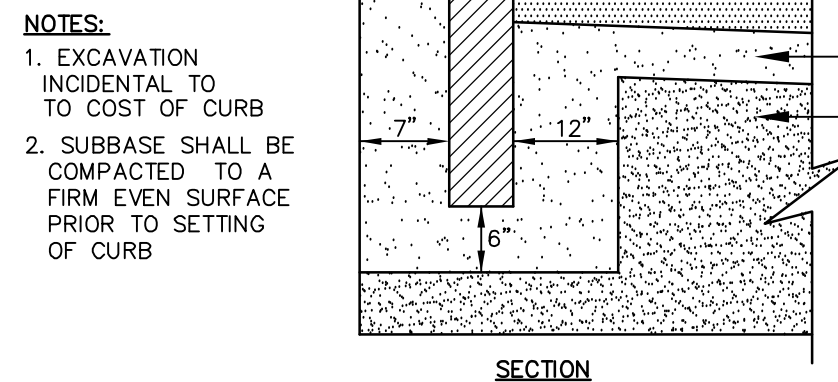
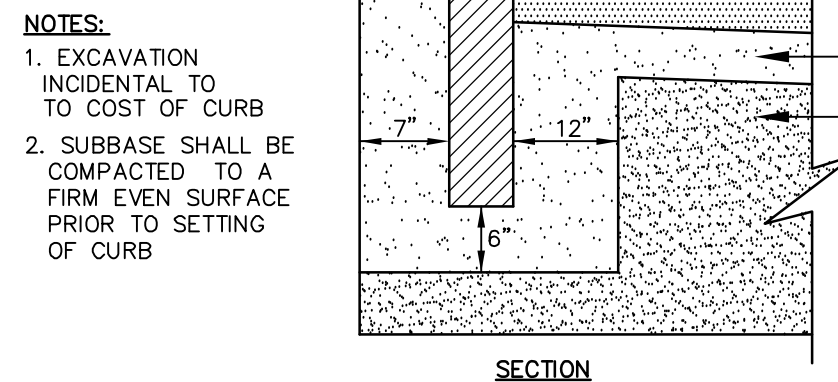
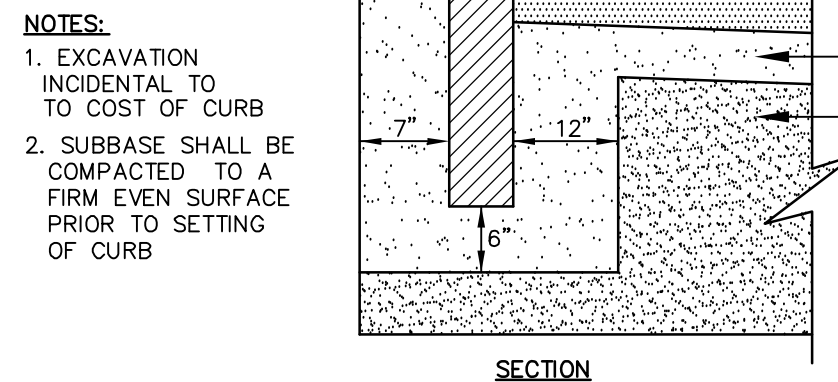
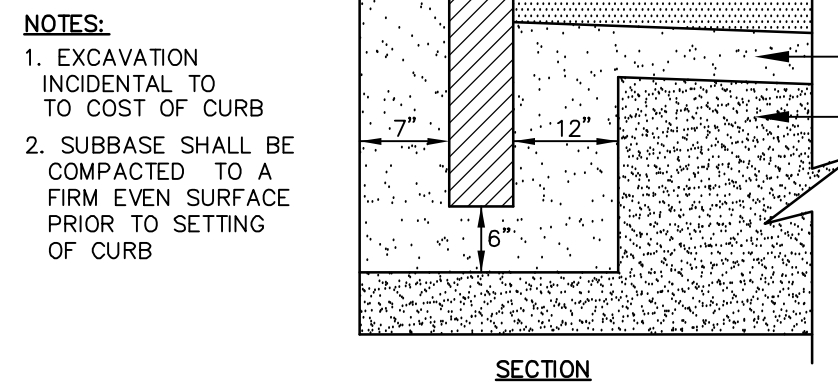
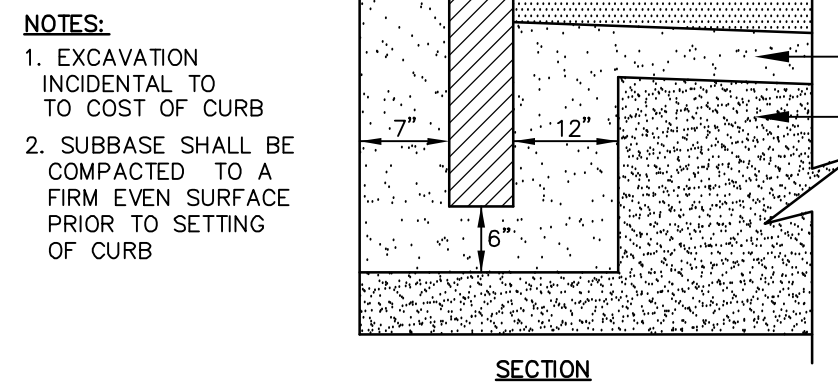
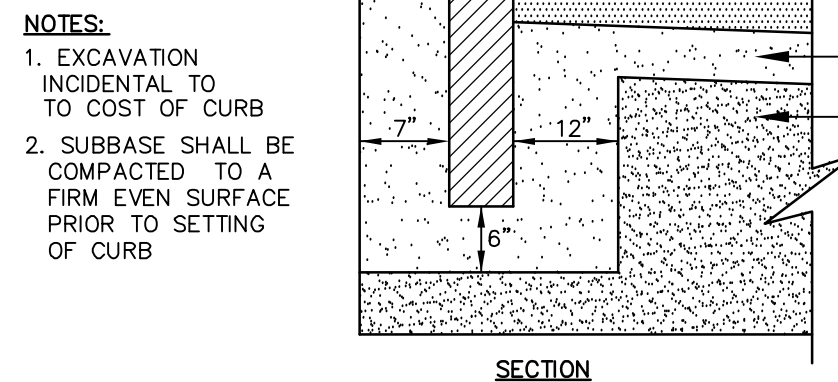
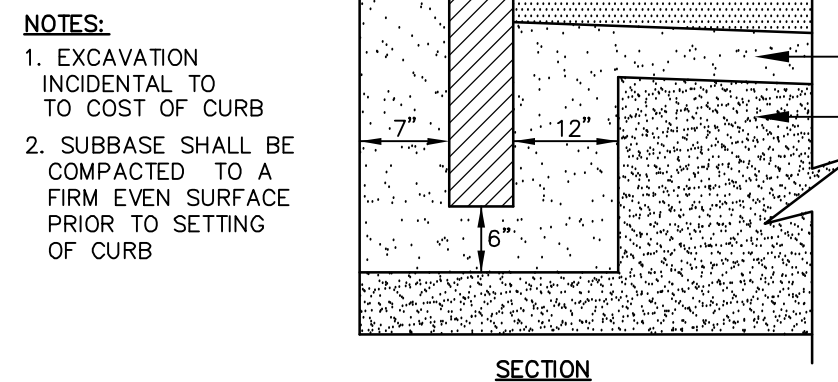
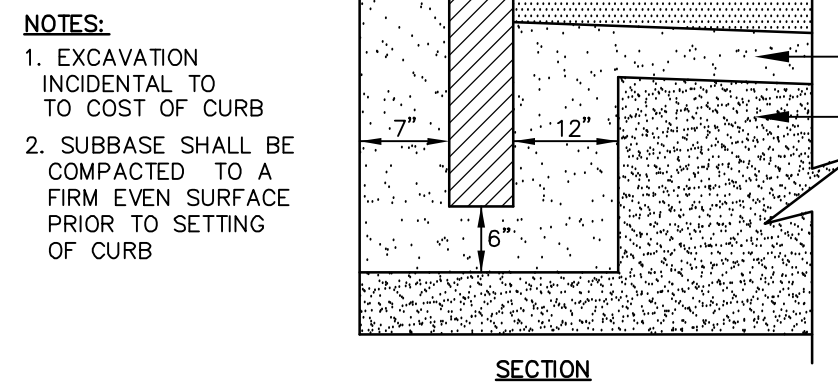
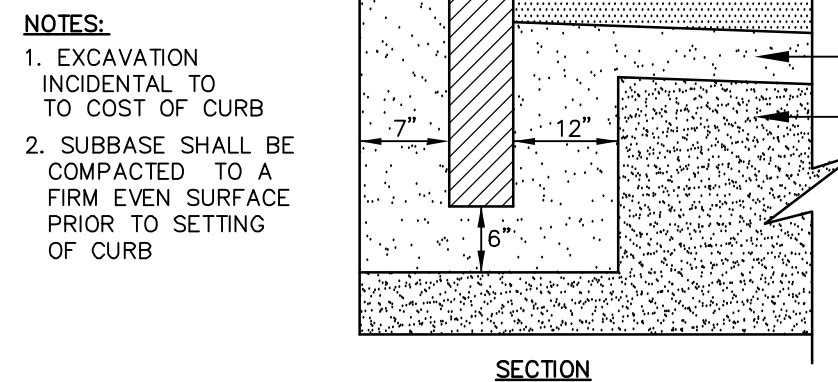
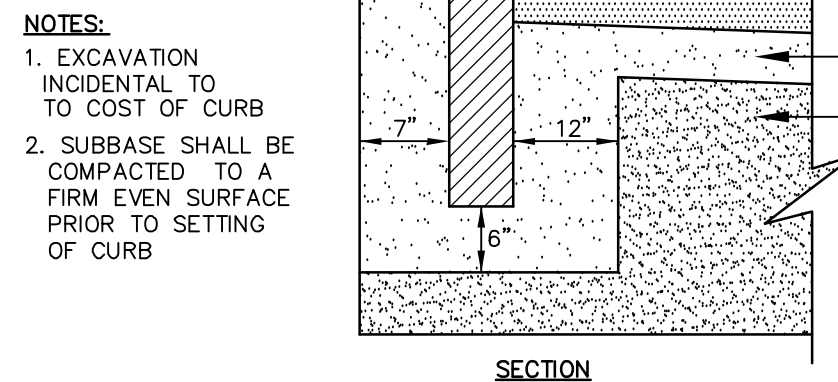
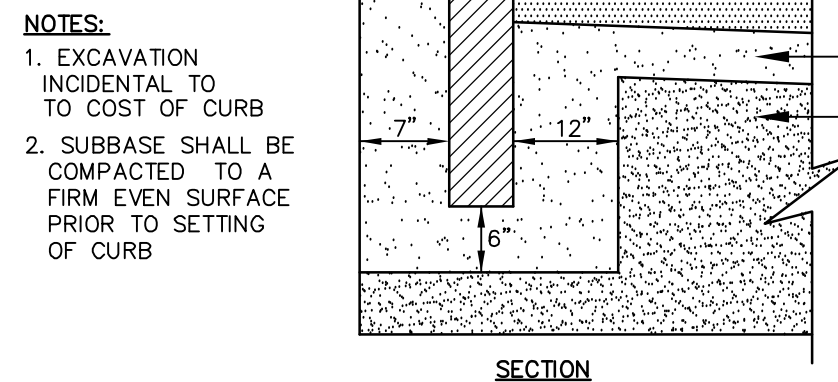
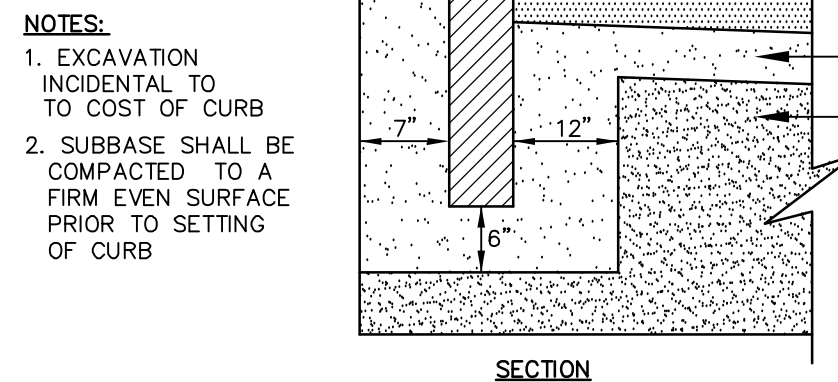
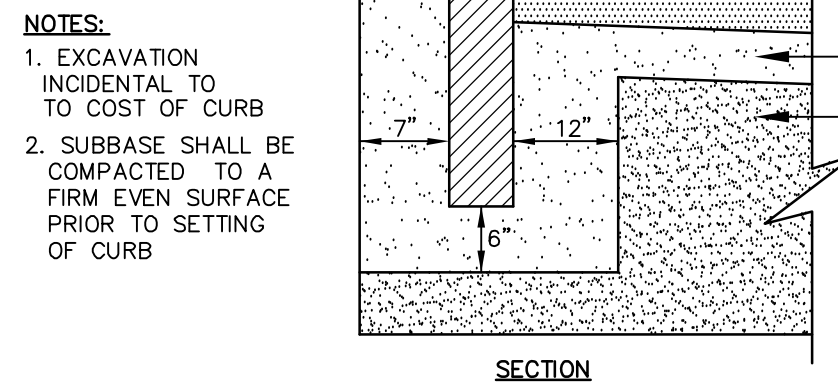
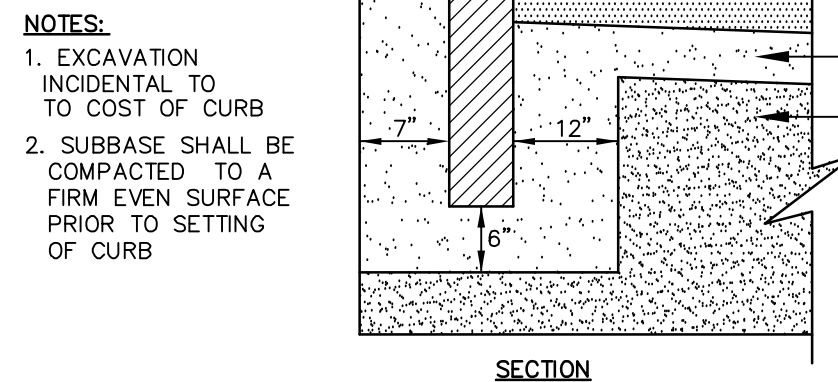
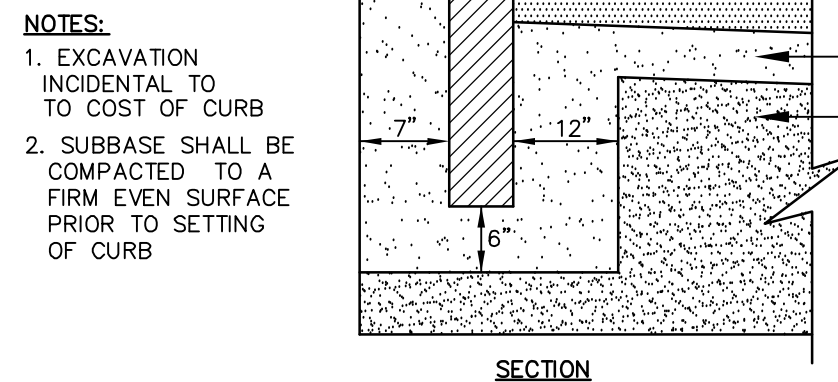
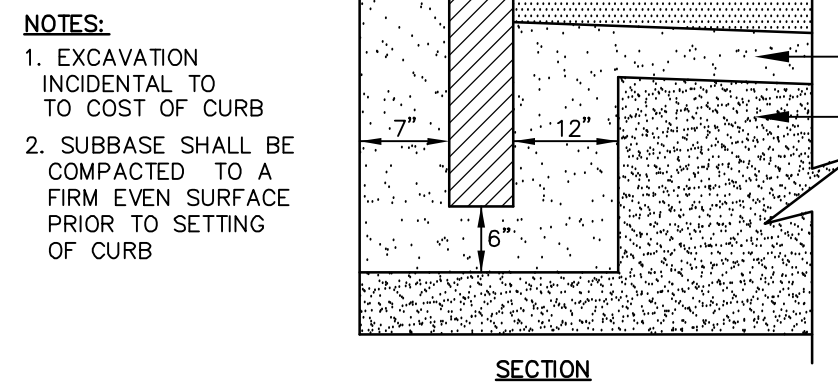
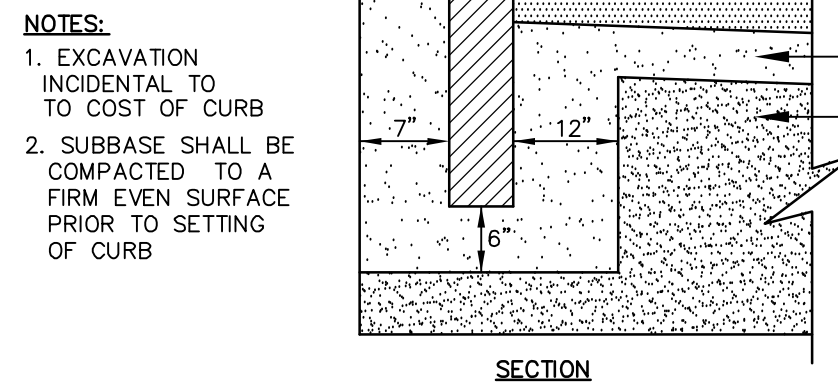
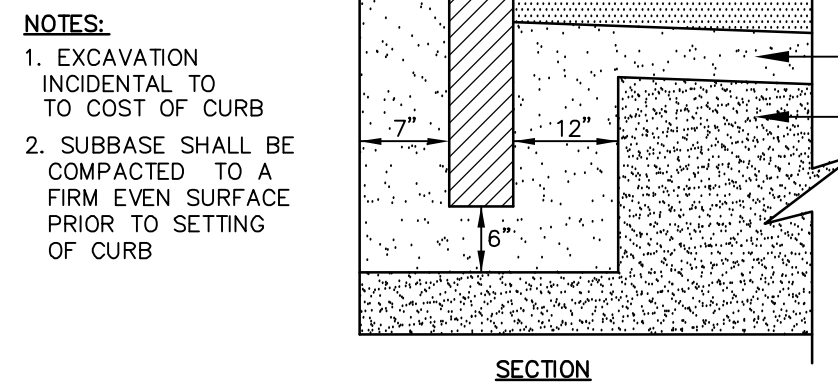
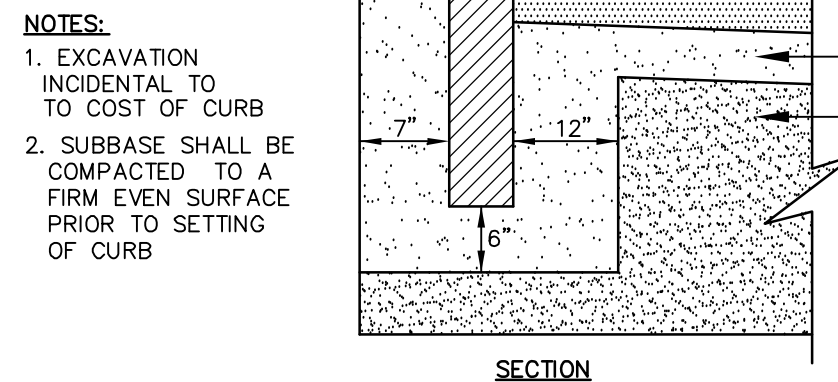
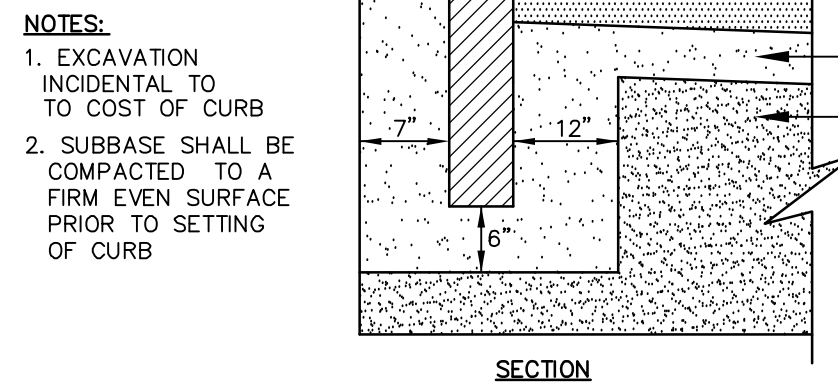
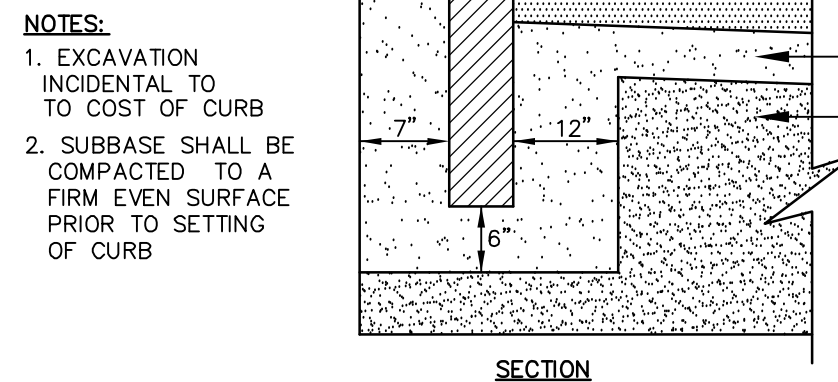
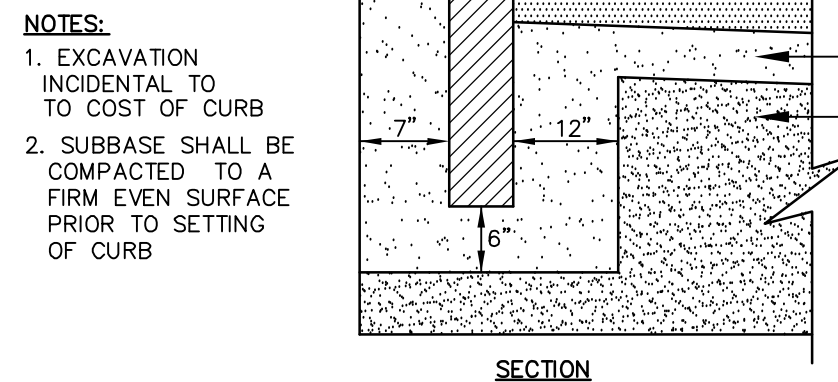
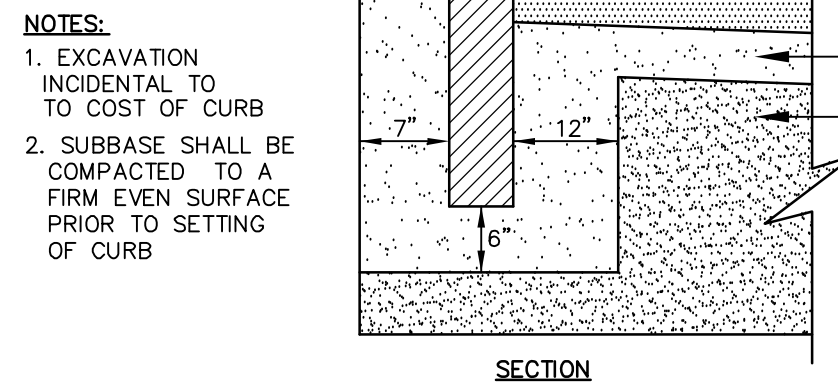
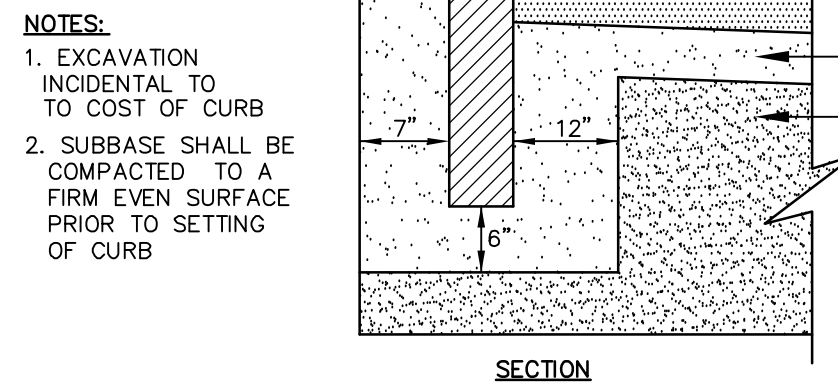
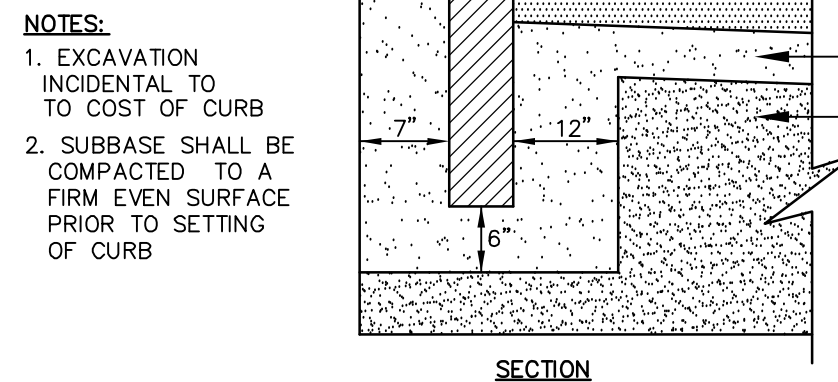
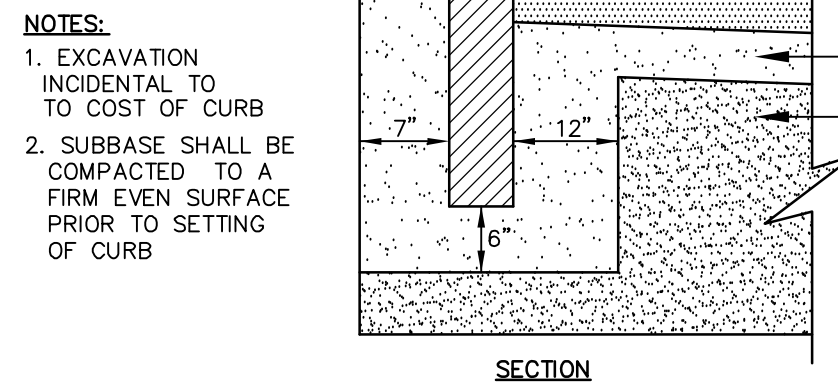
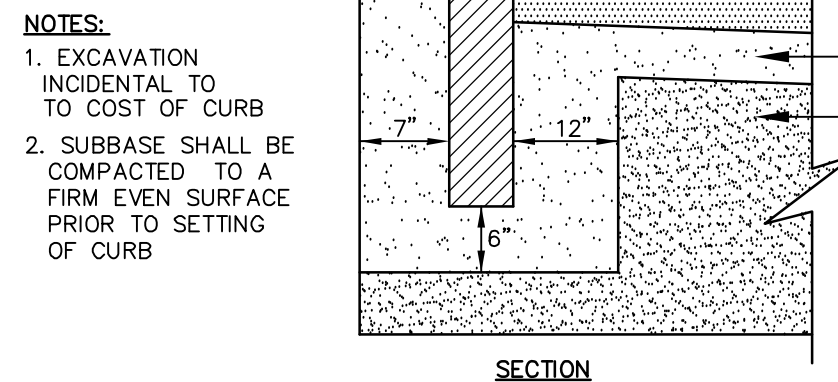
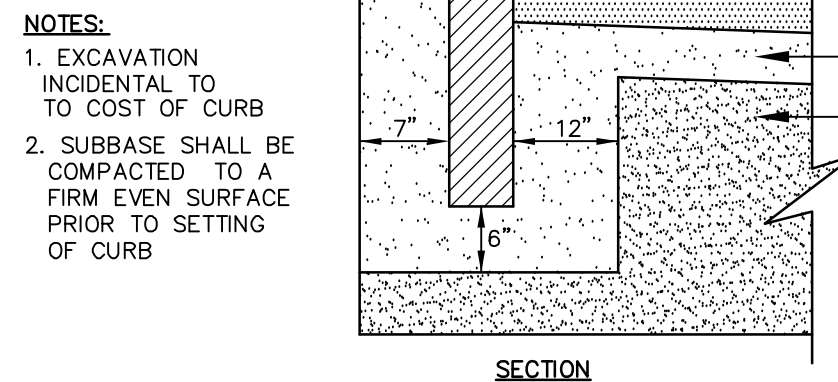
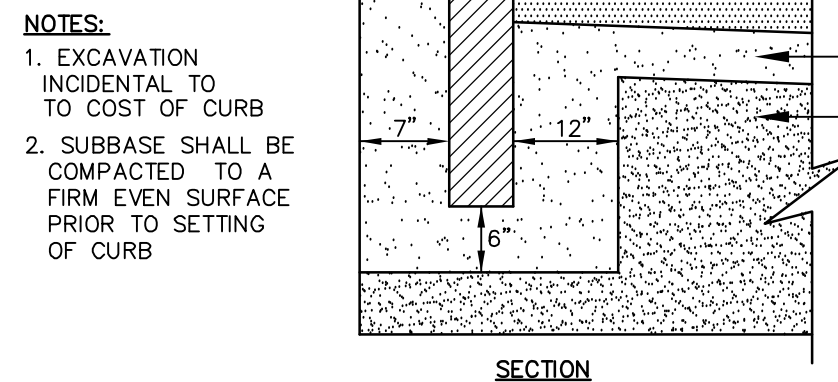
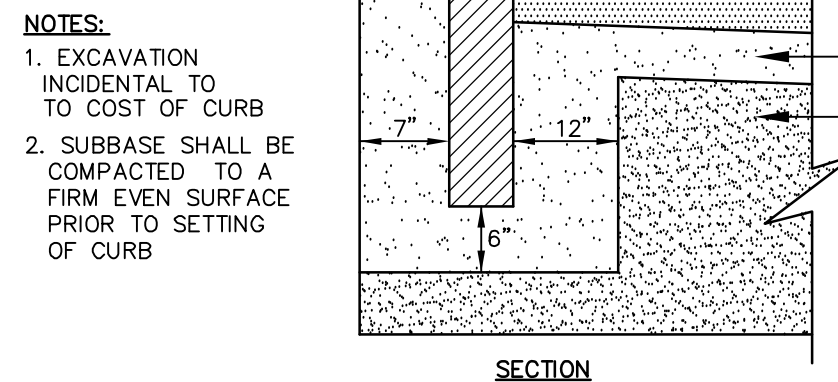
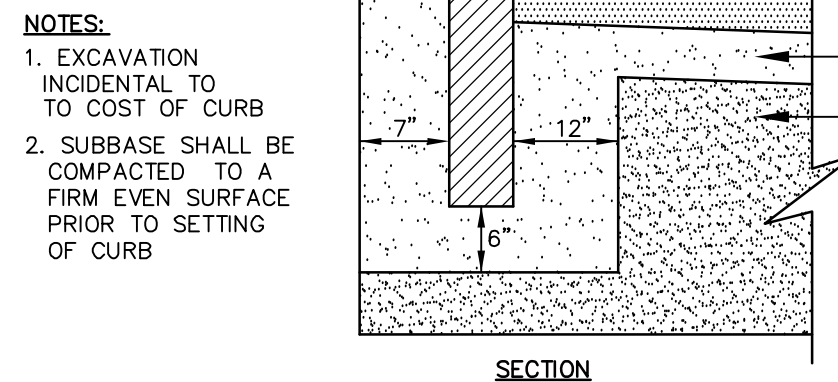
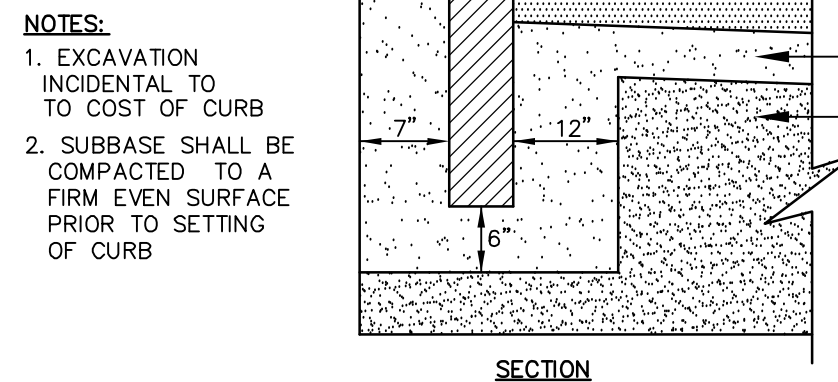
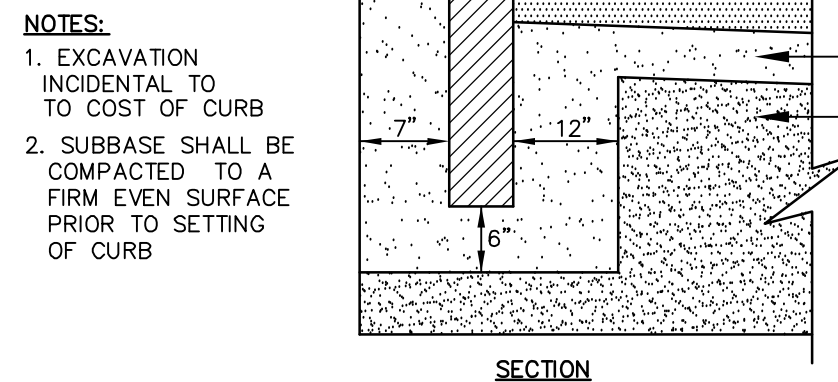
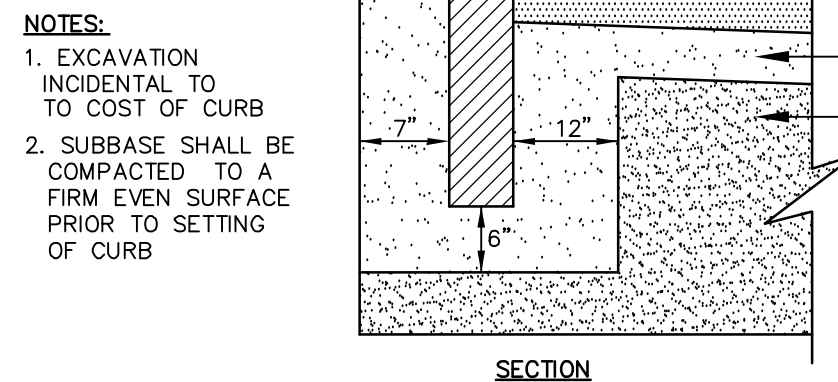
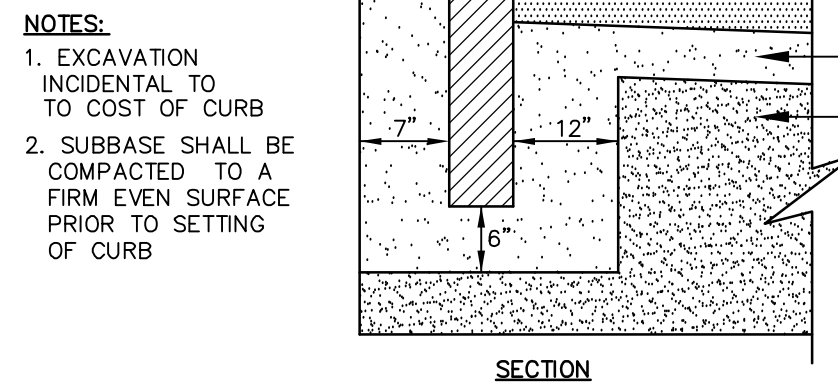
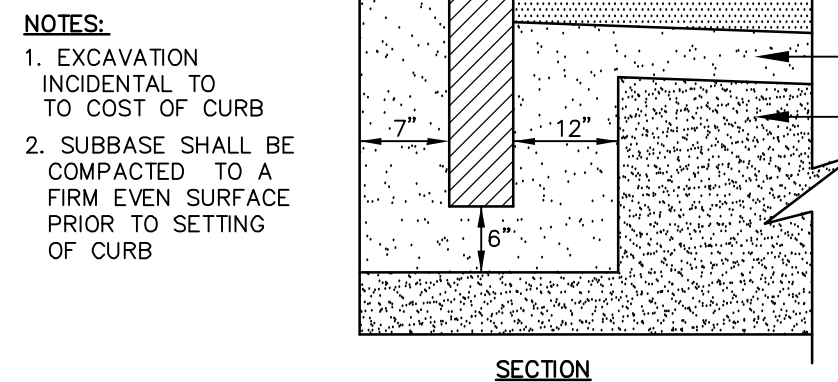
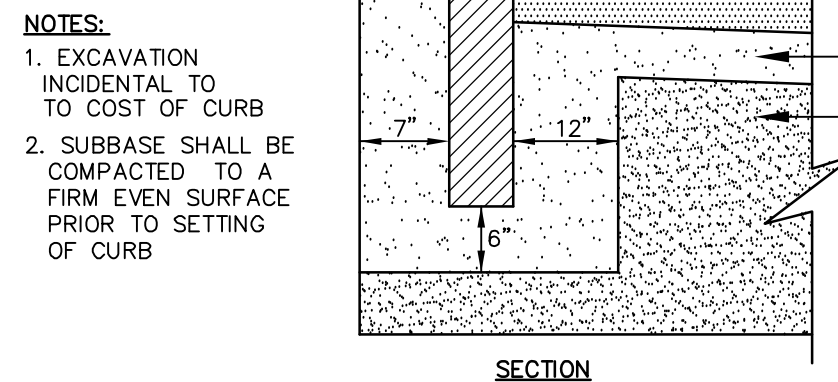
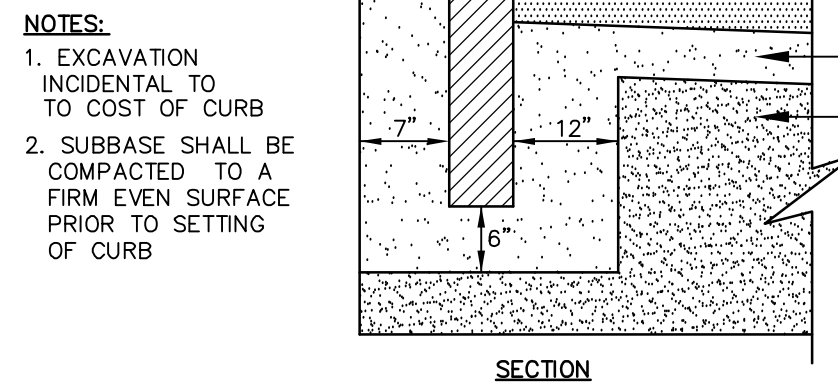
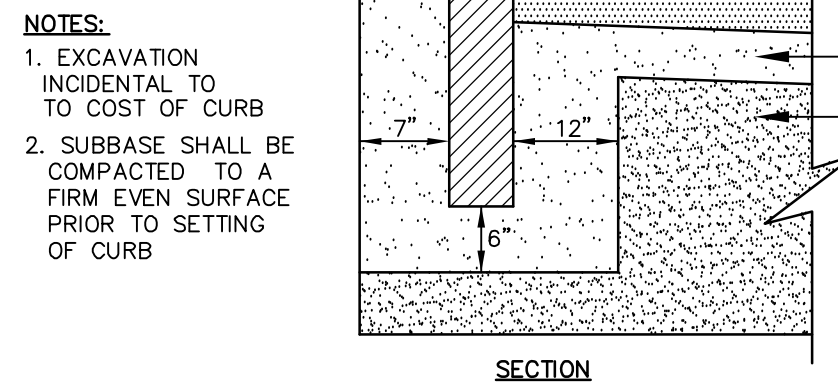
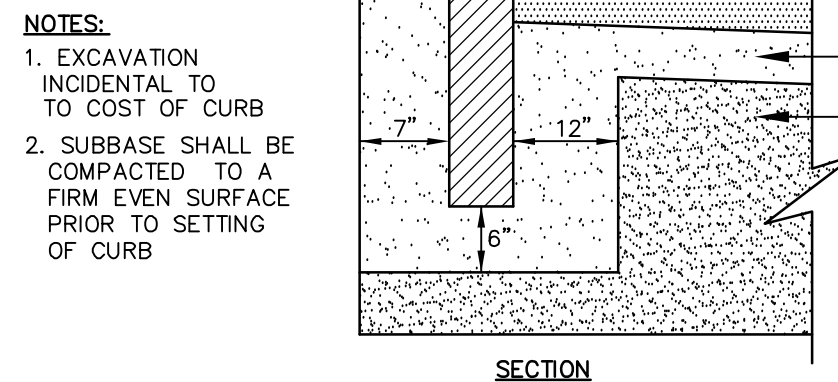
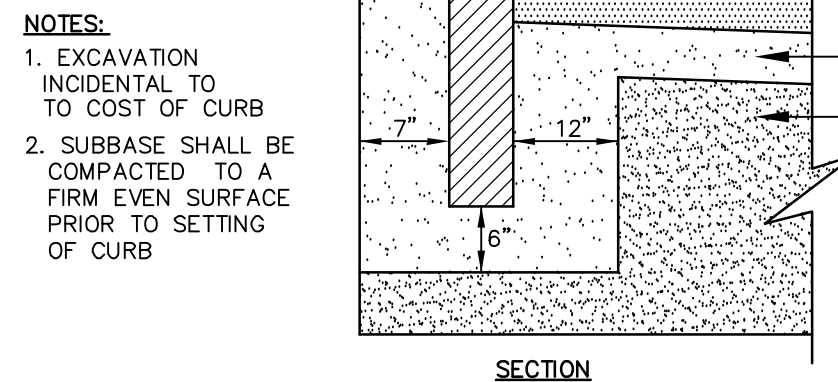
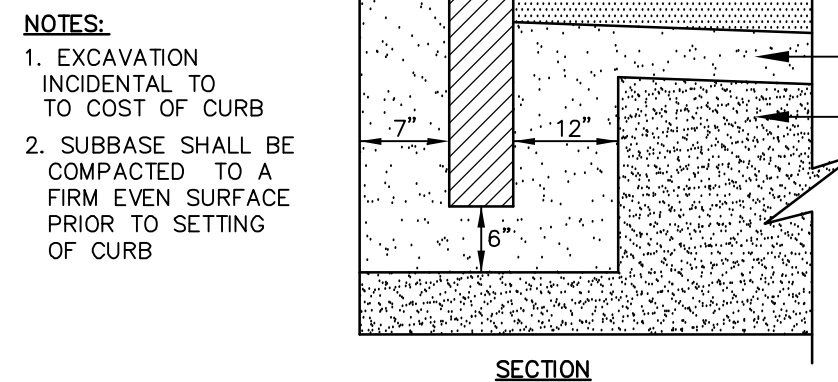
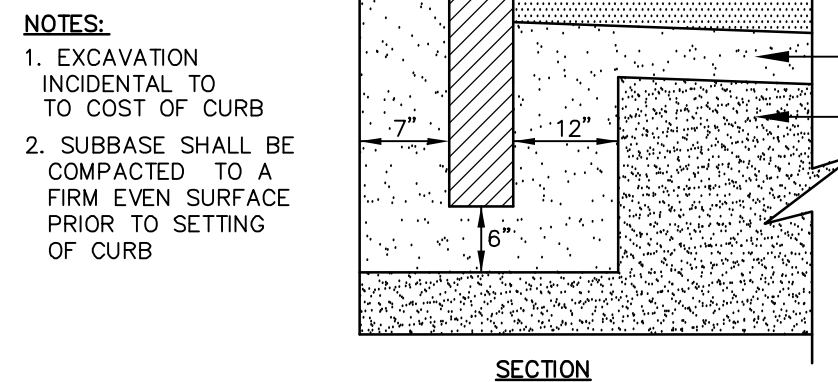
### TYPICAL TIPDOWN CURB INSTALLATION

NOT TO SCALE



### VERTICAL GRANITE CURB

NOT TO SCALE

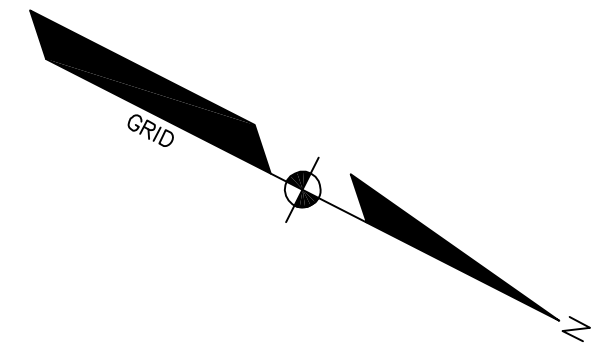






| PLANT | SCHEDULE                        |                           |                      |
|-------|---------------------------------|---------------------------|----------------------|
| KEY   | BOTANICAL NAME                  | COMMON NAME               | SIZE                 |
| EG    | EUNYMUUS 'EMERALD GAIEY'        | EUNYMUUS                  | NO. 1 CONT.          |
| FG    | FESTUCA GLAUCA 'BEYOND BLUE'    | BLUE OAT GRASS            | NO. 1 CONT./18" O.C. |
| JE    | JUNIPERUS C. 'EMERALY SENTINEL' | UNIPRIGT JUNIPER          | 8' HGT.              |
| KN    | KALMIA 'C. OBERLIN'             | RED FL. HEATH             | 10' HGT.             |
| KN    | KALMIA 'NATHAN HALE'            | MOUNTAIN LAUREL           | NO. 5 CONT.          |
| ML    | MAGNOLIA X 'LEONARD MESSEL'     | MAGNOLIA                  | NO. 25 CONT.         |
| PV    | PACHYRANDRA TERMINALS           | PACHYRANDRA               | FLS/8" O.C.          |
| PV    | PINUS F. 'VANDERWOLF'S PYRAMID' | VANDERWOLF PINE           | 6'-8" HGT.           |
| RM    | RHOODODENDRON 'MIDNIGHT RUBY'   | RHOODODENDRON             | NO. 5 CONT.          |
| TH    | THUJA 'NIGRA'                   | BARB. AMERICAN ARBORVITAE | 8' HGT.              |
| UA    | ULMUS A. 'VALLEY FORGE'         | VALLEY FORGE ELM          | 2 1/2" C.L.          |





**LEGEND**

WATERSHED BOUNDARY  
TIME OF CONCENTRATION

REACH

WATERSHED LABEL

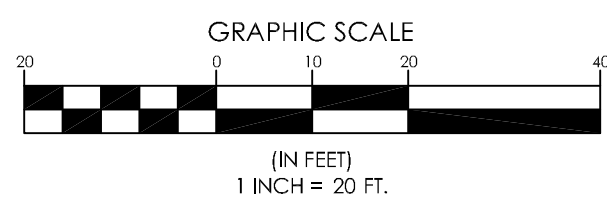
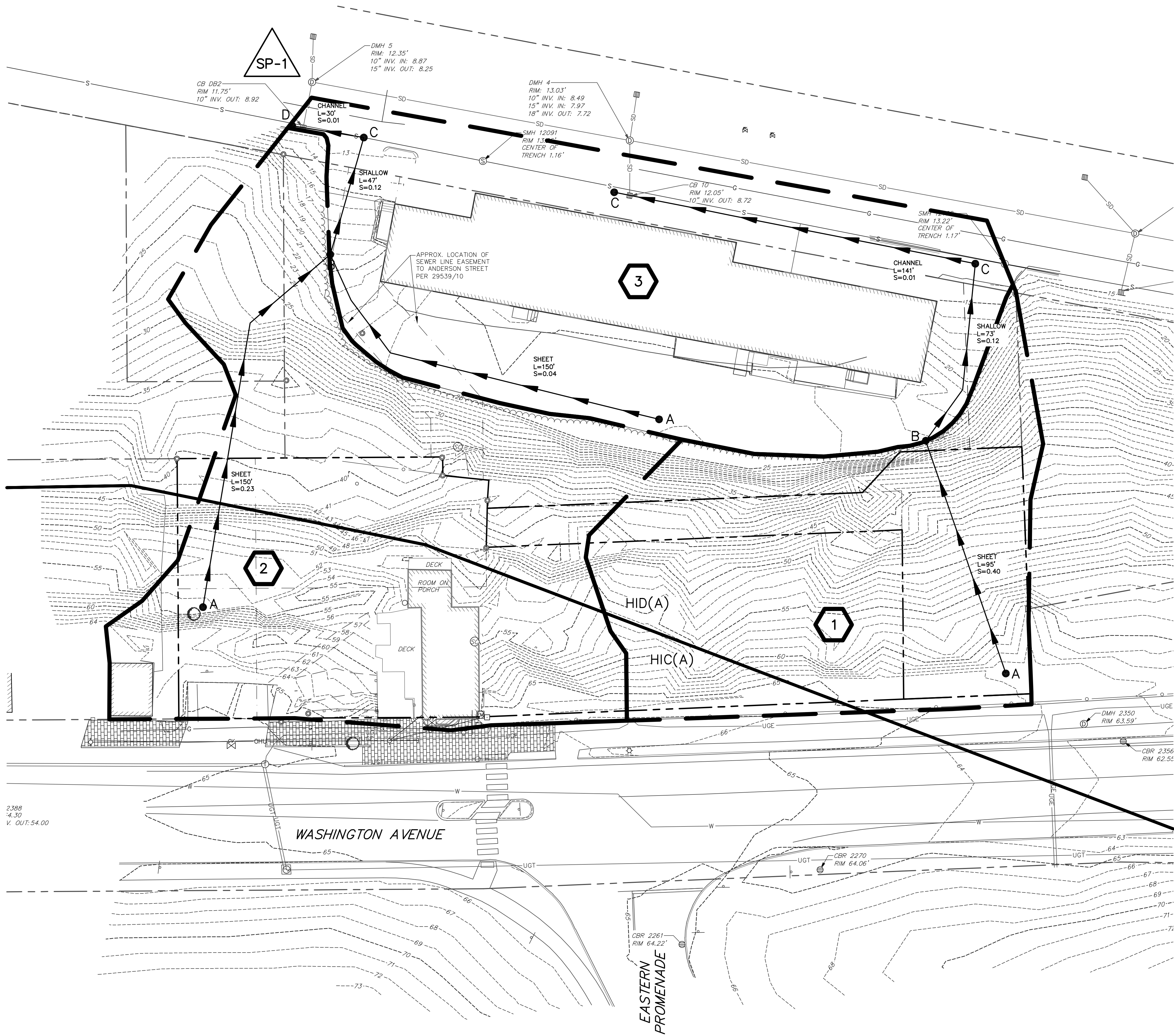
REACH

DETENTION POND

SOILS BOUNDARY

**LEGEND**

| EXISTING                | PROPOSED                |
|-------------------------|-------------------------|
| PROPERTY LINE/R.O.W.    | PROPERTY LINE/R.O.W.    |
| ABUTTER LINE/R.O.W.     | ABUTTER LINE/R.O.W.     |
| EASEMENT                | EASEMENT                |
| MONUMENT                | MONUMENT                |
| IRON PIPE/ROD           | IRON PIPE/ROD           |
| BUILDING                | BUILDING                |
| DECK/STEPS/<br>OVERHANG | DECK/STEPS/<br>OVERHANG |
| EDGE PAVEMENT           | EDGE PAVEMENT           |
| PAVEMENT SAWCUT         | PAVEMENT SAWCUT         |
| EDGE CONCRETE           | EDGE CONCRETE           |
| PAVEMENT PAINT          | PAVEMENT PAINT          |
| EDGE GRAVEL             | EDGE GRAVEL             |
| CURB LINE               | CURB LINE               |
| RETAINING WALL          | RETAINING WALL          |
| DECIDUOUS TREE          | DECIDUOUS TREE          |
| SIGN                    | SIGN                    |



PLS OR PE

PROGRESS PRINT

PLS OR PE

NOT FOR CONSTRUCTION

KETH D. GRAY, PE#13313

| DESIGNED | CHECKED |
|----------|---------|
| KDG      | KDG     |

| DESIGNED | CHECKED |
|----------|---------|
| KDG      | KDG     |

WWW.SEBAGOTECHNICS.COM

75 John Stevens Rd. 250 South Portland Rd.  
South Portland, ME 04106 Lewiston, ME 04240  
Tel: 207-200-2100 Tel: 207-753-5556

PRE DEVELOPMENT WATERSHED PLAN

OF: 218-220 WASHINGTON AVENUE  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE

FOR: 218-220 WASHINGTON AVENUE LLC  
190 ELDERBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

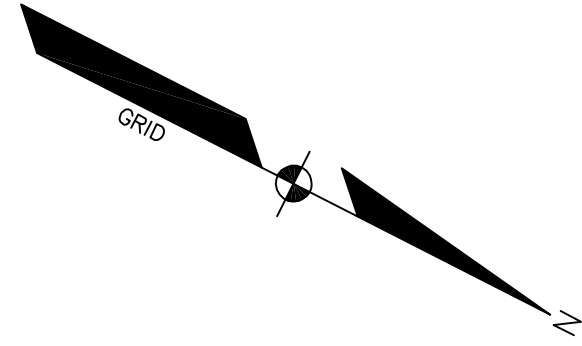
PROJECT NO. 06172

SCALE 1" = 20'

SHEET 1. OF 12

06172SWP.dwg





**LEGEND**

WATERSHED BOUNDARY  
TIME OF CONCENTRATION

REACH

WATERSHED LABEL

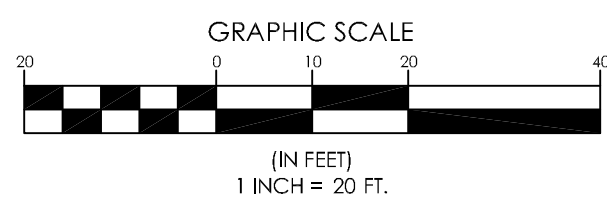
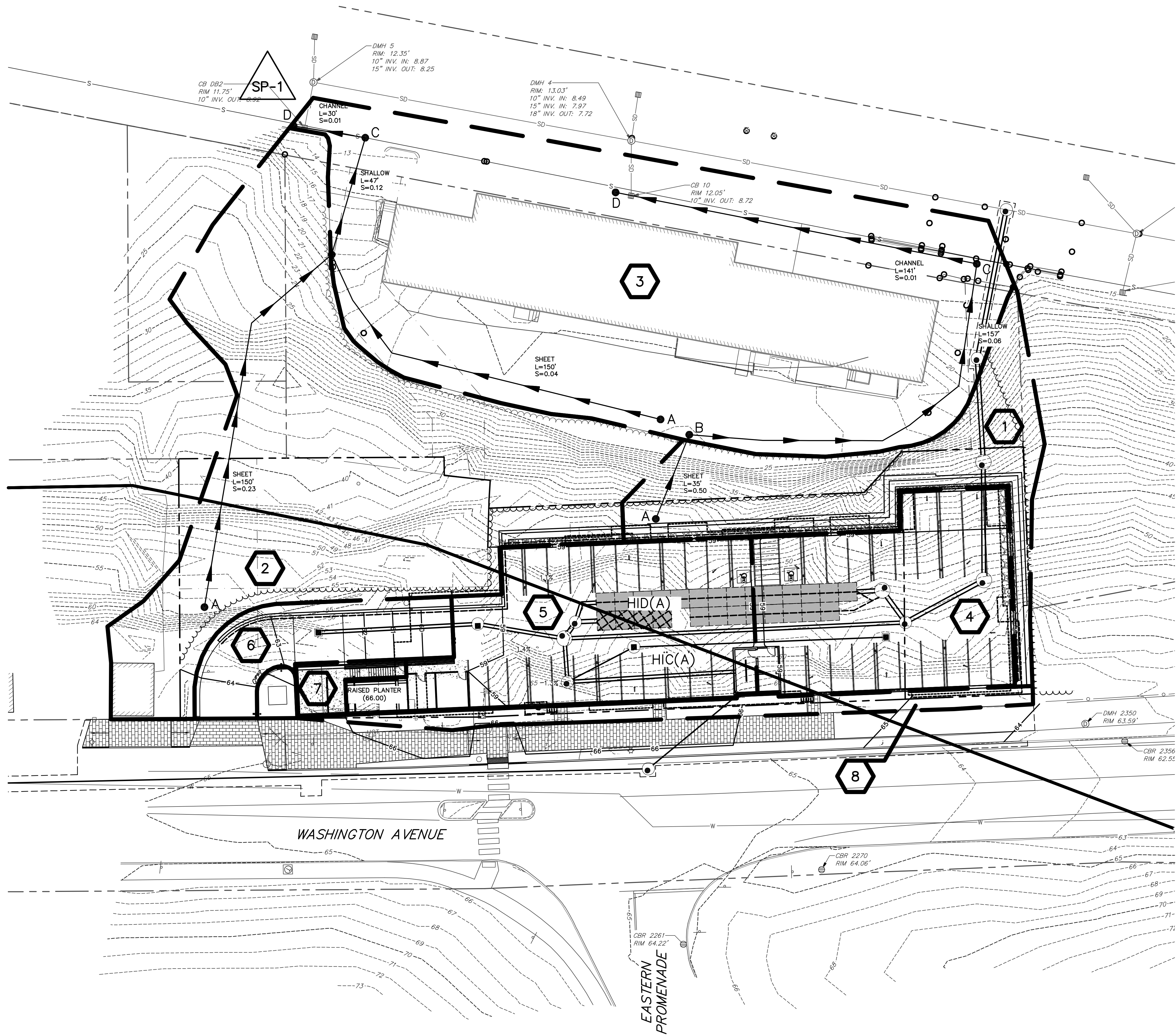
REACH

DETENTION POND

SOILS BOUNDARY

**LEGEND**

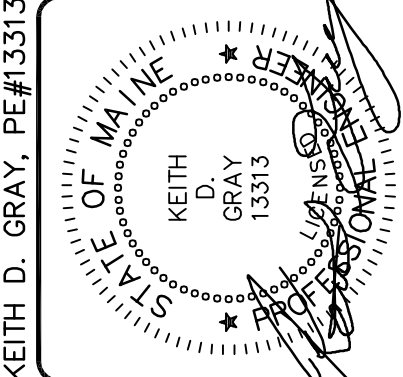
| EXISTING                | PROPOSED                |
|-------------------------|-------------------------|
| PROPERTY LINE/R.O.W.    | PROPERTY LINE/R.O.W.    |
| ABUTTER LINE/R.O.W.     | ABUTTER LINE/R.O.W.     |
| EASEMENT                | EASEMENT                |
| MONUMENT                | MONUMENT                |
| IRON PIPE/ROD           | IRON PIPE/ROD           |
| BUILDING                | BUILDING                |
| DECK/STEPS/<br>OVERHANG | DECK/STEPS/<br>OVERHANG |
| EDGE PAVEMENT           | EDGE PAVEMENT           |
| PAVEMENT SAWCUT         | PAVEMENT SAWCUT         |
| EDGE CONCRETE           | EDGE CONCRETE           |
| PAVEMENT PAINT          | PAVEMENT PAINT          |
| EDGE GRAVEL             | EDGE GRAVEL             |
| CURB LINE               | CURB LINE               |
| RETAINING WALL          | RETAINING WALL          |
| DECIDUOUS TREE          | DECIDUOUS TREE          |
| SIGN                    | SIGN                    |



POST-DEVELOPMENT WATERSHED PLAN  
OF:  
218-220 WASHINGTON AVENUE  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE  
FOR:  
218-220 WASHINGTON AVENUE LLC  
190 ELDREBBY ROAD  
SOUTH PORTLAND, MAINE 04106

PROJECT NO. 06172 SCALE 1" = 20'  
SHEET 2 OF 12

**SEBAGO**  
TECHNICS  
WWW.SEAGOTECHNICS.COM  
75 John Stevens Rd. 250 South Rd.  
South Portland, ME 04106 Lewiston, ME 04240  
Tel: 207-200-2100 Tel: 207-752-5555



NOT FOR CONSTRUCTION

PROGRESS PRINT

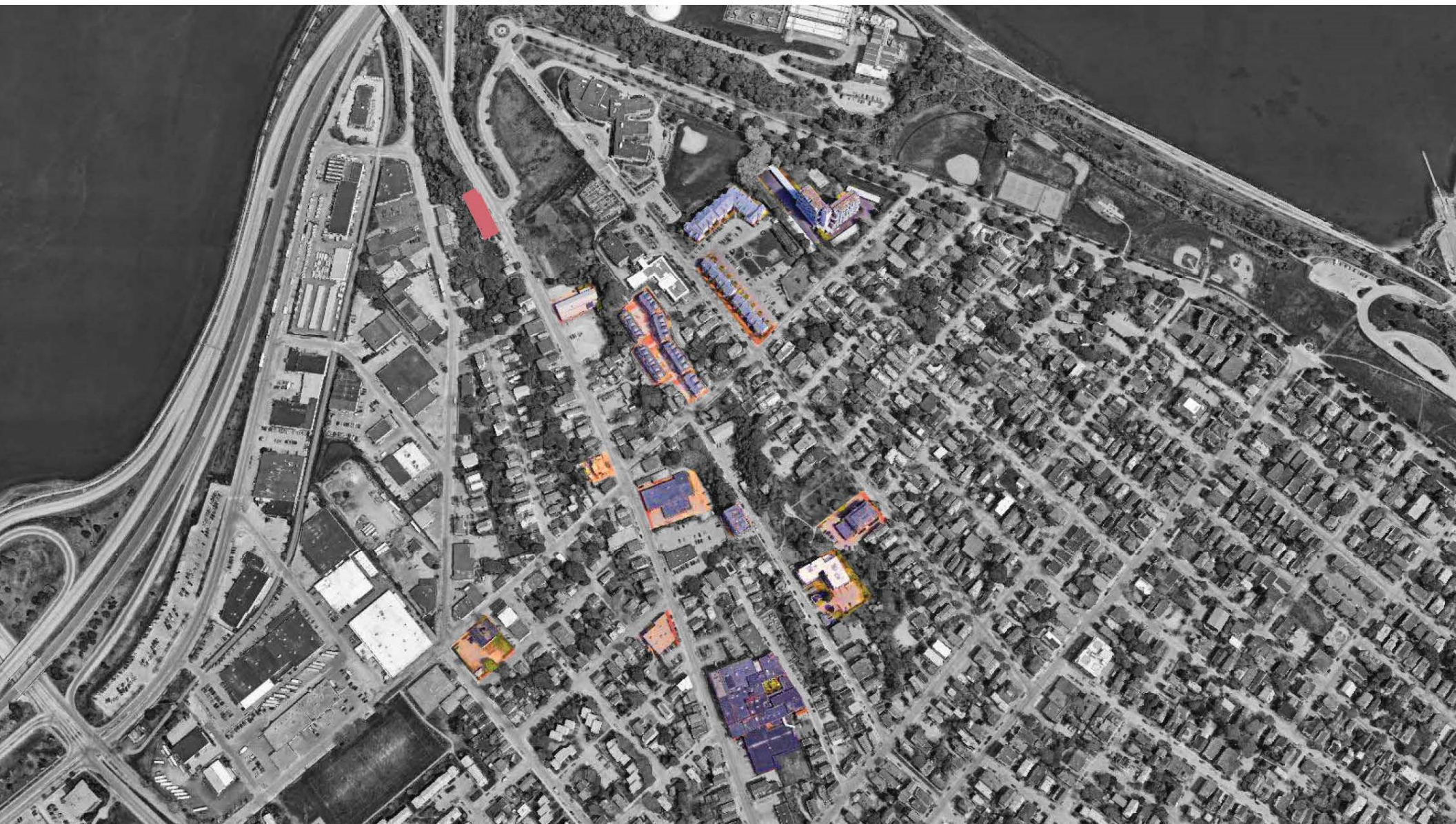




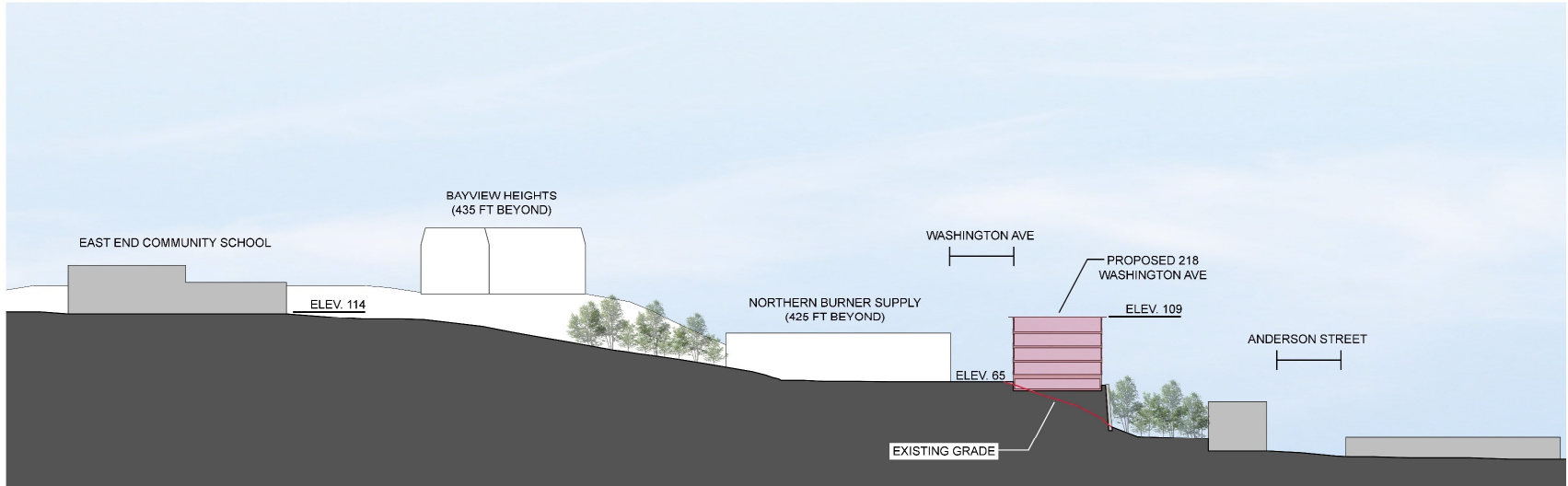












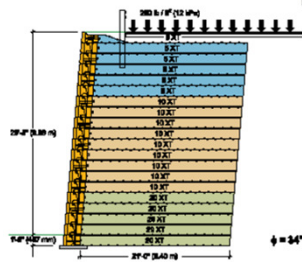
POSITIVE CONNECTION SYSTEM WALLS AIRRYD LOAD RESISTANCE FACTOR DESIGN

## Preliminary Reinforcement Schedule

$\phi = 34^\circ$  DENSE WELL-GRADED SAND OR SAND AND GRAVEL  
LOAD CONDITION B | 200 lbf/ft<sup>2</sup> (12 kPa) LIVE LOAD SURCHARGE, NO BACK SLOPE, NO TOE SLOPE

20 BLOCK SECTION \*  
600 30" (7.6 m) Blocks

| Design | Rebar Required per Wall Length      |
|--------|-------------------------------------|
| Type   | Rebar / Approx. # Rebar / Approx. # |
| 10Y    | 0.250 0.250                         |
| 10Y    | 0.250 0.250                         |
| 10Y    | 0.250 0.250                         |



### Legend:

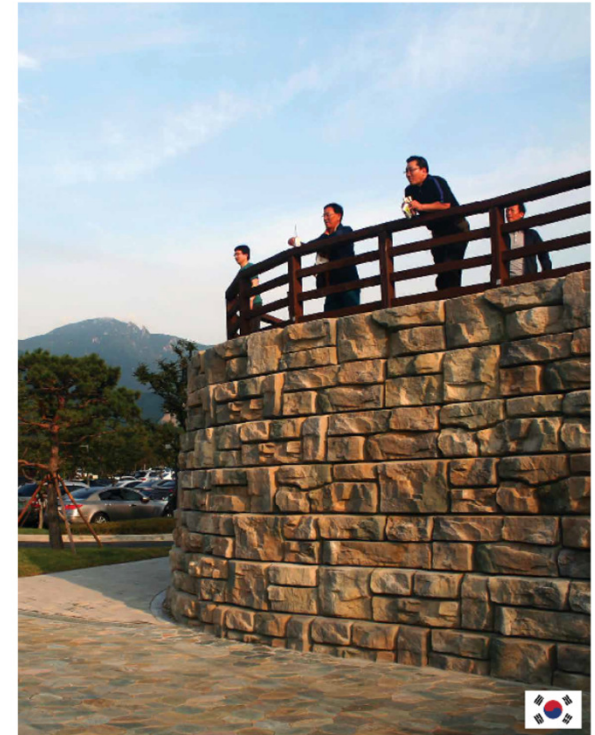
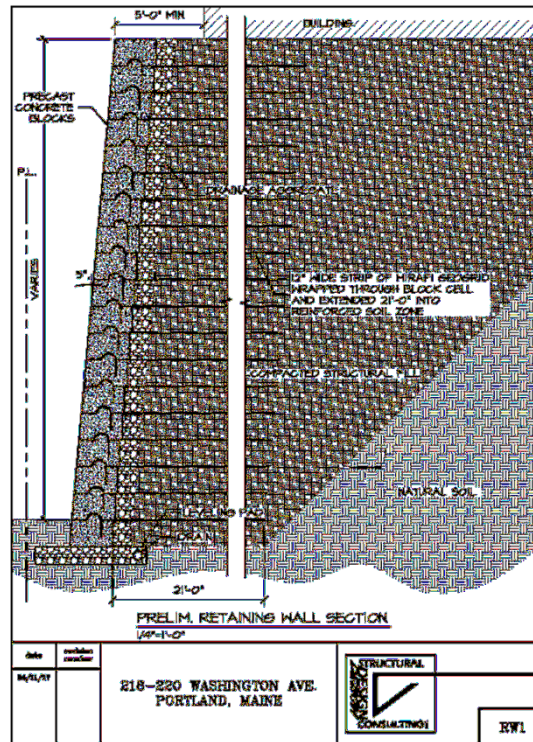
= 20" (508 mm) BLOCK  
 = 41" (1041 mm) BLOCK

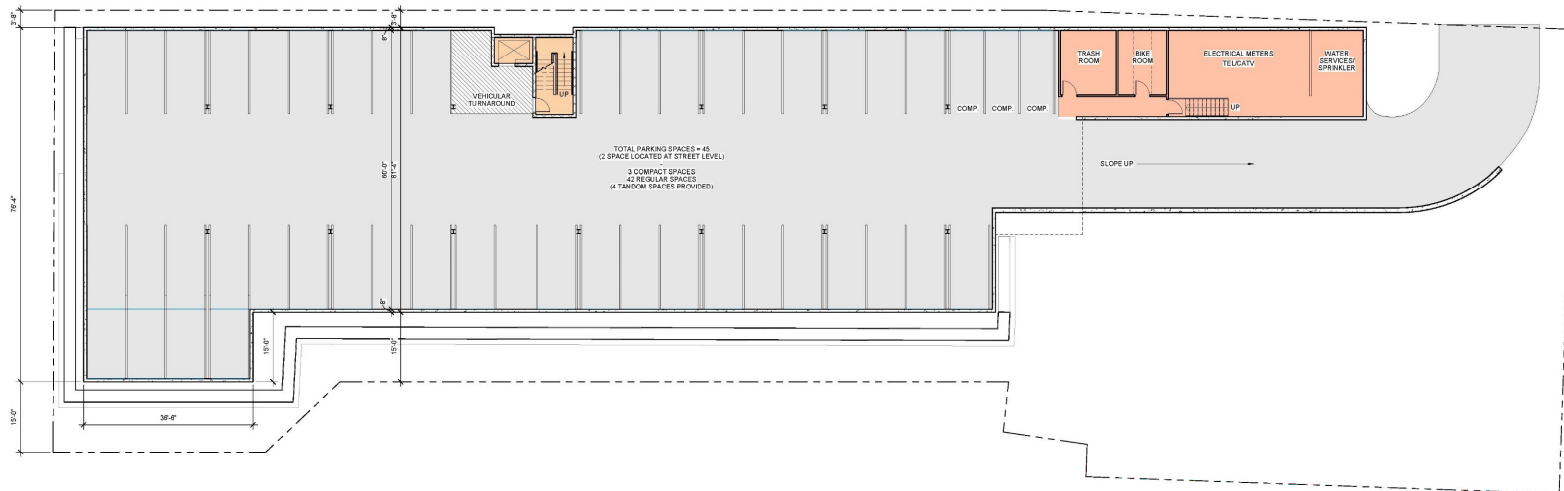
Length 53'  
OILWATER (Construction 100%)  
Design Cut Length = 2' x L + 0.5 (0.5 m)

Design shall be 12" (305 mm) wide width of steel (rebar), type as noted. Design shall be factory cut and certified for width and strength by Tensile Test.

\* Not tall enough? You can build significantly taller walls with the Red-Rock PC System...we just had to stop the preliminary sections somewhere. Talk to your Engineer or give us a call for more info.

SEE NOTES AND RECOMMENDED DETAILS AT START OF PRELIM. REINFORCEMENT SCHEDULE.





1 | GROUND FLOOR  
3/32" = 1'-0"

|                  |  |                      |                   |                                                                                  |       |             |  |               |  |
|------------------|--|----------------------|-------------------|----------------------------------------------------------------------------------|-------|-------------|--|---------------|--|
| Date: DECEMBER 4 |  | Scale: 3/32" = 1'-0" | Ground Floor Plan |                                                                                  | A1.00 |             |  |               |  |
| Revision:        |  | Project Name         |                   | Architect:                                                                       |       | Consultant: |  | Prepared For: |  |
|                  |  |                      |                   | ARCHETYPE<br>architects                                                          |       | Owner       |  |               |  |
|                  |  |                      |                   | 48 Union Wharf Portland, Maine 04101<br>(207) 775-9022 ARCHETYPE@ARCHETYPEPA.COM |       |             |  |               |  |
|                  |  |                      |                   | Address<br>City, State                                                           |       |             |  |               |  |





218 Washington Avenue LLC

Consultant:

Architect:

**ARCHETYPE**  
architects

18 Union Wharf Portland, Maine 04101  
(207) 772-6224 [ARCHETYPE@ARCHETYPEPA.COM](mailto:ARCHETYPE@ARCHETYPEPA.COM)

Project: 218 WASHINGTON AVE

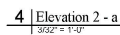
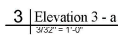
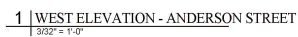
|     |                         |
|-----|-------------------------|
| 017 | Scale:<br>3/32" = 1'-0" |
|-----|-------------------------|

**FIRST & SECOND  
FLOOR PLANS**

A1.01



|       |       |          |        |              |                                |            |                                                                                                                   |                                                                                                                                                |             |                                                                          |
|-------|-------|----------|--------|--------------|--------------------------------|------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------|
| A1.02 | Date: | 5/5/2017 | Scale: | 3/4" = 1'-0" | THIRD AND FOURTH<br>FLOOR PLAN | Revisions: | Project:<br>218 WASHINGTON<br>AVE<br>48 Union Ward Portland, Maine 04108<br>218 WASHINGTON AVE<br>PORTLAND, MAINE | Architect:<br><br>ARCHETYPE<br>2017-1623012704-ARCHTYPE.COM | Consultant: | Prepared For:<br>218 Washington<br>Avenue LLC<br>Address:<br>City, State |
|       |       |          |        |              |                                |            |                                                                                                                   |                                                                                                                                                |             |                                                                          |



A2.01









