

1. Legal Ad

Documents:

[PB LEGAL AD 10-10-17.PDF](#)

2. Agenda

Documents:

[PB AGENDA 10-10-17.PDF](#)

3. 22 Hope Avenue

3.I. Memo And Attachments

Documents:

[HOPE AVE. - 22 \(MEMO\).PDF](#)  
[HOPE AVE. - 22 \(MEMO ATTACHMENTS\).PDF](#)  
[HOPE AVE. - 22 \(APPLICANTS SUBMITTAL A-L\).PDF](#)  
[HOPE AVE. - 22 \(APPLICANTS SUBMITTAL M\).PDF](#)  
[HOPE AVE. - 22 \(APPLICANTS SUBMITTAL N-T\).PDF](#)  
[HOPE AVE. - 22 \(PUBLIC COMMENTS\).PDF](#)  
[HOPE AVE. - 22 \(PLANS\).PDF](#)

4. 233 Anderson Street

4.I. Memo And Attachments

Documents:

[ANDERSON ST. - 233 \(MEMO\).PDF](#)  
[ANDERSON ST. - 233 \(MEMO ATTACHMENTS\).PDF](#)  
[ANDERSON ST. - 233 \(APPLICANTS SUBMITTAL\).PDF](#)

5. 218-220 Washington Avenue

5.I. Report

Documents:

[PB REPORT 10.10.17 218 WASH.PDF](#)

5.II. Attachments

Documents:

[WASHINGTON AVE. - 218 \(REPORT ATTACHMENTS\).PDF](#)  
[WASHINGTON AVE. - 218 \(APPLICANTS SUBMITTAL\).PDF](#)  
[WASHINGTON AVE. - 218 \(PUBLIC COMMENT\).PDF](#)  
[WASHINGTON AVE. - 218 \(PLANS\).PDF](#)

**LEGAL ADVERTISEMENT  
PORTLAND PLANNING BOARD  
MEETING AGENDA**

The Portland Planning Board will hold a meeting on **Tuesday, October 10, 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 Conditional Use for Inclusionary Zoning Application; Brandy Lane Subdivision; 22 Hope Avenue; LBW, LLC., Applicant. (4:30 – 5:30 p.m. **estimated time**) The Board will hold a workshop on a proposal to subdivide a 40 acre parcel into 16 single family lots ranging in size from 6,048 to 18,641 sq. ft. The proposal includes 1.9 acres of land as open space. Conditional rezoning agreement C-40 is the applicable zoning for the site. A conditional use application has also been submitted for the review of one affordable home within the development to meet the City's inclusionary zoning requirements.
- ii. Zoning Map Amendment from Industrial I-Lb/Business B-1b to Business B-1b; 233 Anderson Street; Walnut LLC., Applicant. (5:30 – 6:30 **estimated time**) The Board will hold a workshop on a proposed map amendment. The zoning for the parcel is split between Industrial I-Lb and Business B-1b zones. The applicant is requesting to rezone the entire parcel to Business B-1b in order to support a mixed use development (potentially including multi-family) on the vacant site. The proposed rezoning is subject to review and a recommendation from the Planning Board to the City Council.

**Public Hearing 7:00 p.m.**

- i. Level III Subdivision and Site Plan and Conditional Use for Inclusionary Zoning; 218 Washington Avenue; 218-220 Washington Ave., LLC., Applicant. (7:00 p.m. **estimated time**) The Board will hold a public hearing 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 is subject to review under Portland's subdivision, site plan and Inclusionary Zoning requirements.

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



PLANNING BOARD



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

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**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 SEPTEMBER 26, 2017:**  
Workshop: All members were present.  
Public Hearing: All members were present.
4. **REPORT OF DECISIONS AT THE MEETINGS HELD ON SEPTEMBER 26, 2017:**
  1. Level III Site Plan, Thames Street Property (WEX office), 0 Hancock Street, LLC., Applicant.  
Dundon moved and Morrisette seconded a motion to waive the technical standard (1.7.2.7) for

driveway separation to allow a reduction in the separation to 20 feet on Hancock Street. Vote: 7-0. Dundon moved and Morrisette seconded a motion to waive the technical standard for the stormwater management requirement (Sec 5 of Technical Manual) to treat less than 50% of the redevelopment site, due to the proposed roof drain filter system, rooftop vegetation, reduction in impervious area, and the lower pollutant load of the hard surface area. Vote: 7-0. Dundon moved and Morrisette seconded a motion to waive the technical standard sidewalk design (Sec 1.8.3) and accompanying street cross-sections to allow for a standard curb with two intervening granite steps, as presented at the public hearing (L.2.) Vote: 7-0. Dundon moved and Morrisette seconded a motion to approve the site plan application with eleven (11) conditions of approval. Vote: 7-0.

- ii. Level III Subdivision, Knights Farm 9 Lot Subdivision; 1728 Washington Avenue, Greenlight Enterprises, LLC., Applicant. Dundon moved and Morrisette seconded a motion to find that criteria 1 and 6 were met of the waiver criteria and waived the sidewalk on the north side of the proposed street. Vote: 7-0. Dundon moved and Morrisette seconded a motion to find that criteria 4 and 5 were met of the waiver criteria and waived the curbing along the Washington Avenue frontage. Vote: 7-0. Dundon moved and Morrisette seconded a motion to approve the subdivision plan with five (5) conditions of approval

## **5. NEW BUSINESS – 7:00 p.m.**

- i. Level III Subdivision and Site Plan and Conditional Use for Inclusionary Zoning; 218 Washington Avenue; 218-220 Washington Ave., LLC., Applicant. (7:00 **estimated time**) The Board will hold a public hearing 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 is subject to review under Portland's subdivision, site plan and Inclusionary Zoning requirements.



# Memorandum

## Planning and Urban Development Department

### Planning Division

**To:** Chair Boepple and Members of the Portland Planning Board  
**From:** Matthew Grooms, Planner  
**Date:** October 5, 2017  
**Re:** Brandy Lane Subdivision (Sixteen Lots), 22 Hope Lane  
LBW, LLC  
Preliminary Review  
**Project #:** 2017-117 **CBL:** 448-A-004  
**Meeting Date:** October 10, 2017

#### I. INTRODUCTION

LBW, LLC is proposing a sixteen-lot single-family subdivision on a 6.46 acre parcel of land in the North Deering Neighborhood. The site is currently undeveloped woodland and features an existing trail within the Presumpscot River Preserve and parking area for approximately five vehicles. As part of the development, a street will be constructed, with a 50' right-of-way (ROW), to the City Standards including the installation of underground utility services, granite curbs, lighting, sidewalks and street trees. The Planning Board is being requested to review the application under Portland's Subdivision Ordinance and for compliance with Division 30 of the City's Land Use Code to ensure adequate affordable housing per the city's inclusionary zoning requirements. The entire development is located within the C-40 Contract Zone.



|                                                                                                                                                                                                     |                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| esplanade to reduce wetland impact and should provide analysis of wetland impacts from sidewalk construction, including analysis of permitting requirements.                                        |                                                                                                                                        |
| Preservation of Significant Natural Features waiver to allow for the filling of on-site wetland features                                                                                            | <i>Section 14-526(b)</i> requires that significant natural features be preserved and protected by incorporating them into site design. |
| Staff Recommendation: No waiver is required as this level of review falls within the purview of the MDEP, which required a Tier I NRPA permit. A copy of this permit shall be provided to the city. |                                                                                                                                        |
| <b>Review</b>                                                                                                                                                                                       | <b>Applicable Standards</b>                                                                                                            |
| Subdivision (creation of 3 or lots)                                                                                                                                                                 | <i>Section 14-497</i>                                                                                                                  |

### III. PROJECT DATA

|                             |                                           |                                                |                   |
|-----------------------------|-------------------------------------------|------------------------------------------------|-------------------|
| Existing Zoning             | C-40 Contract Zone                        |                                                |                   |
| Existing Use                | Undeveloped Woodlands                     |                                                |                   |
| Proposed Use                | Sixteen single-family lots                |                                                |                   |
| Parcel Size                 | 6.46 acres                                |                                                |                   |
|                             | <i>Existing</i>                           | <i>Proposed</i>                                | <i>Net Change</i> |
| Impervious Surface Area     | 0 SF                                      | 70.051 SF                                      | 70.051 SF         |
| Building Footprint          | 0 SF                                      | 0 SF (Buildings are not proposed at this time) | 0 SF              |
| Number of Residential Units | 0                                         | 16 New Lots                                    | 16 Lots           |
| Proposed Bedroom Mix        | Additional Information has been requested |                                                |                   |
| Estimated Cost of Project   | Awaiting Cost Estimate                    |                                                |                   |

### IV. EXISTING CONDITIONS

This 6.46-acre tract of undeveloped woodlands is located off of Hope Lane in the North Deering Neighborhood and is abutted by single-family residential uses to the south and west, the Falmouth Spur roadway to the north and a Central Maine Power Company Easement and undeveloped woodlands including a portion of the Presumpscott River Preserve to the east of this site. A Presumpscott River Preserve parking area with space for six vehicles is located off of the property's frontage on Hope Lane, providing access to one of the Preserve's trail heads, which traverses the southeast corner of the property. The property contains several areas of existing wetlands totaling and exhibits a predominantly gentle slope, with the exception of two steeper inclines located at the north and south ends of the site. Residential land uses in the vicinity are predominantly zoned R-2 Residential with the exception of eight parcels to the southeast of this site which fall within the C-40 Contract Zone. The area of land encompassed by the CMP easement is zoned RPZ Resource Protection Zone.



**Figure 2: View of Site from Hope Lane with Existing Trail Parking**

The property contains several areas of existing wetlands totaling and exhibits a predominantly gentle slope, with the exception of two steeper inclines located at the north and south ends of the site. Residential land uses in the vicinity are predominantly zoned R-2 Residential with the exception of eight parcels to the southeast of this site which fall within the C-40 Contract Zone. The area of land encompassed by the CMP easement is zoned RPZ Resource Protection Zone.

## V. PROPOSED DEVELOPMENT

This subdivision would consist of sixteen lots measuring between 6,054 sf and 17,006 sf, compliant with the standards of the C-40 Contract Zone which requires lots to be a minimum of 6,000 sf. The applicant intends to construct a new public street with a 50-foot right-of-way, measuring 950 feet in length to be named Brandy Lane. This street would access all sixteen lots and connect with Hope Lane at the existing curb cut where the trailhead parking area is currently located. This parking area would subsequently be relocated approximately 250 feet further north within the site, with the trailhead similarly being relocated.

Along the entire west side of Brandy Lane, a sidewalk and esplanade feature, measuring 5 feet and 6 feet respectively, is proposed and is continued along the east side of the street across the frontage of proposed lots 13 through 16, with a sidewalk waiver being sought for the remaining portion due to wetland disturbance. Crosswalks will be constructed at two locations; between proposed lots 7 and 16, and at the Brandy Lane and Hope Lane intersection. A total of nine Town and Country street lamps, spaced approximately 115-feet apart are proposed along the west side of Brandy Lane within the proposed esplanade and two street trees are being provided per lot.

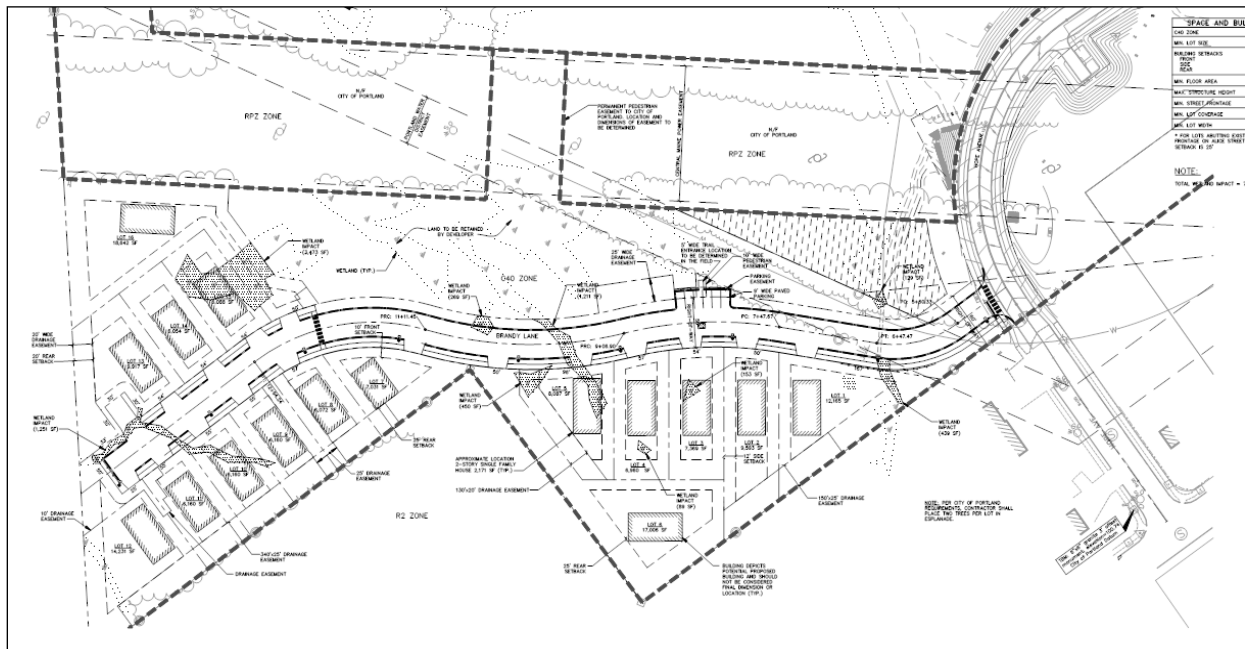


Figure 3: Proposed Subdivision Plan

Prior to development of the street, underground electric, telephone and cable lines are to be installed beneath proposed esplanades, with a new water main and sanitary sewer line being constructed beneath Brandy Lane itself. In regards to stormwater management control, the development will utilize 4 filtertrenches, 3 systems of StormTech chambers, 5 Grassed underdrained soil filters, and 16 roof dripline filters to provide water quality treatment and storage. Certain features of this system have been proposed within the public right-of-way, and staff have asked that all stormwater BMPs be relocated out of the right-of-way.

This site contains a number of wetland areas which are predominantly clustered along the easterly property boundary. The applicant intends to fill 7,764 sf of wetland in order to complete this subdivision, and is seeking a Tier I NRPA permit from Maine DEP.

## VI. PUBLIC COMMENT

The Planning Division received three written public comments for this project (*Attachment 8*). These comments discuss utilizing the development parcel for recreational purposes, concerns regarding traffic in the vicinity of the development and requests for additional information regarding relocation of the trail parking area.

The City's consulting traffic engineer, Tom Errico, in reviewing the applicant's traffic evaluation report, determined that the existing street network has sufficient capacity to accommodate trips associated with this development and further that the development will not result in safety deficiencies.

The proposed single-family development is an allowable use under the C-40 Contract Zone and the property is not owned by the city and as such, the applicant is not obliged to alter their proposal.

## VII. RIGHT, TITLE, & INTEREST AND FINANCIAL & TECHNICAL CAPACITY

a. The owner of the property is Lloyd B. Wolf of LBW, LLC. The applicant has provided a copy of a quitclaim deed, recorded at the Cumberland County Registry of Deeds (Book 23889 Page 327), which demonstrates their right, title and interest in the property (*Attachment J*).

b. The applicant has submitted a letter from Gorham Savings Bank, dated January 5, 2017, as demonstration of their financial and technical capacity to complete the proposed development (*Attachment K*).

| SPACE AND BULK STANDARDS                                                                                         |                    |
|------------------------------------------------------------------------------------------------------------------|--------------------|
| C40 ZONE                                                                                                         | REQUIRED           |
| MIN. LOT SIZE                                                                                                    | 6,000 S.F.         |
| BUILDING SETBACKS<br>FRONT<br>SIDE<br>REAR                                                                       | 10'<br>12'<br>20'* |
| MIN. FLOOR AREA                                                                                                  | 1,000 S.F.         |
| MAX. STRUCTURE HEIGHT                                                                                            | 35 FT.             |
| MIN. STREET FRONTAGE                                                                                             | 50 FT.             |
| MIN. LOT COVERAGE                                                                                                | 40%                |
| MIN. LOT WIDTH                                                                                                   | 50 FT.             |
| * FOR LOTS ABUTTING EXISTING RESIDENTIAL LOTS WITH FRONTAGE ON ALICE STREET AND ALICE COURT, REAR SETBACK IS 25' |                    |

Figure 4: Zoning Compliance Table

## VIII. ZONING ANALYSIS

The proposed subdivision is within the C-40 Contract Zone. This is considered a sixteen-lot subdivision, all lots intended for development of single-family residential structures. The lots as proposed meet the minimum lot size, minimum street frontage, and lot width. Each lot has the potential to meet all of the other setback requirements, parking requirements, lot coverage requirements, and building height. When a building permit comes in for the construction on the individual lots, it must meet all the zone requirements.

Initially, the C-40 Contract Zone contained an age restriction clause, which stipulated that at least 80% of the total occupied units be reserved for owner-occupied individuals of at least fifty-five years of age. In 2012, this requirement was removed with the first amendment to the C-40

Contract Zone. All other subdivision requirements of the zone are being met.

## IX. SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS (Section 14-496)

The final plat will need to be revised to reflect any waivers and conditions of approval that relate to the subdivision plan. Any waivers granted must be recorded at the Registry of Deeds within 90 days of a Planning Board decision.

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

### 1. Will Not Result in Undue Water and Air Pollution (Section 14-497 (a) 1), and Will Not Result in Undue Soil Erosion (Section 14-497 (a) 4)

The site is currently undeveloped and contains no impervious surface area. In regards to stormwater management control, the development will utilize 4 filterstrips, 3 systems of StormTech chambers, 5 grassed underdrained soil filters, and 16 roof dripline filters to provide water quality treatment and storage. Certain features of this system have been proposed within the public right-of-way, and staff have asked that all stormwater BMPs be relocated out of the right-of-way. No undue air pollution or

soil erosion is anticipated as a result of this development. The applicant intends to fill 7,764 sf of wetlands, which requires a Tier I NRPA permit from MDEP.

2. *Sufficient Water Available (Section 14-497 (a) 2 and 3)*

The applicant has not provided a letter from the Portland Water District confirming the district's ability to serve the proposed project. This will need to be part of the final submission.

3. *Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)*

The proposal includes a proposed street that starts at a new intersection with Hope Lane and dead ends with a turnaround near the boundary to the north. The Fire Department has reviewed the layout of the turnaround and states "[t]he proposed turnaround appears to be able to accommodate a Fire Dept. ladder truck. The access drive has been designed to meet City of Portland standards with a paved travel way of 28 feet in width. The Fire Department has indicated that 28 feet is needed for emergency access.

The applicant submitted a Traffic Generation Assessment (*Attachment L*) which projects 152 weekday and 159 Saturday vehicle trips, 12 AM peak hour trips, and 16 PM peak hour trips from the proposed subdivision. The City's Traffic Engineering Reviewer Tom Errico has commented (*Attachment 1*):

*I have reviewed the Traffic Evaluation prepared by the applicant. I find the contents and conclusions to be acceptable. The project does not require a Traffic Movement permit and is not expected to cause unreasonable traffic congestion or safety deficiencies.*

**Sidewalk Requirement**

The applicant is proposing a sidewalk and esplanade feature as required per the city's subdivision ordinance along the west side of Brandy Lane and along a portion of the east side of the street in front of proposed lots 13 through 16. Section 14-498(b)(8) of the Subdivision Ordinance requires that a sidewalk be constructed on each side of newly proposed streets. Tom Errico, in reviewing the applicant's plans provided the following comment (*Attachment 1*):

*A sidewalk shall be constructed on both sides of Brandy Lane per City standards. The applicant can request a waiver for sidewalks with supporting documentation per City waiver requirements.*

As part of the applicant's resubmittal following initial staff review, a sidewalk waiver request was submitted, citing the presence of wetlands and anticipated use of the subdivision. Tom Errico is requesting additional information regarding the waiver request as listed below (*Attachment 7*):

*The applicant has noted that construction of a sidewalk on both sides of Brandy Lane will have wetland impacts and thus requests a waiver for the eastern side of the street. The applicant should consider providing a sidewalk on the eastern side of the street, without a grass esplanade, in areas of wetland impact. Additionally, the applicant should specifically note the area of wetland impact and how this impact would alter permitting requirements.*

4. *Will Provide for Adequate Sanitary Sewer and Stormwater Disposal (Section 14-497 (a) 6), and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage (Section 14-497 (a) 7)*

The applicant has submitted a wastewater capacity application to the Department of Public Works requesting confirmation of adequate sewer capacity. A letter from DPW confirming sewer capacity has been included as a condition of approval. Since the road will be built to City standards and accepted by the City Council, solid waste and snow removal will then be handled by the City.

Under 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 MDEP Chapter 500 rules describe stormwater management requirements for new development projects. The City's Peer Engineering Review (*Attachment 6*) notes:



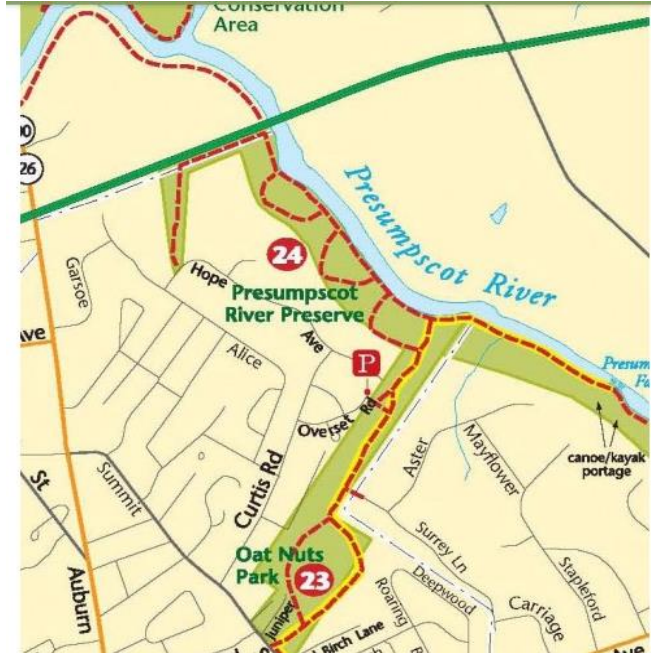
1. *The Applicant has noted that a MDEP NRPA Tier I wetland permit and approval from the ACOE are required, copies of all permit approvals should be forwarded to the City upon receipt. Applicant has acknowledged, and will be providing the permits when available.*
2. *The Applicant has included letters to utilities in their application. Ability to serve confirmation should be provided when available. Applicant has acknowledged, and will be providing the information when available.*
3. *In accordance with Section 5 of the City of Portland Technical Manual, a Subdivision 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 70,000 square feet. As such, the project is required to include stormwater management features for stormwater quality control. Please see below for additional stormwater management comments.*
  - c. *Flooding Standard: The project will result in an increase in impervious area of approximately 70,000 square feet. As such, the project is required to include specific stormwater management features to control the rate or quantity of stormwater runoff from the site. The Applicant has indicated that there will be minor increases in flow in the 2-year storm, 10-year storm and 25-year storm. We are in agreement that the increases will be insignificant. The underdrain soil filters have not been modeled in HydroCAD, and these may provide a small amount of flow attenuation as well. Please see below for additional stormwater management comments.*
4. *We have the following comments on the proposed stormwater management system for the site:*
  - a. *The Applicant is maintaining drainage that passes beneath the proposed roadway at the southern end of the site. A 36-inch pipe currently exists at this location. The upstream, western end of this pipe will be replaced, but the eastern, outlet end of the existing pipe will be maintained. The Applicant should provide information on any existing condition and any known capacity issues that exist. While overall flow at the study point at this location is not increasing, concentrated flow from the development is being added to this pipe. The adequacy of this pipe should be addressed. The Applicant has provided capacity calculations. Additional information verifying the existing condition or the pipe should be provided (photos, etc.). If cleaning or repair of the existing pipe is required, this should be noted on the plans.*
  - b. *Maintenance of the stormwater management features has been described in the Erosion & Sedimentation Control Report. A stormwater maintenance agreement will be required from the Applicant. Additional information should be provided on the ownership and maintenance of the stormwater treatment systems throughout the subdivision, i.e., will a homeowners association be put into place to pay for and manage the maintenance throughout the site. The Applicant has included a Post-Construction Stormwater Management Plan document as their Maintenance Agreement. The Applicant should note that a recorded agreement with the City is required in accordance with Chapter 32.*
  - c. *It is our understanding that no stormwater treatment infrastructure is allowed within the Right-of-Way. The Applicant's Plans show the Filterra units within the Right-of-Way. The Applicant should confirm with the Department of Public Works that this layout will be acceptable.*
  - d.



5. Scenic Beauty, Natural, Historic, Habitat and other Resources (Section 14-497 (a) 8)

At present, the proposed development site is undeveloped consisting of woodland and borders portions of the Presumpscot River Preserve, a 48-acre public nature preserve that includes 2.5 miles of trails and is host to a variety of activities including mountain biking, snowshoeing, hiking, cross country-skiing and birding. This subdivision is located outside of the preserve, and is not protected. Vehicular and pedestrian access to the trail network are being relocated within the development to allow for the construction of Brandy Lane.

This property includes sizeable wetland areas as previously described, and shall be partially filled so as to develop the road and buildable lots. In support of this proposal, the applicant supplied a wetlands report from TRC Environmental Corporation, which indicate that no existing wetland features are considered to be “Significant Vernal Pools” as defined by the Maine Natural Resources Protection Act and are not subject to protection. Vernal pools and isolated vernal pools may be filled if a Tier I NRPA permit is obtained from MDEP. The applicant has also supplied letters from the Maine Department of Agriculture, Conservation and Forestry as well as the Maine Ecological Services Field Office of the US Department of the Interior, Fish and Wildlife Service, which state that this site is not known to contain rare or unique botanical features or endangered wildlife habitat.



**Figure 5: Map of Presumpscot River Preserve**

This site is not known to be a site of historic or archaeological significance. The applicant requested a determination from the State Historic Preservation Officer regarding the presence of historic or archaeological features. No response was included as part of this submission.

The ordinance requires submission to include a preliminary landscape plan, and staff have advised the applicant that tree saves are generally sought for subdivisions. A more detailed landscape and tree save plan will need to be prepared for the final submission. The applicant is proposing 32 street trees. Tree save proposals should address the need for buffering between the subdivision and the surrounding existing homes.

6. Comprehensive Plan (Section 14-497 (a) 9)

The staff has identified goals and policies which are relevant to the proposed housing development and finds the proposal in conformance with the adapted Comprehensive Plan.

Housing: A Livable City

*State Goals:* To encourage and promote affordable decent, housing opportunities for all Maine citizens

*Local Goals:*

- 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.

Goals from Future Strategies:

9. Adopt Affordable Housing

- Pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods.

7. Financial Capability (Section 14-497 (a) 10)

As noted above, the applicant has submitted a letter from Gorham Savings Bank indicating the intent to finance the project.

8. Wetland and Groundwater Impacts, Flood-Prone Area

This development will include filling of 7,764 sf of wetlands which shall require a Tier I NRPA permit. The applicant has submitted a waiver request asking that the Planning Board waive Section 14-526.b for the preservation of significant natural features contingent upon issuance of the Tier I NRPA permit from MDEP. This approval will be required with the final plan submittal.

**XI. INCLUSIONARY ZONING CONDITIONAL USE**

Given that this subdivision consists of greater than ten residential units, it is required to comply with the requirements of Division 30, Section 14-487, Affordable Housing, of the City's Land Use Code. Victoria Volent, the City's Housing Program Manager, has reviewed the inclusionary zoning application and has provided the following comment (*Attachment 5*):

*The Conditional Use for Ensuring Workforce Housing Inclusionary Zoning Application, submitted by Brandy Lane Subdivision, indicates the applicant is proposing the creation of 16 single-family dwelling units of owner occupied housing of three and four bedrooms.*

*The applicant is electing to provide one single-family unit with three bedrooms.*

*The applicant has satisfied the requirement that all developments of ten or more units comply with the requirements set forth in Division 30, Section 14-487 of the Zoning Ordinance.*

*The applicant has satisfied the requirement that at least ten percent of the dwelling units in the development are designated as Workforce Units.*

*Based on materials submitted (the Inclusionary Zoning- Workforce Housing Standards and Marketing Strategy prepared by Gorrill Palmer), it is unclear if the applicant has met the requirement that the number of bedrooms in the Workforce unit is at least 10% of the total number of bedrooms made available as part of the development.*

*The Applicant should provide a breakdown of the number of bedrooms, by unit, within the proposed development to confirm the 10% requirement.*

**XII. NEXT STEPS (PRIOR TO FINAL PLAN SUBMISSION)**

1. Submit final Subdivision Plat
2. Provide updated Submit Stormwater analysis and Management Plan
3. Submit Landscape Plan to include treesaves
4. Submit Neighborhood Meeting Certificate
5. Supply Tier I NRPA Permit
6. Supply required Ability to Serve Letters
7. Address the staff review, Memo and Planning Board comments

## **ATTACHMENTS:**

### **Attachments to Memorandum**

1. Traffic Review Comments (09.12.2017)
2. Planning and Fire Review Comments (09.14.2017)
3. Peer Engineering Review Comments (09.14.2017)
4. DPW Review Comments (09.14.2017)
5. Housing Program Manager Review Comments (09.18.2017)
6. Peer Engineering Review Comments (10.06.2017)
7. Traffic Review Comments (10.06.2017)
8. Public Comment
  - PC1 – Julie Armstrong (07.29.2017)
  - PC2 – Steven Smalley (09.09.2017)
  - PC3 – Jaime Parker (10.02.2017)

### **Applicant's Submittal**

- A. Conditional Use Cover Letter
- B. Cover Letter
- C. Conditional Use IZ Application
- D. Table of Contents
- E. Workforce Housing Standards
- F. Cover Letter
- G. Agent Authorization
- H. Subdivision Application Form
- I. Project Narrative
- J. Right, Title and Interest
- K. Financial Capacity
- L. Traffic Evaluation
- M. Wetland Report
- N. Erosion and Sedimentation Control Report
- O. Stormwater Management Report
- P. Ability to Serve Letter Requests
- Q. Resource Letters
- R. Stormwater Maintenance Agreement
- S. Stormwater Package

### **Plans**

1. Cover Page
2. Subdivision Plat
3. Overall Subdivision Plan
4. Layout and Utility Plan and Profile
5. Existing Water Main Plan and Profile
6. Layout and Utility Plan and Profile
7. Overall Grading, Drainage and Erosion Control Plan
8. Grading and Drainage Plan and Profile
9. Grading and Drainage Plan and Profile
10. Site Details
11. Site, Utility and Erosion Control Details
12. Drainage and Utility Details
13. Sewer and Water Details
14. Drainage Details
15. Soil Filter Plan and Details
16. Filterra Details
17. Erosion Control notes
18. Water Quality Plan

19. Pre-Development Watershed Map
20. Post-Development Watershed Map
21. Construction Management Plan Map



Matthew Grooms &lt;mgrooms@portlandmaine.gov&gt;

---

## Brandy Lane Subdivision -- Preliminary Traffic Comments

---

Tom Errico &lt;thomas.errico@tylin.com&gt;

Tue, Sep 12, 2017 at 11:04 AM

To: Matthew Grooms &lt;mgrooms@portlandmaine.gov&gt;

Cc: Keith Gray &lt;kgray@portlandmaine.gov&gt;, Katherine Earley &lt;kas@portlandmaine.gov&gt;, Jeremiah Bartlett &lt;JBartlett@portlandmaine.gov&gt;, "Jeff Tarling (JST@portlandmaine.gov)" &lt;JST@portlandmaine.gov&gt;, "Swett, Lauren" &lt;lszett@woodardcurran.com&gt;

Hi Matt – the following summarizes our preliminary traffic comments following a review of application materials.

- I have reviewed the Traffic Evaluation prepared by the applicant. I find the contents and conclusions to be acceptable. The project does not require a Traffic Movement Permit and is not expected to cause unreasonable traffic congestion or safety deficiencies.
- A sidewalk shall be constructed on both sides of Brandy Lane per City standards. The applicant can request a waiver for sidewalks with supporting documentation per City waiver requirements.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE  
Senior Associate  
Traffic Engineering Director

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thomas.errico@tylin.com

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"One Vision, One Company"

## Planning and Urban Development Department Planning Division



September 14, 2017

Lloyd Wolf  
LBW, LLC  
PO Box 1382  
Portland, ME 04104

Doug Reynolds  
Gorrill Palmer  
707 Sable Oaks Drive, Suite 30  
South Portland, ME 04106

RE: Staff Review Comments for Brandy Lane Subdivision (2017-117) – Planning Board Review

|                  |                         |             |            |
|------------------|-------------------------|-------------|------------|
| Project Name:    | Brandy Lane Subdivision | Project ID: | (2017-117) |
| Project Address: | 22 Hope Avenue          | CBL:        | 448 A004   |
| Applicant:       | Lloyd Wolf              |             |            |
| Planner:         | Matthew Grooms          |             |            |

Dear Mr. Wolf and Mr. Reynolds,

Thank you for submitting a Level III Preliminary Plan application for a sixteen-unit single-family subdivision located on a 6.46 acre parcel located in the C-40 Conditional Zone. This proposal is being reviewed as a preliminary plan for Planning Board review subject to the following applicable Land Use Code provisions:

- Chapter 14, Article IV. Subdivision Ordinance
- Standards of the C-40 Conditional Zone
- Neighborhood Meeting Regulations, Section 14-32

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

#### I. Public Infrastructure and Community Safety Standards

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

1. The Hammerhead turn-around configuration at the end looks sufficient for a Ladder truck with 30' of width and 30' of depth.
2. The proposed fire hydrant approximately halfway down Brandy Lane appears sufficient.
3. The proposed width of the street will meet City and Fire Standards.

#### II. Site Design Standards

### **A. Subdivision Review Comments (Matthew Grooms)**

1. The applicant shall provide a revised sidewalk detail which demonstrates an acceptable 2% cross-slope across proposed driveway aprons as required under Section 1.8.3 of the City's Technical Manual.
2. A tree plan, showing groups of existing, sizeable trees which the subdivider intends to preserve should be provide. Please note, this plan can be submitted as a separate plan.
3. As required in under Section 14-499(f), a minimum of two street trees shall be provided per lot, and shown on applicable plan sheets.
4. Please note, it is understood that the submission of a construction management plan shall be recommended to the Planning Board as a condition for approval with the understanding that this document be provide and approved by DPW and Planning prior to the issuance of any building permits.
5. Please note, it is understood that utility capacity letters shall be recommended as a condition for approval with the understanding that those documents be received prior to the issuance of any building permits.
6. At present, parking for the Presumpscott Preserve Trail head is shown to be partially located within easements 2 and 4. The applicant shall provide evidence that parking is permitted in this location.
7. Would the applicant consider placing some kind of guard-rail or barrier between the proposed parking for the trail head and the start of the trail.
8. From the submitted documents, it is not clear who will be maintaining the temporary pedestrian easement located on this property. Can the applicant provide all applicable easement documentation as referenced on the recording plat.
9. On the recording plat, the location of all easements should be clearly called out, specifically referencing the 25' drainage easement which runs along the westerly property lines of lots 1 and 2, and the northerly property line of lot 13.
10. Provide the location and dimensions of all proposed exterior and rooftop mechanical equipment as well as associated details.

### **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 September 26, 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 subdivision 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



## MEMORANDUM



**TO:** Matt Grooms, Planner  
**FROM:** Lauren Swett, PE & Craig Sweet, EIT  
**DATE:** September 14, 2017  
**RE:** Brandy Lane, Subdivision Application

Woodard & Curran has reviewed the Subdivision Application for the proposed Brandy Lane Subdivision located at 22 Hope Avenue in Portland, Maine. The project involves The creation of 16 lot subdivision with associated roadway and utilities.

### Documents Reviewed by Woodard & Curran

- Subdivision Application and attachments, dated May 24, 2017, prepared by Gorrill Palmer, on behalf of LBW, LLC.
- Engineering Plans, Sheets 1-20, dated May 24, 2017, prepared by Gorrill Palmer, on behalf of LBW, LLC.

### Comments

- 1) The Applicant has noted that a MDEP NRPA Tier I wetland permit and approval from the ACOE are required, copies of all permit approvals should be forwarded to the City upon receipt.
- 2) The Applicant has included letters to utilities in their application. Ability to serve confirmation should be provided when available.
- 3) In accordance with Section 5 of the City of Portland Technical Manual, a Subdivision 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.
    - Additional silt fence should be installed in some areas along the western property line adjacent to proposed grading activities.
  - b) General Standard: The project will result in an increase in impervious area of approximately 70,000 square feet. As such, the project is required to include stormwater management features for stormwater quality control. The Applicant has provided a detailed stormwater treatment system, but it is our understanding that the Department of Public Works is not allowing stormwater treatment systems to be installed within the Right-of-Way. Please see below for additional stormwater management comments.
  - c) Flooding Standard: The project will result in an increase in impervious area of approximately 70,000 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. The Applicant has indicated that there will be minor increases in flow in the 2-year storm and in the 10-year storm at one location. We are in agreement that the increases will be insignificant. The underdrain soil filters have not been modeled in HydroCAD, and these may provide a small amount of flow attenuation as well. Please see below for additional stormwater management comments.
- 4) We have the following comments on the proposed stormwater management system for the site:
  - a) The HydroCAD model for the Post-Development system includes six subcatchments that are not connected to the stormdrainage system. We understand that the Applicant is not connecting the roof drain filters to the model, and we are in agreement that this is appropriate, but it appears based on the impervious surface designations on the disconnected subcatchments that more than just the roofs are included. Additional clarification is required.



- b) The Applicant has noted in their stormwater narrative that roadway sideslopes are anticipated to be mowed more than twice per year and have not been included in the developed area. Please clarify this statement, and how the sideslope areas have been accounted for in the stormwater calculations.
- c) It is noted that the Maine DEP now allows for the installation of Filterra Tree Box filters without the use of an isolator row. It is understood that this may be providing some flow attenuation, but the Applicant may consider eliminating the isolator row if it helps with fitting stormwater treatment on the site, but outside of the right-of-way as is now required by the City.
- d) The HydroCAD model has modeled all proposed stormdrain pipes as 18 inches in diameter. The drawings show 12-inch pipe. The Applicant should verify pipe size and that it has been adequately designed to accommodate flow.
- e) The Applicant is maintaining drainage that passes beneath the proposed roadway at the southern end of the site. A 36-inch pipe currently exists at this location. The upstream, western end of this pipe will be replaced, but the eastern, outlet end of the existing pipe will be maintained. The Applicant should provide information on any existing condition and any known capacity issues that exist. While overall flow at the study point at this location is not increasing, concentrated flow from the development is being added to this pipe. The adequacy of this pipe should be addressed.
- f) The Applicant should consider a drop manhole structure for DMH 1. The pipe from the roadway has an invert that is almost 8 feet higher than the existing 36-inch pipe that is being tied into the structure.
- g) The Applicant should note the sizes of the proposed foundation stubs. Are these stubs also intended to connect to the roof drip strip piping? Additional clarification on the use of the stubs to the stormwater system from each lot should be provided.
- h) Catch Basin 6 is located within Lot 16 in a drainage easement. Based on grading, it is unclear what area this will be collecting. If it is collecting a large, offsite area, the adequacy of the catch basin grate and proposed pipe size to manage flow should be considered.
- i) The underdrain soil filters are not shown on the drainage plan and profile sheets. We recommend showing these for clarity of grading.
- j) Details should be provided for the rip rap outlets with rip rap sizing and thickness as appropriate for the pipe sizes and anticipated flow.
- k) Maintenance of the stormwater management features has been described in the Erosion & Sedimentation Control Report. A stormwater maintenance agreement will be required from the Applicant. Additional information should be provided on the ownership and maintenance of the stormwater treatment systems throughout the subdivision, i.e., will a homeowners association be put into place to pay for and manage the maintenance throughout the site.

City of Portland Maine  
Dept. of Public Works  
Engineering Division

# Memo

To: Mathew Grooms - Planner  
From: Keith Gray, PE – Senior Engineer, DPW  
Date: September 14, 2017  
Re: 22 Hope Ave. - Brandy Lane Subdivision (2017-117) – Subdivision Application

---

The following comments/concerns are in regards to the Subdivision Application prepared by Gorrill Palmer, on behalf of the applicant, Investment LBW, LLC. with last plan revision submitted on May 24, 2017. Please feel free to contact me with questions.

**Sheet C101 & C102:**

- The Department of Public Works (DPW) does not accept ownership of low pressure force-mains within the right-of-way. The “association” is required to retain ownership and maintenance the forcemain.
- Refer to the *Utility Locations in Streets* detail in Section 1 of the Technical Manual for proposed utility locations within the City ROW. Proposed utilities should be revised to more align with the above detail to the extent possible.
- Sanitary sewer and water mains should maintain ten (10) feet in separation (per PWD standards).
- Sanitary sewer slope shall be no less than .4 percent (.4%) when existing conditions govern, however a greater slope is recommended. Please review the proposed gravity sewer main to see if the slope could be increased from the minimum.
- Where practical, manhole structures should be located in center of the travel lane or in a location outside of axle tracking.
- Proposed utilities should cross perpendicular (to the extent possible) to the existing 20-inch water main.
- Profile(s) should include all utilities (proposed and existing) to identify potential crossing conflicts.
- Revise note on proposed curb to include type (vertical granite curb).

**Sheet C103, C104 & C105:**

- DPW does not permit stormwater treatment structures (structural BMP's) within the City right-of-way for proposed subdivisions.
- Provide detail on DMH1. Does the existing 36" RCP connect/terminate at DMH1? Label existing 36" in profile.
- What are the flows to CB5 and CB6? Are the grates modeled? What storm event do they pass prior to overflowing towards the down gradient lots?

**General Comments:**

- Provide/clarify grading at intersection.
- Provide riprap sizing and thickness at all proposed locations.
- The applicant should consider proposing screening from the Falmouth Spur.
- The enclosed "Draft" Construction Management Plan Template depicts the overall detail that the City is requesting for the planning, coordination, and control of the construction site. Please note that the Construction Management Plan includes: 1) a construction management site plan, 2) a construction schedule (time frame); and 3) a written narrative addressing the categories identified within the enclosed CMP Template.
- Details should be in accordance with the City's Technical Manual.

**Subdivision Plat Review Comments (Mr. Bill Scott):**

1. The plan is very "busy" in places and that makes it hard to read. Lightening the contours or removing them altogether would help a lot. Also, it appears that some of the CAD point blocks were left "on" which is causing some double symbols and double descriptions for a lot of the monumentation. Freezing this layer would also help de-clutter the plan.
2. A portion of Hope Avenue appears to show design layers for the roadway, curbing, grading contours, etc. I believe this road has already been constructed so the line work should match that of the existing road and structure locations.
3. Please add "See Note 2" to the North Arrow to call attention to this important note.
4. Please label the easement type that crosses Lots 1 & 2.
5. The proposed street line figure has a misclosure of 0.086' based on how it is currently labeled. Adding chord bearings and distances or deflection angles might help to minimize this misclosure.

**Rest of the Plan Set (Mr. Bill Scott):**

1. Add a note to the Cover Sheet to verify that the elevations for this project are on the City's datum. They should also say which City benchmark was used as the basis for the survey.
2. All TBM's used to control construction on this site should be labeled as to location, description and elevation. These should be labeled on all of the sheets showing proposed manhole and catch basin structures with elevations.
3. Please show the center line PC's, PT's and PRC's and label the stationing of each on the Overall Subdivision Plan sheet and on the plan and profile sheets.

**Matthew Grooms** <mgrooms@portlandmaine.gov>

---

## Brandy Lane Subdivision Application

---

**Victoria Volent** <vvolent@portlandmaine.gov>  
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Mon, Sep 18, 2017 at 12:54 PM

Matthew,

The Conditional Use for Ensuring Workforce Housing Inclusionary Zoning Application, submitted by Brandy Lane Subdivision, indicates the applicant is proposing the creation of 16 single-family dwelling units of owner occupied housing of three and four bedrooms.

The applicant is electing to provide one single-family unit with three bedrooms.

The applicant has satisfied the requirement that all developments of ten or more units comply with the requirements set forth in Division 30, Section 14-487 of the Zoning Ordinance.

The applicant has satisfied the requirement that at least ten percent of the dwelling units in the development are designated as Workforce Units.

Based on materials submitted (the Inclusionary Zoning- Workforce Housing Standards and Marketing Strategy prepared by Gorrill Palmer), it is unclear if the applicant has met the requirement that the number of bedrooms in the Workforce unit is at least 10% of the total number of bedrooms made available as part of the development.

The Applicant should provide a breakdown of the number of bedrooms, by unit, within the proposed development to confirm the 10% requirement.

Please let me know if I may be of further assistance.

Victoria Volent

----

Victoria Volent  
Housing Program Manager  
Housing and Community Development  
Phone: 207-482-5028  
Fax: 207-874-8949  
[www.portlandmaine.gov](http://www.portlandmaine.gov)

## MEMORANDUM



**TO:** Matt Grooms, Planner  
**FROM:** Lauren Swett, PE & Craig Sweet, EIT  
**DATE:** October 6, 2017  
**RE:** Brandy Lane, Subdivision Application

Woodard & Curran has reviewed the Subdivision Application for the proposed Brandy Lane Subdivision located at 22 Hope Avenue in Portland, Maine. The project involves The creation of 16 lot subdivision with associated roadway and utilities.

### **Documents Reviewed by Woodard & Curran**

- Response to Comments and Attachments, dated September 28, 2017, prepared by Gorrill Palmer, on behalf of LBW, LLC.
- Engineering Plans, Sheets 1-20, REV. dated September 28, 2017, prepared by Gorrill Palmer, on behalf of LBW, LLC.

### **Comments (comments in italics from previous memorandum)**

- 1) *The Applicant has noted that a MDEP NRPA Tier I wetland permit and approval from the ACOE are required, copies of all permit approvals should be forwarded to the City upon receipt. Applicant has acknowledged, and will be providing the permits when available.*
- 2) *The Applicant has included letters to utilities in their application. Ability to serve confirmation should be provided when available. Applicant has acknowledged, and will be providing the information when available.*
- 3) *In accordance with Section 5 of the City of Portland Technical Manual, a Subdivision 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 70,000 square feet. As such, the project is required to include stormwater management features for stormwater quality control. Please see below for additional stormwater management comments.*
  - c) *Flooding Standard: The project will result in an increase in impervious area of approximately 70,000 square feet. As such, the project is required to include specific stormwater management features to control the rate or quantity of stormwater runoff from the site. The Applicant has indicated that there will be minor increases in flow in the 2-year storm, 10-year storm and 25-year storm. We are in agreement that the increases will be insignificant. The underdrain soil filters have not been modeled in HydroCAD, and these may provide a small amount of flow attenuation as well. Please see below for additional stormwater management comments.*
- 4) *We have the following comments on the proposed stormwater management system for the site:*
  - a) *The Applicant is maintaining drainage that passes beneath the proposed roadway at the southern end of the site. A 36-inch pipe currently exists at this location. The upstream, western end of this pipe will be replaced, but the eastern, outlet end of the existing pipe will be maintained. The Applicant should provide information on any existing condition and any known capacity issues that exist. While overall flow at the study point at this location is not increasing, concentrated flow from the development is being added to this pipe. The adequacy of this pipe should be addressed. The Applicant has provided capacity calculations. Additional information verifying the existing condition or the pipe should be provided (photos, etc.). If cleaning or repair of the existing pipe is required, this should be noted on the plans.*



- b) *Maintenance of the stormwater management features has been described in the Erosion & Sedimentation Control Report. A stormwater maintenance agreement will be required from the Applicant. Additional information should be provided on the ownership and maintenance of the stormwater treatment systems throughout the subdivision, i.e., will a homeowners association be put into place to pay for and manage the maintenance throughout the site.* The Applicant has included a Post-Construction Stormwater Management Plan document as their Maintenance Agreement. The Applicant should note that a recorded agreement with the City is required in accordance with Chapter 32.
- c) It is our understanding that no stormwater treatment infrastructure is allowed within the Right-of-Way. The Applicant's Plans show the Filterra units within the Right-of-Way. The Applicant should confirm with the Department of Public Works that this layout will be acceptable.



Matthew Grooms &lt;mgrooms@portlandmaine.gov&gt;

---

## Brandy Lane Subdivision - Status Traffic Comments

---

Tom Errico &lt;thomas.errico@tylin.com&gt;

Fri, Oct 6, 2017 at 11:50 AM

To: Matthew Grooms &lt;mgrooms@portlandmaine.gov&gt;

Cc: Keith Gray &lt;kgray@portlandmaine.gov&gt;, Katherine Earley &lt;kas@portlandmaine.gov&gt;, Jeremiah Bartlett &lt;JBartlett@portlandmaine.gov&gt;, "Jeff Tarling (JST@portlandmaine.gov)" &lt;JST@portlandmaine.gov&gt;, Lauren Swett &lt;lswett@woodardcurran.com&gt;

Hi Matt – the following summarizes status traffic comments following a review of updated application materials.

- I have reviewed the Traffic Evaluation prepared by the applicant. I find the contents and conclusions to be acceptable. The project does not require a Traffic Movement Permit and is not expected to cause unreasonable traffic congestion or safety deficiencies.

**Status: I have no further comment.**

- A sidewalk shall be constructed on both sides of Brandy Lane per City standards. The applicant can request a waiver for sidewalks with supporting documentation per City waiver requirements.

**Status: The applicant has noted that construction of a sidewalk on both sides of Brandy Lane will have wetland impacts and thus requests a waiver for the eastern side of the street. The applicant should consider providing a sidewalk on the eastern side of the street, without a grass esplanade, in areas of wetland impact. Additionally, the applicant should specifically note the area of wetland impact and how this impact would alter permitting requirements.**

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE  
Senior Associate  
Traffic Engineering Director

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Twitter | Facebook | LinkedIn | Google+



"One Vision, One Company"



707 Sable Oaks Drive, Suite 30  
South Portland, Maine 04106  
207.772.2515

July 5, 2017

Barbara Barhydt  
Planning and Urban Development Department  
City of Portland  
Fourth Floor, City Hall  
389 Congress Street  
Portland, Maine 04101

**Subject: Brandy Lane Subdivision Application  
LBW LLC  
Conditional Use Application for Ensuring  
Workforce Housing**

Dear Barbara,

On behalf of LBW, LLC, we are pleased to submit the enclosed Conditional Use Application to provide workforce housing within the proposed 16-lot single-family subdivision at 22 Hope Avenue in Portland. The site is shown on Assessor's Map 448 A004, is approximately 6.46 acres in size and is located in a Contract Zone. A Preliminary Subdivision application has been submitted to your office and this submission is supplementary to demonstrate the project's planned compliance with the City's inclusionary zoning requirements for residential projects with ten (10) or more dwelling units.

Enclosed please find a Conditional Use Application and an explanation on compliance with the inclusionary zoning requirements. We appreciate the Planning Authority's consideration of our proposal and look forward to meeting with City staff, as necessary, and with the Planning Board to present the proposal and address any questions. If you require any additional information, please don't hesitate to contact our office.

Sincerely,  
Gorrill Palmer

A handwritten signature in blue ink, appearing to read 'D. Reynolds', is placed below the typed name.

Douglas E. Reynolds, P.E.  
Project Manager

Enclosures: Conditional Use – Inclusionary Zoning  
Application & Workforce Housing  
Submission Requirements

cc: Burt Wolf

Relationships.  
Responsiveness.  
Results.



**Subdivision  
Application  
for Brandy Lane  
Subdivision at  
22 Hope Avenue  
Portland, Maine**

PREPARED FOR:  
LBW, LLC  
Portland, Maine

May 2017

SUBMITTED BY:  
Gorrill Palmer  
707 Sable Oaks Drive  
Suite 30  
So. Portland, ME 04106  
207.772.2515



# 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:**

Brandy Lane

**PROPOSED DEVELOPMENT ADDRESS:**

22 Hope Avenue

**CHART/BLOCK/LOT (s):** 448 A004**Applicable Zone:** C40**CONTACT INFORMATION:**

|                                                                                                                                                                                                                                      |                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant – must be owner, Lessee or Buyer</b><br><br>Name: Lloyd B. Wolf<br><br>Business Name, if applicable: LBW, LLC<br><br>Address: PO Box 1382<br><br>City/State : Portland, ME      Zip Code: 04104                         | <b>Applicant Contact Information</b><br><br>Work #<br><br>Home#<br><br>Cell # 207-776-0742      Fax#<br><br>e-mail: lwolf1@maine.rr.com |
| <b>Owner – (if different from Applicant)</b><br><br>Name:<br><br>Address:<br><br>City/State :      Zip Code:                                                                                                                         | <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: LBW, LLC<br><br>Address: PO Box 1382<br><br>City/State : Portland, ME      Zip Code: 04104                                                                                                   | <b>Billing Information</b><br><br>Work #<br><br>Cell #      Fax#<br><br>e-mail: lwolf1@maine.rr.com                                     |
| <b>Designated person/person(s) for uploading to e-Plan:</b><br><br>Name: Doug Reynolds, Gorrill Palmer<br>e-mail: dreynolds@gorrillpalmer.com<br><br>Name: Dan Bacon<br><br>e-mail: dbacon@gorrillpalmer.com<br><br>Name:<br>e-mail: |                                                                                                                                         |

**RIGHT, TITLE OR INTEREST:**

Lloyd B. Wolf is the current owner of the property. Deed is attached to the preliminary subdivision 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.

The project site is currently undeveloped with a landcover of brush and woods.

**PROJECT DESCRIPTION:**

Proposed 16 lot subdivision and 970 ft roadway off Hope Avenue

| 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              |   |
| # IZ 2-Beds              |   |
| # IZ 3-Beds              | 1 |
| 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                                                                                                                                                                        |
| x                   |                   | 1           | Written Proposal for providing workforce units on-site, off-site, or payment of fee-in-lieu.                                                                                                       |
| x                   |                   | 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>                                                                                                                                         |
| NA                  |                   | 1           | An accompanying site plan application, as applicable.                                                                                                                                              |
| NA                  |                   | 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                                                               |
| NA                  |                   | 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.**

|                                                                                                                     |                        |
|---------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Signature of Applicant:</b><br> | <b>Date:</b><br>7/5/17 |
|---------------------------------------------------------------------------------------------------------------------|------------------------|

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## **Inclusionary Zoning – Workforce Housing Standards and Marketing Strategy**

### **Workforce Housing Standards – Section 14-484**

Standard I. 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.

**Response – This project will not be segmented or phased. It is proposed as a 16-lot single-family subdivision which is proposing to provide one (1) lot/dwelling unit that will comply with the workforce housing standards and will be included on-site within the project.**

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.

**Response – The one dwelling unit and lot will be designed to not be distinguishable in lot size, access, and home design than the other dwellings in the subdivision.**

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.

**Response – It is anticipated that the single-family homes within the subdivision will be designed with three and four bedrooms and that the workforce housing unit will be comparable in square footage and bedroom count.**

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.

**Response – The applicant is proposing to meet the workforce housing requirement on-site.**

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.

**Response – Understood.**

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.

**Response – At this time, the applicant plans to meet the 10% as workforce housing standard.**



### **Workforce Marketing Strategy**

The applicant has reviewed the City's Workforce Housing Requirements and Guidelines, including the Marketing / Selection Process. In accordance with these requirements, the applicant intends to notify the City in advance of marketing the sale of the workforce dwelling within the project. As part of this notice to the City, the applicant or its real estate agent, will provide a draft of the marketing advertisement to the City for review and approval. Following City review, the advertisement will be listed in one or more acceptable newspapers. Interested parties will be given sufficient time to request and return a preliminary application. In addition, the applicant or agent will contact local groups and non-profits connected to interested eligible households.

Upon receiving interest from eligible households, the applicant will inform the City. From the beginning of the marketing process the City will also have the opportunity to list the property on its website for a minimum of 30 days to solicit interest from potential Eligible Households. The City will forward any inquiries to the applicant or their designated representative. As part of the marketing process the applicant will acknowledge in writing the household income limits and max sale price restrictions on the unit to any potential buyers interested in the property prior to finalizing a Purchase and Sale Agreement. At a minimum, this shall include providing prospective buyers with the associated household income limits of 120% AMI in any listing and providing written documentation at any open house or showing stating that this unit carries with it income, maximum sale price and other restrictions.

In addition, as the subdivision plan progresses through the permitting process, the applicant will further refine the marketing strategy for the workforce housing unit in coordination with the City.



707 Sable Oaks Drive, Suite 30  
South Portland, Maine 04106  
207.772.2515

May 24, 2017

Barbara Barhydt  
Planning and Urban Development Department  
City of Portland  
Fourth Floor, City Hall  
389 Congress Street  
Portland, Maine 04101

**Subject: Brandy Lane Subdivision**  
**Applicant: LBW LLC**  
**Subdivision Application**

Dear Barbara,

On behalf of LBW, LLC, we are pleased to submit the enclosed Subdivision Application for the proposed construction of a 16-lot single-family residential subdivision at 22 Hope Avenue in Portland. The site is shown on Assessor's Map 448 A004, is approximately 6.46 acres in size and is located in the Conditional Zone (C-40). The project site is currently undeveloped with a land cover of woodlands. Topography in the area of the proposed construction varies from flat slopes of approximately 1/2% to steep slopes of approximately 40%. Steeper slopes are associated with drainage ways at the front and rear of the site.

Enclosed you will find a Preliminary Subdivision Application package and set of plans illustrating the proposal. You will recall that we had a Pre-Application with City staff in June 2016 and that there were comments on the lot configuration, roadway layout and relocation of the gravel parking area for trail users. The enclosed plan set incorporates these comments from staff. We appreciate the Planning Authority's consideration of our proposal and look forward to meeting with City staff, as necessary, and with the Planning Board to present the proposal and address any questions. If you require any additional information, please don't hesitate to contact our office.

Sincerely,  
Gorrill Palmer



Douglas E. Reynolds, P.E.  
Project Manager

Enclosures: Subdivision Application and Narratives  
Subdivision Plans

cc: Burt Wolf

DER/bmg/U:\98089.08 - Design and Permitting 'Long' Road\IP Applications\Local\Site Plan Review\Cover Letter 5-24-2017.doc

LBW, LLC.  
P.O. Box 1382  
Portland, ME 04104  
Cell: (207)-776-0742

19 May 2017

Re: Brandy Lane (22 Hope Avenue)  
Portland, Maine

To Whom It May Concern:

L. Burt Wolf authorizes Gorrill Palmer to execute land development permit applications on my behalf for the referenced project.

If you have any questions or if I can be of any further assistance, please contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read 'L. Burt Wolf', with a stylized, cursive script.

L. Burt Wolf



## **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:**

Brandy Lane

**PROPOSED DEVELOPMENT ADDRESS:**

22 Hope Avenue

**PROJECT DESCRIPTION:**

Proposed 16 lot subdivision and 970 feet of roadway off Hope Avenue

**CHART/BLOCK/LOT:** 448 A004**PRELIMINARY PLAN**  
**FINAL PLAN**5/24/2017 (date)  
(date)**CONTACT INFORMATION:**

|                                                                                                                                                                                         |                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant – must be owner, Lessee or Buyer</b><br>Name: Lloyd B. Wolf<br>Business Name, if applicable: LBW, LLC<br>Address: PO Box 1382<br>City/State : Portland, ME Zip Code: 04104 | <b>Applicant Contact Information</b><br>Work #:<br>Home #:<br>Cell #: 207-776-0742 Fax#:<br>e-mail: lwolf1@maine.rr.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: Doug Reynolds, Gorrill Palmer<br>Address: 707 Sable Oaks Drive - Suite 30<br>City/State : South Portland, ME Zip Code: 04106                      | <b>Agent/Representative Contact information</b><br>Work #: 207-772-2515<br>Home #:<br>Cell #: 207-329-5584 Fax#: 207-772-2520<br>e-mail: dreynolds@gorrillpalmer.com |
| <b>Billing Information</b><br>Name: LBW, LLC<br>Address: PO Box 1382<br>City/State : Portland, ME Zip Code: 04104                                                                       | <b>Billing Contact Information</b><br>Work #:<br>Home #:<br>Cell #: Fax#:<br>e-mail: lwolf1@maine.rr.com                                                             |



|                                                                                                                                                                                                                                                                       |                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineer</b><br><br>Name: Doug Reynolds<br><br>Address: 707 Sable Oaks Drive - Suite 30<br><br>City/State : South Portland, ME Zip Code: 04106                                                                                                                     | <b>Engineer Contact Information</b><br><br>Work #: 207-772-2515<br><br>Home #:<br><br>Cell #: 207-329-5584 Fax#: 207-772-2520<br><br>e-mail: dreynolds@gorrillpalmer.com |
| <b>Surveyor</b><br><br>Name: Titcomb Associates<br><br>Address: 133 Gray Road<br><br>City/State : Falmouth, ME Zip Code: 04105                                                                                                                                        | <b>Surveyor Contact Information</b><br><br>Home #:<br><br>Work #: 207-797-9199<br><br>Cell #: Fax#:<br><br>e-mail: rcroteay@titcombsurvey.com                            |
| <b>Architect</b><br><br>Name:<br><br>Address:<br><br>City/State : Zip Code:                                                                                                                                                                                           | <b>Architect Contact Information</b><br><br>Work #:<br><br>Home #:<br><br>Cell #: Fax#:<br><br>e-mail:                                                                   |
| <b>Attorney</b><br><br>Name: Terry Snow<br><br>Address: 294 Main St<br><br>City/State : Cumberland, ME Zip Code: 04021                                                                                                                                                | <b>Attorney Contact Information</b><br><br>Work #: 207-829-6363<br><br>Home #:<br><br>Cell #: Fax#: 207-829-4481<br><br>e-mail: tsnowlaw@maine.rr.com                    |
| <b>Designated person/person(s) for uploading to e-Plan:</b><br><br>Name: Benjamin Grondin<br>e-mail: bgrondin@gorrillpalmer.com<br><br>Name: Lawrence Bastian<br>e-mail: lbastian@gorrillpalmer.com<br><br>Name: Doug Reynolds<br>e-mail: dreynolds@gorrillpalmer.com |                                                                                                                                                                          |

**APPLICATION FEES:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Level III Development (check applicable reviews)</b></p> <p><input 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> <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></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><input type="checkbox"/> # of Lots <u>16</u> x \$25/lot = <u>\$900</u></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 _____ x \$200/lot = _____</p> <p><input type="checkbox"/> Other _____</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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(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.
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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.

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|                                                                                                                     |                           |
|---------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>Signature of Applicant:</b><br> | <b>Date:</b><br>5/24/2017 |
|---------------------------------------------------------------------------------------------------------------------|---------------------------|

## PROJECT DATA

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

|                                                                                                                                                                                                                          |                                                 |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------|
| <b>Total Area of Site</b>                                                                                                                                                                                                | 281,398                                         | sq. ft. |
| <b>Proposed Total Disturbed Area of the Site</b>                                                                                                                                                                         | 196,896                                         | 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)                                                                                                                                                                                         | 0                                               | sq. ft. |
| Impervious Area (Total Proposed)                                                                                                                                                                                         | 70,051                                          | sq. ft. |
| <b>Building Ground Floor Area and Total Floor Area</b>                                                                                                                                                                   |                                                 |         |
| Building Footprint (Total Existing)                                                                                                                                                                                      | 0                                               | sq. ft. |
| Building Footprint (Total Proposed)                                                                                                                                                                                      |                                                 | sq. ft. |
| Building Floor Area (Total Existing)                                                                                                                                                                                     | 0                                               | sq. ft. |
| Building Floor Area (Total Proposed)                                                                                                                                                                                     |                                                 | sq. ft. |
| <b>Zoning</b>                                                                                                                                                                                                            |                                                 |         |
| Existing                                                                                                                                                                                                                 | C40                                             |         |
| Proposed, if applicable                                                                                                                                                                                                  | N/A                                             |         |
| <b>Land Use</b>                                                                                                                                                                                                          |                                                 |         |
| Existing                                                                                                                                                                                                                 |                                                 |         |
| Proposed                                                                                                                                                                                                                 |                                                 |         |
| <b>Residential, If applicable</b>                                                                                                                                                                                        |                                                 |         |
| # of Residential Units (Total Existing)                                                                                                                                                                                  | 0                                               |         |
| # of Residential Units (Total Proposed)                                                                                                                                                                                  | 16 Single Family Houses                         |         |
| # of Lots (Total Proposed)                                                                                                                                                                                               | 16 Individual Lots                              |         |
| # of Affordable Housing Units (Total Proposed)                                                                                                                                                                           | 0                                               |         |
| <b>Proposed Bedroom Mix</b>                                                                                                                                                                                              |                                                 |         |
| # of Efficiency Units (Total Proposed)                                                                                                                                                                                   | N/A                                             |         |
| # of One-Bedroom Units (Total Proposed)                                                                                                                                                                                  | N/A                                             |         |
| # of Two-Bedroom Units (Total Proposed)                                                                                                                                                                                  | N/A                                             |         |
| # of Three-Bedroom Units (Total Proposed)                                                                                                                                                                                | N/A                                             |         |
| <b>Parking Spaces</b>                                                                                                                                                                                                    |                                                 |         |
| # of Parking Spaces (Total Existing)                                                                                                                                                                                     | 6 for existing trial access                     |         |
| # of Parking Spaces (Total Proposed)                                                                                                                                                                                     | 6 to preserve existing trial access             |         |
| # of Handicapped Spaces (Total Proposed)                                                                                                                                                                                 | N/A                                             |         |
| <b>Bicycle Parking Spaces</b>                                                                                                                                                                                            |                                                 |         |
| # of Bicycle Spaces (Total Existing)                                                                                                                                                                                     | N/A                                             |         |
| # of Bicycle Spaces (Total Proposed)                                                                                                                                                                                     | N/A                                             |         |
| <b>Estimated Cost of Project</b>                                                                                                                                                                                         | Developers General Contractor will Provide Cost |         |

| <b>PRELIMINARY PLAN (Optional) - Level III Site Plan</b> |                   |             |                                                                                                                                                                                                                                            |
|----------------------------------------------------------|-------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant Checklist                                      | Planner Checklist | # of Copies | <b>GENERAL WRITTEN SUBMISSIONS CHECKLIST</b>                                                                                                                                                                                               |
| X                                                        |                   | 1           | Completed Application form                                                                                                                                                                                                                 |
| X                                                        |                   | 1           | Application fees                                                                                                                                                                                                                           |
| X                                                        |                   | 1           | Written description of project                                                                                                                                                                                                             |
| X                                                        |                   | 1           | Evidence of right, title and interest                                                                                                                                                                                                      |
|                                                          |                   | 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 | <b>SITE PLAN SUBMISSIONS CHECKLIST</b>                                                                                                                                                                                                     |
| 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;                                                                                                                                                                                                   |
| N/A                                                      |                   |             | Preliminary Landscape Plan in accordance with Section 4 of the Technical Manual;                                                                                                                                                           |
| X                                                        |                   |             | 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); |
| Waiver                                                   |                   |             | 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;                                                                                                                              |
| N/A                                                      |                   |             | 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> |
| X                                       |                          | 1                  | * Completed Application form                                                                                                                                                         |
| X                                       |                          | 1                  | * Application fees                                                                                                                                                                   |
| X                                       |                          | 1                  | * Written description of project                                                                                                                                                     |
| X                                       |                          | 1                  | * Evidence of right, title and interest                                                                                                                                              |
|                                         |                          | 1                  | * Evidence of state and/or federal permits                                                                                                                                           |
| X                                       |                          | 1                  | * Written assessment of proposed project's specific compliance with applicable Zoning requirements                                                                                   |
| X                                       |                          | 1                  | * Summary of existing and/or proposed easements, covenants, public or private rights-of-way, or other burdens on the site                                                            |
| X                                       |                          | 1                  | * Evidence of financial and technical capacity                                                                                                                                       |
| X                                       |                          | 1                  | Construction Management Plan                                                                                                                                                         |
| X                                       |                          | 1                  | A traffic study and other applicable transportation plans in accordance with Section 1 of the technical Manual, where applicable.                                                    |
| X                                       |                          | 1                  | Written summary of significant natural features located on the site (Section 14-526 (b) (a))                                                                                         |
| X                                       |                          | 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              |
| N/A                                     |                          | 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) |
|---------------------|-------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X                   |                   | 1           | * Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual                                                                           |
| X                   |                   | 1           | <b>Final Site Plans including the following:</b>                                                                                                                              |
| X                   |                   |             | Existing and proposed structures, as applicable, and distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone);               |
| X                   |                   |             | Existing and proposed structures on parcels abutting site;                                                                                                                    |
| X                   |                   |             | All streets and intersections adjacent to the site and any proposed geometric modifications to those streets or intersections;                                                |
| X                   |                   |             | Location, dimensions and materials of all existing and proposed driveways, vehicle and pedestrian access ways, and bicycle access ways, with corresponding curb lines;        |
| X                   |                   |             | 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;                                                    |
| N/A                 |                   |             | Existing and proposed public transit infrastructure with applicable dimensions and engineering specifications;                                                                |
| X                   |                   |             | 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;                                                                                                      |
| Waiver              |                   |             | Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);                                            |
| X                   |                   |             | Location and proposed alteration to any watercourse;                                                                                                                          |
| X                   |                   |             | 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;                                                                                                          |
| X                   |                   |             | Existing vegetation to be preserved, proposed site landscaping, screening and proposed street trees, as applicable;                                                           |
| X                   |                   |             | A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;                                                                              |
| X                   |                   |             | Grading plan;                                                                                                                                                                 |
| N/A                 |                   |             | Ground water protection measures;                                                                                                                                             |
| X                   |                   |             | 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;                                                                                               |
| X   |  | Location, sizing, and directional flows of all existing and proposed utilities within the project site and on all abutting streets;                                                                                            |
| N/A |  | Location and dimensions of off-premises public or publicly accessible infrastructure immediately adjacent to the site;                                                                                                         |
| N/A |  | Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;                                                             |
| N/A |  | 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; |
| N/A |  | 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;                                                                                                                                               |
| X   |  | A signage plan showing the location, dimensions, height and setback of all existing and proposed signs;                                                                                                                        |
| X   |  | Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.                                                                                                                  |





**PORTLAND FIRE DEPARTMENT  
SITE REVIEW  
FIRE DEPARTMENT CHECKLIST**



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

# 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: 5/24/2017

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

Site Address: 22 Hope Avenue

Chart Block Lot Number: 448 A004

Proposed Use: Residential

Previous Use: Vacant

Existing Sanitary Flows: 0 GPD

Existing Process Flows: 0 GPD

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

Existing 8" sanitary sewer stub near existing gravel parking for trails

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: Barbara Barhydt Phone: 207-874-8699

Owner/Developer Name: LBW, LLC

Owner/Developer Address: PO Box 1382, Portland, ME 04104

Phone:  Fax:  E-mail: lwolf1@maine.rr.com

Engineering Consultant Name: Gorrill Palmer

Engineering Consultant Address: 707 Sable Oaks Drive, Suite 30, South Portland, ME 04106

Phone: 207-772-2515 Fax: 207-772-2520 E-mail: dreynolds@gorrillpalmer.com

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

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

Estimated Domestic Wastewater Flow Generated: 5,760 Peak, 3,200 Average GPD

Peaking Factor/ Peak Times: 180%

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) Maine Subsurface Wastewater Disposal Rules

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

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

Total Drainage Fixture Unit (DFU) Values: \_\_\_\_\_

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.*

---

**Project Narrative  
Brandy Lane Subdivision  
May 2017**

The following narrative presents the information required for the Preliminary Subdivision Application.

**Project Description:**

The project is located at 22 Hope Avenue in Portland. The existing site is currently undeveloped. Figure 1 following this page shows the Project Location. The site is vacant with a land cover of woodlands. There is a 2,200 sq. ft. gravel parking lot for trail access to the Presumpscot River Preserve. Existing wetlands on the site are predominantly in the westerly portion of the parcel. An application to the MDEP for a Tier I NRPA permit will be submitted to the State and copied to the U.S. Army Corps of Engineers for the proposed wetland fills.

The project is a proposed residential subdivision with sixteen lots and public water and sewer. A roadway approximately 960 feet in length is proposed for access to the development. The project will provide the six parking spaces for trail-users to be relocated on the parcel. The project is required to be in conformance with the Maine DEP Chapter 500 Stormwater Management Law and shall be reviewed under the City's Delegated Review Authority.

**Right, Title and Interest:**

Lloyd B. Wolf is the current owner of the property. Attachment 1 contains a deed for the subject parcel.

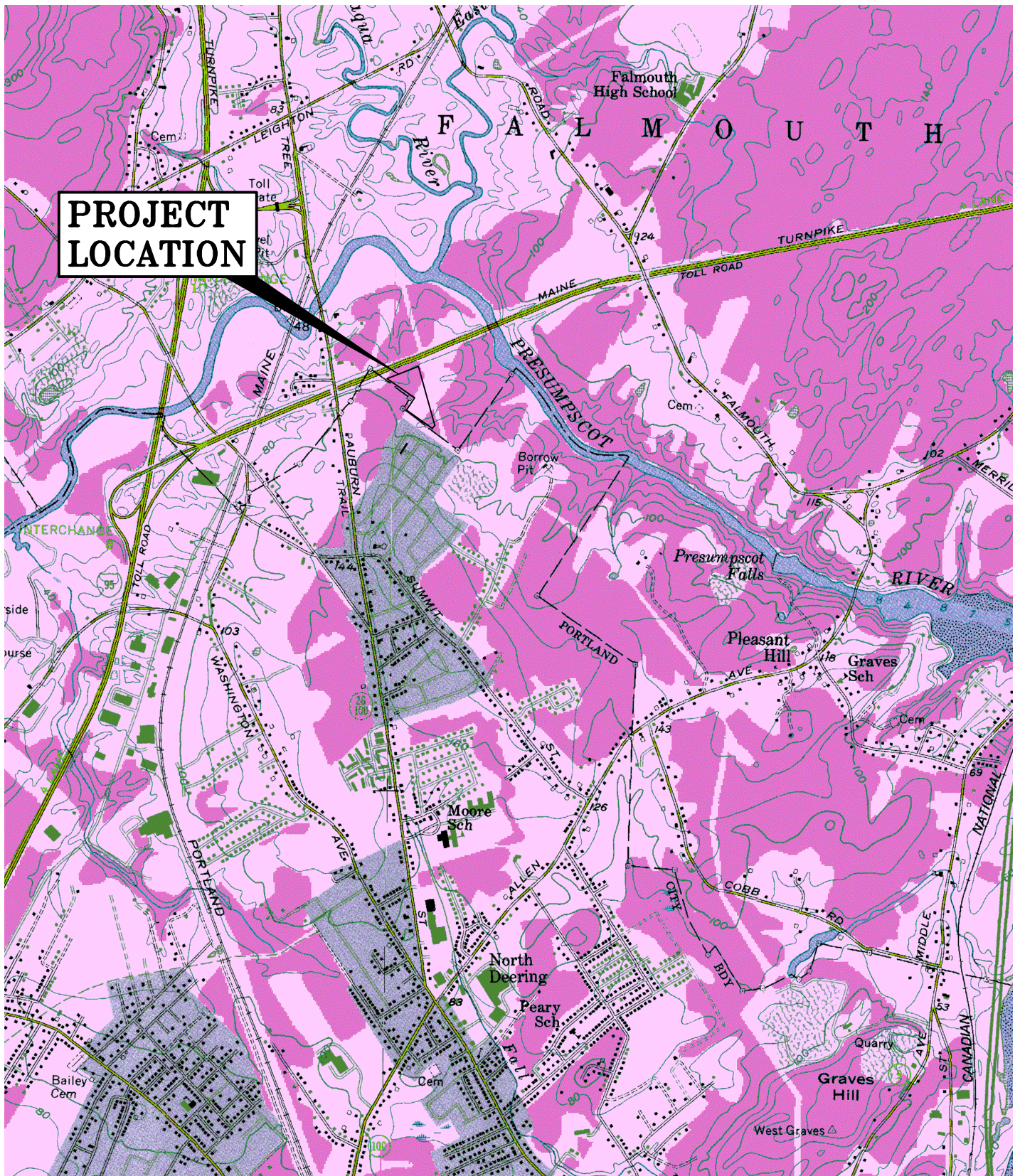
**State and Federal Permits:**

As noted above, the City of Portland will review this project for conformance with the Maine DEP Stormwater Law. An NRPA Tier I permit application will be filed with the state for the proposed wetland fill prior to the final review. The U.S. Army Corps of Engineers will be copied on the NRPA application.

**Zoning Assessment:**

The project is located in the C40 Conditional Zone. Section 14-60 of the Chapter 14 Land Use Code states "Pursuant to 30-A M.R.S.A. Section 4503(9), conditional or contract zoning is hereby authorized for rezoning of property where, for reasons such as the unusual nature or unique location of the development proposed, the city council finds it necessary or appropriate to impose, by agreement with the property owner or otherwise, certain conditions or restrictions in order to ensure that the rezoning is consistent with the city's comprehensive plan." The abutting areas to the parcel are located in the R2 Residential Zone. The property owner is proposing to develop the parcel consisting of single family dwellings, thereby being consistent with the abutting zone. The property owner also proposes the six parking spaces for trail users to be relocated on the parcel. The proposed spaces are shown on the plan.





**U.S.G.S. Location Map**  
 Brandy Lane Subdivision- Portland, Maine  
 U.S.G.S. Map Portland West, Maine-7.5 Minute Series (Topographic)

|                                |                   |
|--------------------------------|-------------------|
| Design: DJG                    | Date: MAY 2017    |
| Draft: CG                      | Job No.: 98089.06 |
| Checked: DER                   | Scale: NTS        |
| File Name: 98089.1-LOCMAP1.dwg |                   |



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 207.657.6910

Figure

1





**Easements or Other Burdens:**

1. Property is subject to a Temporary Easement granted to the City of Portland by Lloyd B. Wolf recorded in Book 26744, Page 103.
2. Property is subject to a Temporary Pedestrian Easement granted to the City of Portland by Lloyd B. Wolf recorded in Book 23889, Page 346.
3. Property is subject to a Pedestrian Easement granted to the City of Portland by Lloyd B. Wolf recorded in Book 23889, Page 349.
4. Property is subject to an easement conveyed to Portland Water District recorded in Book 2267, Page 257.
5. Property is subject to an easement conveyed to Central Maine Power Company by Philip E. Hamlin and Elizabeth G Hamlin recorded in Book 2167, Page 435.

Locations of the above easements are shown on the Subdivision Plat.

**Proposed Waivers:**

The following waivers are requested:

- A waiver is requested for the requirement in Section 14-526.b for the preservation of significant natural features. The proposed wetland impact could not be avoided in the development of the site, though the design has avoided wetland impacts to the extent feasible. The applicant has demonstrated compliance with applicable State and Federal regulations by applying for an MDEP NRPA Tier 1 permit for the wetland impact

**Evidence of Financial and Technical Capacity:**

LBW, LLC. has experience with development in Portland such as developing Hope Avenue and has hired Professional Engineers to prepare permitting and construction plans for this project. Given this, the Applicant possesses sufficient technical capacity. Attachment 2 contains evidence of the financial capacity for this project.

**Construction Management Plan:**

A construction management plan will be prepared by the General Contractor prior to the start of work at the site as noted on the site plan contained within the plan set. The management plan will address the anticipated start and end date of the project, discuss the construction sequence, and provide a pedestrian circulation plan. The management plan will be submitted to the City Planning Division prior to commencement of site work.

**Traffic:**

A Traffic Evaluation for this project is include in Attachment 3.

**Significant Natural Features:**

As noted in the wetland report for the site prepared TRC Maine dated July 2016 there are no Significant Vernal Pools on the site. However, there are wetlands scattered throughout the site. The majority of wetlands are located at the center of the site near an existing Central Maine Power easement. The design of the subdivision favors the westerly property line to avoid wetland impacts to the extent feasible. Given the size of the site, some wetland impacts could not be avoided. An



application for a MDEP NRPA Tier I wetland permit has been submitted to the state and copied to the City and the U.S. Army Corps of Engineers. The wetland report is included in Attachment 4.

**Stormwater:**

Section 14-526.b.3.b of the Land Use Ordinance states that all development other than Level I residential shall comply with Section 5 of the Technical Manual including Basic, General, and Flooding standards as applicable to prevent and control the release of pollutants to waterbodies, watercourses, wetlands and groundwater, and reduce adverse impacts associated with increases or changes in flow, soil erosion and sedimentation.

Section 5.II.c of the Technical Manual states that subdivisions shall be required to submit a stormwater management plan pursuant to the regulations of Maine DEP Chapter 500 Stormwater Management Rules, including Basic, General and Flooding standards.

The Basic Standard is met by the Erosion and Sedimentation Control Report submitted with this application in Attachment 5.

The General and Flooding Standards are addressed in the Stormwater Management Report for the project which is included in Attachment 6.

**Master Plan:**

The applicant is obtaining the necessary permits and has followed the applicable zoning ordinances. For these reasons, it is assumed the subdivision meets the City of Portland's Master Plan.

**Utility Capacity:**

Attachment 7 contains letters sent to the Portland Water District, Portland Public Services and Central Maine Power requesting confirmation of their ability to serve the project. The ability to serve responses will be forwarded to the City upon receipt.

**Solid Waste Management:**

Lot owners will be responsible for their own solid waste disposal until the City of Portland accepts Brandy Lane as a public roadway. Upon acceptance, it will be the responsibility of the City to provide solid waste disposal services to the residents of Brandy Lane.

**NFPA:**

Two fire hydrants are proposed in the sixteen lot subdivision at the proper separation along the public way. The NFPA Life Safety Code will be complied with through the building permit and construction process.

**Design Standards:**

The development is in conformance with the design standards of Section 14-526 of the City Land Use Code as noted below. Waiver requests from the standards are also noted below.



14-526 a Transportation Standards – Off street parking will be provided by driveways on the individual lots.

14-526 b Environmental Quality Standards – As noted in the wetland report for the site contained in Attachment 4, the site contains significant natural features in the parcel. Impacts to the wetlands were minimized, but could not be avoided by development of the site. A waiver to the requirement to preserve the wetland is requested. An application for the wetland fill has been submitted to the MDEP and copied to the U.S. Army Corps of Engineers. Each house will require two (2) street trees as part of the Building Permit Process. Stormwater management is discussed above.

14-526 c Public Infrastructure and Community Safety Standards – Two fire hydrants are shown on the proposed roadway for the sixteen lot subdivision. The proposed electric service is underground and the applicant has contacted the Portland Water District, Department of Public Services and Central Maine Power to obtain ability to serve letters for water, wastewater and electrical services. The proposed utility connections are shown on the Utility plan in the plan set.

14-526 d Site Design Standards – The proposed buildings are a maximum of 2-story residential dwellings which will not have a detrimental impact on adjoining properties. There are no known historic resources on the project site. HVAC units shall comply with applicable state and federal emission requirements. No signage other than traffic signs is proposed for the project. The building designs will be compatible with surrounding development.

### **Boundary Survey**

Boundary Survey information is included on the Subdivision Plat within the plan set.

### **Plan Set**

A plan set containing the required information is included with this application.

The project proposes developing the parcel into 16 single-family lots, which meets the subdivision definition stated in Chapter 14 Land Use Ordinance. The following narrative discusses the subdivision requirements of the City of Portland Land Use Ordinance.

### **Section 14-496 Plat Requirements**

1. The Plat is at an appropriate scale and contains the required information.
2. Two foot contours are shown. The site is undeveloped with no existing structures.
3. Brandy Lane Subdivision proposes a 50-foot right of way width. A typical pavement section is included on the detail sheets for the project.
4. The proposed right-of-way is shown on the Subdivision Plat. Drainage easements and pedestrian trail easements are shown and labeled.
5. A baseline with curve information and the appropriate street information is provided on the plan and profile drawings.
6. Existing utilities are shown on the plans.
7. The parcel boundary and the proposed lot lines are shown on the Plat.
8. Abutting parcel owners are shown on the Plat.





9. The project is not located within a flood zone.
10. There are no existing historic sites or structures on the parcel.
11. Proposed utilities are shown on the Utility Plan.
12. Proposed sanitary sewer service and stormdrains are shown on the plans with inverts, slopes, rim elevations and structure locations.
13. Street lights are shown on the Utility Plans.
14. No trees are proposed for preservation, many will remain in undeveloped areas of the site.
15. Grading and drainage is shown on the Grading, Drainage, and Erosion Control plan within the plan set (Sheets C103-C105).
16. Existing zoning is shown on Sheet C100 (Overall Subdivision Plan).
17. No future phases are proposed.
18. Six (6) parking spaces are proposed to be relocated within the subdivision for public trail access.
19. The plans contain the required contact information.
20. The application submittal contains written information.
21. Required monuments are shown on the Plat.
22. The vicinity sketch is included in the plan set.
23. The site data is included on Sheet C100 (Overall Subdivision Plan).
24. Additional submission items are included in the Subdivision Application.

#### **Section 14-497 General Requirements**

1. The project is a residential subdivision which is not anticipated to result in air pollution. The project will utilize the public sewer system and will not result in water pollution. The site is not within a flood plain and has a proposed stormwater management plan.
2. An ability to serve letter from the Portland Water District is included in Attachment 6. The response of the ability to serve will be forwarded to the City upon receipt. The stormwater management report demonstrates adequate stormwater disposal.
3. The project will not cause a burden on an existing water supply.
4. An erosion and sedimentation control report is included in Attachment 5.
5. A Traffic Evaluation is included in Attachment 3.
6. An ability to serve letter to Public Services Department is included in Attachment 7. The response of the ability to serve will be forwarded to the City upon receipt.
7. The residents will be responsible for their solid waste disposal, until such time that Brandy Lane is accepted as a City street.
8. The project will not have an undue adverse effect on historical sites and will not have an undue impact to scenic or natural beauty beyond any typical development of vacant land.
9. The project is in conformance with the land development plan based on compliance with zoning district standards.
10. The developer's financial capacity is addressed by Attachment 2. The developer has experience with development in Portland such as the Hope Avenue Development and has hired



Professional Engineers to prepare permitting and construction plans for this project, therefore the Applicant possesses sufficient technical capacity.

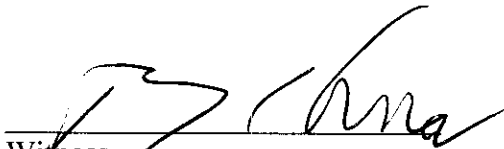
- I 1. The project is not within the watershed of a pond or lake, or within 250' of a wetland defined in Title 38.
- I 2. The connection to the municipal sewer, and the stormwater management plan for the project will ensure that the project does not adversely affect groundwater.
- I 3. The site is not within a flood prone area.
- I 4. Wetlands are shown on the plans.
- I 5. The proposed Brandy Lane crosses an apparent intermittent stream at +/- station 6+50, where an existing 36" reinforced concrete pipe culvert will be extended for construction of the roadway.

**WARRANTY DEED**  
(Maine Statutory Short Form)

KNOW ALL BY THESE PRESENTS, that I, ROBERT L. ADAM, of Westbrook, Maine (hereinafter collectively referred to as "Grantor"), for valuable consideration, grant to LLOYD B. WOLF, with a mailing address of 9 Loveitt's Field Road, South Portland, Maine (hereinafter referred to as "Grantee"), with warranty covenants, Grantor's one-half undivided interest as tenant in common in the land, and any improvements thereon, situated in Portland, Cumberland County, Maine, described as follows:

See Attached Exhibit A

WITNESS my hand and seal this 5 day of April, 2006

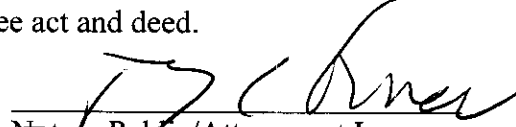
  
Witness

  
Robert L. Adam

STATE OF MAINE  
CUMBERLAND, ss.

April 5, 2006

Then personally appeared before me the above-named ROBERT L. ADAM and acknowledged the foregoing instrument to be his free act and deed.

  
Notary Public/Attorney at Law

Printed Name: JERRY N. SABLE

Exhibit A

PARCEL ONE

A certain lot or parcel of land located on the northerly side of Hope Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a 6"x6" granite monument found on the southerly side of land of the Maine Turnpike Authority and at the northeasterly corner of Lot 17 as depicted on a plan of the Auburn Pines Subdivision recorded in the Cumberland County Registry of Deeds in Plan Book 199, Page 393. Thence:

1) N 64°31'06" E by said land of the Maine Turnpike Authority a distance of Four Hundred Seventy-Eight and 86/100 (478.86) feet to a point and land now or formerly of the City of Portland as described in a deed recorded in said Registry in Book 17463, Page 276.

2) S 19°30'58" E by said land of City of Portland a distance of Four Hundred Thirty and 11/100 (430.11) feet to a point.

3) N 70° 29' 02" E by said land of City of Portland a distance of One Hundred Fifty and 00/100 (150.00) feet to a point and land now or formerly of Lloyd B. Wolf and Robert L. Adam as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7058, Page 70.

4) S 19° 30' 58" E by said land of Wolf and Adam a distance of Seventy-Five and 00/100 (75.00) to a point and said land of the City of Portland.

5) S 70°29'02" W by said land of the City of Portland a distance of One Hundred Fifty and 00/100 (150.00) feet to a point.

6) S 19°30'58" E by said land of the City of Portland a distance of Four Hundred Four and 18/100 (404.18) feet to the northerly sideline of Hope Avenue as depicted on the plan of Presumpscot River Place III recorded in said Registry in Plan Book 202, Page 650, said point being herein designated as Point A.

7) Southwesterly by said Hope Avenue following a non tangent curve to the left having a radius of Two Hundred Twenty-Five and 00/100 (225.00) feet an arc distance of One Hundred Five and 51/100 (105.51) feet to a point, said point lying S 45°27'10" W a distance of One Hundred Four and 54/100 (104.54) feet from previously described Point A.

8) S 32°01'10" W by said Hope Avenue a distance of Fifteen and 45/100 (15.45) feet to a point on the former Town Line between the City of Portland and the Town of Falmouth.

9) N 58°27'09" W by said former Town Line a distance of Four Hundred Fifty-Seven and 24/100 (457.24) feet to the apparent center of an irregularly shape stone monument marked "F" - "W" and the southeasterly side of Lot 13 as depicted on the said plan of Auburn Pines Subdivision.

10) N 30°55'13" E by said Lot 13 a distance of Two Hundred Ninety and 78/100 (290.78) feet to the apparent center of an irregularly shape stone monument marked "F" - "W" and the northeasterly corner of said Lot 13.

11) N 58°56'30" W by said Lot 13, and Lots 15-17 as depicted on the said plan of Auburn Pines Subdivision a distance of Four Hundred Eighty-Two and 24/100 (482.24) feet to the point of beginning.

Bearings are based on true north.

The above described parcel contains 6.46 acres and being a portion of land now or formerly of Lloyd B. Wolf and Robert L. Adam as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7058, Page 70.

Reference is herein made to Private & Special Laws of Maine, Second Regular Session of the 120<sup>th</sup> Legislature, Chapter 62, S.P. 499-L.D. 1586, An Act to Separate Territory from the Town of Falmouth and Annex it to the City of Portland, approved April 2, 2002.

Parcel One described above is conveyed subject to a certain pedestrian easement described in an Easement Deed from Grantor and Grantee herein to the City of Portland, of even or recent date herewith, to be recorded at the Cumberland County Registry of Deeds.

Parcel One described above is conveyed subject to a certain Portland Water District Easement, recorded in the Cumberland County Registry of Deeds in Book 2267, Page 257, as well as a certain Central Maine Power Easement, recorded in said registry in Book 17463, Page 276.

The above described parcel is conveyed subject to any and all easements and restrictions of record and includes all rights, easements, privileges and appurtenances pertaining thereto.

## PARCEL TWO

A certain lot or parcel of land located on the southwesterly side of Hope Avenue in the City of Portland, County of Cumberland, State of Maine, bounded and described as follows:

Beginning at a point on the southwesterly sideline of Hope Avenue and the northerly corner of Lot 30 as depicted on a plan of Presumpscot River Place III recorded in the Cumberland County Registry of Deeds in Plan Book 202, Page 650. Thence:

- 1) S 31°28'15" W by said Lot 30 a distance of One Hundred Thirteen and 81/100 (113.81) feet to a point and the easterly corner of land now or formerly of James G. Somma and Constance Somma as described in a deed recorded in said Registry in Book 6230, Page 51.
- 2) N 57°48'44" W by said land of Somma, other land now or formerly of said Somma, land now or formerly of Stephen M. Colucci and Janet L. Colucci, and land now or formerly of James Elowitch as described in deeds recorded in said Registry in Book 4299, Page 46; Book 9460, Page 133; and Book 9388, Page 282 respectively, a distance of Four Hundred Forty-Two and 61/100 (442.61) feet to a point and the northerly corner of said land of Elowitch
- 3) S 32°01'40" W by said land of Elowitch a distance of Sixty-Three and 50/100 (63.50) feet to a point and the easterly corner of land now or formerly of Gloria J. LaBrecque and Mary T. Beyer as described in a deed recorded in said Registry in Book 16128, Page 262.
- 4) N 58°27'09" W by said land of LaBrecque & Beyer a distance of Ninety-Seven and 85/100 (97.85) feet to a point on the southeasterly sideline of said Hope Avenue.
- 5) N 32°01'10" E by said Hope Avenue a distance of Fifteen and 04/100 (15.04) feet to a point of curvature.
- 6) Northeasterly and easterly by said Hope Avenue following a curve to the right having a radius of One Hundred Seventy-Five and 00/100 (175.00) feet an arc length of Two Hundred Forty-Two and 65/100 (242.65) feet to a point.
- 7) S 30°40'13" W by said Hope Avenue a distance of Thirty-Four and 36/100 (34.36) feet to a point.
- 8) S 59° 19'47" E by said Hope Avenue a distance of Fifty and 00/100 (50.00) feet to a point.
- 9) N 30°40'13" E by said Hope Avenue a distance of Thirty-Five and 61/100 (35.61) feet to a point.
- 10) S 55°52'57" E by said Hope Avenue a distance of Three Hundred Forty-Six and 71/100 (346.71) feet to the point of beginning.

Bearings are based on true north.

The above described parcel contains 1.46 acres and being a portion of land now or formerly of Lloyd B. Wolf and Robert L. Adam as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7058, Page 70.

Reference is herein made to Private & Special Laws of Maine, Second Regular Session of the 120<sup>th</sup> Legislature, Chapter 62, S.P. 499-L.D. 1586, An Act to Separate Territory from the Town of Falmouth and Annex it to the City of Portland, approved April 2, 2002.

The above described parcel is conveyed subject to any and all easements and restrictions of record and includes all rights, easements, privileges and appurtenances pertaining thereto.

The above described parcel is conveyed subject to a certain culvert easement, benefiting the City of Portland, located on the southeasterly side of Hope Avenue in the City of Portland, County of Cumberland, State of Maine, shown as "City of Portland Culvert Easement" on a plan entitled "Riverwalk Subdivision Plan" prepared by Titcomb Associates, Sheet 1 of 2, dated October 25, 2005, to be recorded in the Cumberland County Registry of Deeds, and more particularly bounded and described as follows:

Beginning at a point on the southeasterly sideline of Hope Avenue said point lying N 40°32'44" E a distance of Seventy-Eight and 77/100 (78.77) feet from the northerly corner of land now or formerly of Gloria J. LaBrecque and Mary T. Beyer as described in a deed recorded the Cumberland County Registry of Deeds in Book 16128, Page 262. Thence:

- 1) Easterly following a non-tangent curve to the right having a radius of One Hundred Seventy-Five and 00/100 (175.00) feet an arc length of Thirty-One and 05/100 (31.05) feet to a point, said point lying N 58°09'09" E a distance of Thirty-One and 01/100 (31.01) feet from the last described point of beginning.
- 2) S 17°11'02" E a distance of Thirty-Five and 83/100 (35.83) feet to a point.
- 3) S 72°37'44" W a distance of Thirty and 00/100 (30.00) feet to a point.
- 4) N 17°11'02" W a distance of Twenty-Eight and 07/100 (28.07) feet to the point of beginning.

Bearings are based on true north.

The above described culvert easement contains 973 square feet. The above described culvert easement includes the right to construct, repair and perpetually maintain through, under, across and upon said easement parcel, culverts, pipes, ditches or the like, for conveying drainage water, and to lay, relay, repair, alter, enlarge, maintain and remove said drainage systems upon, across or under said easement parcel, with all necessary fixtures and appurtenances, to trim, cut down and remove bushes and trees

growing on said easement parcel, to remove grass, vegetation and crops growing on said easement parcel and to excavate or fill said easement parcel, all to such extent as in the judgment of the City of Portland is necessary for any of the above purposes, and to enter upon said easement parcel at any and all times for any of the foregoing purposes.

The above described parcel is conveyed subject to a certain culvert/drainage easement, benefiting the City of Portland, located on the southwesterly side of Hope Avenue in the City of Portland, County of Cumberland, State of Maine, shown as "City of Portland Culvert Easement" on a plan entitled "Riverwalk Subdivision Plan" prepared by Titcomb Associates, Sheet 1 of 2, dated October 25, 2005, to be recorded in the Cumberland County Registry of Deeds, and more particularly bounded and described as follows:

Beginning at a point on the southwesterly sideline of Hope Avenue, said point lying N 55°52'57" W by said Hope Avenue a distance of Two Hundred Sixteen and 48/100 (216.48) feet from the northerly corner of Lot 30 as depicted on a plan of Presumpscot River Place III recorded in the Cumberland County Registry of Deeds in Plan Book 202, Page 650. Thence:

- 1) S 06°46'58" E a distance of Forty-Seven and 80/100 (47.80) feet to a point.
- 2) S 83°13'02" W a distance of Thirty and 00/100 (30.00) feet to a point.
- 3) N 06°46'58" W a distance of Seventy-Three and 79/100 (73.79) feet to said Hope Avenue.
- 4) S 55°52'57" E by said Hope Avenue a distance of Thirty-Nine and 69/100 (39.69) feet to the point of beginning.

Bearings are based on true north.

The above described culvert easement contains 1,824 square feet. The above described culvert easement includes the right to construct, repair and perpetually maintain through, under, across and upon said easement parcel, culverts, pipes, ditches or the like, for conveying drainage water, and to lay, relay, repair, alter, enlarge, maintain and remove said drainage systems upon, across or under said easement parcel, with all necessary fixtures and appurtenances, to trim, cut down and remove bushes and trees growing on said easement parcel, to remove grass, vegetation and crops growing on said easement parcel and to excavate or fill said easement parcel, all to such extent as in the judgment of the City of Portland is necessary for any of the above purposes, and to enter upon said easement parcel at any and all times for any of the foregoing purposes.

The above described parcel is conveyed subject to a certain drainage easement, benefiting the City of Portland, adjoining the above referenced culvert/drainage easement, shown as "City of Portland Drainage Easement" on the above referenced "Riverwalk Subdivision Plan" prepared by Titcomb Associates, Sheet 1 of 2, dated



October 25, 2005, being thirty and 00/100 (30.00) feet in width, beginning near the southwesterly corner of the above described culvert/drainage easement and continuing southwesterly across the above described Lot 17. The center of said drainage easement follows the center of the naturally occurring drainage course, which course may vary from time to time. The easement includes the right to construct, repair and perpetually maintain through, under, across and upon said easement parcel, culverts, pipes, ditches or the like, for conveying drainage water, and to lay, relay, repair, alter, enlarge, maintain and remove said drainage systems upon, across or under said easement parcel, with all necessary fixtures and appurtenances, to trim, cut down and remove bushes and trees growing on said easement parcel, to remove grass, vegetation and crops growing on said easement parcel and to excavate or fill said easement parcel, all to such extent as in the judgment of the City of Portland is necessary for any of the above purposes, and to enter upon said easement parcel at any and all times for any of the foregoing purposes.

### PARCEL THREE

A certain lot or parcel of land located on the northeasterly side of Hope Avenue 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 Hope Avenue and the westerly corner of Lot 1 as depicted on a plan of Presumpscot River Place III recorded in the Cumberland County Registry of Deeds in Plan Book 202, Page 650. Thence:

- 1) N 55°52'57" W by said Hope Avenue a distance of Two Hundred Sixty-Five and 28/100 (265.28) feet to a point.
- 2) N 31°28'15" E a distance of Ninety-Nine and 50/100 (99.50) feet to a point.
- 3) N 58°31'45" W a distance of Twenty and 00/100 (20.00) feet to a point.
- 4) N 39°42'09" E a distance of One Hundred Seventeen and 91/100 (117.91) feet to a point.
- 5) N 75°51'37" E a distance of One Hundred Sixty-Four and 63/100 (164.63) feet to a point.
- 6) S 58°31'45" E a distance of One Hundred Fifty-Two and 96/100 (152.96) feet to a point and the northwesterly side of said Lot 1.
- 7) S 31°28'15" W by said Lot 1 a distance of Three Hundred Forty-Six and 08/100 (346.08) feet to the point of beginning.

Bearings are based on true north.

The above described parcel contains 1.95 acres and being a portion of land now or formerly of Lloyd B. Wolf and Robert L. Adam as described in a deed recorded in the Cumberland County Registry of Deeds in Book 7058, Page 70.

Reference is herein made to Private & Special Laws of Maine, Second Regular Session of the 120<sup>th</sup> Legislature, Chapter 62, S.P. 499-L.D. 1586, An Act to Separate Territory from the Town of Falmouth and Annex it to the City of Portland, approved April 2, 2002.

The above described parcel is conveyed subject to any and all easements and restrictions of record and includes all rights, easements, privileges and appurtenances pertaining thereto.

The above described parcel is conveyed subject to a portion of a certain culvert easement located on the northeasterly side of Hope Avenue 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 Hope Avenue, said point lying N 55°52'57" W by said Hope Avenue a distance of Two Hundred Sixty-Five and 28/100 (265.28) feet from the westerly corner of Lot 1 as depicted on a plan of Presumpscot River Place III recorded in the Cumberland County Registry of Deeds in Plan Book 202, Page 650. Thence:

- 1) N 31°28'15" E a distance of Seventeen and 51/100 (17.51) feet to a point.
- 2) S 06°46'58" E a distance of Twenty-Three and 15/100 (23.15) feet to a point on the northeasterly side of said Hope Avenue.
- 3) N 55°52'57" W by said Hope Avenue a distance of Fourteen and 35/100 (14.35) feet to the point of beginning.

The above described portion of the culvert easement contains 126 square feet.

Received  
Recorded Register of Deeds  
Apr 26, 2006 12:16:21P  
Cumberland County  
John B O'Brien



January 5, 2017

Portland Planning Board  
389 Congress Street,  
Portland, Maine 04101

RE: 16-17 Lot Subdivision

To Whom It May Concern,

Lloyd B. Wolf dba LBW, LLC has an established paid as agreed relationship with Gorham Savings Bank. Mr. Wolf has the financial and technical ability to complete the project this residential subdivision project in Portland, Maine. Should have you have any additional questions I can assist with, I can be reached at 222-1499.

Sincerely,

A handwritten signature in blue ink that reads "Kimberly A. Donnelly". The signature is written in a cursive, flowing style.

Kimberly A. Donnelly  
Senior Vice President  
Gorham Savings Bank



TRC  
6 Ashley Drive  
Scarborough, ME 04074

Main 207-879-1930  
Fax 207-879-9293

## Memorandum

**To:** Al Palmer **Project No.:** 222955  
**From:** Rich Jordan  
**Subject:** Riverwalk Vernal Pool Reconnaissance 2014 – Data  
**Date:** 25 August 2014  
**CC:** -na-

---

Hi Al –

This memo provides a data roundup for the vernal pool (VP) reconnaissance performed on the entirety of the western side and a small portion of the eastern side of the “Riverwalk” parcels north of Hope Avenue in Portland (please see the proposal documents for a site description). This is a follow-up to my email of 8/11/2014, in which I sent the shapefiles for the site. There are two basic data types included within the file – one set is noted as “VP” (listed as 1 through 6) and one set is noted as letter features (GPS-located as potential vernal pools (“PVP”) and listed as A through F), as depicted on the attached site map.

### **Summary:**

I visited the site in May of 2014, and was a little late in the breeding season to count unhatched wood frog egg masses. However, I was able to observe disassociated (hatched and hatching) wood frog egg masses and unhatched spotted salamander egg masses. None of the ponded features mapped or observed on the eastern side of the right-of-way (ROW) were naturally occurring (thus they do not meet the Maine Natural Resources Protection Act definition of “Significant Vernal Pool”); however, some of the features meet the definition of “vernal pool” in the U.S. Army Corps of Engineers Maine General Permit. In terms of vernal pool indicator species productivity, the most prolific feature was VP-4 (19 spotted salamander egg masses and  $\geq 3$  wood frog egg masses). VP-4 is one depression in a complex of depressions (identified as VP-1 through VP-5,) associated with ditching and borrow areas along an abandoned woods road. VP-6 is located in a seasonally flooded portion of a forested wetland and contained four spotted salamander egg masses and several wood frog tadpoles (observed during the May field visit). No indicator species were observed within VPs-1, 2, 3, or 5. I also reviewed six isolated wetlands (containing PVPs A-F). None of the PVP features are Maine Department of Environmental Protection Significant Vernal Pools, and only Feature E meets the Army Corps definition of vernal pool (two or three disassociated wood frog egg masses were observed in Feature E).

### **VP- 1 through 5:**

The polygons identified as VP-1, VP-2, VP-3, VP-4, and VP-5 are all manmade depressions located in a forested wetland within excavated borrow areas and ditches adjacent to an abandoned roadbed. VP-

1 and VP-2 are approximately 3 feet wide and 8-10 inches deep. VP-3 is larger, but approximately the same depth. VP-4 is the largest of the small complex, and is a little deeper, approximately 12-18 inches deep. VP-5 is a circular depression (borrowed), located on the edge of the cleared ROW. VP-5 is approximately 18 inches deep.

During two site visits in May of 2014, 19 spotted salamander egg masses, a few (~3) disassociated wood frog egg masses and several wood frog tadpoles were observed in VP-4. A portion of the VP-4 basin extends onto the adjacent, cleared ROW, and several of the salamander egg masses (7) were noted within a ponded section of the wetland at the tree-line between the Riverwalk site and the cleared ROW. No VP indicator species or egg masses were observed in VP-1, VP-2, VP-3, or VP-5 (in August, a juvenile wood frog was noted adjacent to VP-3 and a mature green frog was noted in VP-5). See photographs below for more information.

#### **VP-6:**

The polygon identified as VP-6 is a larger and deeper, seasonally flooded portion of a forested wetland. The water depth ranges from 4 to 12 inches. Surface flow within the wetland and depression appears to be impounded by an anthropogenic mound that extends into the adjacent, cleared ROW. The basin also extends onto the ROW. There also appears to have been some additional earthwork (bulldozing) in the immediate area that may have created this low area (earth work appears to have occurred decades ago).

Four (4) spotted salamander egg masses and several wood frog tadpoles were observed in VP-6 during the May field visits. No wood frog egg masses were observed during these visits. See photographs below for more information.

#### **Features A through D:**

Features A, B, C, and D are previously-delineated, small, isolated wetlands on the east side of the cleared ROW (across the ROW from the subject parcel). I reviewed these four wetlands in order to judge whether or not they would be likely to provide vernal pool habitat. None of the features appear likely to provide vernal pool habitat for one or more of the following reasons: despite wet conditions at the site in August, features A, B, C, and D were all dry during the site visit. Additionally, some of the features lack a depression, the depressions were very shallow (less than 3 inches prior to spillover) and/or they lacked water-stained leaves or other indicators of prolonged ponding. See photographs below for more information.

#### **Features E and F**

Features E and F are also previously-delineated, small, isolated wetlands located on the subject parcel (west side of the ROW). Both features are shallow, manmade depressions, adjacent to the abandoned forest road. Feature E is a small excavation pit approximately 18-24 inches deep. In May, Feature E had 2 or 3 disassociated wood frog egg masses and several wood frog tadpoles. See photographs below for more information. Feature F is an isolated wetland consisting of a small, shallow (4-6 inches deep) depression within an upland forest. Feature F is not likely to provide vernal pool habitat for the same reasons cited for features A through D above.

**Wetlands Review**

As discussed at our site walk, during the vernal pool reconnaissance, I performed a cursory review of the previously delineated wetland boundaries. While I did not perform a full delineation (*e.g.*, soil pits were not analyzed), based on plants, hydrology and the general location of the features, the boundaries appear fairly accurate within the sample areas that I reviewed.

I am happy to meet with you and the landowner at your convenience to discuss these findings and preliminary next steps for outreach and permitting. If you need any additional information, please give me a call or email. Thanks again.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "R. E. Jordan Jr.", with a stylized flourish at the end.

Richard E. Jordan Jr. (PWS/CPESC)  
Cell: 207.317.3583  
Email: [rjordan@trcsolutions.com](mailto:rjordan@trcsolutions.com)

**Photographs**



1. VP-1 - 8/8/2014 (dry)



2. VP-2 - 8/8/2014 (dry)





3. VP-3 - 8/8/2014



4. VP-4 - 5/11/2014





5. VP-4 - 5/16/2014



6. VP-4 - 5/16/2014 (facing into property from cleared ROW)





7. VP-4 - 8/8/2014



8. VP-4 - 8/8/2014 (facing into cleared ROW)





9. VP-5 - 8/8/2014



10. VP-6 - 5/11/2014



11. VP-6 - 5/16/2014



12. VP-6 - 8/8/2014





13. VP-6 - 8/8/2014 (looking into property from ROW)



14. Feature A – 8/8/2014





15. Feature B – 8/8/2014



16. Feature C – 8/8/2014





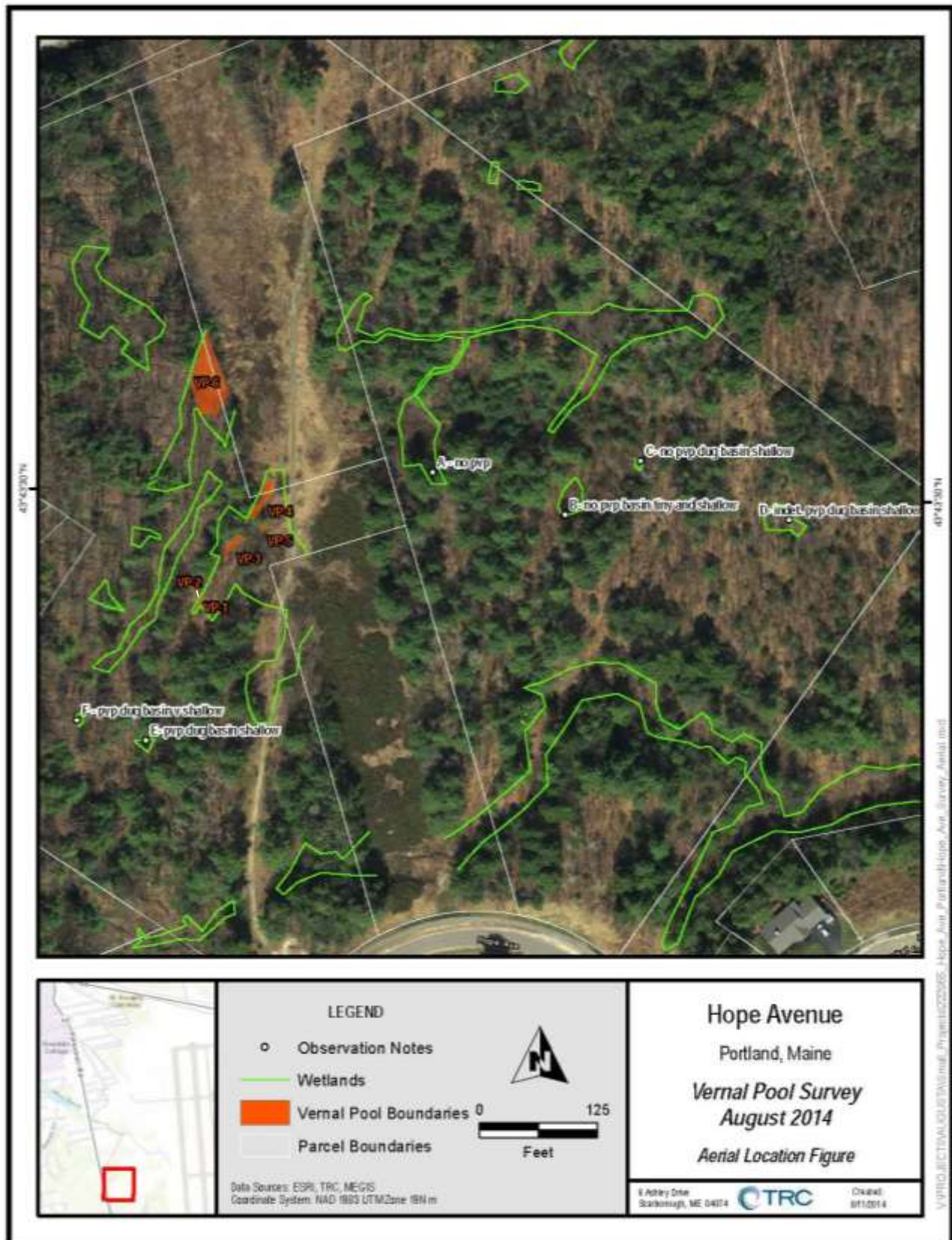
17. Feature D – 8/8/2014



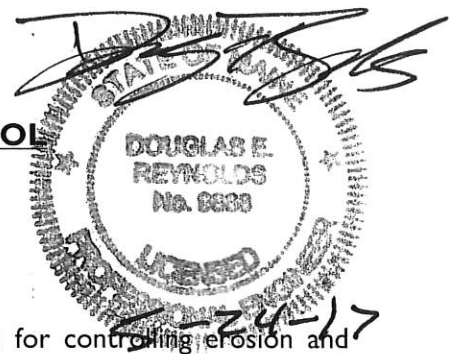
18. Feature E – 5/11/2014







## **EROSION AND SEDIMENTATION CONTROL** **BASIC STANDARDS**



### **I.1 Overview**

This Exhibit demonstrates the developer has made adequate provision for controlling erosion and sedimentation.

### **I.2 Introduction**

LBW, LLC. has retained Gorrill Palmer to prepare an Erosion and Sedimentation Control Report for the construction of a proposed 16 lot single family residential subdivision, 960 linear foot roadway, and infrastructure off Hope Avenue in Portland, Maine. The site is shown on Assessor's Map 448 Lot A004, is approximately 6.46 acres in size and is located in the Conditional Zone. Figure I is a map showing the project location. The developer will construct the roadway, driveway aprons, utility services 5 feet beyond the right-of-way, and stormwater appurtenances. Lot development will also be by the developer of the subdivision. The developer is currently seeking a Subdivision Permit from the City of Portland which entails conformance with City of Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management. Gorrill Palmer has prepared an Erosion and Sedimentation Control Plan for the proposed development. This narrative contains the general erosion and sedimentation control measures, which are appropriate for the construction of the project.

### **I.3 Narrative**

#### **I.3.1 Existing Conditions and Soil Types**

The project site is currently undeveloped with a landcover of brush and woods.

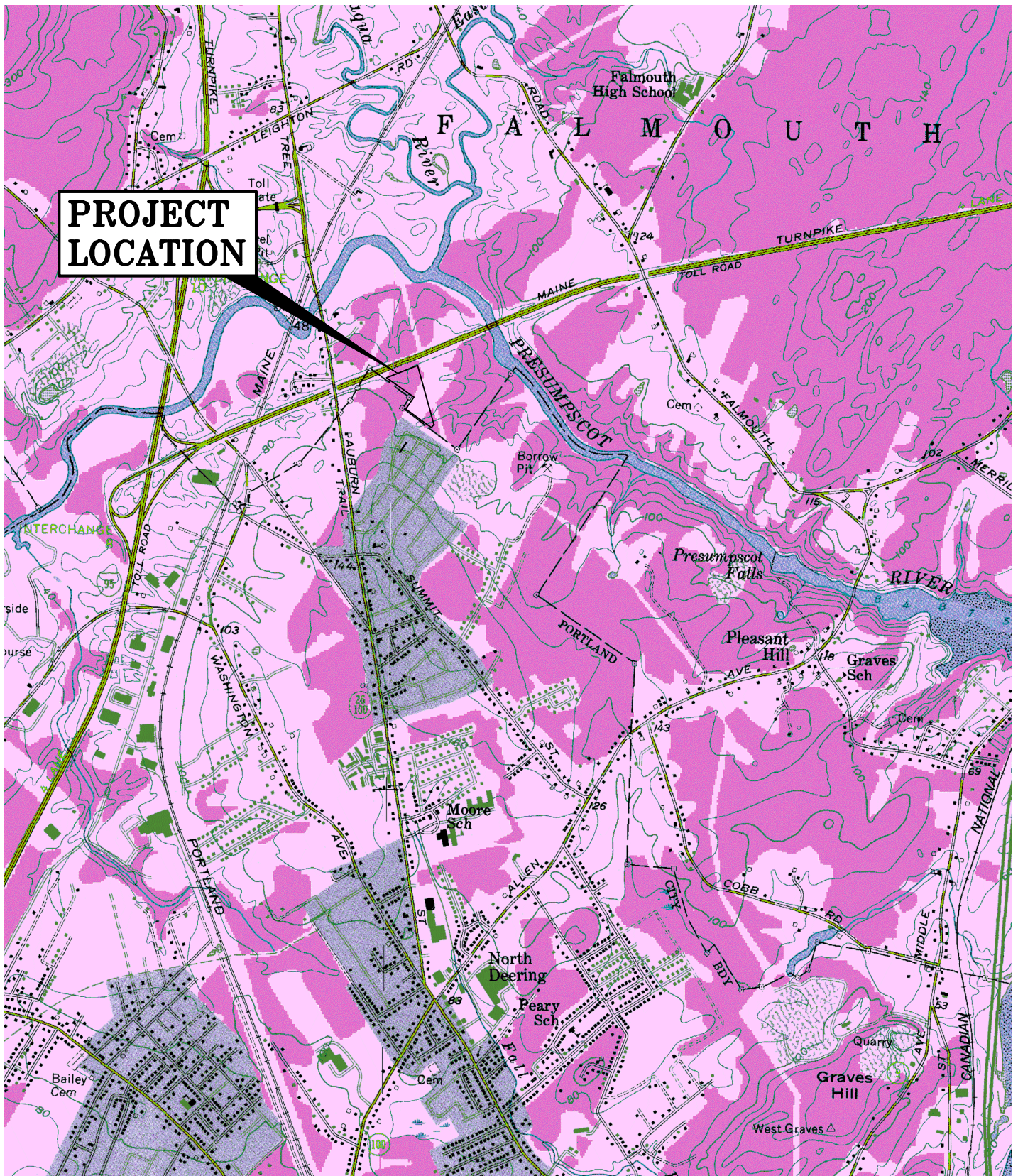
Abutting land uses include:

- North – Maine Turnpike Spur
- West – Residential
- South – Residential
- East – Resource Protection

Topography in the area of the proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 40%. The steeper slopes are associated with drainage ways at the front and rear of the site. The Presumpscot River is a property boundary to the north.

The Medium Intensity Soil Survey for Cumberland County as prepared by the Natural Resources Conservation Service was utilized in identifying the on-site soils. The soil report for this vicinity follows this page. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. The higher values are indicative of the more erodible soils. The following table lists the soils found on site and their K values:





**U.S.G.S. Location Map**  
 Riverwalk Subdivision- Portland, Maine  
 U.S.G.S. Map Portland West, Maine-7.5 Minute Series (Topographic)

|                                |                   |
|--------------------------------|-------------------|
| Design: DJG                    | Date: JAN 2017    |
| Draft: CG                      | Job No.: 98089.06 |
| Checked: DER                   | Scale: NTS        |
| File Name: 98089.1-LOCMAP1.dwg |                   |



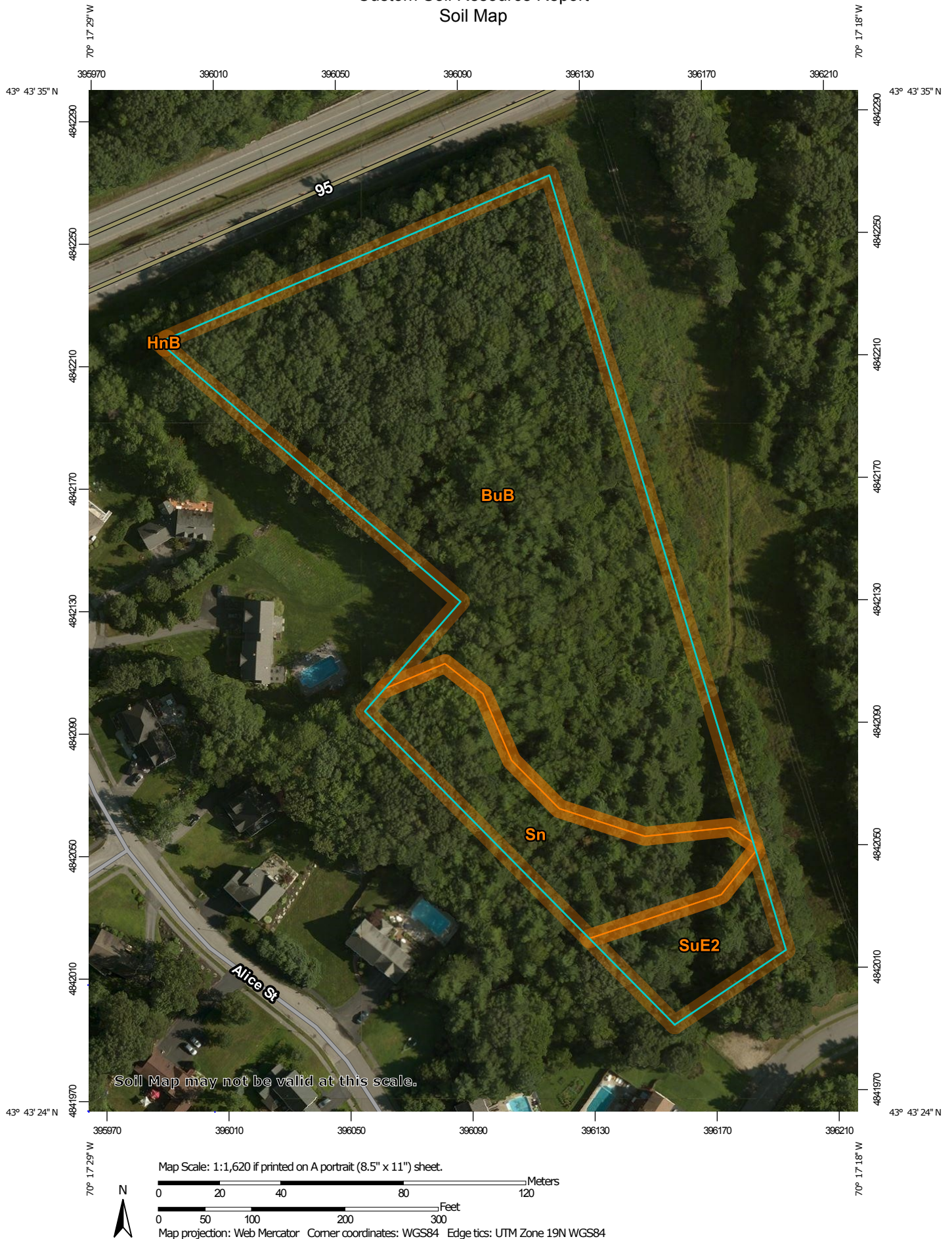
Relationships. Responsiveness. Results.  
[www.gorrillpalmer.com](http://www.gorrillpalmer.com)  
 207.657.6910

Figure

1



# Custom Soil Resource Report Soil Map



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals

### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Cumberland County and Part of Oxford County, Maine  
Survey Area Data: Version 12, Sep 15, 2016

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

## Map Unit Legend

| Cumberland County and Part of Oxford County, Maine (ME005) |                                                     |              |                |
|------------------------------------------------------------|-----------------------------------------------------|--------------|----------------|
| Map Unit Symbol                                            | Map Unit Name                                       | Acres in AOI | Percent of AOI |
| BuB                                                        | Lamoine silt loam, 3 to 8 percent slopes            | 4.6          | 77.6%          |
| HnB                                                        | Hinckley-Suffield complex, 3 to 8 percent slopes    | 0.0          | 0.0%           |
| Sn                                                         | Scantic silt loam, 0 to 3 percent slopes            | 0.9          | 15.5%          |
| SuE2                                                       | Suffield silt loam, 25 to 45 percent slopes, eroded | 0.4          | 6.9%           |
| <b>Totals for Area of Interest</b>                         |                                                     | <b>6.0</b>   | <b>100.0%</b>  |

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.



| K VALUE  |            |            |
|----------|------------|------------|
| Type     | Subsurface | Substratum |
| Lamoine  | 0.32       | 0.49       |
| Scantic  | 0.49       | 0.49       |
| Suffield | 0.49       | 0.49       |

Based on a review of the K Values, the on-site soils have moderate susceptibility to erosion.

### **1.3.2 Existing Erosion Problems**

Gorrill-Palmer is not aware of any existing erosion problems on site.

### **1.3.3 Critical Areas**

Critical areas that would require special attention during construction would be side slopes adjacent to any wetlands.

### **1.3.4 Protected Natural Resources**

Wetlands on-site have been delineated by TRC Consultants of Scarborough, Maine, and located by GPS and are shown on project plans. The total area of wetlands located within the development footprint is approximately 119,750 +/- s.f. (2.74 acres). It is anticipated that approximately 7,464 s.f. of wetlands will be impacted during development of the site.

### **1.3.5 Erosion Control Measures and Site Stabilization**

The primary emphasis of the erosion/sedimentation control plan, which will be implemented for this project, is as follows:

- ◆ Development of a careful construction sequence.
- ◆ Rapid revegetation of denuded areas to minimize the period of soil exposure.
- ◆ Rapid stabilization of drainage paths to avoid rill and gully erosion.
- ◆ The use of on-site measures to capture sediment (hay bales/ stone check dams/silt fence, etc.)

The following temporary and permanent erosion and sediment control devices will be implemented as part of the site development. These devices shall be installed as indicated on the plans or as described within this report. For further reference, see the latest edition of the Maine Erosion and Sediment Control Practices Field Guide for Contractors.

#### **A. Dewatering**

Water from construction trench dewatering or pond construction shall pass first through a filter bag or secondary containment structure (e.g. hay bale lined pool) prior to discharge. The discharge site shall be selected to avoid flooding, icing, and sediment discharges to a protected resource. In no case shall the filter bag or containment structure be located within 50 feet of a protected natural resource.

## **B. Inspection and Monitoring**

Maintenance measures shall be applied as needed during the entire construction season. After each rainfall, snow storm or period of thawing and runoff, the site contractor shall perform a visual inspection of all installed erosion control measures and perform repairs as needed to insure their continuous function. Following the temporary and/or final seeding and mulching, the contractor shall in the spring inspect and repair any damages and/or unestablished spots. Established vegetative cover means a minimum of 90% of areas vegetated with vigorous growth.

## **C. Temporary Erosion Control Measures**

The following measures are planned as temporary erosion/sedimentation control measures during construction:

1. Crushed stone-stabilized construction entrance shall be placed at the entrance off Hope Avenue.
2. Siltation fence or wood waste compost berms shall be installed downstream of any disturbed areas to trap runoff-borne sediments until grass areas are revegetated. The silt fence and/or wood waste compost berms shall be installed per the details provided in this package and inspected at least once a week and before and immediately after a storm event of 0.5 inches or greater, and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence or berm line. 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. Wood waste compost berms are not to be used adjacent to wetland areas that are not to be disturbed.
3. Straw or hay mulch including hydroseeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and October 15th on slopes of less than 15 percent shall be anchored by applying water; mulch placed on slopes of equal to or steeper than 15 percent shall be covered by a fabric netting and anchored with staples in accordance with manufacturer's recommendation. Fabric netting and staples shall be used on disturbed areas within 50' of lakes, streams, and wetlands regardless of the upstream slope. Mulch placed between October 15th and April 15th on slopes equal to or steeper than 8 percent shall be covered with a fabric netting and anchored with staples in accordance with the manufacturer's recommendations. Slopes steeper than 3:1 and equal to or flatter than 2:1, which are to be revegetated, shall receive curlex blankets by American Excelsior or equal. Slopes steeper than 2:1 shall receive riprap as noted on the plans. The mulch application rate for both temporary and permanent seeding is 75 lbs per 1000 sf as identified in Attachment A of this section. Mulch shall not be placed over snow.
4. Temporary stockpiles of stumps, grubblings, or common excavation will be protected as follows:
  - a) Temporary stockpiles shall not be located within 100 feet of any wetlands which will not be disturbed and shall be located away from drainage swales.

b) Stockpiles shall be stabilized within 7 days by either temporarily seeding the stockpile by a hydroseed method containing an emulsified mulch tackifier or by covering the stockpile with mulch, such as hay, straw, or erosion control mix.

c) Stockpiles shall be surrounded by sedimentation barrier at the time of formation.

5. All denuded areas that are within 100 feet of an undisturbed wetland, which have been rough graded and are not located within the roadway subbase area, shall receive mulch or erosion control mesh fabric within 48 hours of initial disturbance of soil. All areas within 100 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window. In other areas, the time period may be extended to 7 days.

6. For work, which is conducted between October 15<sup>th</sup> and April 15<sup>th</sup> of any calendar year, all denuded areas, shall be covered with hay mulch or erosion control mix, applied at twice the normal application rate and anchored with a fabric netting. The time period for applying mulch shall be limited to 2 days for all areas.

7. Hope Avenue shall be swept to control mud and dust as necessary. Additional stone shall be added to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.

8. During grubbing operations stone check dams shall be installed at any evident concentrated flow discharge points and as directed on the Erosion Control Plans.

9. Silt fencing with a minimum stake spacing of 6 feet shall be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence shall be anchored.

10. Wood waste compost/bark berms may be used in lieu of siltation fencing. Berms shall be removed and spread in a layer not to exceed 3" thick once upstream areas are completed and a 90% catch of vegetation is attained.

11. Water and/or calcium chloride shall be furnished and applied in accordance with MDOT specifications – Section 637 – Dust Control.

12. Loam and seed is intended to serve, as the primary permanent revegetative measure for all denuded areas not provided with other erosion control measures, such as riprap. Application rates are provided in Attachment A of this section. Seeding shall not occur over snow.

#### **D. Permanent Erosion Control Measures**

The following permanent erosion control measures have been designed as part of the Erosion/Sedimentation Control Plan:

1. All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.) will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas as noted in **Temporary Erosion Control Measures** paragraph 3 of this report. All areas within 100 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window. Native topsoil shall be stockpiled and reused for final restoration when it is of sufficient quality.

2. All storm drain pipe outlets shall have riprap aprons at their outlet to protect the outlet and receiving channel from scour and deterioration. Installation details are provided in the plan set. The aprons shall be installed and stabilized to the extent practicable prior to directing runoff to the tributary pipe or culvert.

#### **I.4 Implementation Schedule**

**The following construction sequence shall be required to insure the effectiveness of the erosion and sedimentation control measures are optimized:**

It is anticipated that construction of the subdivision and related infrastructure will commence in Spring of 2018 and be completed by Winter of 2018. Surface course paving shall be completed after the base course pavement has gone through one complete winter season as required by the City of Portland.

Note: For all grading activities, the contractor shall exercise extreme caution not to overexpose the site, this shall be accomplished by limiting the disturbed area.

1. Install stabilized construction entrance at the intersection of the access drive and Hope Avenue.
2. Install perimeter silt fence and/or wood waste berms prior to grubbing respective areas.
3. Clear and grub for roadway construction. Install stone check dams at any evident concentrated flow discharge points.
4. Commence earthwork and grading to subgrade.
5. Commence installation of drainage appurtenances.
6. Commence grassed underdrained soil filter construction.
7. Commence installation of water and sewer lines.
8. Continue earthwork and grading to subgrade as necessary for construction.
9. Complete installation of underground utilities to 5' beyond right-of-way.
10. Install sub-base and base gravel within roadway and driveway aprons.
11. Install base course paving for roadway and driveway aprons.
12. Loam, lime, fertilize, seed and mulch disturbed areas.

13. Once the site is stabilized and a 90% catch of vegetation has been obtained, remove all temporary erosion control measures.
14. Touch up loam and seed.
15. Install surface course paving after the base course paving has gone through one complete winter season.
16. Touch up loam and seed.

Note: All denuded areas not subject to final paving, riprap, or gravel shall be revegetated.

Prior to construction of the project, the contractor shall submit to the owner a schedule for the completion of the work, which will satisfy the following criteria:

1. The above construction sequence should generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to reduce the extent of the exposed areas as specified below. The intent of this sequence is to provide for erosion control and to have structural measures such as silt fence and construction entrances in place before large areas of land are denuded.
2. The work shall be conducted in sections which shall:
  - a) Limit the amount of exposed area to those areas in which work is expected to be undertaken during the proceeding 30 days.
  - b) Revegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event; or temporarily stabilized within 48 hours of initial disturbance of soil for areas within 100 feet of an undisturbed wetland and 7 days for all other areas. Areas within 100 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window.
  - c) Incorporate planned inlets and drainage system as early as possible into the construction phase. The ditches shall be immediately lined or revegetated as soon as their installation is complete.

#### **1.5 Erosion, Sedimentation and Stabilization Control Plan**

The Erosion Control Plan is included in the plan set.

#### **1.6 Details and Specifications**

The Erosion Control details and specifications are included in the plan set.

#### **1.7 Winter Stabilization Plan**

The winter construction period is from November 1 through April 15. If the construction site is not stabilized with pavement, a road gravel base, 75% mature vegetation cover or riprap by November 15

then the site needs to be protected with over-winter stabilization. An area considered open is any area not stabilized with pavement; vegetation, mulching, erosion control mats, riprap or gravel base on a road.

Winter excavation and earthwork shall be completed such that any area left exposed can be controlled by the contractor. Limit the exposed area to those areas in which work is expected to be under taken during the proceeding 15 days and that can be mulched in one day prior to any snow event.

All areas shall be considered to be denuded until the subbase gravel is installed in roadway/parking areas or the areas of future loam and seed have been loamed, seeded and mulched. Hay and straw mulch rate shall be a minimum of 150 lbs./1,000 s.f. (3 tons/acre) and shall be properly anchored.

The contractor shall install any added measures which may be necessary to control erosion/sedimentation from the site dependent upon the actual site and weather conditions. Continuation of earthwork operations on additional areas shall not begin until the exposed soil surface on the area being worked has been stabilized, in order to minimize areas without erosion control protection.

### **1. Soil Stockpiles**

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or at 150 lbs/1,000 s.f. (3 tons per acre) or with a four-inch layer of woodwaste erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpile shall not be placed (even covered with hay or straw) within 100 feet from any natural resources.

### **2. Natural Resource Protection**

Any areas within 100 feet from any natural resources, if not stabilized with a minimum of 75% mature vegetation catch, shall be mulched by December 1 and anchored with plastic netting or protected with erosion control mats. During winter construction, a double line of sediment barriers (i.e. silt fence backed with hay bales or erosion control mix) shall be placed between any natural resource and the disturbed area. Projects crossing the natural resource shall be protected a minimum distance of 100 feet on either side from the resource. Existing projects not stabilized by December 1 shall be protected with the second line of sediment barrier to ensure functionality during the spring thaw and rains.

### **3. Sediment Barriers**

During frozen conditions, sediment barriers shall consist of woodwaste filter berms as frozen soil prevents the proper installation of hay bales and sediment silt fences.

### **4. Mulching**

An area shall be considered denuded until areas of future loam and seed have been loamed, seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Mulch shall not be spread on top of snow. The snow 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 with straw or hay at a rate of 150 lb. per 1,000 square feet (3 tons/acre) and adequately anchored that ground surface is not visible through the mulch.

Between the dates of November 1 and April 15, all mulch shall be anchored by peg line, mulch netting, asphalt emulsion chemical, or wood cellulose fiber. When ground surface is not visible through the mulch then cover is sufficient. After November 1<sup>st</sup>, mulch and anchoring of all bare soil shall occur at the end of each final grading workday.

## **5. Mulching on Slopes and Ditches**

Slopes shall not be left exposed for any extended time of work suspension unless fully mulched and anchored with peg and netting or with erosion control blankets. Mulching shall be applied at a rate of 230 lbs/1,000 s.f. on all slopes greater than 8%.

Mulch netting shall be used to anchor mulch in all drainage ways with a slope greater than 3% for slopes exposed to direct winds and for all other slopes greater than 8%. Erosion control blankets shall be used in lieu of mulch in all drainage ways with slopes greater than 8%. Erosion control mix can be used to substitute erosion control blankets on all slopes except ditches.

## **6. Seeding**

Between the dates of October 15 and April 1<sup>st</sup>, loam or seed will not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until such time as the final treatment can be applied. If the date is after November 1<sup>st</sup> and if the exposed area has been loamed, final graded with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched. Dormant seeding may be selected to be placed prior to the placement of mulch and fabric netting anchored with staples. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 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.

## **Standards for Timely Stabilization of Construction Sites During Winter**

**1. Standard for the timely stabilization of ditches and channels** -- The applicant shall construct and stabilize all stone-lined ditches and channels on the site by November 15. The applicant shall construct and stabilize all grass-lined ditches and channels on the site by September 1. If the applicant fails to stabilize a ditch or channel to be grass-lined by September 1, then the applicant will take one of the following actions to stabilize the ditch for late fall and winter.

Install a sod lining in the ditch -- The applicant shall line the ditch with properly installed sod by October 1. Proper installation includes the applicant pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, watering the sod to promote root growth into the disturbed soil, and anchoring the sod with jute or plastic mesh to prevent the sod strips from sloughing during flow conditions.

Install a stone lining in the ditch --The applicant shall line the ditch with stone riprap by November 15. The applicant shall hire a registered professional engineer to determine the stone size and lining

thickness needed to withstand the anticipated flow velocities and flow depths within the ditch. If necessary, the applicant shall regrade the ditch prior to placing the stone lining so to prevent the stone lining from reducing the ditch's cross-sectional area.

**2. Standard for the timely stabilization of disturbed slopes** -- The applicant shall construct and stabilize stone-covered slopes by November 15. The applicant shall seed and mulch all slopes to be vegetated by September 1. The department shall consider any area having a grade greater than 15% to be a slope. If the applicant fails to stabilize any slope to be vegetated by September 1, then the applicant shall take one of the following actions to stabilize the slope for late fall and winter.

Stabilize the soil with temporary vegetation and erosion control mats -- By September 1 the applicant shall seed the disturbed slope with winter rye at a seeding rate of 3 pounds per 1,000 square feet and apply erosion control mats over the mulched slope. The applicant shall 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 shall cover the slope with a layer of woodwaste compost as described in item iii of this standard or with stone riprap as described in item iv of this standard.

Stabilize the slope with sod -- The applicant shall stabilize the disturbed slope with properly installed sod by September 1. Proper installation includes the applicant pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The applicant shall not use late-season sod installation to stabilize slopes having a grade greater than 33% (3H:1V).

Stabilize the slope with woodwaste compost -- The applicant shall place a six-inch layer of woodwaste compost on the slope by November 15. Prior to placing the woodwaste compost, the applicant shall remove any snow accumulation on the disturbed slope. The applicant shall not use woodwaste compost to stabilize slopes having grades greater than 50% (2H:1V) or having groundwater seeps on the slope face.

Stabilize the slope with stone riprap -- The applicant shall place a layer of stone riprap on the slope by November 15. The applicant shall hire a registered professional engineer to determine the stone size needed for stability and to design a filter layer for underneath the riprap.

**3. Standard for the timely stabilization of disturbed soils** -- By September 15 the applicant shall seed and mulch all disturbed soils on areas having a slope less than 15%. If the applicant fails to stabilize these soils by this date, then the applicant shall take one of the following actions to stabilize the soil for late fall and winter.

Stabilize the soil with temporary vegetation -- By September 1 the applicant shall seed the disturbed soil with winter rye at a seeding rate of 3 pounds per 1000 square feet, lightly mulch the seeded soil with hay or straw at 75 pounds per 1000 square feet, and anchor the mulch with plastic netting. The applicant shall 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 1, then the applicant shall mulch the area for over-winter protection as described below.

Stabilize the soil with sod -- The applicant shall stabilize the disturbed soil with properly installed sod by September 15. Proper installation includes the applicant pinning the sod onto the soil with wire

pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

Stabilize the soil with mulch -- By November 15 the applicant shall mulch the disturbed soil by spreading hay or straw at a rate of at least 150 pounds per 1000 square feet on the area so that no soil is visible through the mulch. Prior to applying the mulch, the applicant shall 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.

## **I.8 Maintenance of facilities**

The stormwater facilities will be maintained by the Applicant, LBW, LLC. or their assigned heirs. The contract documents will require the contractor to designate a person responsible for maintenance of the sedimentation control features during construction as required by the Erosion Control Report. Long-term operation/maintenance recommended for the stormwater facilities is presented below.

The responsible party may contract with such professionals, as may be necessary in order to comply with this provision and may rely on the advice of such professionals in carrying out its duty hereunder, provided, that the following operation and maintenance procedures are hereby established as a minimum for compliance with this section. A maintenance log of the inspections shall be kept by the responsible party.

A typical maintenance log for the Subdivision is included in Attachment C.

### **Inspection and Maintenance Frequency and Corrective Measures:**

The following areas, facilities, and measures will be inspected and the identified deficiencies will be corrected. Clean-out must include the removal and legal disposal of any accumulated sediments and debris.

#### **Culverts:**

Inspect culverts 2 times per year (preferably in Spring and Fall) to ensure that the culverts are working in their intended fashion and that they are free of debris. Remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit and repair any erosion damage at the culvert's inlet and outlet.

#### **Stormdrain Outlets:**

Inspect outlets 2 times per year (preferably in Spring and Fall) to ensure that the outlets are working in their intended fashion and that they are free of debris. Remove any obstructions to flow; remove accumulated sediments and debris at the outlet and within the conduit. Repair any erosion damage at the stormdrain outlet.

#### **Catch Basins:**

Inspect catch basins 2 times per year (preferably in Spring and Fall) to ensure that the catch basins are working in their intended fashion and that they are free of debris. Clean structures when sediment depths reach 12" from invert of outlet. If the basin outlet is designed with a hood to trap floatable materials (i.e. Snout), check to ensure watertight seal is working. At a minimum, remove floating debris at the time of the inspection.

**Inlet/Outlet Control Structures:**

Inspect structures and piping 2 times per year (preferably in Spring and Fall) to ensure that the structures are working in their intended fashion and that they are free of debris. Remove any obstructions to flow; remove accumulated sediments and debris within the structure.

**Soil Filter – Grassed Underdrained Soil Filter:**

Inspect all upstream pre-treatment measures 2 times per year (preferably in Spring and Fall) for sediment and floatables accumulation. Remove and dispose of any sediments or debris.

**Surface (Underdrain Pond, Swale or Bio-Filter):**

The soil filter will be inspected within the first three months after construction; thereafter the filter will be inspected 2 times per year (preferably in Spring and Fall) to ensure that the filter is draining within 24 to 48 hours of a rain event equivalent to 1" or more. Adjustments will be made to the outlet valve to ensure that the Grassed Underdrained Soil Filter drains within 24 to 48 hours. Failure to drain in 72 hours will require part or all of the soil filter media to be removed and replaced with new material meeting the soil filter gradation. The facilities will be inspected after major storms and any identified deficiencies will be corrected. Harvesting and weeding of excessive growth shall be performed as needed. Inspect for unwanted or invasive plants and remove as necessary.

**Subsurface detention chambers:**

Inspect chambers per manufacturer's recommendation. At a minimum inspect chambers 2 times per year (preferably in Spring and Fall) to ensure that the structures are working in their intended fashion and that they are free of debris. Remove sediment from Isolator row when depth of sediment reaches 3 inches.

**Roofline Drip Strip:**

The drip strip will be inspected within the first three months after construction; thereafter the filter will be inspected 2 times per year (preferably in Spring and Fall) to ensure that the filter is draining within 24 to 48 hours of a rain event equivalent to 1" or more. Adjustments will be made to the outlet valve to ensure that the drip strip drains within 24 to 48 hours. Failure to drain in 72 hours will require part or all of the soil filter media to be removed and replaced with new material meeting the soil filter gradation. The facilities will be inspected after major storms and any identified deficiencies will be corrected. Inspect for unwanted or invasive plants and remove as necessary. Remove debris from the surface. Since the Roofline Drip edge is a part of the approved stormwater management plan, it cannot be paved over or altered in any way. Gutters shall not be installed along the roofline.

**Vegetated Areas:**

Inspect slopes and embankments early in the growing season 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. The facilities will be inspected after major storms and any identified deficiencies will be corrected.

**Ditches, Swales and other Open Stormwater Channels:**

Inspect 2 times per year (preferably in Spring and Fall) to ensure they are working in their intended fashion and that they are free of sediment and debris. Remove any obstructions to flow, including accumulated sediments and debris and vegetated growth. Repair any erosion of the ditch lining. Vegetated ditches will 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. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. Correct any erosion of the channel's bottom or sideslopes. The facilities shall be inspected after major storms and any identified deficiencies shall be corrected.

**Roadways:** 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. Repair potholes and other roadway obstructions and hazards. Plowing and sanding of paved areas shall be performed as necessary to maintain vehicular traffic safety.

**Filtrerra Units:**

The first year of maintenance shall be performed by the Supplier or a supplier approved contractor. Subsequent maintenance shall be performed at least 2 times per year (preferably in Spring and Fall). At a minimum, the maintenance shall consist of the following:

1. Filterra Unit Inspection
2. Foreign debris, silt, mulch & trash removal
3. Filter media evaluation and recharge as necessary
4. Plant health evaluation and pruning or replacement as necessary
5. Replacement of mulch
6. Disposal of all maintenance refuse items

**Post-Construction Stormwater Management Plan**

As part of the Stormwater Permit, the applicant is required to meet the standards in Section 5 of the City of Portland Technical Manual for Stormwater Management. The General Standard in item IV. Submission Requirements states that a project must submit a Post-Construction Stormwater Inspection & Maintenance Plan per Maine DEP Chapter 500 Appendix B with reporting requirements per Chapter 32 of City of Portland Code of Ordinances, and a Stormwater Maintenance Agreement. The management plan shall comply to Chapter 32 of City of Portland Code of Ordinances as follows:

- (a) The owner or operator of a BMP shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
- (b) If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide record of the deficiency and corrective action(s) to the department of public works ("DPW") in the annual report

- (c) The owner or operator of a BMP 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 to DPW in a form provided by DPW, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action(s) taken.
- (d) Any persons required to file an annual certification under this section shall include with the annual certification a filing fee established by DPW to pay the administrative and technical costs of review of the annual certification.
- (e) In order to determine compliance with this article and with the post-construction stormwater management plan, DPW may enter upon property at reasonable hours with the consent of the owner, occupant or agent to inspect the BMPs

### **Housekeeping**

As part of the Stormwater Permit, the applicant is required to meet the standards in Appendix C of the Chapter 500 Rules. The following procedures are hereby established as a minimum for compliance with this section. For further information on the procedures listed below, refer to Chapter 500 rules – Appendix C.

#### **Spill Prevention:**

Appropriate spill prevention, containment, and response planning/implementation shall be used to prevent pollutants from being discharged from materials on site.

#### **Groundwater Protection:**

During construction, hazardous materials with the potential to contaminate groundwater shall not be stored or handled in areas of the site which drain to an infiltration area.

#### **Fugitive Sediment and Dust:**

Appropriate measures shall be taken to ensure that activities do not result in noticeable erosion of the soils and water and/or calcium chloride shall be used to ensure that activities do not result in fugitive dust emissions during or after construction.

#### **Debris and Other Materials:**

Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

#### **Trench or Foundation De-watering:**

Water collected through the process of trenching and/or de-watering must be removed from the ponded area, and must be spread through natural wooded buffers or other areas that are specifically designed to collect the maximum amount of sediment possible.

#### **Non-stormwater Discharges:**

Identify and prevent contamination by non-stormwater discharges.



### **Conclusion**

The Applicant has provided temporary and permanent erosion control measures as well as specifying a sequence of construction as measures to minimize erosion and sedimentation.

### **Attachments**

- Attachment A - Seeding Plan
- Attachment B - Inspection Report
- Attachment C - Subdivision Maintenance Log

**ATTACHMENT A**  
**Seeding Plan**

## SEEDING PLAN

Project: Brandy Lane

---

Site Location: Hope Avenue, Portland, ME

☐ Permanent Seeding      ☒ Temporary Seeding

1. Instruction on preparation of soil: Prepare a good seed bed for planting method used.
2. Apply lime as follows: \_\_\_\_\_ # / acres, OR 138 # /M Sq. Ft.
3. Fertilize with \_\_\_\_\_ pounds of \_\_\_\_\_ N-P-K/ac. OR 13.8 pounds of 10-10-10 N-P-K/M Sq. Ft.
4. Method of applying lime and fertilizer: Spread and work into the soil before seeding.
5. Seed with the following mixture:  
    50% Winter Rye  
    50% Annual Rye
6. Mulching instructions: Apply at the rate of \_\_\_\_\_per acre, OR 75 pounds per M. Sq. Ft.

|                                        | <u>Amount</u> | <u>Unit # Tons. Etc.</u> |
|----------------------------------------|---------------|--------------------------|
| 7. TOTAL LIME                          | 138           | #/1000 sq. ft.           |
| 8. TOTAL FERTILIZER                    | 13.8          | #/1000 sq. ft.           |
| 9. TOTAL SEED                          | 1.03          | #/1000 sq. ft.           |
| 10. TOTAL MULCH                        | 75            | #/1000 sq. ft.           |
| 11. TOTAL other materials, seeds, etc. | <hr/>         |                          |
| 12. REMARKS                            |               |                          |

Spring seeding is recommended; however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

## SEEDING PLAN

Project: Brandy Lane

Site Location: Hope Avenue, Portland, ME

☒ Permanent Seeding      ☐ Temporary Seeding

1. Instruction on preparation of soil: Prepare a good seed bed for planting method used.
2. Apply lime as follows: \_\_\_\_\_ # / acres, OR 138 # /M Sq. Ft.
3. Fertilize with \_\_\_\_\_ pounds of \_\_\_\_\_ N-P-K/ac. OR 18.4 pounds of 10-20-20 N-P-K/M Sq. Ft.
4. Method of applying lime and fertilizer: Spread and work into the soil before seeding.
5. Seed with the following mixture:
  - 40% Creeping Red Fescue
  - 30% Charger II Perennial Ryegrass
  - 20% KenBlue Kentucky Bluegrass
  - 10% Tiffany Chewings Fescue
6. Mulching instructions: Apply at the rate of \_\_\_\_\_per acre, OR 75 pounds per M. Sq. Ft.

|                                        | <u>Amount</u> | <u>Unit # Tons. Etc.</u> |
|----------------------------------------|---------------|--------------------------|
| 7. TOTAL LIME                          | 138           | #/1000 sq. ft.           |
| 8. TOTAL FERTILIZER                    | 18.4          | #/1000 sq. ft.           |
| 9. TOTAL SEED                          | 1.03          | #/1000 sq. ft.           |
| 10. TOTAL MULCH                        | 75            | #/1000 sq. ft.           |
| 11. TOTAL other materials, seeds, etc. | <hr/>         |                          |
| 12. REMARKS                            |               |                          |

Spring seeding is recommended, however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

**ATTACHMENT B**  
**Inspection Report**

# **STORMWATER POLLUTION PREVENTION PLAN**

## **INSPECTION REPORT**

### **PROJECT INFORMATION**

Project Name: Brandy Lane

Address: 22 Hope Avenue  
Portland, Maine

### **CONTRACTOR/SUBCONTRACTOR INFORMATION**

Inspector Name: \_\_\_\_\_

Firm: \_\_\_\_\_

Title: \_\_\_\_\_

Qualifications: \_\_\_\_\_

### **INSPECTION SUMMARY**

Date of Inspection: \_\_\_\_\_

Major Observations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

THE FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION  
PLAN WITH THE FOLLOWING EXCEPTIONS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



ACTIONS NECESSARY TO BRING FACILITY INTO COMPLIANCE:

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REQUIRED MODIFICATIONS TO STORMWATER POLLUTION PREVENTION PLAN  
(MUST BE IMPLEMENTED WITHIN 7 DAYS OF INSPECTION):

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CERTIFICATION STATEMENT:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the systems, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**ATTACHMENT C**  
**Subdivision Maintenance Log**

## **STORMWATER INSPECTION LOG BRANDY LANE HOMEOWNERS ASSOCIATION**

### **Inspection and Maintenance Frequency and Corrective Measures:**

The following areas, facilities, and measures will be inspected and the identified deficiencies will be corrected. Clean-out must include the removal and legal disposal of any accumulated sediments and debris. A maintenance log shall be kept for all inspections.

#### **Culverts:**

Inspect culverts 2 times per year (preferably in Spring and Fall) to ensure that the culverts are working in their intended fashion and that they are free of debris. Remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit and repair any erosion damage at the culvert's inlet and outlet.

#### **Stormdrain Outlets:**

Inspect outlets 2 times per year (preferably in Spring and Fall) to ensure that the outlets are working in their intended fashion and that they are free of debris. Remove any obstructions to flow; remove accumulated sediments and debris at the outlet and within the conduit. Repair any erosion damage at the stormdrain outlet.

#### **Catch Basins:**

Inspect catch basins 2 times per year (preferably in Spring and Fall) to ensure that the catch basins are working in their intended fashion and that they are free of debris. Clean structures when sediment depths reach 12" from invert of outlet. If the basin outlet is designed with a hood to trap floatable materials (i.e. Snout), check to ensure watertight seal is working. At a minimum, remove floating debris at the time of the inspection.

#### **Inlet/Outlet Control Structures:**

Inspect structures and piping 2 times per year (preferably in Spring and Fall) to ensure that the structures are working in their intended fashion and that they are free of debris. Remove any obstructions to flow; remove accumulated sediments and debris within the structure.

#### **Soil Filter – Grassed Underdrained Soil Filter:**

Inspect all upstream pre-treatment measures 2 times per year (preferably in Spring and Fall) for sediment and floatables accumulation. Remove and dispose of any sediments or debris.

#### **Surface (Underdrain Pond, Swale or Bio-Filter):**

The soil filter will be inspected within the first three months after construction; thereafter the filter will be inspected 2 times per year (preferably in Spring and Fall) to ensure that the filter is draining within 24 to 48 hours of a rain event equivalent to 1" or more. Adjustments will be made to the outlet valve to ensure that the Grassed Underdrained Soil Filter drains within 24 to 48 hours. Failure to drain in 72 hours will require part or all of the soil filter media to be removed and replaced with new material meeting the soil filter gradation. The facilities will be inspected after major storms and any identified deficiencies will be corrected. Harvesting and weeding of excessive growth shall be performed as needed. Inspect for unwanted or invasive plants and remove as necessary.

#### **Subsurface detention chambers:**

Inspect chambers per manufacturer's recommendation. At a minimum inspect chambers 2 times per year (preferably in Spring and Fall) to ensure that the structures are working in their intended fashion

and that they are free of debris. Remove sediment from Isolator row when depth of sediment reaches 3 inches.

**Roofline Drip Strip:**

The drip strip will be inspected within the first three months after construction; thereafter the filter will be inspected 2 times per year (preferably in Spring and Fall) to ensure that the filter is draining within 24 to 48 hours of a rain event equivalent to 1" or more. Adjustments will be made to the outlet valve to ensure that the drip strip drains within 24 to 48 hours. Failure to drain in 72 hours will require part or all of the soil filter media to be removed and replaced with new material meeting the soil filter gradation. The facilities will be inspected after major storms and any identified deficiencies will be corrected. Inspect for unwanted or invasive plants and remove as necessary. Remove debris from the surface. Since the Roofline Drip edge is a part of the approved stormwater management plan, it cannot be paved over or altered in any way. Gutters shall not be installed along the roofline.

**Vegetated Areas:**

Inspect slopes and embankments early in the growing season 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. The facilities will be inspected after major storms and any identified deficiencies will be corrected.

**Ditches, Swales and other Open Stormwater Channels:**

Inspect 2 times per year (preferably in Spring and Fall) to ensure they are working in their intended fashion and that they are free of sediment and debris. Remove any obstructions to flow, including accumulated sediments and debris and vegetated growth. Repair any erosion of the ditch lining. Vegetated ditches will 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. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. Correct any erosion of the channel's bottom or sideslopes. The facilities shall be inspected after major storms and any identified deficiencies shall be corrected.

**Roadways:** 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. Repair potholes and other roadway obstructions and hazards. Plowing and sanding of paved areas shall be performed as necessary to maintain vehicular traffic safety.

**Filtrerra Units:**

The first year of maintenance shall be performed by the Supplier or a supplier approved contractor. Subsequent maintenance shall be performed at least 2 times per year (preferably in Spring and Fall). At a minimum, the maintenance shall consist of the following:

1. Filterra Unit Inspection
2. Foreign debris, silt, mulch & trash removal
3. Filter media evaluation and recharge as necessary
4. Plant health evaluation and pruning or replacement as necessary
5. Replacement of mulch

6. Disposal of all maintenance refuse items

**Post-Construction Stormwater Management Plan**

As part of the Stormwater Permit, the applicant is required to meet the standards in Section 5 of the City of Portland Technical Manual for Stormwater Management. The General Standard in item IV. Submission Requirements states that a project must submit a Post-Construction Stormwater Inspection & Maintenance Plan per Maine DEP Chapter 500 Appendix B with reporting requirements per Chapter 32 of City of Portland Code of Ordinances, and a Stormwater Maintenance Agreement. The management plan shall comply to Chapter 32 of City of Portland Code of Ordinances as follows:

- (a) The owner or operator of a BMP shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and pones, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
- (b) If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide record of the deficiency and corrective action(s) to the department of public works ("DPW") in the annual report
- (c) The owner or operator of a BMP 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 to DPW in a form provided by DPW, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action(s) taken.
- (d) Any persons required to file an annual certification under this section shall include with the annual certification a filing fee established by DPW to pay the administrative and technical costs of review of the annual certification.
- (e) In order to determine compliance with this article and with the post-construction stormwater management plan, DPW may enter upon property at reasonable hours with the consent of the owner, occupant or agent to inspect the BMPs

## Brandy Lane Maintenance Log

| Personnel:   |           |                   |                     |                      |
|--------------|-----------|-------------------|---------------------|----------------------|
| Date:        |           |                   |                     |                      |
| Structure    | Condition | Depth of Sediment | Inspection Comments | Maintenance Required |
| CULVERT 6+45 |           |                   |                     |                      |
| CB 1         |           |                   |                     |                      |
| CB 2         |           |                   |                     |                      |
| CB 3         |           |                   |                     |                      |
| CB 4         |           |                   |                     |                      |
| DMH 1        |           |                   |                     |                      |
| DMH 2        |           |                   |                     |                      |
| DMH 3        |           |                   |                     |                      |
| DMH 4        |           |                   |                     |                      |
| DMH 5        |           |                   |                     |                      |
| DMH 6        |           |                   |                     |                      |
| DMH 7        |           |                   |                     |                      |
| DMH 8        |           |                   |                     |                      |
| DMH 9        |           |                   |                     |                      |
| DMH 10       |           |                   |                     |                      |
| OCS 1        |           |                   |                     |                      |
| OCS 2        |           |                   |                     |                      |
| OCS 3        |           |                   |                     |                      |



## Brandy Lane Maintenance Log

|                                   |                  |                          |                            |                             |
|-----------------------------------|------------------|--------------------------|----------------------------|-----------------------------|
| Personnel:                        |                  |                          |                            |                             |
| Date:                             |                  |                          |                            |                             |
| <b>Structure</b>                  | <b>Condition</b> | <b>Depth of Sediment</b> | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
| SWALES                            |                  |                          |                            |                             |
| VEGETATED AREAS                   |                  |                          |                            |                             |
| ROADWAYS                          |                  |                          |                            |                             |
| <b>Filterra 7+37 RT</b>           | <b>Condition</b> |                          | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
|                                   |                  |                          |                            |                             |
| <b>Stormtech 7+37 RT</b>          |                  |                          |                            |                             |
|                                   |                  |                          |                            |                             |
| <b>Filterra 7+37 LT</b>           | <b>Condition</b> |                          | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
|                                   |                  |                          |                            |                             |
| <b>Filterra 14+10 RT</b>          | <b>Condition</b> |                          | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
|                                   |                  |                          |                            |                             |
| <b>Stormtech 14+10 RT</b>         |                  |                          |                            |                             |
|                                   |                  |                          |                            |                             |
| <b>Filterra 14+05 LT</b>          | <b>Condition</b> |                          | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
|                                   |                  |                          |                            |                             |
| <b>Stormtech 14+05 LT</b>         |                  |                          |                            |                             |
|                                   |                  |                          |                            |                             |
| <b>Roof Dripline Filter Lot 1</b> |                  |                          |                            |                             |

## Brandy Lane Maintenance Log

| Personnel:                                |                  |                   |                            |                             |
|-------------------------------------------|------------------|-------------------|----------------------------|-----------------------------|
| Date:                                     |                  |                   |                            |                             |
| Structure                                 | Condition        | Depth of Sediment | Inspection Comments        | Maintenance Required        |
|                                           |                  |                   |                            |                             |
| Roof Dripline Filter Lot 5                |                  |                   |                            |                             |
|                                           |                  |                   |                            |                             |
| Roof Dripline Filter Lot 6                |                  |                   |                            |                             |
|                                           |                  |                   |                            |                             |
| Roof Dripline Filter Lot 11               |                  |                   |                            |                             |
|                                           |                  |                   |                            |                             |
| Roof Dripline Filter Lot 12               |                  |                   |                            |                             |
|                                           |                  |                   |                            |                             |
| <b>Grassed Underdrained Soil Filter 1</b> | <b>Condition</b> |                   | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
| Berm Slopes                               |                  |                   |                            |                             |
| Vegetation                                |                  |                   |                            |                             |
| Sediment                                  |                  |                   |                            |                             |
| Pond Inlet                                |                  |                   |                            |                             |
| Storm Drain Outlet                        |                  |                   |                            |                             |
| Overflow                                  |                  |                   |                            |                             |
| <b>Grassed Underdrained Soil Filter 2</b> | <b>Condition</b> |                   | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
| Berm Slopes                               |                  |                   |                            |                             |

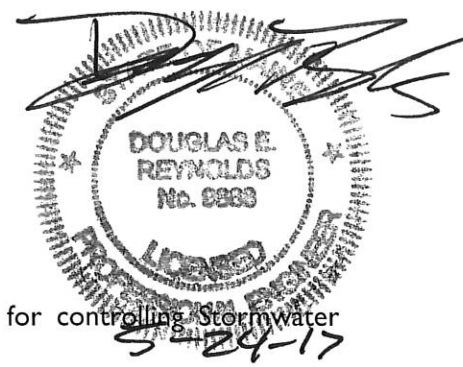
## Brandy Lane Maintenance Log

|                                           |                  |                          |                            |                             |
|-------------------------------------------|------------------|--------------------------|----------------------------|-----------------------------|
| Personnel:                                |                  |                          |                            |                             |
| Date:                                     |                  |                          |                            |                             |
| <b>Structure</b>                          | <b>Condition</b> | <b>Depth of Sediment</b> | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
| Vegetation                                |                  |                          |                            |                             |
| Sediment                                  |                  |                          |                            |                             |
| Pond Inlet                                |                  |                          |                            |                             |
| Storm Drain Outlet                        |                  |                          |                            |                             |
| Overflow                                  |                  |                          |                            |                             |
| <b>Grassed Underdrained Soil Filter 3</b> | <b>Condition</b> |                          | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
| Berm Slopes                               |                  |                          |                            |                             |
| Vegetation                                |                  |                          |                            |                             |
| Sediment                                  |                  |                          |                            |                             |
| Pond Inlet                                |                  |                          |                            |                             |
| Storm Drain Outlet                        |                  |                          |                            |                             |
| Overflow                                  |                  |                          |                            |                             |
| <b>Grassed Underdrained Soil Filter 4</b> | <b>Condition</b> |                          | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
| Berm Slopes                               |                  |                          |                            |                             |
| Vegetation                                |                  |                          |                            |                             |
| Sediment                                  |                  |                          |                            |                             |
| Pond Inlet                                |                  |                          |                            |                             |
| Storm Drain Outlet                        |                  |                          |                            |                             |

## Brandy Lane Maintenance Log

|                                           |                  |                          |                            |                             |
|-------------------------------------------|------------------|--------------------------|----------------------------|-----------------------------|
| Personnel:                                |                  |                          |                            |                             |
| Date:                                     |                  |                          |                            |                             |
| <b>Structure</b>                          | <b>Condition</b> | <b>Depth of Sediment</b> | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
| Overflow                                  |                  |                          |                            |                             |
| <b>Grassed Underdrained Soil Filter 5</b> | <b>Condition</b> |                          | <b>Inspection Comments</b> | <b>Maintenance Required</b> |
| Berm Slopes                               |                  |                          |                            |                             |
| Vegetation                                |                  |                          |                            |                             |
| Sediment                                  |                  |                          |                            |                             |
| Pond Inlet                                |                  |                          |                            |                             |
| Storm Drain Outlet                        |                  |                          |                            |                             |
| Overflow                                  |                  |                          |                            |                             |
|                                           |                  |                          |                            |                             |

## **STORMWATER MANAGEMENT**



### **12.1 Overview**

This Exhibit demonstrates the developer has made adequate provision for controlling Stormwater Runoff.

### **12.2 Introduction**

LBW, LLC has retained Gorrill Palmer to prepare plans and permit applications for a proposed residential subdivision off Hope Avenue. The site is shown on Assessor's Map 448 Lot A004, is approximately 6.46 acres in size and is located in the Conditional Zone. Figure 1 is a map showing the project location. The developer will construct the roadway, driveway aprons, utility services 5 feet beyond the right-of-way, and stormwater appurtenances. Lot development will also be by the developer of the subdivision. This stormwater permit application includes an allowance for developed area on each lot. The developer is currently seeking a subdivision permit from the City of Portland and a Stormwater Permit reviewed by the City of Portland under their delegated authority. The plans prepared by Gorrill Palmer include the infrastructure necessary to serve the project. This narrative contains the Stormwater Management measures which are appropriate for the site.

### **12.3 Development Description**

The project is a residential subdivision consisting of 16 single family residential lots, a 950 linear foot roadway, and associated infrastructure off 22 Hope Avenue in Portland, Maine.

The project site is currently undeveloped with a landcover of brush and woods. Topography in the area of the proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 40%. The steeper slopes are associated with drainage ways at the front and rear of the site.

Abutting land uses include:

- North – Maine Turnpike Spur
- West – Residential
- South – Residential
- East – Resource Protection

The development of the site will create approximately 1.6 acres of impervious area with a total disturbed area of approximately 4.1 acres.

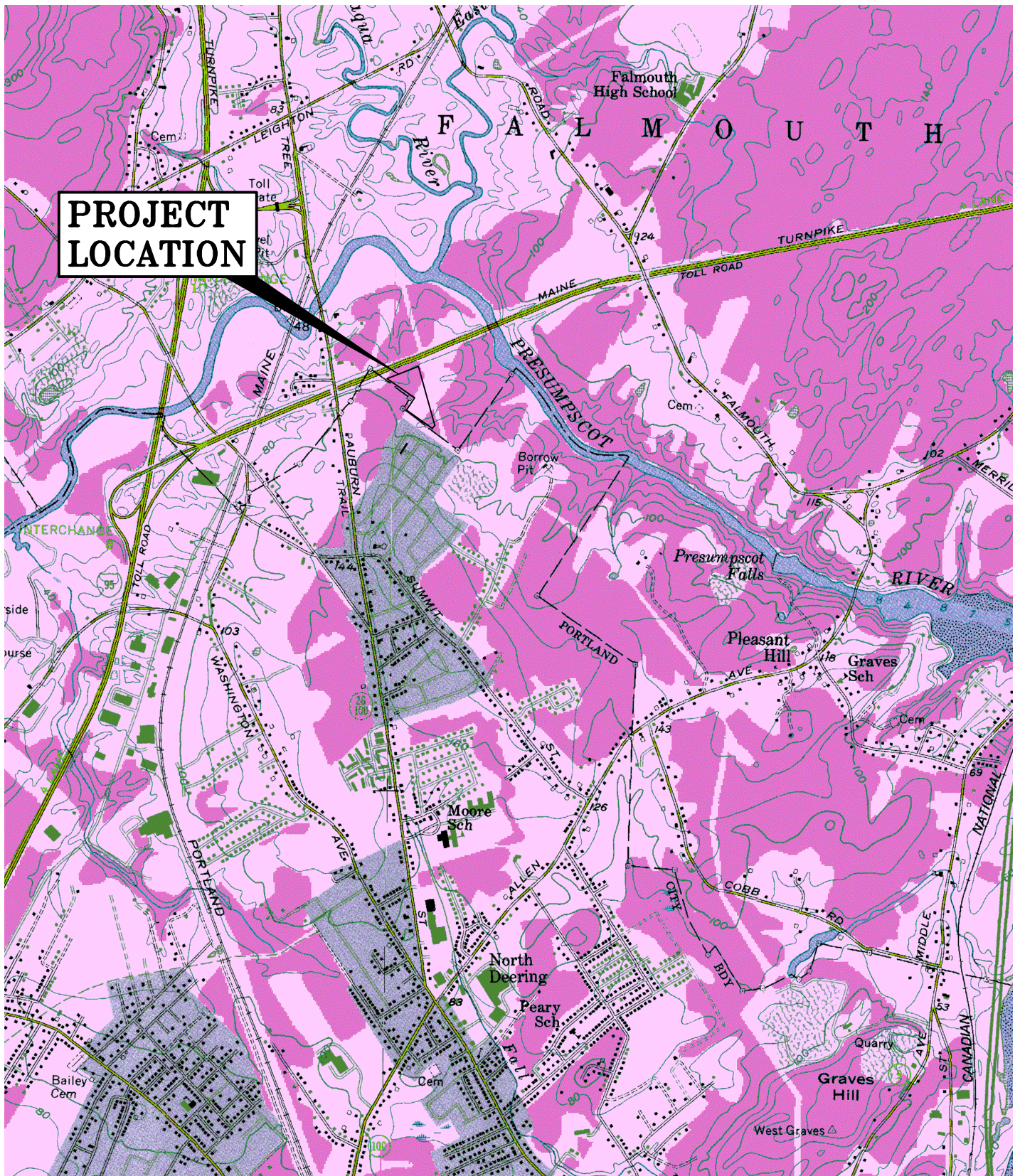
### **12.4 Surface Water**

There are no lakes located on, adjacent to or downstream of the project site. The site contains several drainage ways which outlet to the Presumpscot River, which is north and east of the site.

### **12.5 General Topography**

Topography in the area of the proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 40%. The steeper slopes are associated with drainage ways at the front and rear of the site. Elevations on site range from 90' at Hope Avenue to 74' at the southwesterly property line.





**U.S.G.S. Location Map**  
 Brandy Lane Subdivision- Portland, Maine  
 U.S.G.S. Map Portland West, Maine-7.5 Minute Series (Topographic)

|                                |                   |
|--------------------------------|-------------------|
| Design: DJG                    | Date: MAY 2017    |
| Draft: CG                      | Job No.: 98089.06 |
| Checked: DER                   | Scale: NTS        |
| File Name: 98089.1-LOCMAP1.dwg |                   |



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 207.657.6910

Figure

1



## **12.6 Flooding**

Based upon the FEMA maps, the site is located within a Zone C floodplain. Zone C is defined as “areas of minimal flooding”.

Section 5.III of the Technical Manual States,

*“Developments as specified under Section II Applicability in Portland must comply with the most recent version of the Maine Department of Environmental Protection (Maine DEP) Chapter 500 Rules for Stormwater Management, including but not limited to the standards for Urban Impaired Stream, Basic, General, and Flooding Standards for the suitability, design, installation, and maintenance of systems to comply with the General and Flooding Standards are provided in Volume III of the Maine Stormwater Best Management Practices Manual.”*

## **12.7 Natural Drainage Ways**

The project as currently proposed includes alteration of a natural drainage way in the northern portion of the site. The drainage way is located in an area of proposed house lots. Therefore, the drainage way is to be filled to provide a level area for development. Piping systems and stormwater BMPs are designed to re-route water draining to the area.

## **12.8 Alterations to Land Cover**

Changes in land cover will include removal of wooded areas of the project site and the addition of paved surfaces, buildings, and lawns.

## **12.9 Stormwater Management Control**

Section 14-526.b.3.b of the Land Use Ordinance states that all development other than Level I residential shall comply with Section 5 of the Technical Manual including Basic, General, and Flooding standards as applicable to prevent and control the release of pollutants to waterbodies, watercourses, wetlands and groundwater, and reduce adverse impacts associated with increases or changes in flow, soil erosion and sedimentation.

Section 5.II.b and Section 5.I I.c of the Technical Manual states that Level II and III site plans shall be required to submit a stormwater management plan pursuant to the regulations of Maine DEP Chapter 500 Stormwater Management Rules, including Basic, General and Flooding standards.

The Basic Standard is presented in the Erosion and Sedimentation Control report included with this permit application. The General Standard and Flooding Standard are presented as follows:

The development will utilize 4 Filterstrips, 3 systems of StormTech chambers, 5 Grassed Underdrained Soil Filters, and 16 Roof Dripline Filters to provide water quality treatment and storage.



The Maine Department of Environmental Protection rules and regulations regarding stormwater concentrate on four stormwater management objectives:

- Effective Pollutant Removal
- Cooling
- Channel Protection
- Flood Control

These objectives may be met either directly by providing BMP's that manage and treat the runoff after it has been created, or indirectly by incorporating low impact development site planning concepts to minimize production and contamination of runoff by maximizing infiltration and evapotranspiration.

### **12.9.1 Current Treatment Methods**

Under the General Standard, the project is required to meet the BMP Standards as the development site is not tributary to a lake watershed. The BMP Standard requires no less than 95% of the impervious area and no less than 80% of the developed area associated with a project to be controlled. The house lot development will be treated to the required 95% and 80% levels. The proposed roadway will be treated as a linear project and the project will provide treatment for runoff according to the requirements for a linear project. For a linear portion of a project the BMP Standard requires no less than 75% of the impervious area and no less than 50% of the developed area associated with a project to be controlled. The four treatment measures listed in Chapter 500 and described in Volume III of the Stormwater BMP Manual are:

- Wetponds
- Filters
- Infiltration
- Buffers

Below is a brief description of each treatment method.

#### Wetpond with detention above the permanent pool:

Wet ponds are stormwater detention impoundments that have a permanent pool of water and have the capacity to temporarily store storm water runoff while it is released at a controlled rate. They can be designed to provide flood control as well as water quality treatment. Properly sized and maintained, wet ponds can achieve high rates of removal for a number of urban pollutants, including sediment and the pollutants associated with sediment, such as trace metals, hydrocarbons, BOD, nutrients, and pesticides. The addition of an underdrained gravel trench in the bench area around the permanent pool allows for slow, extended release of stormwater without risk of blockage and effective cooling to avoid thermal impacts. This BMP treatment method is generally used to treat runoff from large drainage areas.

#### Filters

Filtration BMPs have shown to be very effective at removing a wide range of pollutants from stormwater runoff, particularly organic soil filter medias. They can be constructed in combination with infiltration practices, or with an underdrain filter, where infiltration is not feasible. Soil filters can be designed and constructed using common materials. Underdrained soil filters control stormwater quality by capturing and retaining runoff and passing it through a

filter bed comprised of a specific soil media. Various filter medias may be used, the most common including sand filters and organic filters. Once through the soil media, the runoff is collected in a perforated underdrain pipe and discharged to the receiving water. The filter and underdrain provides for slow release of smaller storm events, minimizing stream channel erosion, as well as cooling the discharge. Vegetated underdrain soil filters can also be designed to provide detention above the channel protection volume.

### Infiltration

Infiltration measures control stormwater quantity and quality, by retaining all or part of runoff on-site and discharging it into the ground. Infiltration is designed to occur at the surface (as in infiltration basins and to a degree vegetated swales and buffers), or in subsurface systems (e.g., infiltration trenches and infiltrators). The basic function of an infiltration system is to remove a portion of runoff from the total runoff volume of the site and treatment comes about through absorption, straining, microbial decomposition in the soil and trapping of particulate matter within pretreatment areas. Pretreatment to remove sediments, grease and oils is required prior to discharge to the infiltration measure. Possible pretreatment measures include filter strips, swales with check dams, sand filters, sediment traps, grease and oil traps, and sediment basins.

### Buffers

Buffer strips are natural, undisturbed strips of natural vegetation or planted strips of close growing vegetation adjacent to and downslope of developed areas. As stormwater runoff travels over the buffer area, vegetation slows the runoff and traps particulate pollutants. They are also effective for phosphorus removal when designed in accordance with the volume III BMP technical design manual. The buffers are preceded by a level lip spreader which allows for thermal cooling of the runoff and a distribution of the flow to a sheet flow rather than direct discharge. The effectiveness of buffers for pollutant removal depends on the flow path length and slope, the buffer berm length, the soil permeability, the size of drainage area, and the type and density of vegetation. Buffers are used to treat runoff from relatively small amounts of impervious area, as typically found in residential developments and small commercial and industrial sites. This type of BMP requires minimal maintenance and provides an aesthetically pleasing area.

## **12.9.2 Approach and Analysis for Quality**

The proposed development will be required to meet the BMP Standard under the General Standard. Based upon review of the four recommended and approved methods for mitigating the increased frequency and duration of channel erosive flows, as required by the BMP Standards, the developer is proposing to use sixteen Roof Dripline Filters, five grassed underdrained soil filters and four filterterraces coupled with Stormtech systems to provide cooling, and storage to provide water quality control.

The sixteen Roof Dripline Filters, five grassed underdrained soil filters and four filterterraces coupled with Stormtech systems are proposed for treatment of runoff from the roadway and developed area of 16 residential house lots. The impervious roof area of house lots are proposed to be treated with Roof Dripline Filters due to their lot locations and limitations presented by existing topography. In addition to the limitations presented by existing topography and narrow development area, in order to provide adequate treatment for the house lots, five grassed underdrained soil filters would be required. Test pits should be conducted prior to construction to confirm the seasonal high groundwater elevation. Until test

pits have been conducted, it is assumed filters would need to be lined with an impermeable membrane since the project site consists of Type D soils. In order to meet the Land Use Ordinance and adhere to the City of Portland's Technical Manual Low Impact Design technologies were investigated. Filterra systems are a subsurface bioretention system with an inlet set at the curb line of the roadway. Due to the small footprint of Filterra systems, they were chosen to treat the linear portion of the site as well as some of the lot area. Stormtech chambers sized to contain the water quality volume are connected to the Filterra systems in accordance with the MDEP BMP Standards.

### **12.9.3 Water Quality Sizing Requirements**

Under BMP standards the development is required to treat the runoff from 95% of the project's impervious area and from 80% of the project's developed area for the house lot development, and for the linear portion, treatment is required for 75% of the impervious area and 50% of the developed area.

#### **Roof Dripline Filter**

Roof Dripline Filtration will be utilized for the residential units on lots. The dripline provides treatment for the tributary roof area. The reservoir layer is designed to provide storage for the 25-Year rainfall of 5.8 inches in order to meet the Flooding Standard in accordance with MDEP BMP 7.5. A 40% void ratio was used to calculate the storage. The Drip Strip Detail for the assumed house footprint is included in the detail sheets.

The individual lot treatment is shown in the following table. The house lots are assumed to contain 1,540 square feet of roof area, except for lot 7 which is assumed to contain 1,237 square feet of roof area. Due to the limited development footprint, a lawn and driveway area was calculated for each lot.

| <b>TABLE I</b>                |                   |                  |                                               |                                                                            |
|-------------------------------|-------------------|------------------|-----------------------------------------------|----------------------------------------------------------------------------|
| <b>PROPOSED LOT TREATMENT</b> |                   |                  |                                               |                                                                            |
| <b>LOT NUMBER</b>             | <b>FRONT ROOF</b> | <b>REAR ROOF</b> | <b>DRIVEWAY</b>                               | <b>LAWN</b>                                                                |
| 1                             | Dripline Filter   | Dripline Filter  | 450 sf /Filterra 2                            | 461 sf /Filterra 2<br>1,264 sf /Soil Filter 1                              |
| 2                             | Dripline Filter   | Dripline Filter  | 558 sf /Filterra 2                            | 2,460 sf /Filterra 2<br>4,000 sf /Soil Filter 1                            |
| 3                             | Dripline Filter   | Dripline Filter  | 558 sf /Filterra 2                            | 4,044 sf /Filterra 2<br>480 sf /Soil Filter 1                              |
| 4                             | Dripline Filter   | Dripline Filter  | 432 sf /Filterra 2                            | 4,350 sf /Filterra 2<br>3,824 sf /Soil Filter 2                            |
| 5                             | Dripline Filter   | Dripline Filter  | 198 sf /Filterra 2                            | 1,605 sf /Filterra 2                                                       |
| 6                             | Dripline Filter   | Dripline Filter  | 2,464 sf /Soil Filter 2                       | 2,127 sf /Filterra 2<br>2,832 sf /Soil Filter 1<br>2,256 sf /Soil Filter 2 |
| 7                             | Dripline Filter   | Dripline Filter  | 176 sf /Filterra 4<br>400 sf /Soil Filter 3   | 1,492 sf /Filterra 4<br>3,344 sf /Soil Filter 3                            |
| 8                             | Dripline Filter   | Dripline Filter  | 360 sf /Filterra 4                            | 1,477 sf /Filterra 4<br>1,952 sf /Soil Filter 3                            |
| 9                             | Dripline Filter   | Dripline Filter  | 414 sf /Filterra 4                            | 1,503 sf /Filterra 4<br>1,928 sf /Soil Filter 4                            |
| 10                            | Dripline Filter   | Dripline Filter  | 414 sf /Filterra                              | 800 sf /Filterra 4<br>2,560 sf /Soil Filter 4                              |
| 11                            | Dripline Filter   | Dripline Filter  | None                                          | 2,496 sf /Soil Filter 4                                                    |
| 12                            | Dripline Filter   | Dripline Filter  | None                                          | 2,608 sf /Soil Filter 4                                                    |
| 13                            | Dripline Filter   | Dripline Filter  | 360 sf /Filterra 3                            | 629 sf /Filterra 3<br>4,368 sf /Soil Filter 5                              |
| 14                            | Dripline Filter   | Dripline Filter  | 360 sf /Filterra 3                            | 2,354 sf /Filterra 3<br>832 sf /Soil Filter 5                              |
| 15                            | Dripline Filter   | Dripline Filter  | 360 sf /Filterra 3                            | 3,058 sf /Filterra 3<br>265 sf /Soil Filter 5                              |
| 16                            | Dripline Filter   | Dripline Filter  | 1,200 sf /Filterra 3<br>400 sf /Soil Filter 5 | 1,568 sf /Filterra 3<br>8,835 sf /Soil Filter 5                            |

### Filterra

The proposed Filterras will treat the stormwater runoff from a portion of the roadway as shown on the Post Development Watershed Plan enclosed in Attachment A of this report. The driveway aprons, trail parking area, and turnaround are included in the linear portion of the project. It has been assumed that the roadway sideslopes will be mowed no more than twice a year, therefore they were not considered as developed area.

The Filterra systems have been design in accordance with the MDEP approval letter dated February 2, 2017. The sizing is in accordance with the manufacturers standard New England Testing Results. Based upon discussion with Contech representatives, the Filterra unit was sized based upon the tributary impervious area and an equivalent impervious area for the tributary vegetated area. The equivalent area is calculated by multiplying the vegetated area by

0.4 to account for the MDEP treatment requirement of 0.4" of runoff from vegetated areas. The Filterra outflow and bypass have been directed to a Stormtech chamber system designed to retain the water quality volume, based upon 1" of runoff from impervious areas and 0.4" of runoff from vegetated area. An Isolator Row has been included to allow for maintenance of the system. Outlet control structures with the weir set at the water quality elevation will detain the water quality volume. The water quality volume will be conveyed from the chambers by the underdrain outlet. Flow from larger storms will overtop the weir and be conveyed to the discharge point through the stormdrain system.

The following table presents the filterras performance.

| <b>TABLE 2</b>                  |                 |                 |
|---------------------------------|-----------------|-----------------|
| <b>Filterra 1</b>               |                 |                 |
|                                 | <b>REQUIRED</b> | <b>PROVIDED</b> |
| <b>Impervious Area</b>          |                 |                 |
| Roadway                         |                 | 7,834 sq. ft.   |
| House lot                       |                 | 0 sq. ft.       |
| <b>Vegetated Developed Area</b> |                 |                 |
| Roadway                         |                 | 0 sq. ft.       |
| House Lot                       |                 | 0 sq. ft.       |
| <b>Filterra Size</b>            | 4 X 8           | 4 X 8           |
| <b>Water Quality Volume</b>     | 653 cu. ft.     |                 |
| <b>SC-740 Stormtech</b>         | 9               | 9               |

| <b>TABLE 3</b>                  |                 |                 |
|---------------------------------|-----------------|-----------------|
| <b>Filterra 2</b>               |                 |                 |
|                                 | <b>REQUIRED</b> | <b>PROVIDED</b> |
| <b>Impervious Area</b>          |                 |                 |
| Roadway                         |                 | 9,727 sq. ft.   |
| House lot                       |                 | 2,196 sq. ft.   |
| <b>Vegetated Developed Area</b> |                 |                 |
| Roadway                         |                 | 2,238 sq. ft.   |
| House Lot                       |                 | 15,047 sq. ft.  |
| <b>Filterra Size</b>            | 7 X 13          | 7 X 13          |
| <b>Water Quality Volume</b>     | 1570 cu. ft.    |                 |
| <b>SC-740 Stormtech</b>         | 21              | 21              |

| <b>TABLE 4</b>                  |                 |                 |
|---------------------------------|-----------------|-----------------|
| <b>Filtterra 3</b>              |                 |                 |
|                                 | <b>REQUIRED</b> | <b>PROVIDED</b> |
| <b>Impervious Area</b>          |                 |                 |
| Roadway                         |                 | 5,110 sq. ft.   |
| House lot                       |                 | 2,280 sq. ft.   |
| <b>Vegetated Developed Area</b> |                 |                 |
| Roadway                         |                 | 720 sq. ft.     |
| House Lot                       |                 | 7,609 sq. ft.   |
| <b>Filtterra Size</b>           | 6 X 10          | 6 X 10          |
| <b>Water Quality Volume</b>     | 894 cu. ft.     |                 |
| <b>SC-740 Stormtech</b>         | 12              | 12              |

| <b>TABLE 5</b>                  |                 |                 |
|---------------------------------|-----------------|-----------------|
| <b>Filtterra 4</b>              |                 |                 |
|                                 | <b>REQUIRED</b> | <b>PROVIDED</b> |
| <b>Impervious Area</b>          |                 |                 |
| Roadway                         |                 | 5,090 sq. ft.   |
| House lot                       |                 | 1,364 sq. ft.   |
| <b>Vegetated Developed Area</b> |                 |                 |
| Roadway                         |                 | 1,020 sq. ft.   |
| House Lot                       |                 | 5,272 sq. ft.   |
| <b>Filtterra Size</b>           | 6 X 8           | 6 X 8           |
| <b>Water Quality Volume</b>     | 748             |                 |
| <b>SC-740 Stormtech</b>         | 10              | 10              |

#### Grassed Underdrained Soil Filter

Due to the project site's topography and layout, in order to provide the required 95% treatment of impervious area and 80% treatment of the developed area, Grassed Underdrained Soil Filters are proposed to reach the required treatment levels. The Grassed Underdrained Soil Filters are currently oversized for the treatment area to be conservative for the sites unique layout.

Grassed Underdrained Soil Filters are defined in Volume III, Section 7 of the Stormwater Management Best Management Practices Manual published by the Maine Department of Environmental Protection. The development will be required to provide the treatment volume for 1.0 inch times the subcatchments impervious area plus 0.4 inch times the subcatchments landscaped developed area. The surface area of the filters are required to be no less than the sum of 5% of the impervious area and 2% of the landscaped area draining to the filters. The channel protection volume is allowed to pond up to 18" deep within the filters. Runoff from larger storms will be conveyed from the filters by spillways with its crest set at the channel protection elevation. A valve will be placed on the filters underdrain to regulate the outflow through the soil media. The valve will be field adjusted to maintain the outflow time between 24 and 48 hours for the channel protection volume. Yearly maintenance of the filters will include monitoring the outflow after a rainfall event to ensure the outflow time is within the required parameters. The filter media will be a layered system consisting of 12" of sand and 6" of loamy topsoil with a transition layer of 2" of the topsoil rototilled into the sand layer. The

attached Watershed Map was utilized to determine the water surface elevation for larger storms.

The following tables present the Grassed Underdrained Soil Filter information:

| <b>TABLE 6</b>                            |                 |                 |
|-------------------------------------------|-----------------|-----------------|
| <b>GRASSED UNDERDRAINED SOIL FILTER 1</b> |                 |                 |
|                                           | <b>REQUIRED</b> | <b>PROVIDED</b> |
| Impervious Area                           |                 | 0 sq. ft.       |
| Developed Area (non-impervious)           |                 | 8,576 sq. ft.   |
| Treatment Volume                          | 286 cu. ft.     | 305 cu. ft.     |
| Filter Surface Area                       | 172 sq. ft.     | 305 sq. ft.     |
| Cell Base Elevation                       |                 | 86 ft.          |
| Overflow Outlet Elevation                 |                 | 87.5 ft.        |

| <b>TABLE 7</b>                            |                 |                 |
|-------------------------------------------|-----------------|-----------------|
| <b>GRASSED UNDERDRAINED SOIL FILTER 2</b> |                 |                 |
|                                           | <b>REQUIRED</b> | <b>PROVIDED</b> |
| Impervious Area                           |                 | 2,464 sq. ft.   |
| Developed Area (non-impervious)           |                 | 6,080 sq. ft.   |
| Treatment Volume                          | 408 cu. ft.     | 442 cu. ft.     |
| Filter Surface Area                       | 245 sq. ft.     | 442 sq. ft.     |
| Cell Base Elevation                       |                 | 88 ft.          |
| Overflow Outlet Elevation                 |                 | 89.5 ft.        |

| <b>TABLE 8</b>                            |                 |                 |
|-------------------------------------------|-----------------|-----------------|
| <b>GRASSED UNDERDRAINED SOIL FILTER 3</b> |                 |                 |
|                                           | <b>REQUIRED</b> | <b>PROVIDED</b> |
| Impervious Area                           |                 | 400 sq. ft.     |
| Developed Area (non-impervious)           |                 | 5296 sq. ft.    |
| Treatment Volume                          | 210 cu. ft.     | 354 cu. ft.     |
| Filter Surface Area                       | 126 sq. ft.     | 354 sq. ft.     |
| Cell Base Elevation                       |                 | 82 ft.          |
| Overflow Outlet Elevation                 |                 | 83.5 ft.        |

| <b>TABLE 9</b>                            |                 |                 |
|-------------------------------------------|-----------------|-----------------|
| <b>GRASSED UNDERDRAINED SOIL FILTER 4</b> |                 |                 |
|                                           | <b>REQUIRED</b> | <b>PROVIDED</b> |
| Impervious Area                           |                 | 0 sq. ft.       |
| Developed Area (non-impervious)           |                 | 9,592 sq. ft.   |
| Treatment Volume                          | 320 cu. ft.     | 440 cu. ft.     |
| Filter Surface Area                       | 191 sq. ft.     | 440 sq. ft.     |
| Cell Base Elevation                       |                 | 79 ft.          |
| Overflow Outlet Elevation                 |                 | 80.5 ft.        |



| <b>TABLE 10</b>                           |                 |                 |
|-------------------------------------------|-----------------|-----------------|
| <b>GRASSED UNDERDRAINED SOIL FILTER 5</b> |                 |                 |
|                                           | <b>REQUIRED</b> | <b>PROVIDED</b> |
| Impervious Area                           |                 | 400 sq. ft.     |
| Developed Area (non-impervious)           |                 | 14,035 sq. ft.  |
| Treatment Volume                          | 502 cu. ft.     | 677 cu. ft.     |
| Filter Surface Area                       | 301 sq. ft.     | 677 sq. ft.     |
| Cell Base Elevation                       |                 | 80 ft.          |
| Overflow Outlet Elevation                 |                 | 81.5 ft.        |

#### **12.9.4 Conclusion – Overall Treatment**

The following table summarizes the proposed treatment for the linear portion of the project. The roadway, sidewalk, turnaround, trail parking, and driveway aprons are the impervious areas associated with the linear portion of the project. The esplanade is the landscaped area associated with the linear portion of the project.

| <b>TABLE 11 – LINEAR PORTION</b>                       |                   |                                               |
|--------------------------------------------------------|-------------------|-----------------------------------------------|
|                                                        | <b>IMPERVIOUS</b> | <b>DEVELOPED</b><br>(Impervious + Landscaped) |
| Area treated by Filterrras (sf)                        | 27,761            | 31,739                                        |
| Area treated by Grassed Underdrained Soil Filters (sf) | 0                 | 0                                             |
| Total Area Treated (sf)                                | 27,761            | 31,739                                        |
| Area Untreated (sf)                                    | 8,189             | 8,855                                         |
| Total Area of Project (sf)                             | 35,950            | 40,594                                        |
| Percent Treated                                        | 77.2%             | 78.2%                                         |
| Percent Required                                       | 75%               | 50%                                           |

The following table summarizes the proposed treatment for the house lot portion of the project. The house lots are assumed to contain 1,540 square feet of roof area except for lot 7 which is assumed to contain 1,237 square feet of roof area. Due to the limited development footprint, a lawn and driveway area was calculated for each lot.

| <b>TABLE 12 – HOUSE LOTS</b>                           |                   |                                               |
|--------------------------------------------------------|-------------------|-----------------------------------------------|
|                                                        | <b>IMPERVIOUS</b> | <b>DEVELOPED</b><br>(Impervious + Landscaped) |
| Area treated by Filterrras (sf)                        | 5,840             | 33,768                                        |
| Area treated by Grassed Underdrained Soil Filters (sf) | 3,264             | 47,108                                        |
| Roof Dripline Filters (sf)                             | 24,337            | 36,657                                        |
| Total Area Treated (sf)                                | 33,441            | 117,533                                       |
| Area Untreated (sf)                                    | 660               | 21,331                                        |
| Total Area of Project (sf)                             | 34,101            | 138,864                                       |
| Percent Treated                                        | 98%               | 85%                                           |
| Percent Required                                       | 95%               | 80%                                           |

The proposed development of the residential subdivision will utilize four Filterrras, five Grassed Underdrained Soil Filters and twelve Roof Dripline Filters to mitigate the development as required by the BMP Standards. The development is required to control runoff from no less than 95% of the impervious area and no less than 80% of the developed area and, for the linear portion of the project, the development is required to control runoff from no less than 75% of the impervious area and no less than 50% of the developed area. As proposed, the development is controlling approximately 95% of the created impervious area, and approximately 82% of the developed area for the house lots, and is controlling approximately 75.2% of the created impervious area, and approximately 76.4% of the developed area for the linear portion, which meets or exceeds the required control.

A Water Quality Map is included in attachment A.

#### **12.9.5 Water Quantity Sizing Requirements**

The stormwater management study provides an analysis of predevelopment and post development stormwater runoff rates.

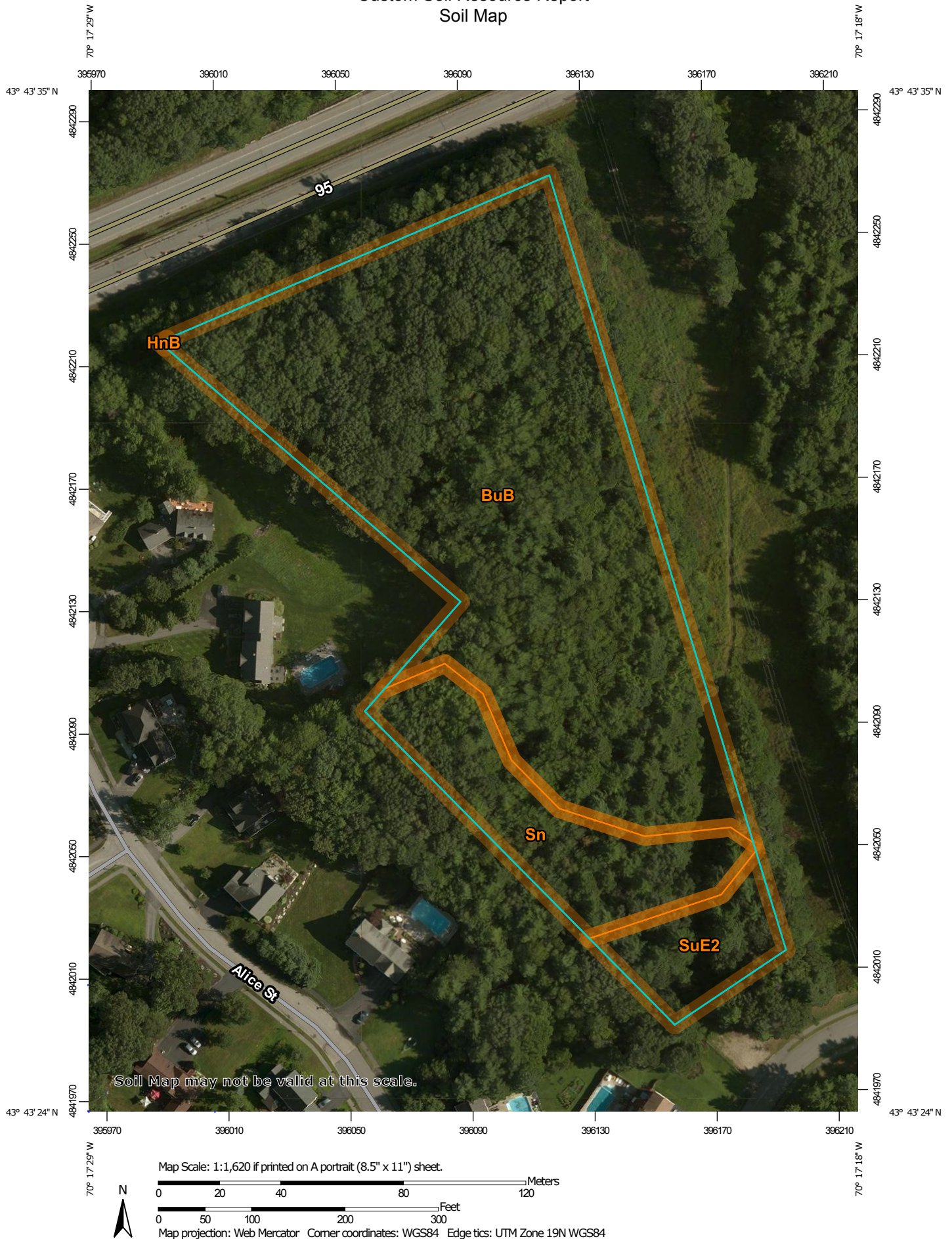
The Natural Resource Conservation Service Medium Intensity Soil Survey was used to identify onsite and offsite soils. The project site is comprised of hydrologic soil types B, C, and D. An excerpt from the Medium Intensity Soil Survey follows this page.

The SCS TR-20 methodology, using the HydroCad program, was employed by Gorrill Palmer to analyze predevelopment and post-development conditions. A 24-hour, SCS Type III storm distribution for the two, ten and twenty five year storm frequencies was used. The corresponding rainfall amounts for these storms are 3.1", 4.6" and 5.8" respectively.

Land use cover, delineations of watershed hydraulic flow paths, and hydrologic soils data were obtained using the following data:

1. Portland 7.5 Minute Quadrangle Maps prepared by the U.S.G.S.
2. On-site topographic survey with 2' contour intervals from an existing conditions plan of the site.

# Custom Soil Resource Report Soil Map



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals

### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Cumberland County and Part of Oxford County, Maine  
Survey Area Data: Version 12, Sep 15, 2016

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

## Map Unit Legend

| Cumberland County and Part of Oxford County, Maine (ME005) |                                                     |              |                |
|------------------------------------------------------------|-----------------------------------------------------|--------------|----------------|
| Map Unit Symbol                                            | Map Unit Name                                       | Acres in AOI | Percent of AOI |
| BuB                                                        | Lamoine silt loam, 3 to 8 percent slopes            | 4.6          | 77.6%          |
| HnB                                                        | Hinckley-Suffield complex, 3 to 8 percent slopes    | 0.0          | 0.0%           |
| Sn                                                         | Scantic silt loam, 0 to 3 percent slopes            | 0.9          | 15.5%          |
| SuE2                                                       | Suffield silt loam, 25 to 45 percent slopes, eroded | 0.4          | 6.9%           |
| <b>Totals for Area of Interest</b>                         |                                                     | <b>6.0</b>   | <b>100.0%</b>  |

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.



3. Aerial Photography of the project site, obtained from the Maine Office of GIS.
4. Natural Resource Conservation Service Medium Intensity Soil Survey
5. Field Reconnaissance.

### **Predevelopment Conditions**

The drainage study analyzes the watershed in the predevelopment condition as depicted on the Predevelopment Watershed Map.

The predevelopment was analyzed as two subcatchments and two points of interest (POI) were analyzed. POI 1 is the location in a swale at the lot's eastern boundary and the POI 2 is the location in a swale at the lots northern boundary.

Subcatchment 1S consists of the drainage area to POI 1. Most of Subcatchment 1S is off site.

Subcatchment 2S consists of the drainage area to POI 2.

A watershed map for the predevelopment conditions is attached to this section as drawing number W1. The predevelopment conditions were analyzed using HydroCAD modeling. Table 13 presents the peak flow rates at the point of interest in the predevelopment condition.

| <b>Table 13 - Predevelopment Peak Flow Rates (cfs)</b> |                        |              |              |
|--------------------------------------------------------|------------------------|--------------|--------------|
| <b>Point of Interest</b>                               | <b>Peak Flow (cfs)</b> |              |              |
|                                                        | <b>2 YR</b>            | <b>10 YR</b> | <b>25 YR</b> |
|                                                        | <b>Pre</b>             | <b>Pre</b>   | <b>Pre</b>   |
| POI # 1                                                | 18.6                   | 42.9         | 64.4         |
| POI # 2                                                | 9.1                    | 19.8         | 29.2         |

Copies of the calculations for the predevelopment conditions are included in Attachment B.

### **Post Development Conditions**

Analysis for the post development condition consists of determining post development peak flows and limiting the post development flows to predevelopment levels. The Post Development was analyzed as six subcatchments and two points of interest (POI) were analyzed. POI 1 is the location in a swale at the lot's eastern boundary and the POI 2 is the location in a swale at the lot's northern boundary.

Subcatchment 1S is composed of offsite and onsite area draining to the culvert shown on the plan set.

Subcatchment 7S is the area tributary to the Stormtech Subsurface Chamber Systems.

Subcatchment 9S is the onsite area tributary to POI 1.

These subcatchments are routed to the existing culvert and swale, POI 1.

Subcatchment 2S is composed of offsite and onsite area tributary to proposed stormdrain system.

Subcatchment 6S is the onsite area tributary to POI 2.

Subcatchment 11S is the area tributary to the Stormtech Subsurface Chamber Systems.

These subcatchments are routed to the proposed stormdrain system and swale, POI 2.

The runoff from the roof areas of twelve lot's is stored within the drip strips in accordance with MDEP BMP 7.5. Since the Flooding Standard has been met by storing the 25-Year Rainfall, the twelve roof areas have been removed from the post development HydroCAD model, due to the many assumptions required to route twelve small areas through the drip strip storage and outlets. The post development watershed area is less than the predevelopment area due to the removal of the roofs.

A watershed map for the post development conditions is attached to this section as drawing number W2. Attachment B includes the TR-20 calculations.

The runoff from subcatchments 7S and 11S was routed through the Stormtech chambers which are part of the Filterra water quality system. The chambers provide some attenuation of the tributary runoff.

A comparison of Pre and Post Development peak flows is presented in the following table:

| <b>Table 15 - Post Development Peak Flow Rates with Detention (cfs)</b> |                        |             |              |             |              |             |
|-------------------------------------------------------------------------|------------------------|-------------|--------------|-------------|--------------|-------------|
| <b>Point of Interest</b>                                                | <b>Peak Flow (cfs)</b> |             |              |             |              |             |
|                                                                         | <b>2 YR</b>            |             | <b>10 YR</b> |             | <b>25 YR</b> |             |
|                                                                         | <b>Pre</b>             | <b>Post</b> | <b>Pre</b>   | <b>Post</b> | <b>Pre</b>   | <b>Post</b> |
| POI # 1                                                                 | 18.6                   | 19.3        | 42.9         | 43.1        | 64.4         | 63.8        |
| POI # 2                                                                 | 9.1                    | 9.2         | 19.8         | 18.9        | 29.2         | 27.2        |

As shown in the table above, the Post Development peak flow for the 25-Year storm is less than the peak flow from the Pre Development storm for both POI 1 and POI 2.

The Post Development peak flow for the 10-Year storm at POI 2 is less than the Pre Development peak flow.

The Post Development peak flow increases slightly from Pre Development levels for the 10-Year storm at POI 1 and the 2-Year storm at POI 1 and 2. The following table presents the increase:

| <b>Table 16 – Post Development Peak Flow Increases</b> |                        |                             |                      |                             |
|--------------------------------------------------------|------------------------|-----------------------------|----------------------|-----------------------------|
| <b>Point of Interest</b>                               | <b>Peak Flow (cfs)</b> |                             |                      |                             |
|                                                        | <b>2-Year Storm</b>    |                             | <b>10-Year Storm</b> |                             |
|                                                        | <b>Increase</b>        | <b>% of Pre Development</b> | <b>Increase</b>      | <b>% of Pre Development</b> |
| POI # 1                                                | 0.7                    | 3.8                         | 0.1                  | 0.2                         |
| POI # 2                                                | 0.1                    | 1.1                         | -                    | -                           |

Due to the proximity of the Presumpscot River to the project, these slight increases are considered to be insignificant.



### **12.9.6 Conclusion – Overall Water Quantity**

As a result of attenuation within the proposed Stormtech chambers, and the storage of the 25-Year Rainfall within drip strips at 12 house lot's, the peak Post Development runoff has been reduced to be at or below Pre Development levels for the 25-Year storm at POI 1 and 2 and for the 10-Year storm at POI 2. The slight increase in peak flow for the 10-Year storm at POI 1 and for the 2-Year storm at POI 1 and 2 is considered insignificant due to the location of the parcel just upstream from the Presumpscot River.

### **12.10 Construction BMPs**

Additional water quality treatment will be provided during construction by best management practices (BMP). Standard BMPs to be employed include siltation fencing around the downslope construction perimeter, riprap, stabilized construction entrances, and erosion control fabrics applied to slopes prior to revegetation.

### **12.11 Maintenance of Facilities**

See the Erosion and Sedimentation Control report for this project.

### **12.12 Conclusion**

Gorrill Palmer has been retained by LBW, LLC. to prepare plans and permit applications for a proposed residential subdivision, located off Hope Avenue in Portland, Maine. The proposed development will include 16 residential lots, an approximately 950 linear foot of roadway and associated infrastructure. As a result, the proposed development will create more than 1 acre of impervious area but less than 3 acres of impervious area, and thereby require a Stormwater Law Permit Application. Based upon the attached calculations, the proposed development meets or exceeds the requirement of the BMP Standard through the use of Filterrras, Drip Strips, and Grassed Underdrained Soil Filters. The project also meets the flooding standard due to attenuation of runoff within the BMP treatment facilities.

### **12.13 Attachments**

Attached to this section are the following items:

Attachment A – Watershed Map, Water Quality Map

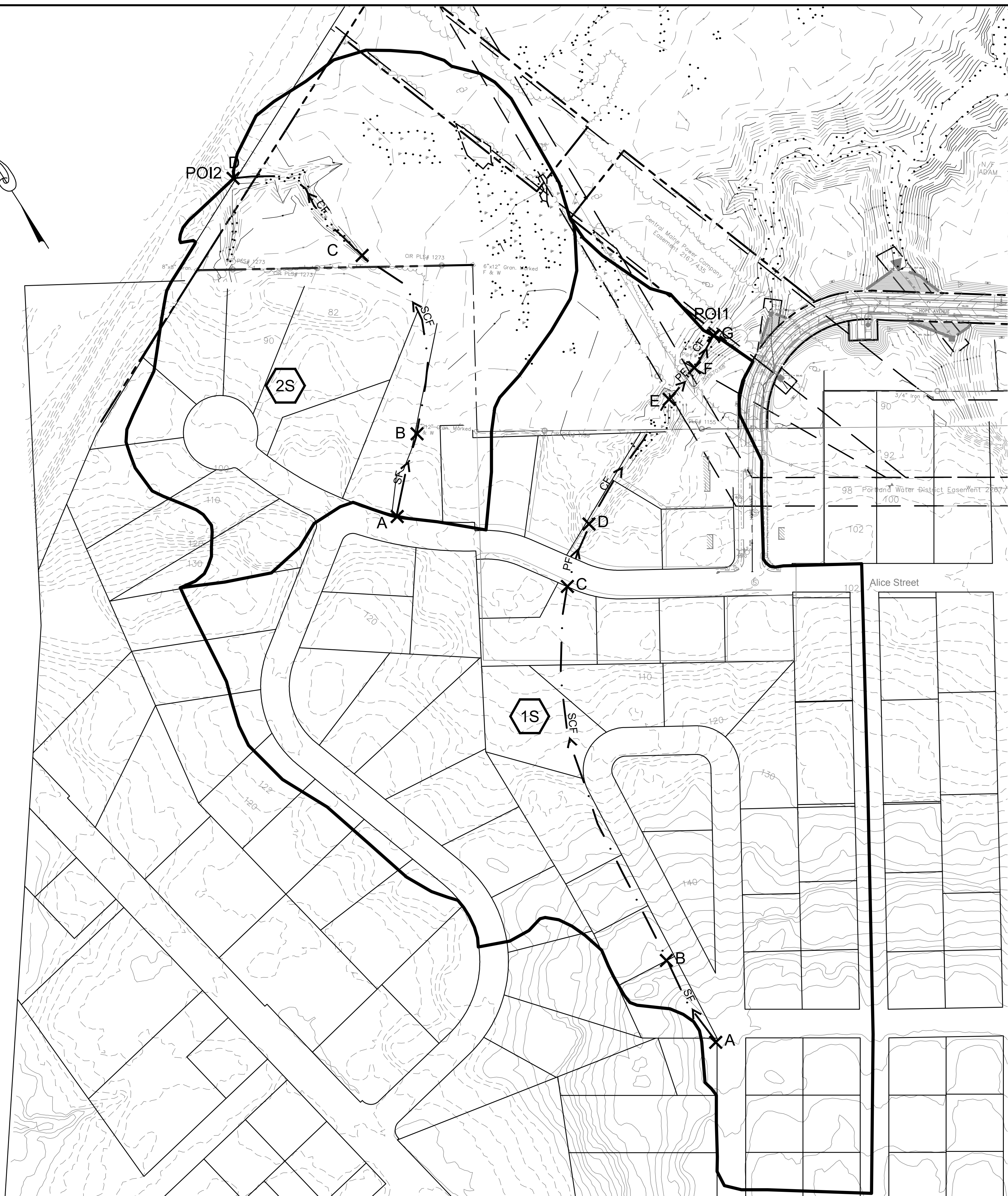
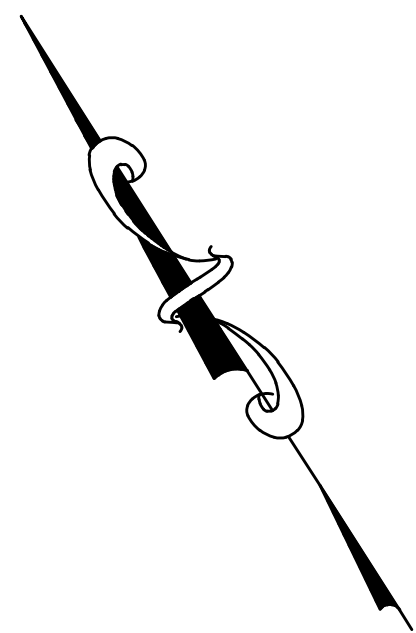
Attachment B – TR-20 Calculations

Attachment C – Filterrra and Grassed Underdrained Soil Filter sizing calculations

Attachment D – Correspondence of manufacturers review and approval of proposed Filterrra design

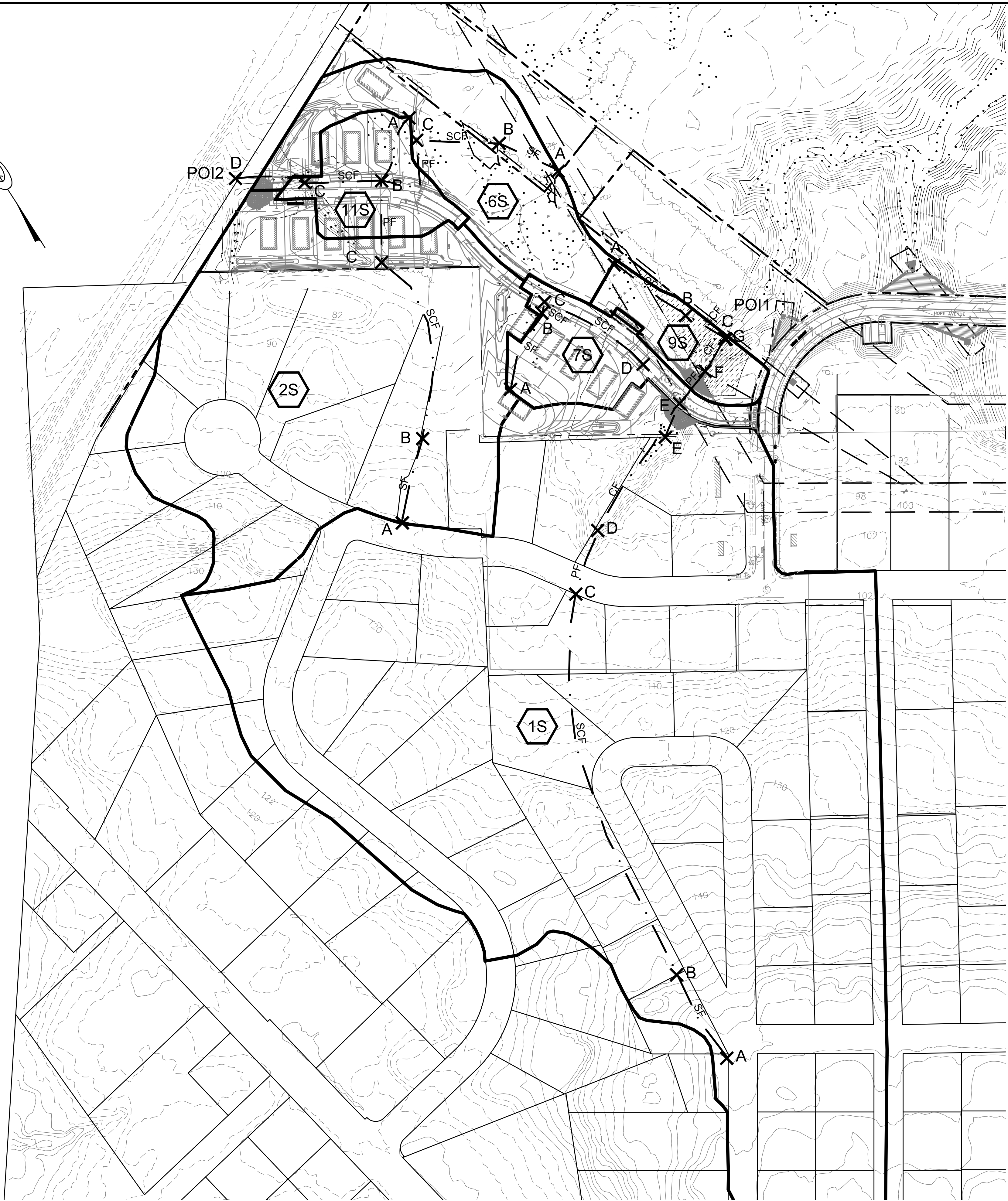
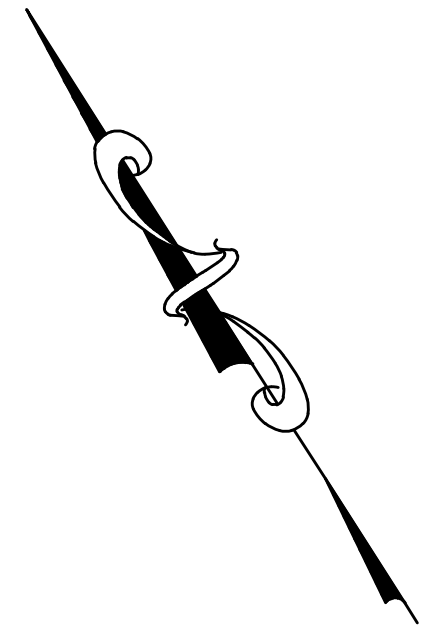
**ATTACHMENT A**  
**Watershed Map and Water Quality Map**

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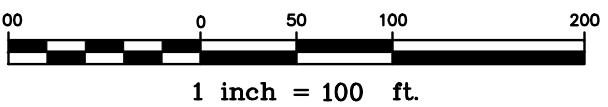
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#### LEGEND

- SUBCATCHMENT AREA
- TIME OF CONCENTRATION FLOW PATH
- WATERSHED BOUNDARY
- WETLAND BOUNDARY
- SHEET FLOW
- PIPE FLOW
- SHALLOW CONCENTRATED FLOW
- CHANNEL FLOW
- POINT OF INTEREST
- REACH

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| SUBDIVISION APPLICATION           | 5/24/17 | DER |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG     | Date: MAY 2017    |
| Checked: AMP                                                                                                                                                                                | Scale: 1"=40' | Job No.: 98089-08 |
| File Name: 98089-08-WS-POST.dwg                                                                                                                                                             |               |                   |
| This plan shall not be modified without written permission from Gorriil Palmer(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP. |               |                   |



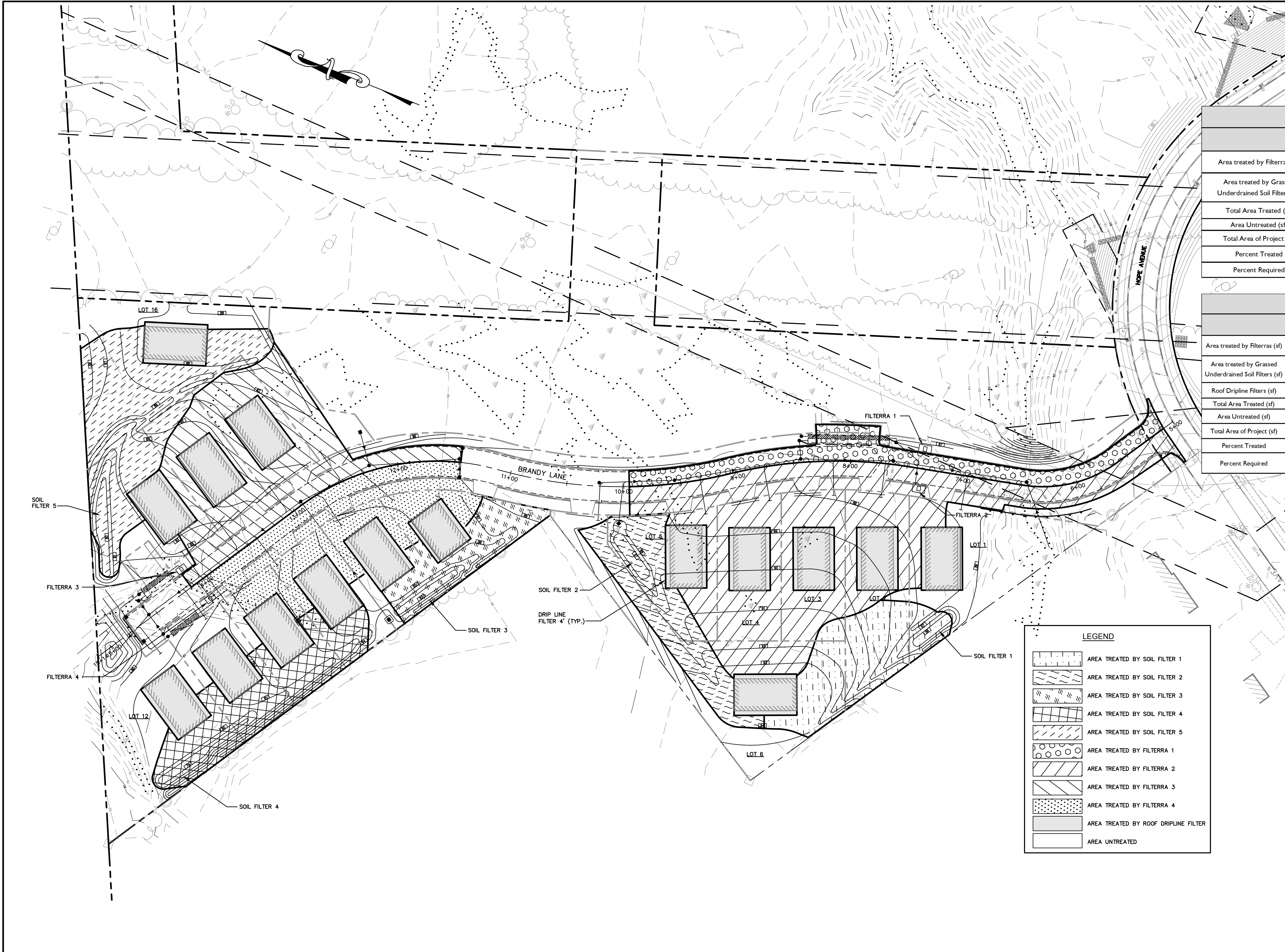
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207.772.2515

|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Post Development Watershe Map                  |
| Project:      | Brandy Lane Subdivision<br>Portland, Maine     |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

|             |
|-------------|
| Drawing No. |
| W2          |



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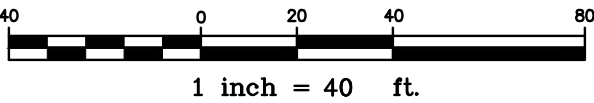


| TABLE 11 - LINEAR PORTION                              |            |                                        |
|--------------------------------------------------------|------------|----------------------------------------|
|                                                        | IMPERVIOUS | DEVELOPED<br>(Impervious + Landscaped) |
| Area treated by Filterras (sf)                         | 27,761     | 31,739                                 |
| Area treated by Grassed Underdrained Soil Filters (sf) | 0          | 0                                      |
| Total Area Treated (sf)                                | 27,761     | 31,739                                 |
| Area Untreated (sf)                                    | 8,189      | 8,855                                  |
| Total Area of Project (sf)                             | 35,950     | 40,594                                 |
| Percent Treated                                        | 77.20%     | 78.20%                                 |
| Percent Required                                       | 75%        | 50%                                    |

| TABLE 12 - HOUSE LOTS                                  |            |                                        |
|--------------------------------------------------------|------------|----------------------------------------|
|                                                        | IMPERVIOUS | DEVELOPED<br>(Impervious + Landscaped) |
| Area treated by Filterras (sf)                         | 5,840      | 33,768                                 |
| Area treated by Grassed Underdrained Soil Filters (sf) | 3,264      | 47,108                                 |
| Roof Dripline Filters (sf)                             | 24,337     | 36,657                                 |
| Total Area Treated (sf)                                | 33,441     | 117,533                                |
| Area Untreated (sf)                                    | 660        | 21,331                                 |
| Total Area of Project (sf)                             | 34,101     | 138,864                                |
| Percent Treated                                        | 98%        | 85%                                    |
| Percent Required                                       | 95%        | 80%                                    |

| LEGEND |                                      |
|--------|--------------------------------------|
|        | AREA TREATED BY SOIL FILTER 1        |
|        | AREA TREATED BY SOIL FILTER 2        |
|        | AREA TREATED BY SOIL FILTER 3        |
|        | AREA TREATED BY SOIL FILTER 4        |
|        | AREA TREATED BY SOIL FILTER 5        |
|        | AREA TREATED BY FILTERRA 1           |
|        | AREA TREATED BY FILTERRA 2           |
|        | AREA TREATED BY FILTERRA 3           |
|        | AREA TREATED BY FILTERRA 4           |
|        | AREA TREATED BY ROOF DRIPLINE FILTER |
|        | AREA UNTREATED                       |

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| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

| Subdivision Application           | Date    | By  |
|-----------------------------------|---------|-----|
| SUBDIVISION APPLICATION           | 5/24/17 | DER |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        |         |     |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG     | Date: MAY 2017    |
| Checked: AMP                                                                                                                                                                                | Scale: 1"=40' | Job No.: 98089.08 |
| File Name: 98089-08-WQ.dwg                                                                                                                                                                  |               |                   |
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Water Quality Plan                             |
| Project:      | Brandy Lane Subdivision<br>Portland, Maine     |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

|             |
|-------------|
| Drawing No. |
| WQ          |



**ATTACHMENT B**  
**TR-20 Calculations**

## **PREDEVELOPMENT**



## Pre Development

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Type III 24-hr 2 YR Rainfall=3.10"

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Page 1

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

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

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

### Subcatchment1S: Subcatchment1

Runoff Area=23.093 ac 31.06% Impervious Runoff Depth>0.83"  
Flow Length=1,365' Tc=12.0 min CN=73 Runoff=18.61 cfs 1.603 af

### Subcatchment2S: Subcatchment2

Runoff Area=10.771 ac 20.98% Impervious Runoff Depth>0.93"  
Flow Length=800' Tc=15.6 min CN=75 Runoff=9.05 cfs 0.838 af

### Reach 4R: POI 1

Inflow=18.61 cfs 1.603 af  
Outflow=18.61 cfs 1.603 af

### Reach 5R: POI 2

Inflow=9.05 cfs 0.838 af  
Outflow=9.05 cfs 0.838 af

**Total Runoff Area = 33.864 ac Runoff Volume = 2.441 af Average Runoff Depth = 0.86"**  
**72.15% Pervious = 24.433 ac 27.85% Impervious = 9.431 ac**

## Pre Development

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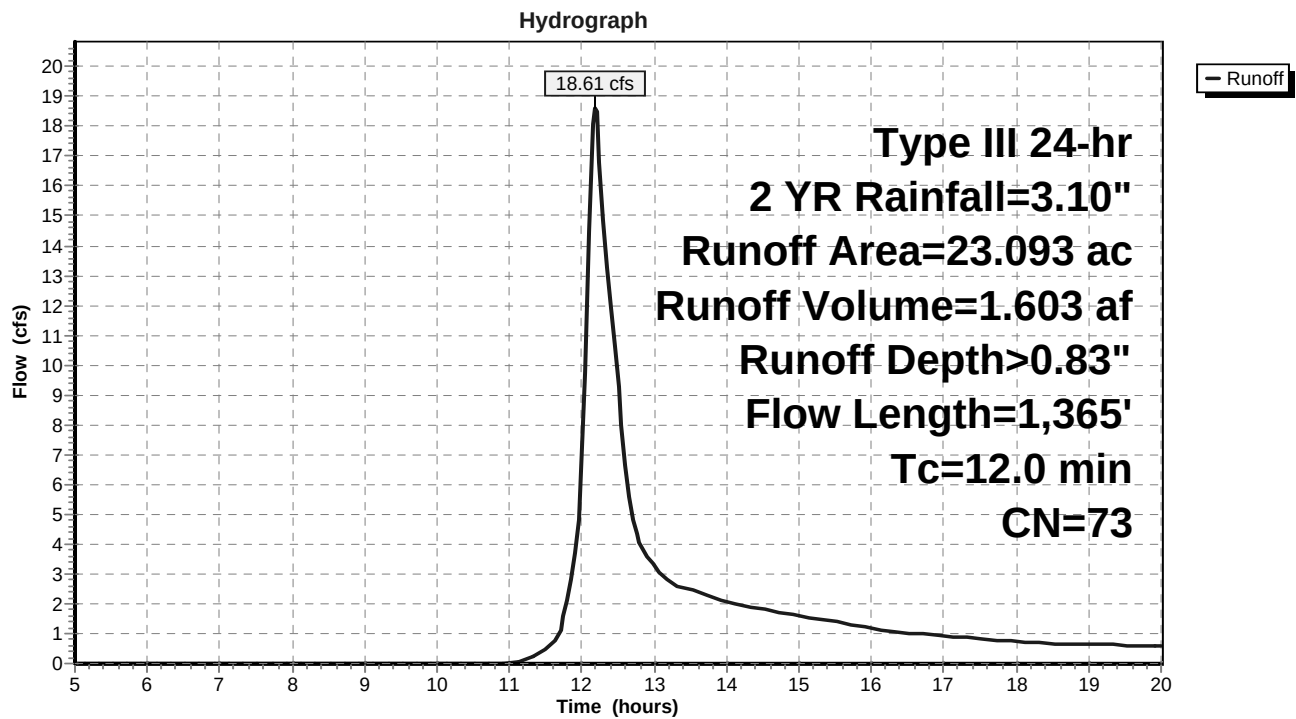
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### Subcatchment 1S: Subcatchment 1



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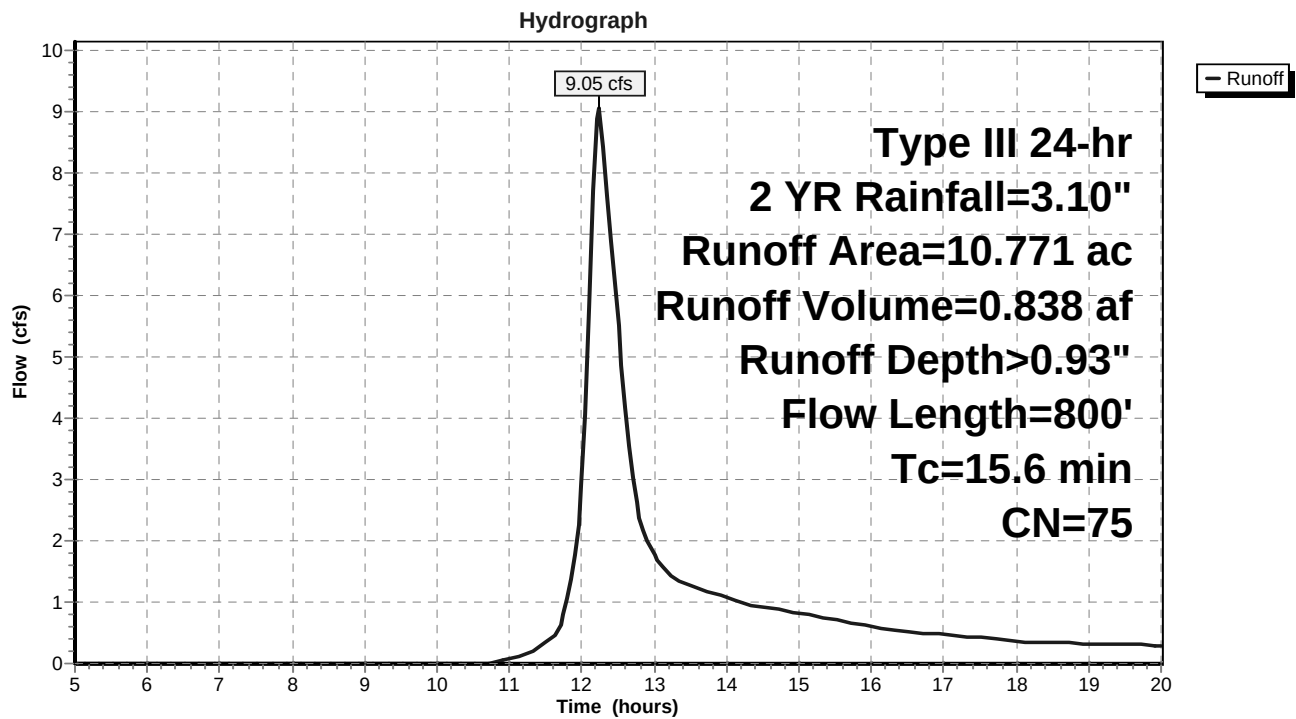
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### Subcatchment 2S: Subcatchment 2



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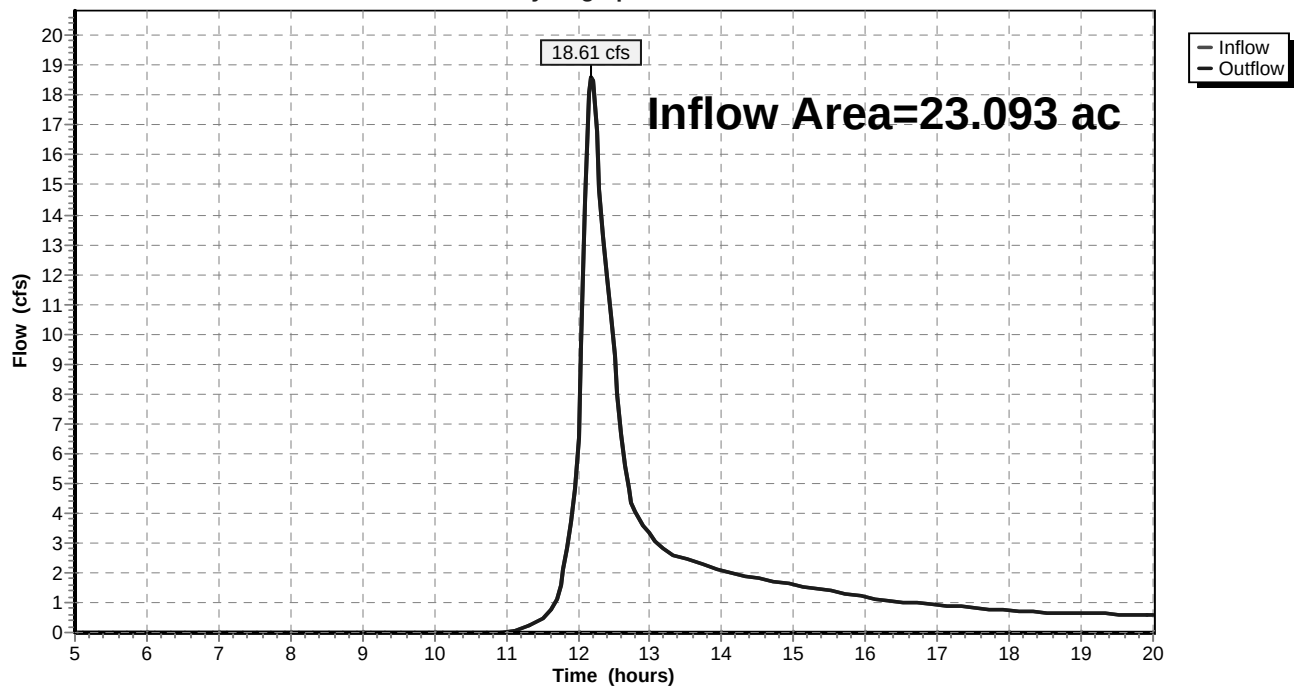
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## Reach 4R: POI 1

Hydrograph



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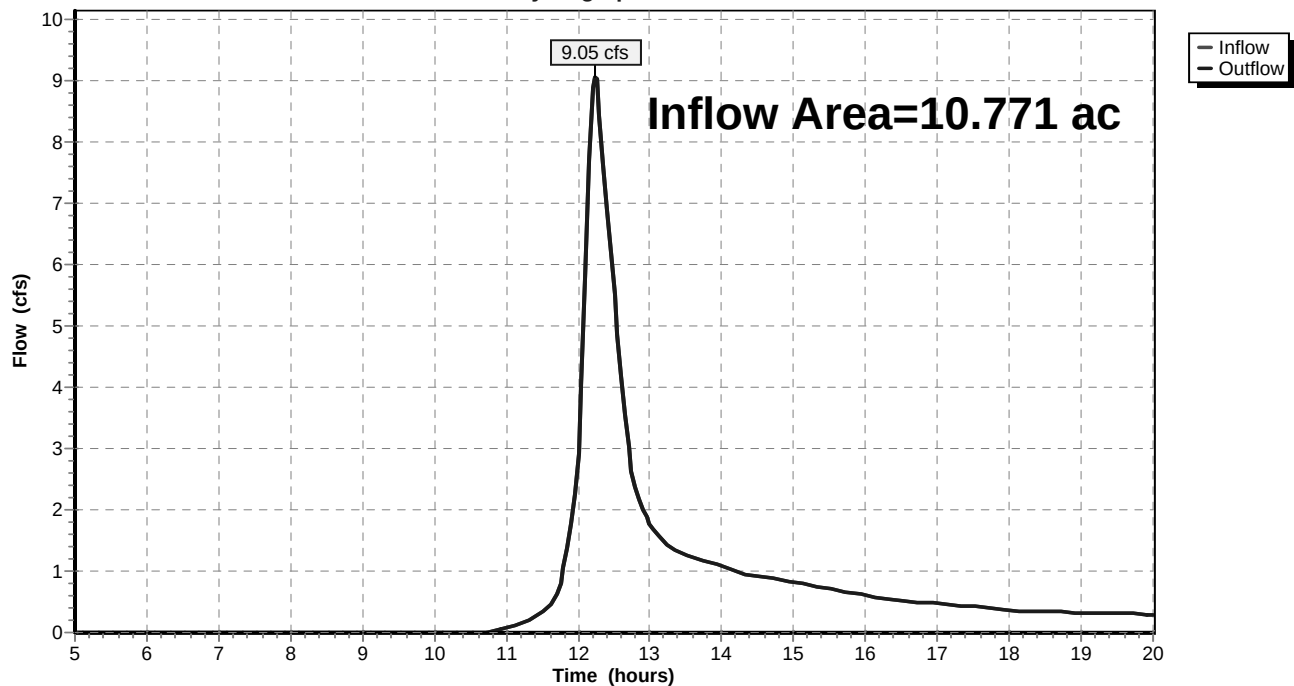
Type III 24-hr 2 YR Rainfall=3.10"

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### Reach 5R: POI 2

Hydrograph



## Pre Development

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Type III 24-hr 10 YR Rainfall=4.60"

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Page 6

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

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

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

### Subcatchment1S: Subcatchment1

Runoff Area=23.093 ac 31.06% Impervious Runoff Depth>1.81"  
Flow Length=1,365' Tc=12.0 min CN=73 Runoff=42.89 cfs 3.493 af

### Subcatchment2S: Subcatchment2

Runoff Area=10.771 ac 20.98% Impervious Runoff Depth>1.96"  
Flow Length=800' Tc=15.6 min CN=75 Runoff=19.79 cfs 1.763 af

### Reach 4R: POI 1

Inflow=42.89 cfs 3.493 af  
Outflow=42.89 cfs 3.493 af

### Reach 5R: POI 2

Inflow=19.79 cfs 1.763 af  
Outflow=19.79 cfs 1.763 af

**Total Runoff Area = 33.864 ac Runoff Volume = 5.255 af Average Runoff Depth = 1.86"**  
**72.15% Pervious = 24.433 ac 27.85% Impervious = 9.431 ac**



## Pre Development

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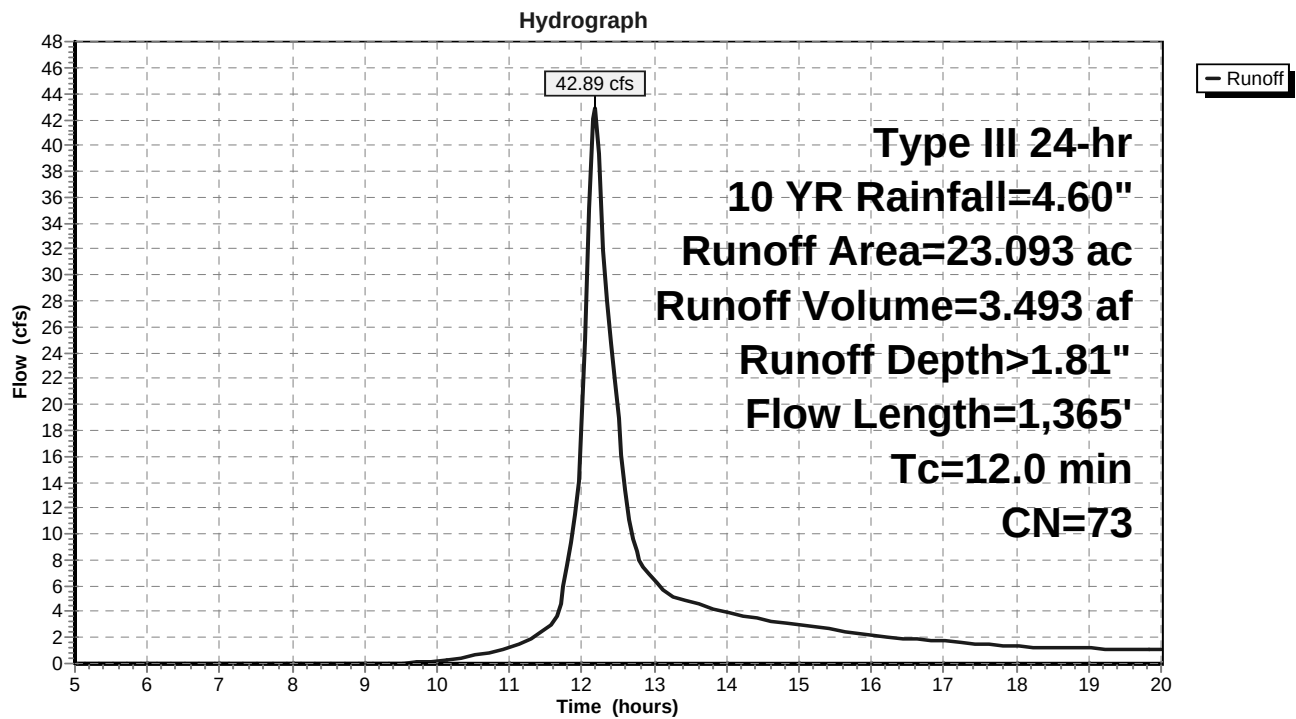
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Type III 24-hr 10 YR Rainfall=4.60"

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### Subcatchment 1S: Subcatchment 1



## Pre Development

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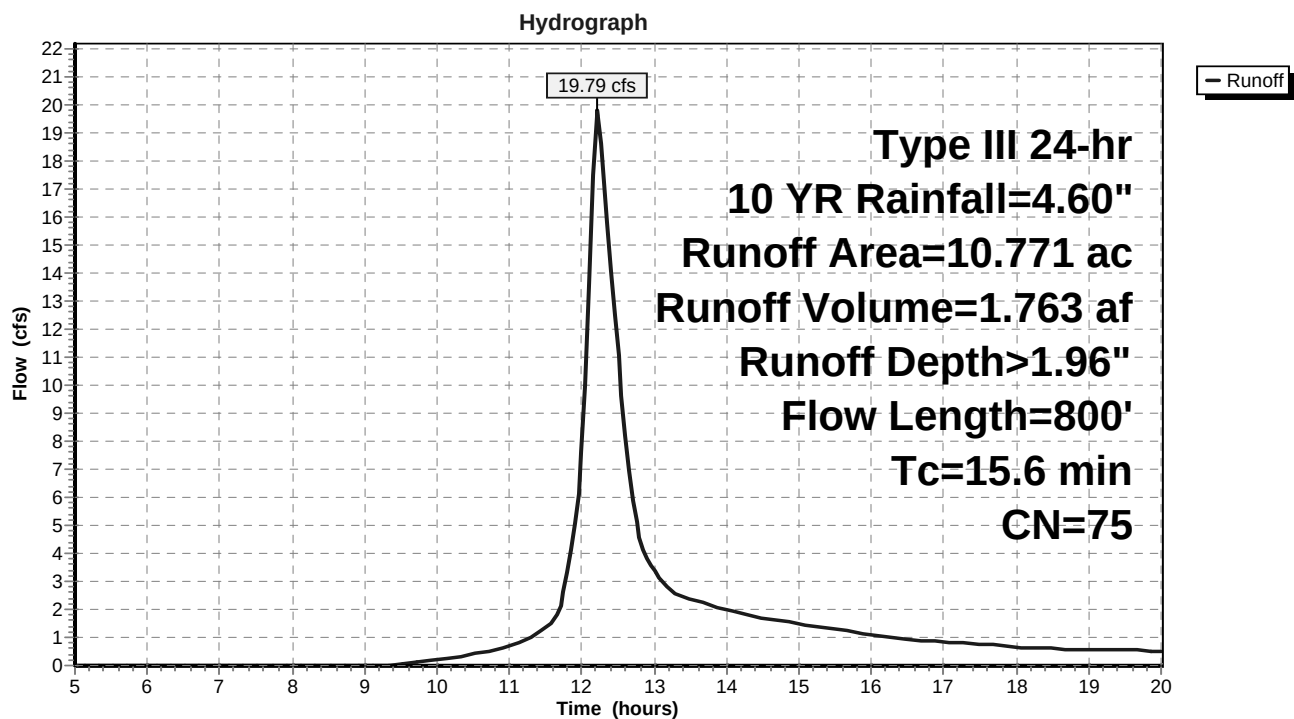
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### Subcatchment 2S: Subcatchment 2



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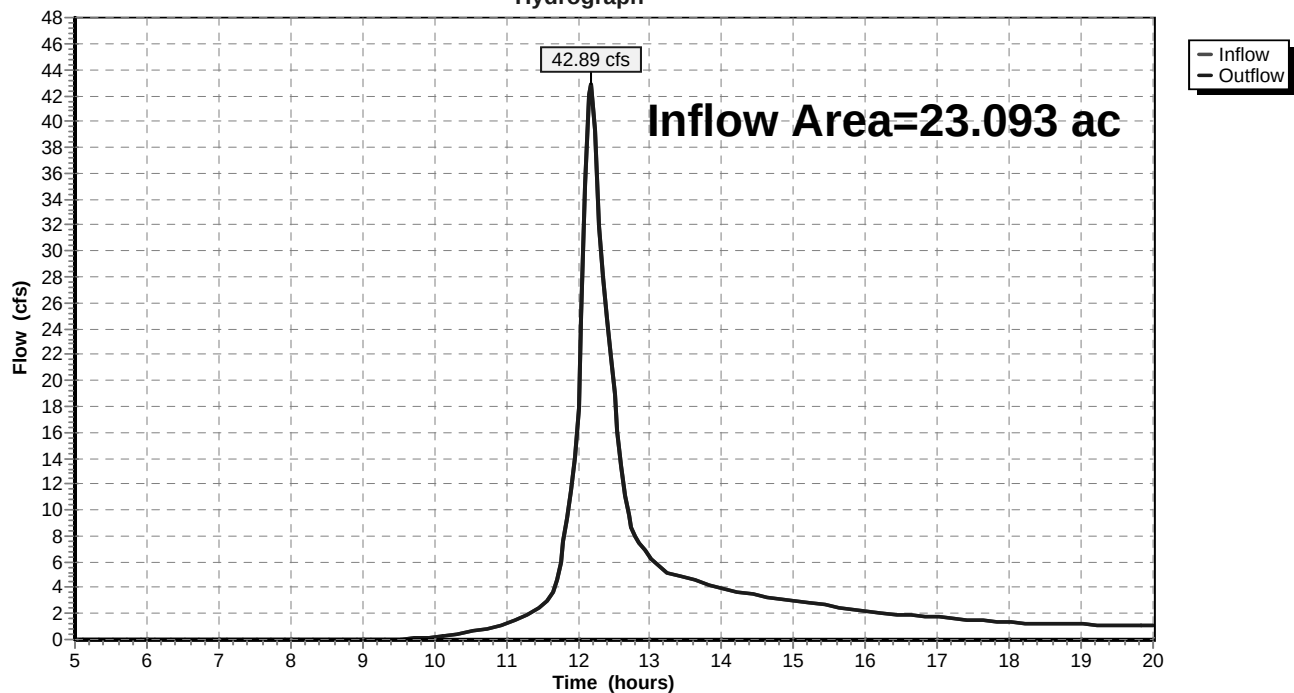
Type III 24-hr 10 YR Rainfall=4.60"

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## Reach 4R: POI 1

Hydrograph



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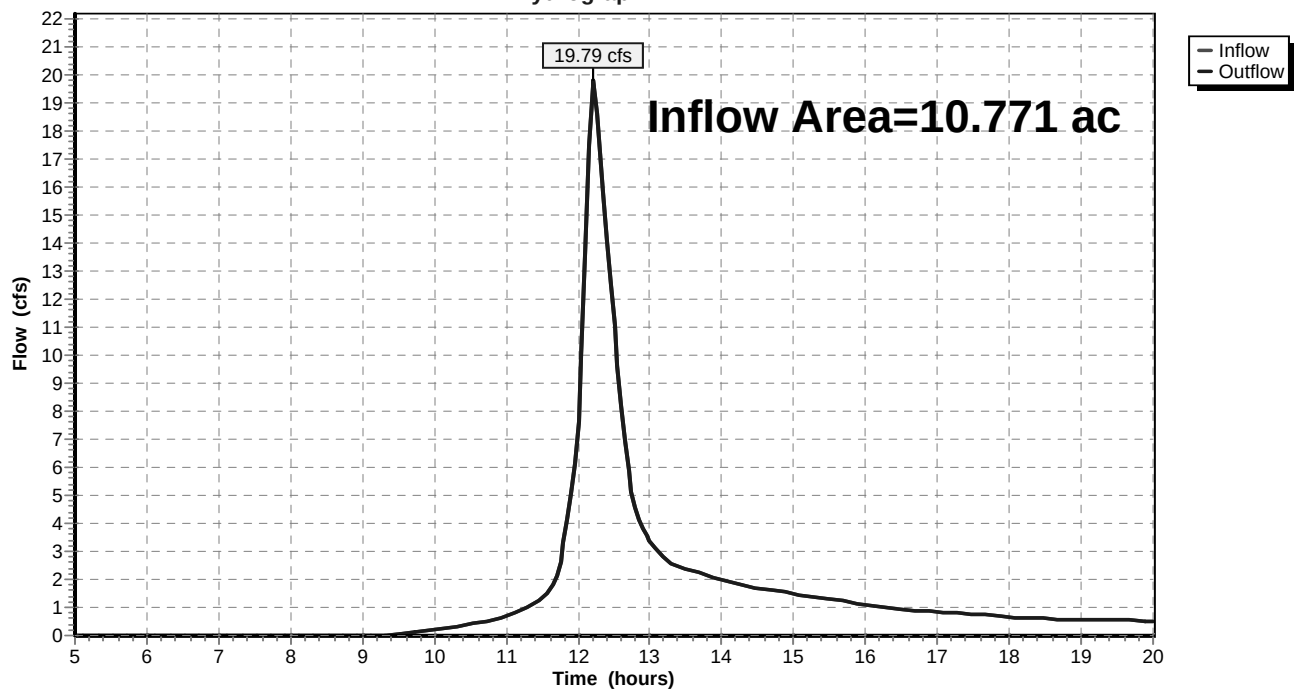
Type III 24-hr 10 YR Rainfall=4.60"

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## Reach 5R: POI 2

Hydrograph

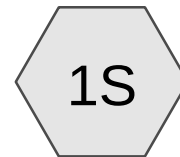




Subcatchment 2



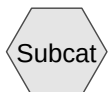
POI 2



Subcatchment 1



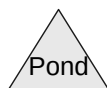
POI 1



Subcat



Reach



Pond



Link

**Routing Diagram for Pre Development**

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Type III 24-hr 25 YR Rainfall=5.80"

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Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

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

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

### Subcatchment1S: Subcatchment1

Runoff Area=23.093 ac 31.06% Impervious Runoff Depth>2.71"  
Flow Length=1,365' Tc=12.0 min CN=73 Runoff=64.44 cfs 5.215 af

### Subcatchment2S: Subcatchment2

Runoff Area=10.771 ac 20.98% Impervious Runoff Depth>2.89"  
Flow Length=800' Tc=15.6 min CN=75 Runoff=29.18 cfs 2.593 af

### Reach 4R: POI 1

Inflow=64.44 cfs 5.215 af  
Outflow=64.44 cfs 5.215 af

### Reach 5R: POI 2

Inflow=29.18 cfs 2.593 af  
Outflow=29.18 cfs 2.593 af

**Total Runoff Area = 33.864 ac Runoff Volume = 7.808 af Average Runoff Depth = 2.77"**  
**72.15% Pervious = 24.433 ac 27.85% Impervious = 9.431 ac**



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Type III 24-hr 25 YR Rainfall=5.80"

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Page 3

**Summary for Subcatchment 1S: Subcatchment 1**

Runoff = 64.44 cfs @ 12.17 hrs, Volume= 5.215 af, Depth&gt; 2.71"

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

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 10.530    | 61 | 1/4 acre lots, 38% imp, HSG A |
| 0.979     | 81 | 1/3 acre lots, 30% imp, HSG C |
| 9.244     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 0.718     | 70 | Woods, Good, HSG C            |
| 1.277     | 77 | Woods, Good, HSG D            |
| 0.345     | 72 | 1/3 acre lots, 30% imp, HSG B |
| 23.093    | 73 | Weighted Average              |
| 15.921    |    | 68.94% Pervious Area          |
| 7.172     |    | 31.06% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------------------------------------|
| 7.9      | 150           | 0.0800        | 0.32              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"                                                            |
| 3.0      | 700           | 0.0680        | 3.91              |                | <b>Shallow Concentrated Flow, B-C</b><br>Grassed Waterway Kv= 15.0 fps                                               |
| 0.3      | 100           | 0.0050        | 5.91              | 29.00          | <b>Pipe Channel, C-D</b><br>30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63'<br>n= 0.013 Corrugated PE, smooth interior |
| 0.3      | 280           | 0.0570        | 16.89             | 101.31         | <b>Channel Flow, D-E</b><br>Area= 6.0 sf Perim= 5.6' r= 1.07'<br>n= 0.022 Earth, clean & straight                    |
| 0.3      | 55            | 0.0010        | 2.86              | 14.05          | <b>Pipe Channel, E-F</b><br>30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63'<br>n= 0.012 Concrete pipe, finished        |
| 0.2      | 80            | 0.0100        | 7.07              | 42.43          | <b>Channel Flow, F-G</b><br>Area= 6.0 sf Perim= 5.6' r= 1.07'<br>n= 0.022 Earth, clean & straight                    |
| 12.0     | 1,365         | Total         |                   |                |                                                                                                                      |

## Pre Development

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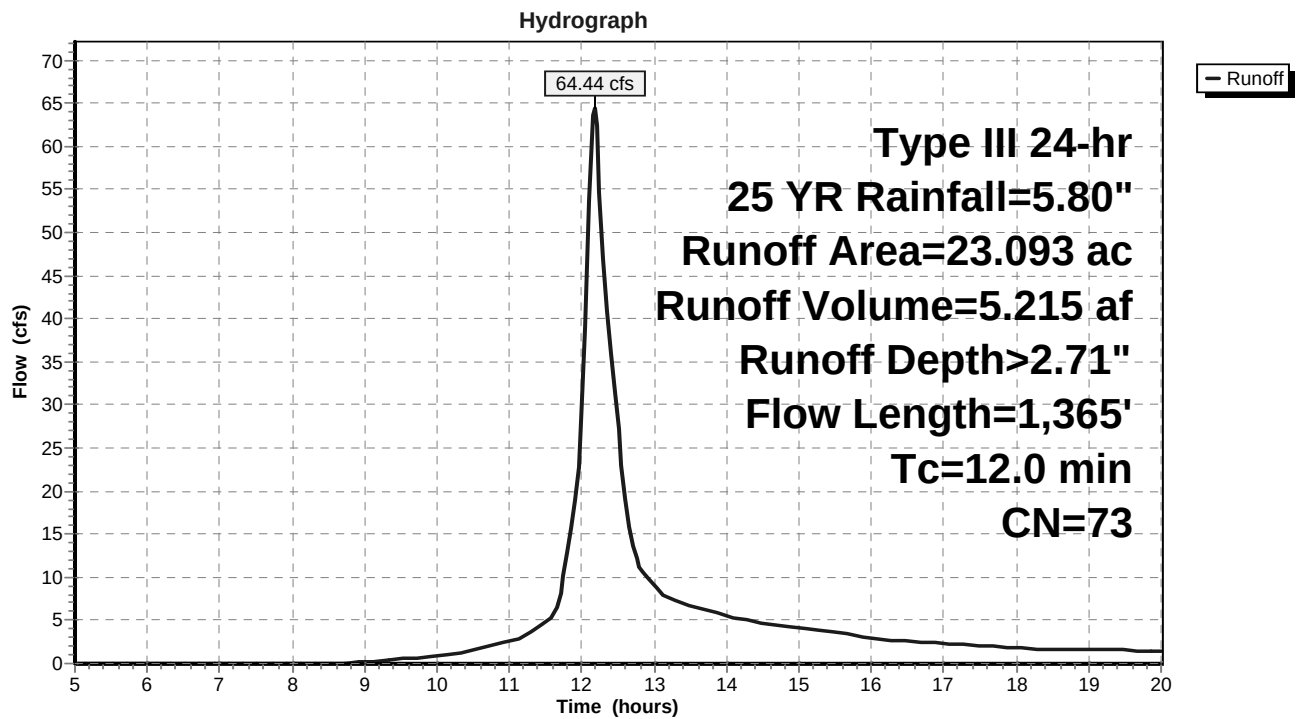
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Type III 24-hr 25 YR Rainfall=5.80"

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Page 4

### Subcatchment 1S: Subcatchment 1



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Type III 24-hr 25 YR Rainfall=5.80"

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Page 5

**Summary for Subcatchment 2S: Subcatchment 2**

Runoff = 29.18 cfs @ 12.22 hrs, Volume= 2.593 af, Depth&gt; 2.89"

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

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 3.212     | 61 | 1/4 acre lots, 38% imp, HSG A |
| 0.192     | 80 | 1/2 acre lots, 25% imp, HSG C |
| 2.607     | 87 | 1/4 acre lots, 38% imp, HSG D |
| 0.157     | 70 | Woods, Good, HSG C            |
| 4.603     | 77 | Woods, Good, HSG D            |
| 10.771    | 75 | Weighted Average              |
| 8.512     |    | 79.02% Pervious Area          |
| 2.259     |    | 20.98% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                       |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------------------------------------|
| 8.9      | 150           | 0.0600        | 0.28              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"                                         |
| 6.4      | 370           | 0.0375        | 0.97              |                | <b>Shallow Concentrated Flow, B-C</b><br>Woodland Kv= 5.0 fps                                     |
| 0.3      | 280           | 0.0400        | 14.14             | 84.87          | <b>Channel Flow, C-D</b><br>Area= 6.0 sf Perim= 5.6' r= 1.07'<br>n= 0.022 Earth, clean & straight |
| 15.6     | 800           | Total         |                   |                |                                                                                                   |

## Pre Development

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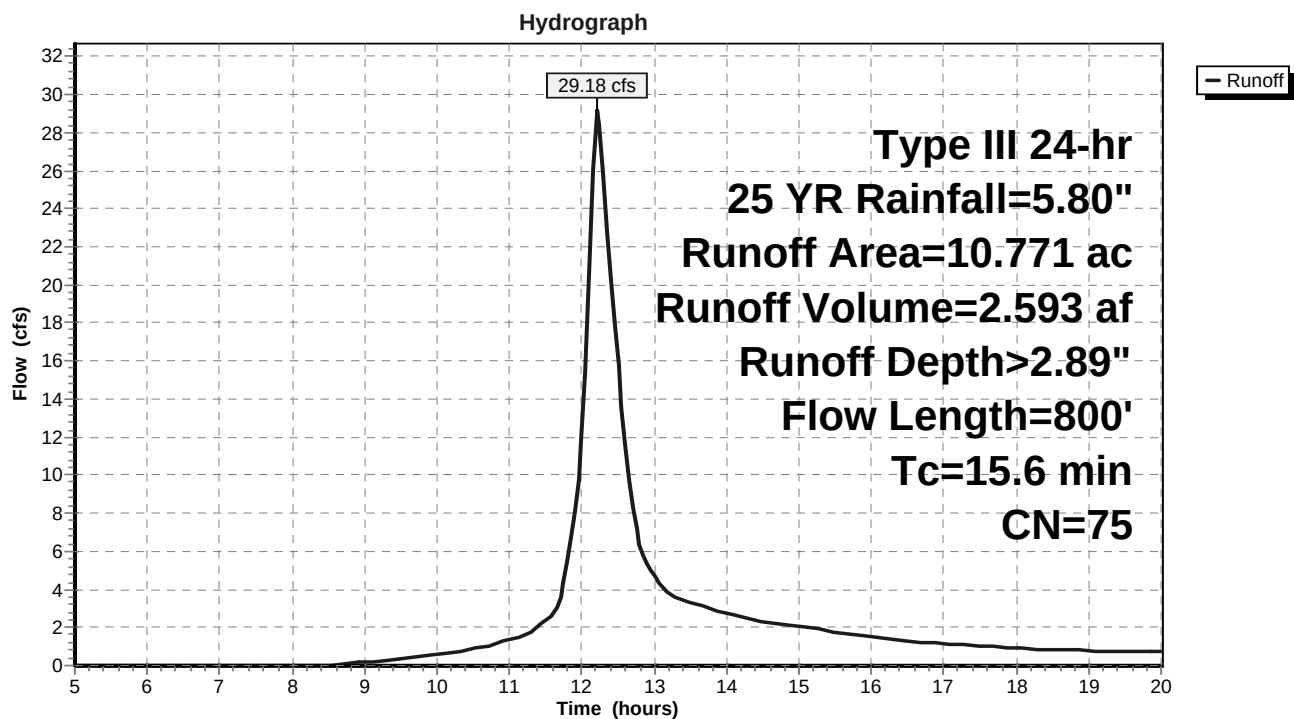
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Type III 24-hr 25 YR Rainfall=5.80"

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### Subcatchment 2S: Subcatchment 2



## Pre Development

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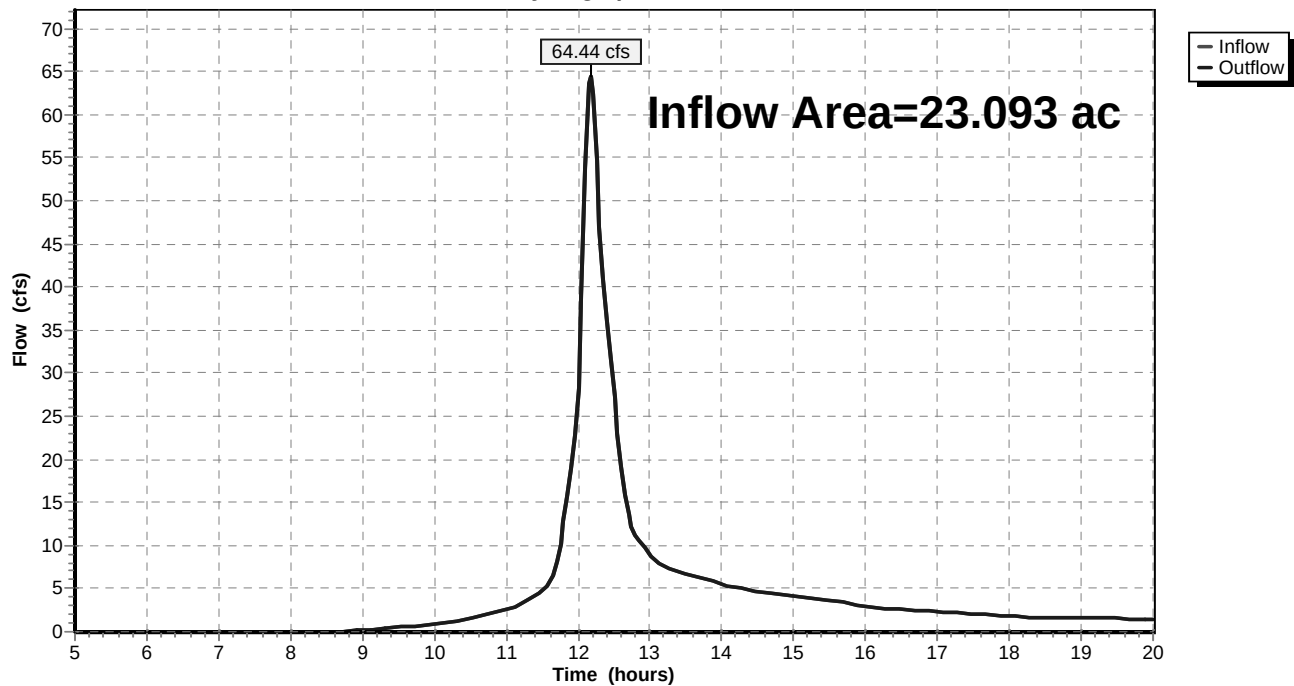
### Summary for Reach 4R: POI 1

Inflow Area = 23.093 ac, 31.06% Impervious, Inflow Depth > 2.71" for 25 YR event  
Inflow = 64.44 cfs @ 12.17 hrs, Volume= 5.215 af  
Outflow = 64.44 cfs @ 12.17 hrs, Volume= 5.215 af, Atten= 0%, Lag= 0.0 min

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

### Reach 4R: POI 1

Hydrograph



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Type III 24-hr 25 YR Rainfall=5.80"

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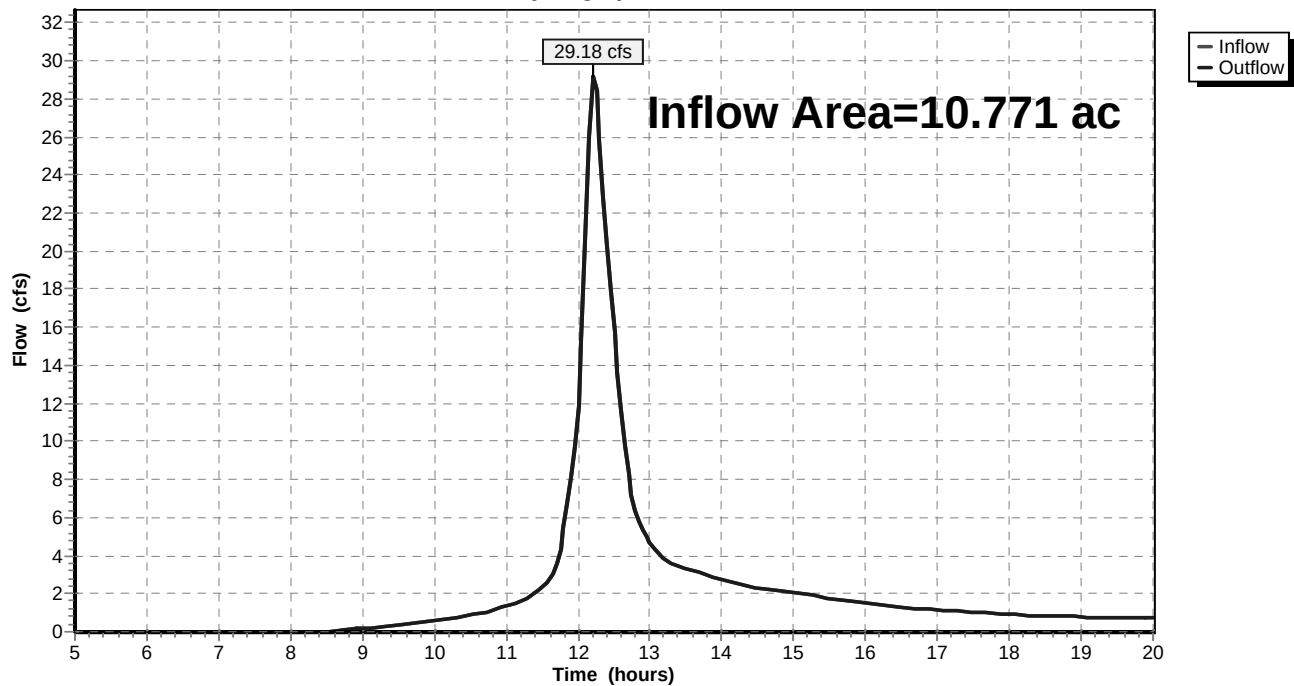
### Summary for Reach 5R: POI 2

Inflow Area = 10.771 ac, 20.98% Impervious, Inflow Depth > 2.89" for 25 YR event  
Inflow = 29.18 cfs @ 12.22 hrs, Volume= 2.593 af  
Outflow = 29.18 cfs @ 12.22 hrs, Volume= 2.593 af, Atten= 0%, Lag= 0.0 min

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

### Reach 5R: POI 2

Hydrograph



## **POST DEVELOPMENT**



## Post Development 2

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Type III 24-hr 2 YR Rainfall=3.10"

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

|                                       |                                                                                                                                                                 |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment1S: Subcatchment3</b>  | Runoff Area=21.404 ac 33.51% Impervious Runoff Depth>0.83"<br>Flow Length=1,365' Tc=11.8 min CN=73 Runoff=17.33 cfs 1.486 af                                    |
| <b>Subcatchment2S: Subcatchment2</b>  | Runoff Area=7.169 ac 36.52% Impervious Runoff Depth>0.93"<br>Flow Length=855' Tc=15.9 min CN=75 Runoff=5.99 cfs 0.558 af                                        |
| <b>Subcatchment6S: Subcatchment1</b>  | Runoff Area=2.737 ac 10.76% Impervious Runoff Depth>1.21"<br>Flow Length=610' Tc=25.6 min CN=80 Runoff=2.53 cfs 0.277 af                                        |
| <b>Subcatchment7S: Subcatchment6</b>  | Runoff Area=1.067 ac 65.62% Impervious Runoff Depth>2.12"<br>Flow Length=365' Tc=12.8 min CN=92 Runoff=2.21 cfs 0.189 af                                        |
| <b>Subcatchment9S: Subcatchment4</b>  | Runoff Area=0.569 ac 0.00% Impervious Runoff Depth>0.78"<br>Flow Length=240' Tc=30.9 min CN=72 Runoff=0.29 cfs 0.037 af                                         |
| <b>Subcatchment11S: Subcatchment5</b> | Runoff Area=0.865 ac 68.20% Impervious Runoff Depth>2.21"<br>Flow Length=250' Tc=21.5 min CN=93 Runoff=1.52 cfs 0.159 af                                        |
| <b>Subcatchment15S: Subcatchment5</b> | Runoff Area=0.865 ac 68.20% Impervious Runoff Depth>2.21"<br>Flow Length=250' Tc=21.5 min CN=93 Runoff=1.52 cfs 0.159 af                                        |
| <b>Subcatchment16S: Subcatchment1</b> | Runoff Area=2.737 ac 10.76% Impervious Runoff Depth>1.21"<br>Flow Length=610' Tc=25.6 min CN=80 Runoff=2.53 cfs 0.277 af                                        |
| <b>Subcatchment17S: Subcatchment6</b> | Runoff Area=1.067 ac 65.62% Impervious Runoff Depth>2.12"<br>Tc=11.8 min CN=92 Runoff=2.27 cfs 0.189 af                                                         |
| <b>Subcatchment18S: Subcatchment4</b> | Runoff Area=0.569 ac 0.00% Impervious Runoff Depth>0.78"<br>Tc=11.8 min CN=72 Runoff=0.43 cfs 0.037 af                                                          |
| <b>Subcatchment19S: Subcatchment5</b> | Runoff Area=0.709 ac 66.57% Impervious Runoff Depth>2.12"<br>Flow Length=250' Tc=21.5 min CN=92 Runoff=1.20 cfs 0.125 af                                        |
| <b>Subcatchment20S: Subcatchment6</b> | Runoff Area=0.968 ac 56.10% Impervious Runoff Depth>1.95"<br>Flow Length=365' Tc=12.8 min CN=90 Runoff=1.87 cfs 0.157 af                                        |
| <b>Reach 4R: POI 1</b>                | Inflow=19.30 cfs 1.680 af<br>Outflow=19.30 cfs 1.680 af                                                                                                         |
| <b>Reach 5R: POI 2</b>                | Inflow=9.19 cfs 0.956 af<br>Outflow=9.19 cfs 0.956 af                                                                                                           |
| <b>Reach 15R: SD System</b>           | Avg. Flow Depth=0.25' Max Vel=5.72 fps Inflow=1.13 cfs 0.121 af<br>18.0" Round Pipe n=0.013 L=50.0' S=0.0300 ' /' Capacity=18.19 cfs Outflow=1.13 cfs 0.121 af  |
| <b>Reach 16R: SD System</b>           | Avg. Flow Depth=0.30' Max Vel=7.52 fps Inflow=1.86 cfs 0.157 af<br>18.0" Round Pipe n=0.013 L=235.0' S=0.0431 ' /' Capacity=21.80 cfs Outflow=1.84 cfs 0.157 af |

## Post Development 2

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Type III 24-hr 2 YR Rainfall=3.10"

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### Pond 11P: Stormtech Chambers 2

Peak Elev=74.23' Storage=0.014 af Inflow=1.20 cfs 0.125 af  
Primary=0.03 cfs 0.030 af Secondary=1.10 cfs 0.092 af Outflow=1.13 cfs 0.121 af

### Pond 14P: Stormtech Chambers 1

Peak Elev=81.54' Storage=0.001 af Inflow=1.87 cfs 0.157 af  
Primary=0.02 cfs 0.002 af Secondary=1.84 cfs 0.155 af Outflow=1.86 cfs 0.157 af

**Total Runoff Area = 40.726 ac Runoff Volume = 3.649 af Average Runoff Depth = 1.08"**  
**65.69% Pervious = 26.752 ac 34.31% Impervious = 13.974 ac**

## Post Development 2

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Type III 24-hr 10 YR Rainfall=4.60"

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

|                                       |                                                                                                                                                                |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment1S: Subcatchment3</b>  | Runoff Area=21.404 ac 33.51% Impervious Runoff Depth>1.82"<br>Flow Length=1,365' Tc=11.8 min CN=73 Runoff=40.00 cfs 3.238 af                                   |
| <b>Subcatchment2S: Subcatchment2</b>  | Runoff Area=7.169 ac 36.52% Impervious Runoff Depth>1.96"<br>Flow Length=855' Tc=15.9 min CN=75 Runoff=13.07 cfs 1.173 af                                      |
| <b>Subcatchment6S: Subcatchment1</b>  | Runoff Area=2.737 ac 10.76% Impervious Runoff Depth>2.36"<br>Flow Length=610' Tc=25.6 min CN=80 Runoff=4.95 cfs 0.538 af                                       |
| <b>Subcatchment7S: Subcatchment6</b>  | Runoff Area=1.067 ac 65.62% Impervious Runoff Depth>3.49"<br>Flow Length=365' Tc=12.8 min CN=92 Runoff=3.54 cfs 0.310 af                                       |
| <b>Subcatchment9S: Subcatchment4</b>  | Runoff Area=0.569 ac 0.00% Impervious Runoff Depth>1.73"<br>Flow Length=240' Tc=30.9 min CN=72 Runoff=0.69 cfs 0.082 af                                        |
| <b>Subcatchment11S: Subcatchment5</b> | Runoff Area=0.865 ac 68.20% Impervious Runoff Depth>3.58"<br>Flow Length=250' Tc=21.5 min CN=93 Runoff=2.40 cfs 0.258 af                                       |
| <b>Subcatchment15S: Subcatchment5</b> | Runoff Area=0.865 ac 68.20% Impervious Runoff Depth>3.58"<br>Flow Length=250' Tc=21.5 min CN=93 Runoff=2.40 cfs 0.258 af                                       |
| <b>Subcatchment16S: Subcatchment1</b> | Runoff Area=2.737 ac 10.76% Impervious Runoff Depth>2.36"<br>Flow Length=610' Tc=25.6 min CN=80 Runoff=4.95 cfs 0.538 af                                       |
| <b>Subcatchment17S: Subcatchment6</b> | Runoff Area=1.067 ac 65.62% Impervious Runoff Depth>3.49"<br>Tc=11.8 min CN=92 Runoff=3.64 cfs 0.311 af                                                        |
| <b>Subcatchment18S: Subcatchment4</b> | Runoff Area=0.569 ac 0.00% Impervious Runoff Depth>1.74"<br>Tc=11.8 min CN=72 Runoff=1.02 cfs 0.083 af                                                         |
| <b>Subcatchment19S: Subcatchment5</b> | Runoff Area=0.709 ac 66.57% Impervious Runoff Depth>3.48"<br>Flow Length=250' Tc=21.5 min CN=92 Runoff=1.93 cfs 0.206 af                                       |
| <b>Subcatchment20S: Subcatchment6</b> | Runoff Area=0.968 ac 56.10% Impervious Runoff Depth>3.29"<br>Flow Length=365' Tc=12.8 min CN=90 Runoff=3.08 cfs 0.266 af                                       |
| <b>Reach 4R: POI 1</b>                | Inflow=43.09 cfs 3.585 af<br>Outflow=43.09 cfs 3.585 af                                                                                                        |
| <b>Reach 5R: POI 2</b>                | Inflow=18.88 cfs 1.912 af<br>Outflow=18.88 cfs 1.912 af                                                                                                        |
| <b>Reach 15R: SD System</b>           | Avg. Flow Depth=0.32' Max Vel=6.54 fps Inflow=1.78 cfs 0.201 af<br>18.0" Round Pipe n=0.013 L=50.0' S=0.0300 '/' Capacity=18.19 cfs Outflow=1.78 cfs 0.201 af  |
| <b>Reach 16R: SD System</b>           | Avg. Flow Depth=0.37' Max Vel=8.54 fps Inflow=2.86 cfs 0.265 af<br>18.0" Round Pipe n=0.013 L=235.0' S=0.0431 '/' Capacity=21.80 cfs Outflow=2.86 cfs 0.265 af |

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Type III 24-hr 10 YR Rainfall=4.60"

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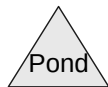
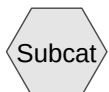
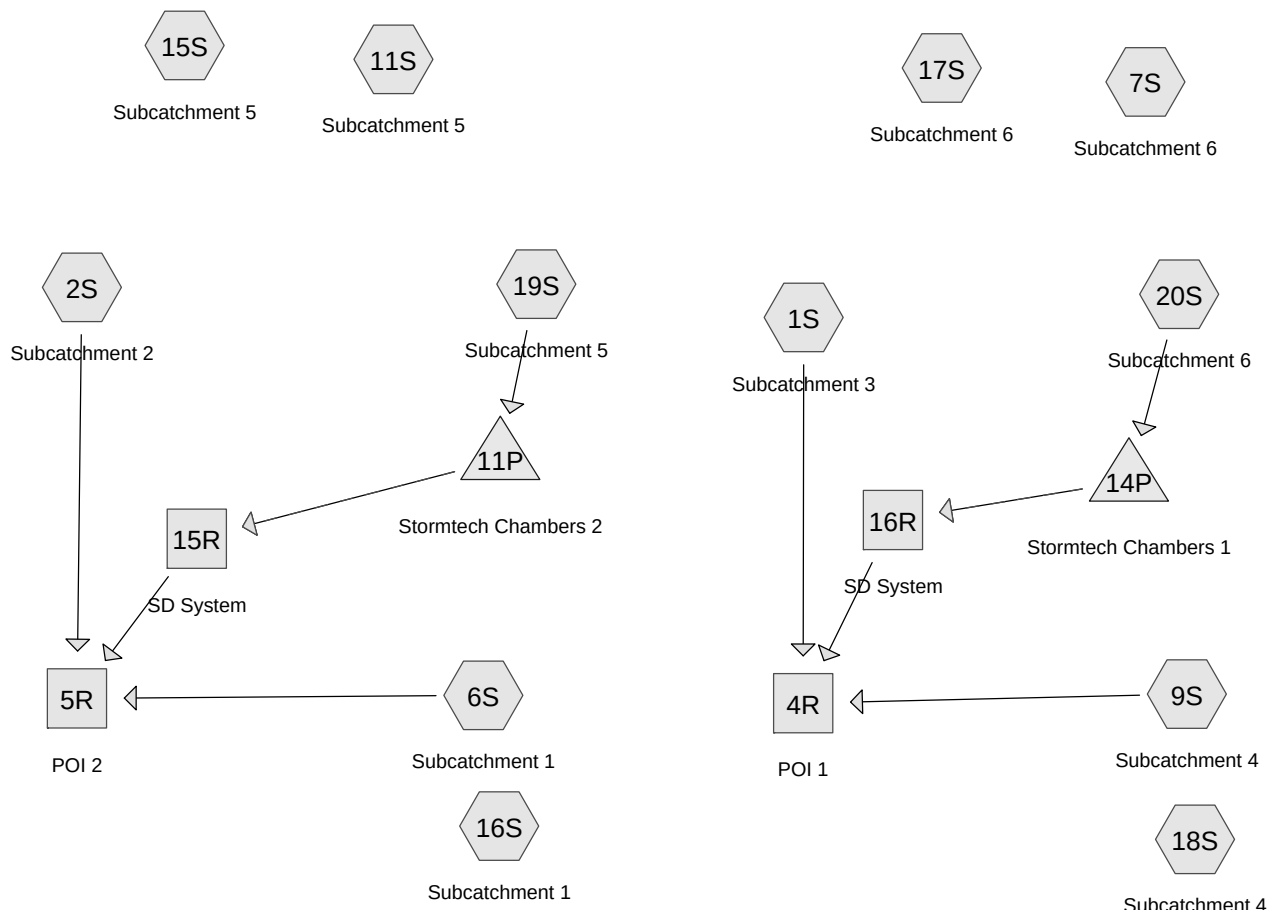
### Pond 11P: Stormtech Chambers 2

Peak Elev=74.56' Storage=0.019 af Inflow=1.93 cfs 0.206 af  
Primary=0.03 cfs 0.033 af Secondary=1.75 cfs 0.168 af Outflow=1.78 cfs 0.201 af

### Pond 14P: Stormtech Chambers 1

Peak Elev=81.80' Storage=0.003 af Inflow=3.08 cfs 0.266 af  
Primary=0.03 cfs 0.003 af Secondary=2.83 cfs 0.262 af Outflow=2.86 cfs 0.265 af

**Total Runoff Area = 40.726 ac Runoff Volume = 7.260 af Average Runoff Depth = 2.14"**  
**65.69% Pervious = 26.752 ac 34.31% Impervious = 13.974 ac**



## Post Development 2

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Type III 24-hr 25 YR Rainfall=5.80"

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

**Subcatchment1S: Subcatchment3** Runoff Area=21.404 ac 33.51% Impervious Runoff Depth>2.71"  
Flow Length=1,365' Tc=11.8 min CN=73 Runoff=60.09 cfs 4.834 af

**Subcatchment2S: Subcatchment2** Runoff Area=7.169 ac 36.52% Impervious Runoff Depth>2.89"  
Flow Length=855' Tc=15.9 min CN=75 Runoff=19.27 cfs 1.726 af

**Subcatchment6S: Subcatchment1** Runoff Area=2.737 ac 10.76% Impervious Runoff Depth>3.35"  
Flow Length=610' Tc=25.6 min CN=80 Runoff=6.99 cfs 0.765 af

**Subcatchment7S: Subcatchment6** Runoff Area=1.067 ac 65.62% Impervious Runoff Depth>4.60"  
Flow Length=365' Tc=12.8 min CN=92 Runoff=4.60 cfs 0.409 af

**Subcatchment9S: Subcatchment4** Runoff Area=0.569 ac 0.00% Impervious Runoff Depth>2.60"  
Flow Length=240' Tc=30.9 min CN=72 Runoff=1.05 cfs 0.123 af

**Subcatchment11S: Subcatchment5** Runoff Area=0.865 ac 68.20% Impervious Runoff Depth>4.69"  
Flow Length=250' Tc=21.5 min CN=93 Runoff=3.10 cfs 0.338 af

**Subcatchment15S: Subcatchment5** Runoff Area=0.865 ac 68.20% Impervious Runoff Depth>4.69"  
Flow Length=250' Tc=21.5 min CN=93 Runoff=3.10 cfs 0.338 af

**Subcatchment16S: Subcatchment1** Runoff Area=2.737 ac 10.76% Impervious Runoff Depth>3.35"  
Flow Length=610' Tc=25.6 min CN=80 Runoff=6.99 cfs 0.765 af

**Subcatchment17S: Subcatchment6** Runoff Area=1.067 ac 65.62% Impervious Runoff Depth>4.60"  
Tc=11.8 min CN=92 Runoff=4.73 cfs 0.409 af

**Subcatchment18S: Subcatchment4** Runoff Area=0.569 ac 0.00% Impervious Runoff Depth>2.62"  
Tc=11.8 min CN=72 Runoff=1.54 cfs 0.124 af

**Subcatchment19S: Subcatchment5** Runoff Area=0.709 ac 66.57% Impervious Runoff Depth>4.59"  
Flow Length=250' Tc=21.5 min CN=92 Runoff=2.51 cfs 0.271 af

**Subcatchment20S: Subcatchment6** Runoff Area=0.968 ac 56.10% Impervious Runoff Depth>4.39"  
Flow Length=365' Tc=12.8 min CN=90 Runoff=4.04 cfs 0.354 af

**Reach 4R: POI 1** Inflow=63.80 cfs 5.311 af  
Outflow=63.80 cfs 5.311 af

**Reach 5R: POI 2** Inflow=27.16 cfs 2.757 af  
Outflow=27.16 cfs 2.757 af

**Reach 15R: SD System** Avg. Flow Depth=0.36' Max Vel=7.07 fps Inflow=2.33 cfs 0.266 af  
18.0" Round Pipe n=0.013 L=50.0' S=0.0300 '/' Capacity=18.19 cfs Outflow=2.33 cfs 0.266 af

**Reach 16R: SD System** Avg. Flow Depth=0.40' Max Vel=8.95 fps Inflow=3.39 cfs 0.354 af  
18.0" Round Pipe n=0.013 L=235.0' S=0.0431 '/' Capacity=21.80 cfs Outflow=3.38 cfs 0.354 af

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Type III 24-hr 25 YR Rainfall=5.80"

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### Pond 11P: Stormtech Chambers 2

Peak Elev=74.87' Storage=0.023 af Inflow=2.51 cfs 0.271 af  
Primary=0.03 cfs 0.035 af Secondary=2.30 cfs 0.231 af Outflow=2.33 cfs 0.266 af

### Pond 14P: Stormtech Chambers 1

Peak Elev=82.22' Storage=0.010 af Inflow=4.04 cfs 0.354 af  
Primary=0.03 cfs 0.004 af Secondary=3.36 cfs 0.350 af Outflow=3.39 cfs 0.354 af

**Total Runoff Area = 40.726 ac Runoff Volume = 10.456 af Average Runoff Depth = 3.08"**  
**65.69% Pervious = 26.752 ac 34.31% Impervious = 13.974 ac**



**Post Development 2**

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Type III 24-hr 25 YR Rainfall=5.80"

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**Summary for Subcatchment 1S: Subcatchment 3**

Runoff = 60.09 cfs @ 12.17 hrs, Volume= 4.834 af, Depth&gt; 2.71"

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

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 10.530    | 61 | 1/4 acre lots, 38% imp, HSG A |
| 0.979     | 81 | 1/3 acre lots, 30% imp, HSG C |
| 9.244     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 0.345     | 72 | 1/3 acre lots, 30% imp, HSG B |
| 0.125     | 70 | Woods, Good, HSG C            |
| 0.181     | 80 | >75% Grass cover, Good, HSG D |
| 21.404    | 73 | Weighted Average              |
| 14.232    |    | 66.49% Pervious Area          |
| 7.172     |    | 33.51% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                              |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------------------------------------------------------------------------------------|
| 7.9      | 150           | 0.0800        | 0.32              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"                                                                |
| 3.0      | 700           | 0.0680        | 3.91              |                | <b>Shallow Concentrated Flow, B-C</b><br>Grassed Waterway Kv= 15.0 fps                                                   |
| 0.3      | 100           | 0.0050        | 5.91              | 29.00          | <b>Pipe Channel, C-D</b><br>30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63'<br>n= 0.013 Corrugated PE, smooth interior     |
| 0.2      | 243           | 0.0570        | 16.89             | 101.31         | <b>Channel Flow, D-E</b><br>Area= 6.0 sf Perim= 5.6' r= 1.07'<br>n= 0.022 Earth, clean & straight                        |
| 0.2      | 92            | 0.0100        | 9.44              | 66.70          | <b>Pipe Channel, E-F</b><br>36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75'<br>n= 0.013 Concrete pipe, bends & connections |
| 0.2      | 80            | 0.0150        | 8.66              | 51.97          | <b>Channel Flow, F-G</b><br>Area= 6.0 sf Perim= 5.6' r= 1.07'<br>n= 0.022 Earth, clean & straight                        |
| 11.8     | 1,365         | Total         |                   |                |                                                                                                                          |

## Post Development 2

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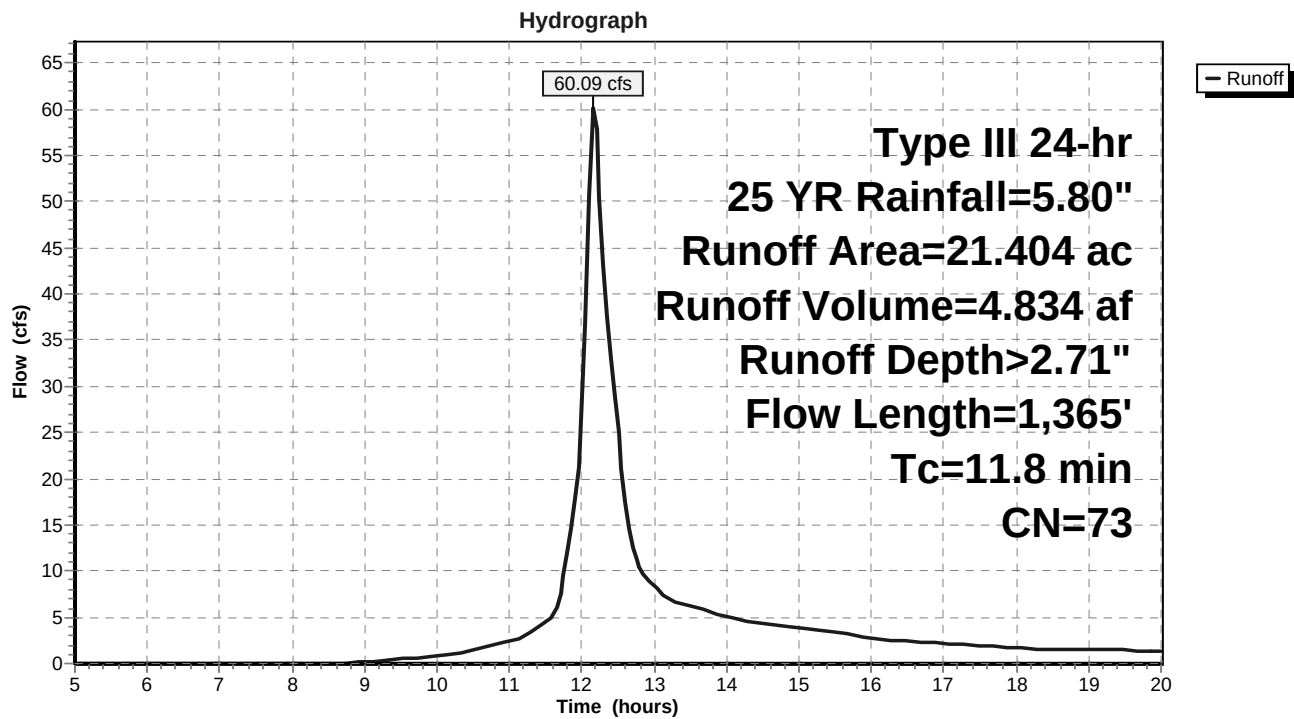
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Type III 24-hr 25 YR Rainfall=5.80"

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### Subcatchment 1S: Subcatchment 3



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 2S: Subcatchment 2

Runoff = 19.27 cfs @ 12.22 hrs, Volume= 1.726 af, Depth> 2.89"

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

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 3.212     | 61 | 1/4 acre lots, 38% imp, HSG A |
| 0.192     | 80 | 1/2 acre lots, 25% imp, HSG C |
| 2.607     | 87 | 1/4 acre lots, 38% imp, HSG D |
| 0.141     | 83 | 1/4 acre lots, 38% imp, HSG C |
| 1.017     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 7.169     | 75 | Weighted Average              |
| 4.551     |    | 63.48% Pervious Area          |
| 2.618     |    | 36.52% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------------------------------------|
| 8.9      | 150           | 0.0600        | 0.28              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"                                                            |
| 6.3      | 340           | 0.0325        | 0.90              |                | <b>Shallow Concentrated Flow, B-C</b><br>Woodland Kv= 5.0 fps                                                        |
| 0.7      | 365           | 0.0204        | 8.49              | 15.00          | <b>Pipe Channel, C-D</b><br>18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38'<br>n= 0.013 Corrugated PE, smooth interior |
| 15.9     | 855           | Total         |                   |                |                                                                                                                      |

## Post Development 2

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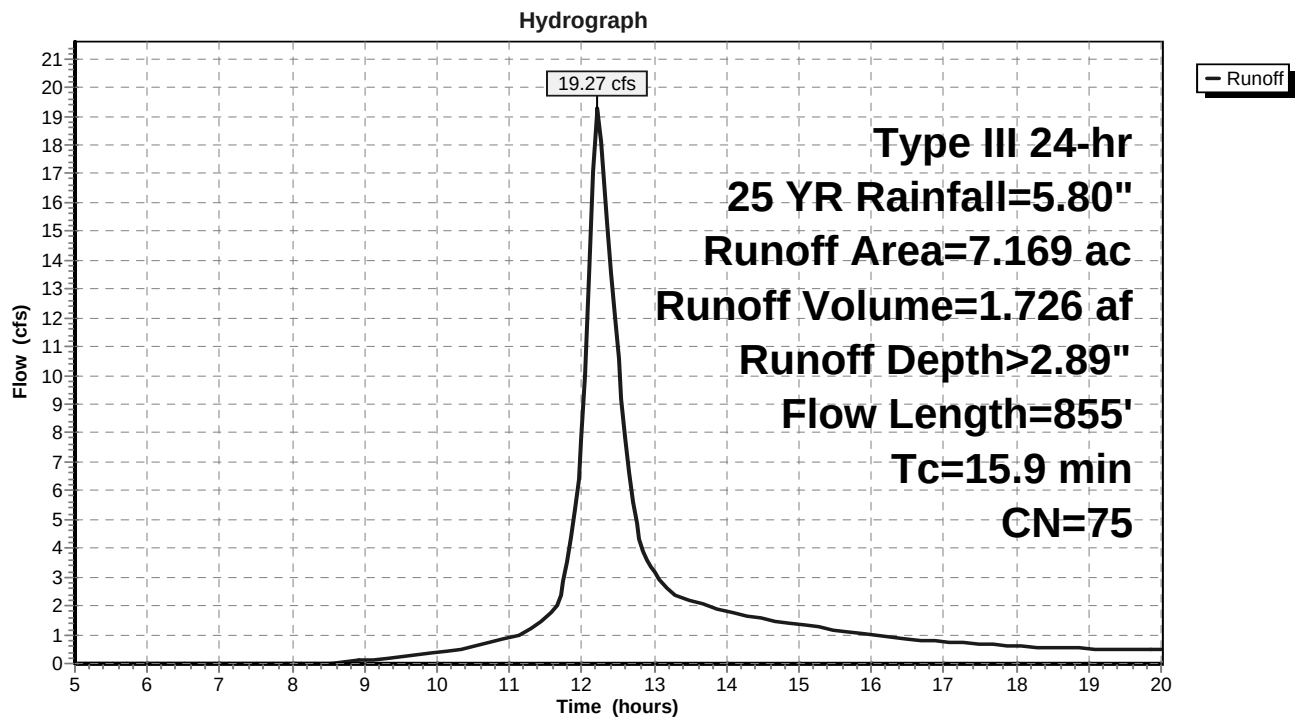
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Type III 24-hr 25 YR Rainfall=5.80"

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### Subcatchment 2S: Subcatchment 2



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 6S: Subcatchment 1

Runoff = 6.99 cfs @ 12.35 hrs, Volume= 0.765 af, Depth> 3.35"

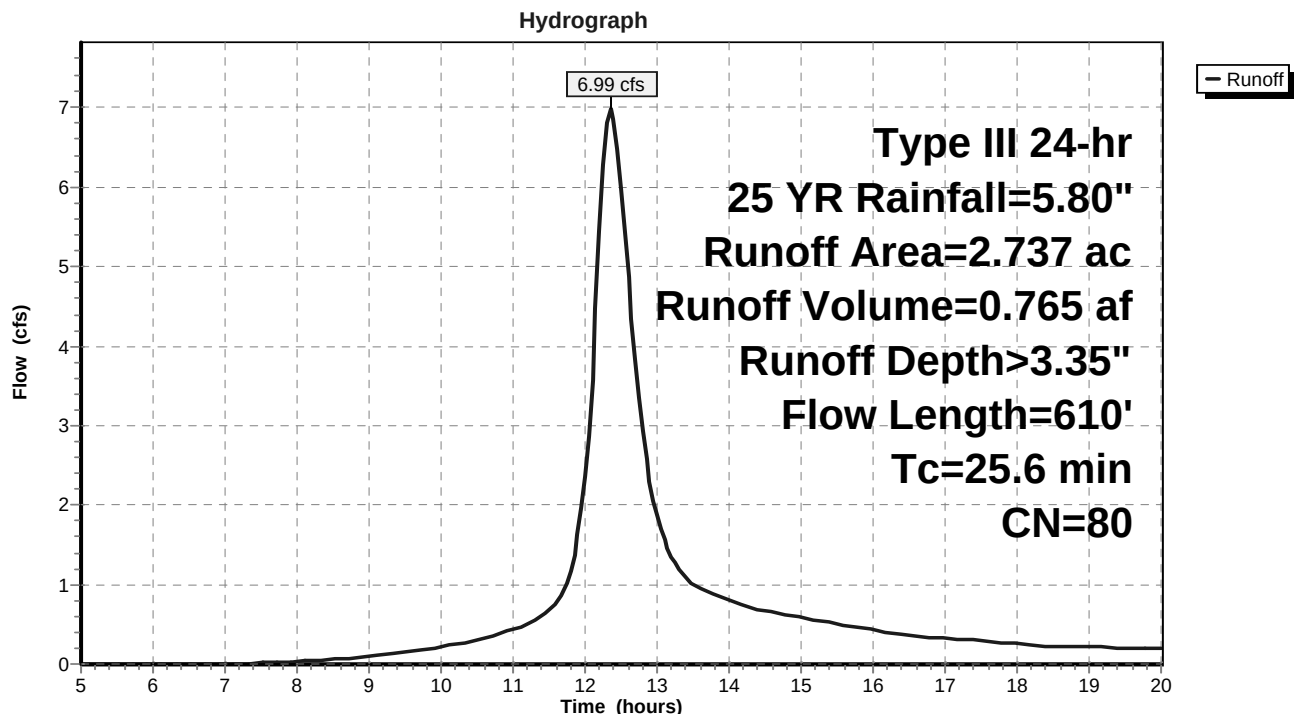
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 1.954     | 77 | Woods, Good, HSG D            |
| 0.698     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 0.085     | 98 | Paved roads w/curbs & sewers  |
| 2.737     | 80 | Weighted Average              |
| 2.443     |    | 89.24% Pervious Area          |
| 0.294     |    | 10.76% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------------------------------------|
| 18.3     | 100           | 0.0310        | 0.09              |                | <b>Sheet Flow, A-B</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                 |
| 6.6      | 140           | 0.0050        | 0.35              |                | <b>Shallow Concentrated Flow, B-C</b><br>Woodland Kv= 5.0 fps                                                        |
| 0.7      | 370           | 0.0200        | 8.41              | 14.86          | <b>Pipe Channel, C-D</b><br>18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38'<br>n= 0.013 Corrugated PE, smooth interior |
| 25.6     | 610           | Total         |                   |                |                                                                                                                      |

### Subcatchment 6S: Subcatchment 1



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 7S: Subcatchment 6

Runoff = 4.60 cfs @ 12.17 hrs, Volume= 0.409 af, Depth> 4.60"

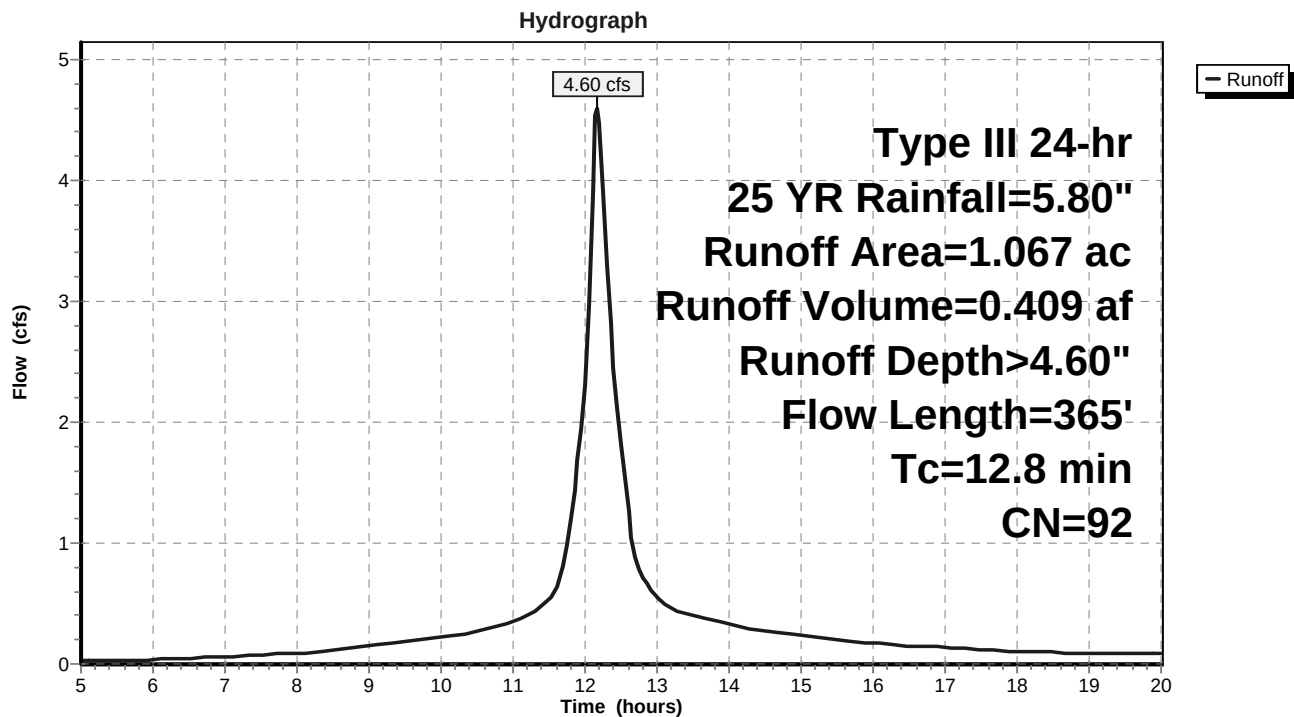
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.543     | 98 | Paved roads w/curbs & sewers  |
| 0.524     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 1.067     | 92 | Weighted Average              |
| 0.367     |    | 34.38% Pervious Area          |
| 0.700     |    | 65.62% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                            |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------|
| 11.0     | 150           | 0.0350        | 0.23              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"              |
| 0.2      | 15            | 0.0050        | 1.06              |                | <b>Shallow Concentrated Flow, B-C</b><br>Grassed Waterway Kv= 15.0 fps |
| 1.6      | 200           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, C-D</b><br>Paved Kv= 20.3 fps            |
| 12.8     | 365           | Total         |                   |                |                                                                        |

### Subcatchment 7S: Subcatchment 6



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 9S: Subcatchment 4

Runoff = 1.05 cfs @ 12.44 hrs, Volume= 0.123 af, Depth> 2.60"

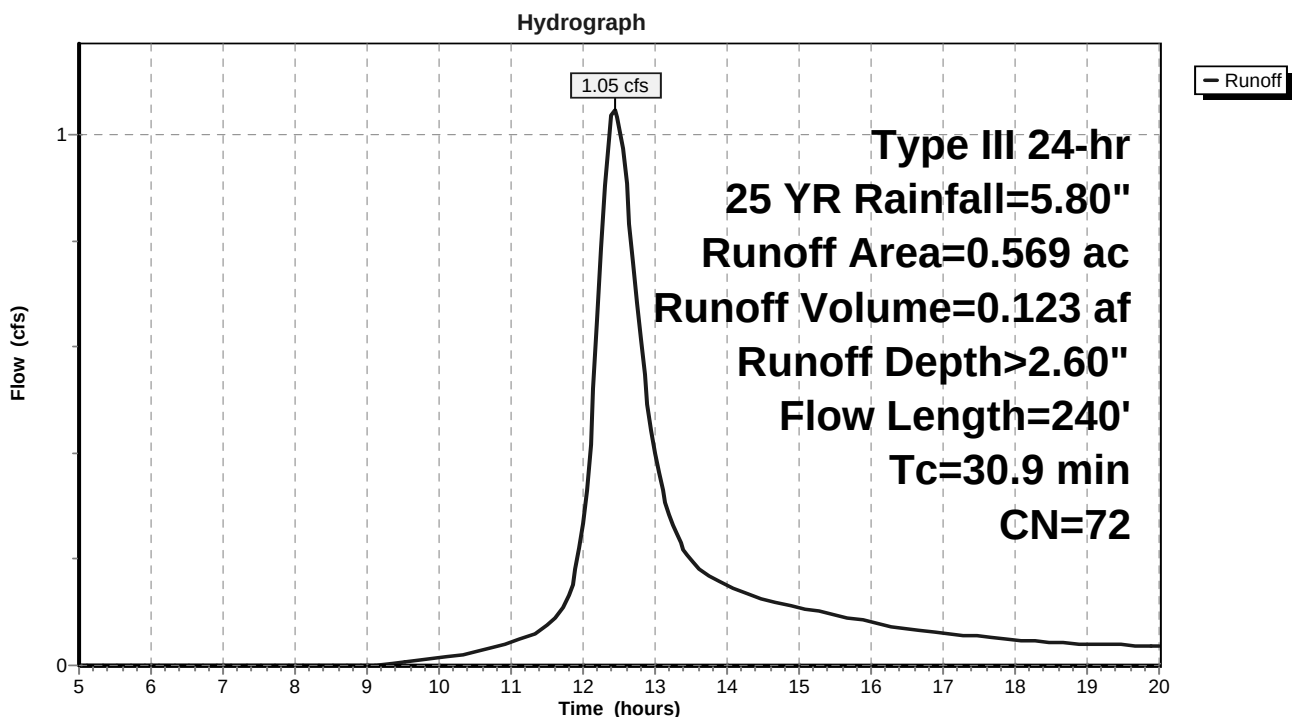
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description           |
|-----------|----|-----------------------|
| 0.379     | 70 | Woods, Good, HSG C    |
| 0.190     | 77 | Woods, Good, HSG D    |
| 0.569     | 72 | Weighted Average      |
| 0.569     |    | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                          |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------|
| 30.2     | 150           | 0.0200        | 0.08              |                | <b>Sheet Flow, A-B</b><br>Woods: Light underbrush n= 0.400 P2= 3.10" |
| 0.7      | 90            | 0.1800        | 2.12              |                | <b>Shallow Concentrated Flow, B-G</b><br>Woodland Kv= 5.0 fps        |
| 30.9     | 240           | Total         |                   |                |                                                                      |

### Subcatchment 9S: Subcatchment 4





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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 11S: Subcatchment 5

Runoff = 3.10 cfs @ 12.28 hrs, Volume= 0.338 af, Depth> 4.69"

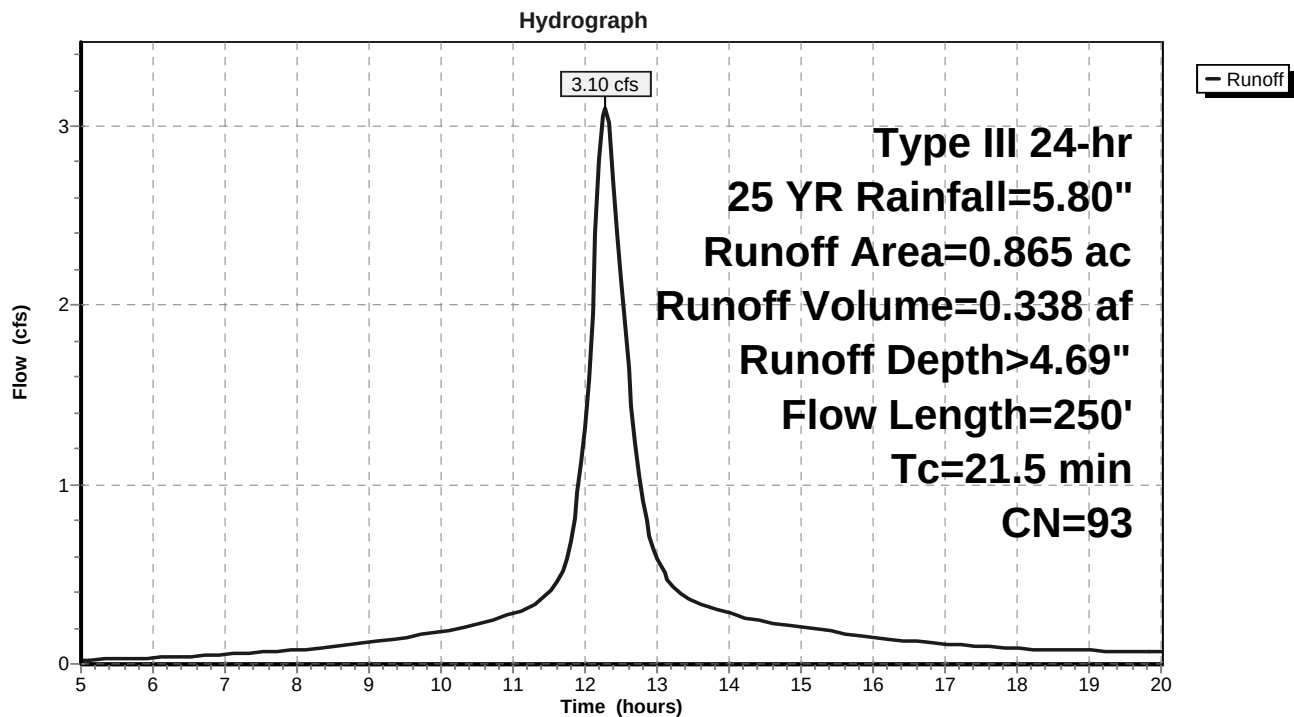
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.472     | 98 | Paved roads w/curbs & sewers  |
| 0.393     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 0.865     | 93 | Weighted Average              |
| 0.275     |    | 31.80% Pervious Area          |
| 0.590     |    | 68.20% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                 |
|----------|---------------|---------------|-------------------|----------------|-------------------------------------------------------------|
| 20.9     | 125           | 0.0125        | 0.10              |                | <b>Sheet Flow, A-B</b><br>Grass: Dense n= 0.240 P2= 3.10"   |
| 0.6      | 125           | 0.0325        | 3.66              |                | <b>Shallow Concentrated Flow, B-C</b><br>Paved Kv= 20.3 fps |
| 21.5     | 250           | Total         |                   |                |                                                             |

### Subcatchment 11S: Subcatchment 5



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 15S: Subcatchment 5

Runoff = 3.10 cfs @ 12.28 hrs, Volume= 0.338 af, Depth> 4.69"

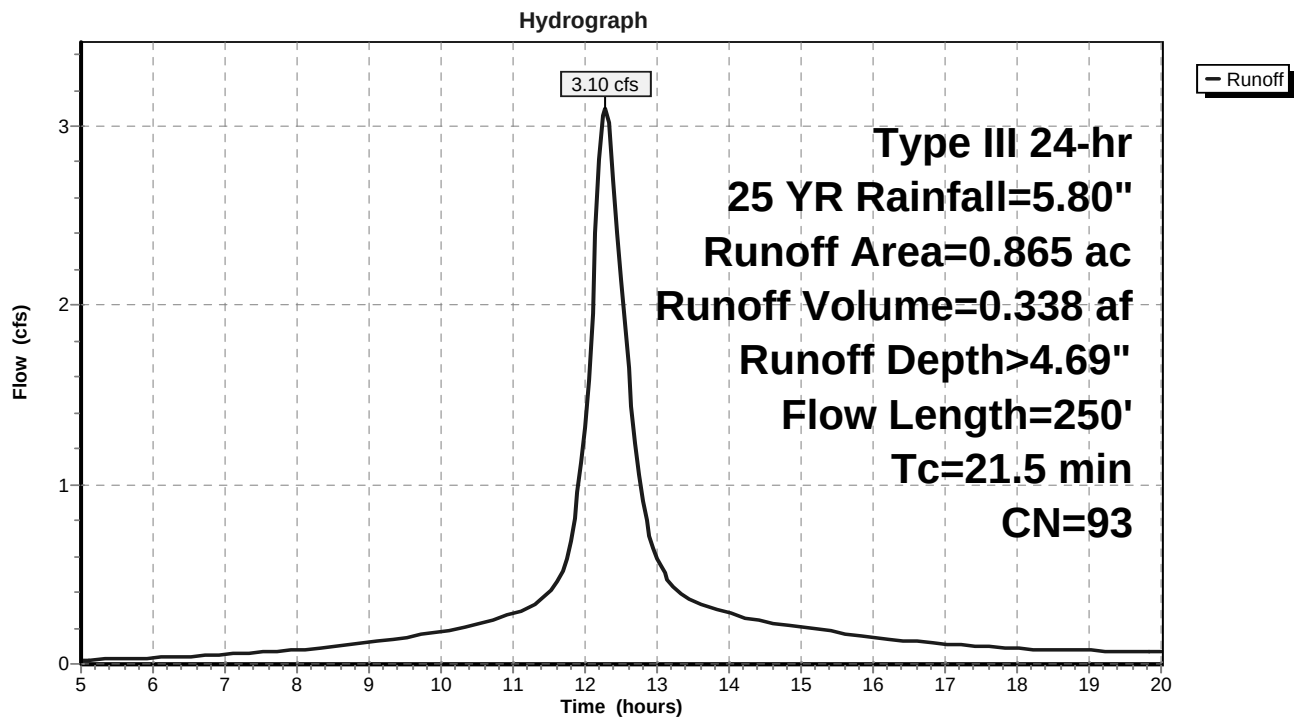
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.472     | 98 | Paved roads w/curbs & sewers  |
| 0.393     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 0.865     | 93 | Weighted Average              |
| 0.275     |    | 31.80% Pervious Area          |
| 0.590     |    | 68.20% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                 |
|----------|---------------|---------------|-------------------|----------------|-------------------------------------------------------------|
| 20.9     | 125           | 0.0125        | 0.10              |                | <b>Sheet Flow, A-B</b><br>Grass: Dense n= 0.240 P2= 3.10"   |
| 0.6      | 125           | 0.0325        | 3.66              |                | <b>Shallow Concentrated Flow, B-C</b><br>Paved Kv= 20.3 fps |
| 21.5     | 250           | Total         |                   |                |                                                             |

### Subcatchment 15S: Subcatchment 5



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 16S: Subcatchment 1

Runoff = 6.99 cfs @ 12.35 hrs, Volume= 0.765 af, Depth> 3.35"

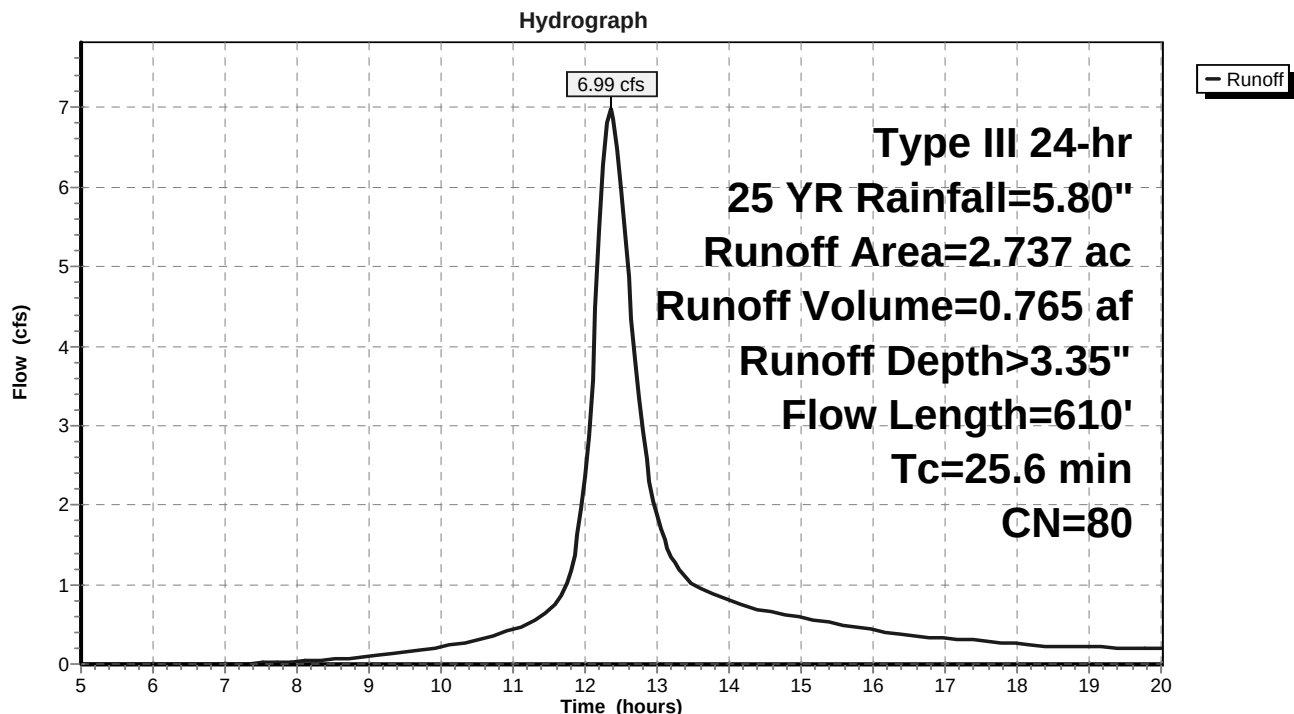
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 1.954     | 77 | Woods, Good, HSG D            |
| 0.698     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 0.085     | 98 | Paved roads w/curbs & sewers  |
| 2.737     | 80 | Weighted Average              |
| 2.443     |    | 89.24% Pervious Area          |
| 0.294     |    | 10.76% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                          |
|----------|---------------|---------------|-------------------|----------------|----------------------------------------------------------------------------------------------------------------------|
| 18.3     | 100           | 0.0310        | 0.09              |                | <b>Sheet Flow, A-B</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                 |
| 6.6      | 140           | 0.0050        | 0.35              |                | <b>Shallow Concentrated Flow, B-C</b><br>Woodland Kv= 5.0 fps                                                        |
| 0.7      | 370           | 0.0200        | 8.41              | 14.86          | <b>Pipe Channel, C-D</b><br>18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38'<br>n= 0.013 Corrugated PE, smooth interior |
| 25.6     | 610           | Total         |                   |                |                                                                                                                      |

### Subcatchment 16S: Subcatchment 1



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 17S: Subcatchment 6

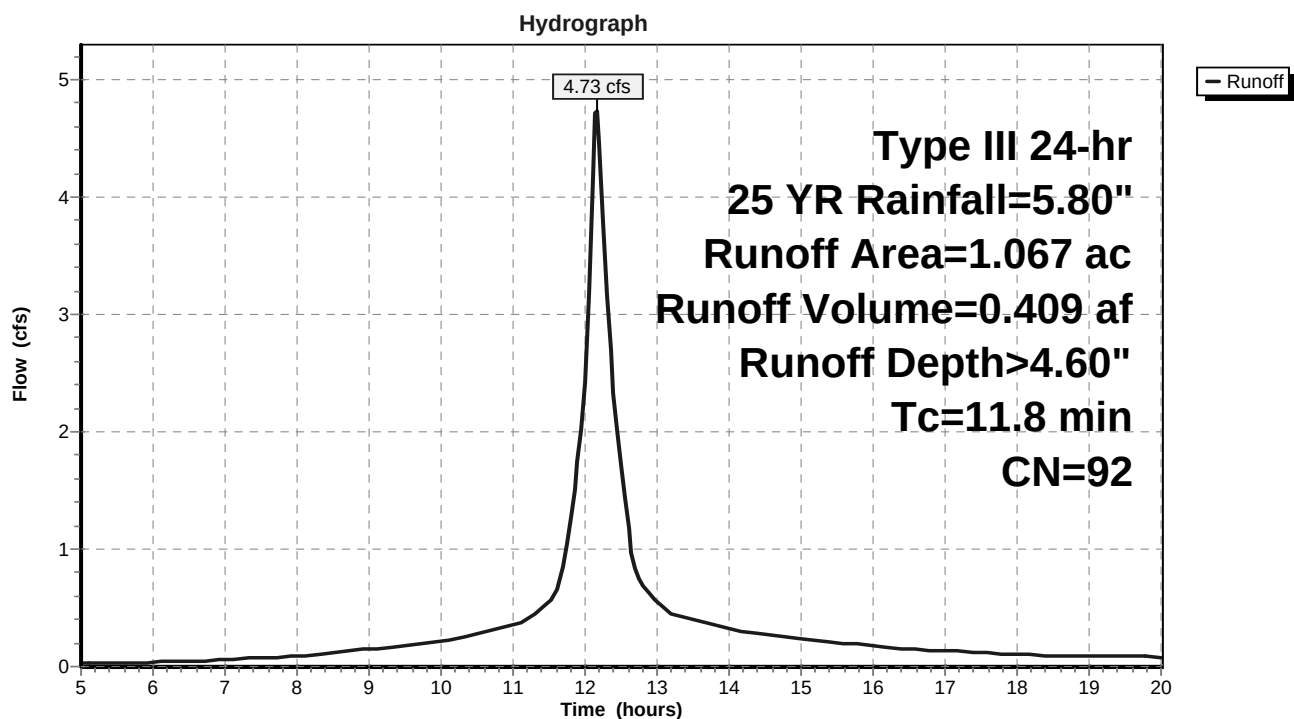
Runoff = 4.73 cfs @ 12.16 hrs, Volume= 0.409 af, Depth> 4.60"

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

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.543     | 98 | Paved roads w/curbs & sewers  |
| 0.524     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 1.067     | 92 | Weighted Average              |
| 0.367     |    | 34.38% Pervious Area          |
| 0.700     |    | 65.62% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description   |
|-------------|------------------|------------------|----------------------|-------------------|---------------|
| 11.8        |                  |                  |                      |                   | Direct Entry, |

### Subcatchment 17S: Subcatchment 6



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### Summary for Subcatchment 18S: Subcatchment 4

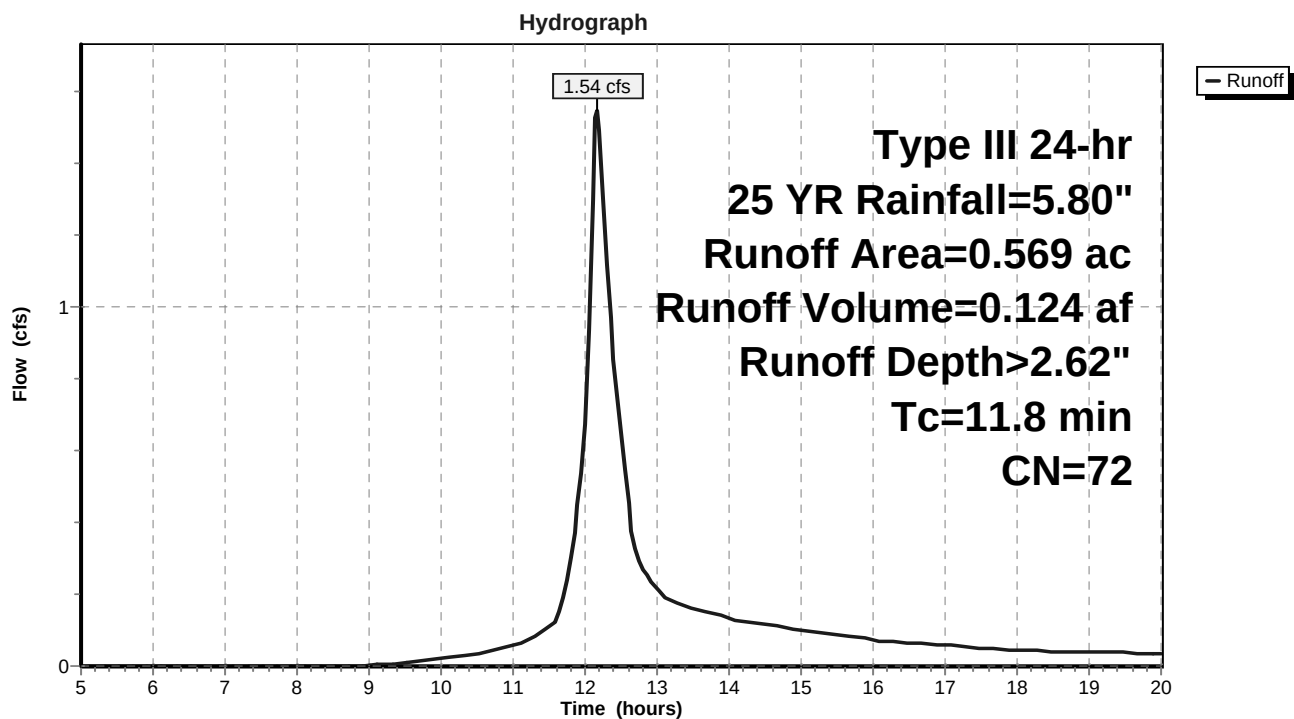
Runoff = 1.54 cfs @ 12.17 hrs, Volume= 0.124 af, Depth> 2.62"

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

| Area (ac) | CN | Description           |
|-----------|----|-----------------------|
| 0.379     | 70 | Woods, Good, HSG C    |
| 0.190     | 77 | Woods, Good, HSG D    |
| 0.569     | 72 | Weighted Average      |
| 0.569     |    | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description   |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 11.8     |               |               |                   |                | Direct Entry, |

### Subcatchment 18S: Subcatchment 4



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 19S: Subcatchment 5

Runoff = 2.51 cfs @ 12.28 hrs, Volume= 0.271 af, Depth> 4.59"

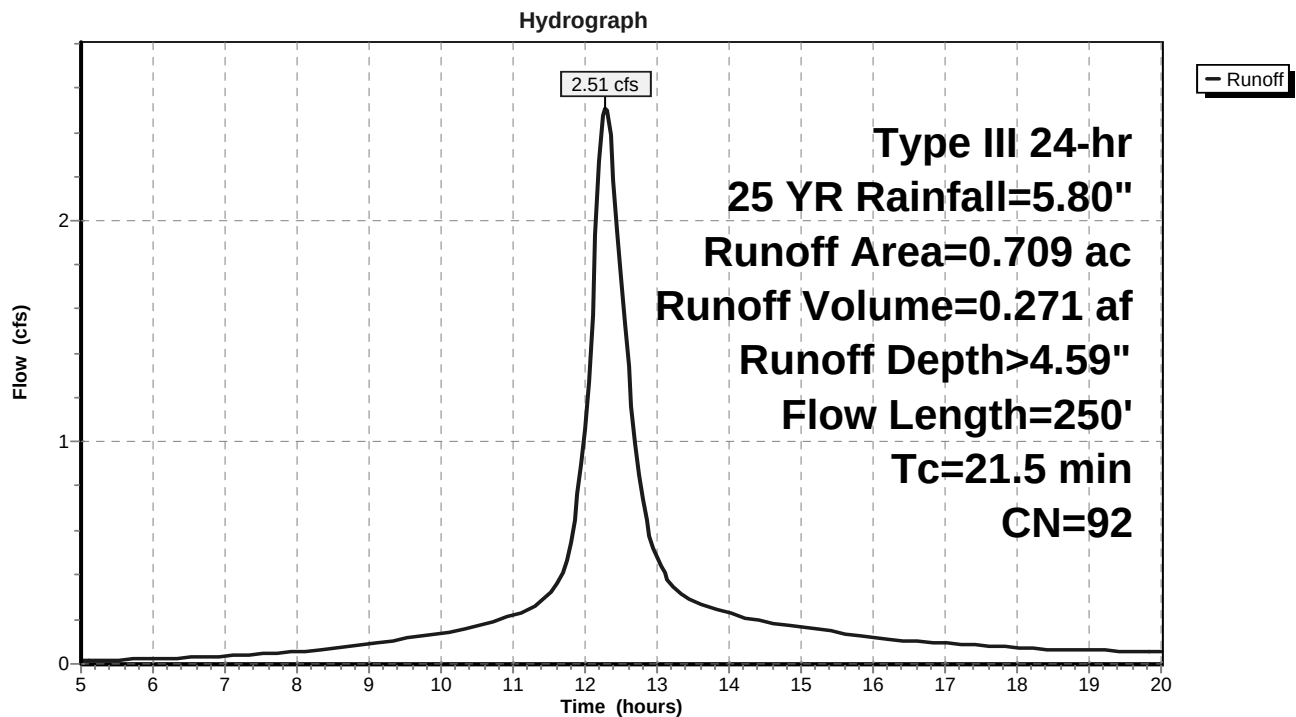
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.472     | 98 | Paved roads w/curbs & sewers  |
| 0.237     | 80 | >75% Grass cover, Good, HSG D |
| 0.709     | 92 | Weighted Average              |
| 0.237     |    | 33.43% Pervious Area          |
| 0.472     |    | 66.57% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                 |
|----------|---------------|---------------|-------------------|----------------|-------------------------------------------------------------|
| 20.9     | 125           | 0.0125        | 0.10              |                | <b>Sheet Flow, A-B</b><br>Grass: Dense n= 0.240 P2= 3.10"   |
| 0.6      | 125           | 0.0325        | 3.66              |                | <b>Shallow Concentrated Flow, B-C</b><br>Paved Kv= 20.3 fps |
| 21.5     | 250           | Total         |                   |                |                                                             |

### Subcatchment 19S: Subcatchment 5



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 20S: Subcatchment 6

Runoff = 4.04 cfs @ 12.17 hrs, Volume= 0.354 af, Depth> 4.39"

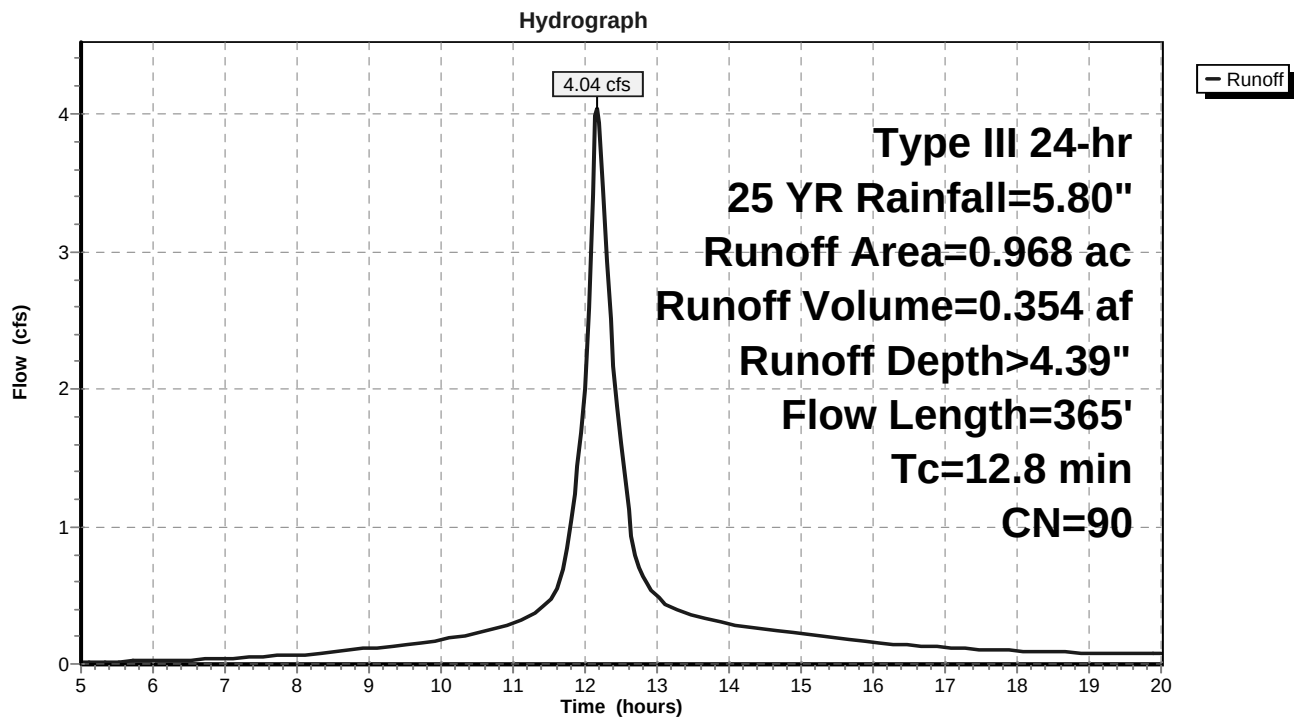
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.543     | 98 | Paved roads w/curbs & sewers  |
| 0.425     | 80 | >75% Grass cover, Good, HSG D |
| 0.968     | 90 | Weighted Average              |
| 0.425     |    | 43.90% Pervious Area          |
| 0.543     |    | 56.10% Impervious Area        |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                            |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------|
| 11.0     | 150           | 0.0350        | 0.23              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"              |
| 0.2      | 15            | 0.0050        | 1.06              |                | <b>Shallow Concentrated Flow, B-C</b><br>Grassed Waterway Kv= 15.0 fps |
| 1.6      | 200           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, C-D</b><br>Paved Kv= 20.3 fps            |
| 12.8     | 365           | Total         |                   |                |                                                                        |

### Subcatchment 20S: Subcatchment 6





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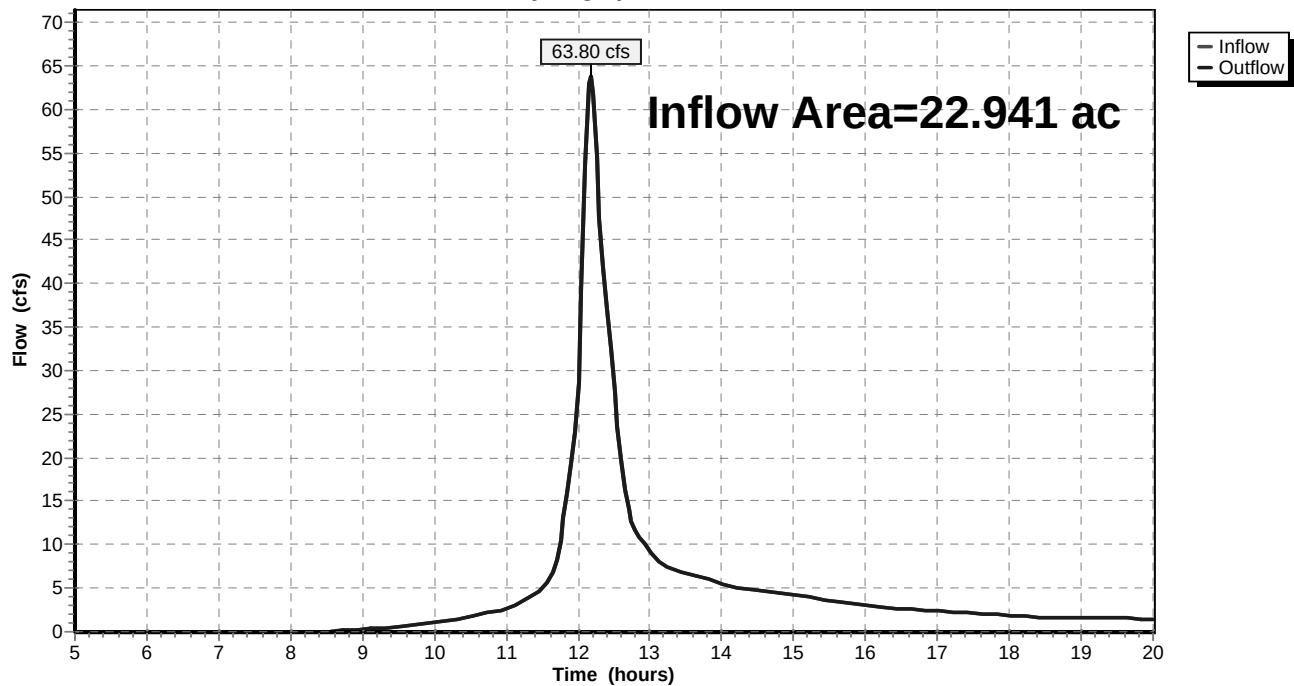
### Summary for Reach 4R: POI 1

Inflow Area = 22.941 ac, 33.63% Impervious, Inflow Depth > 2.78" for 25 YR event  
Inflow = 63.80 cfs @ 12.17 hrs, Volume= 5.311 af  
Outflow = 63.80 cfs @ 12.17 hrs, Volume= 5.311 af, Atten= 0%, Lag= 0.0 min

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

### Reach 4R: POI 1

Hydrograph



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Type III 24-hr 25 YR Rainfall=5.80"

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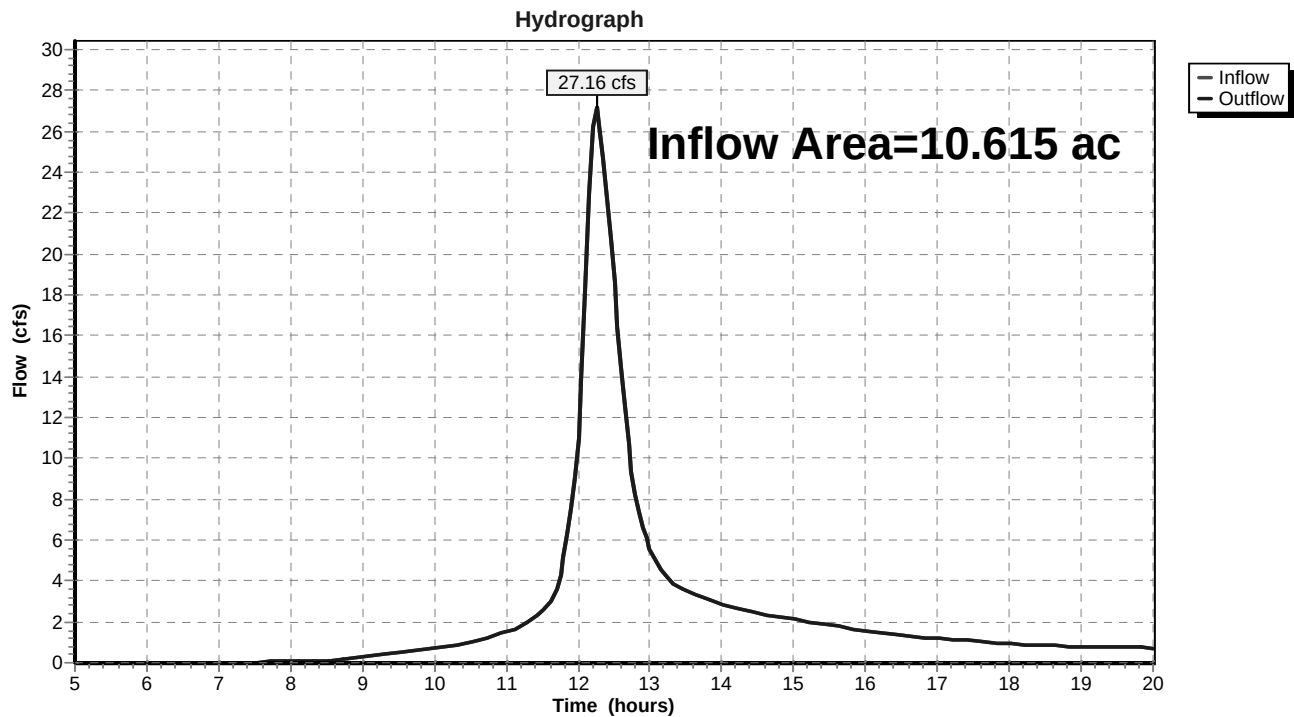
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### Summary for Reach 5R: POI 2

Inflow Area = 10.615 ac, 31.88% Impervious, Inflow Depth > 3.12" for 25 YR event  
Inflow = 27.16 cfs @ 12.25 hrs, Volume= 2.757 af  
Outflow = 27.16 cfs @ 12.25 hrs, Volume= 2.757 af, Atten= 0%, Lag= 0.0 min

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

### Reach 5R: POI 2



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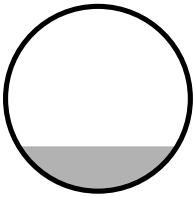
### Summary for Reach 15R: SD System

Inflow Area = 0.709 ac, 66.57% Impervious, Inflow Depth > 4.51" for 25 YR event  
Inflow = 2.33 cfs @ 12.37 hrs, Volume= 0.266 af  
Outflow = 2.33 cfs @ 12.37 hrs, Volume= 0.266 af, Atten= 0%, Lag= 0.1 min

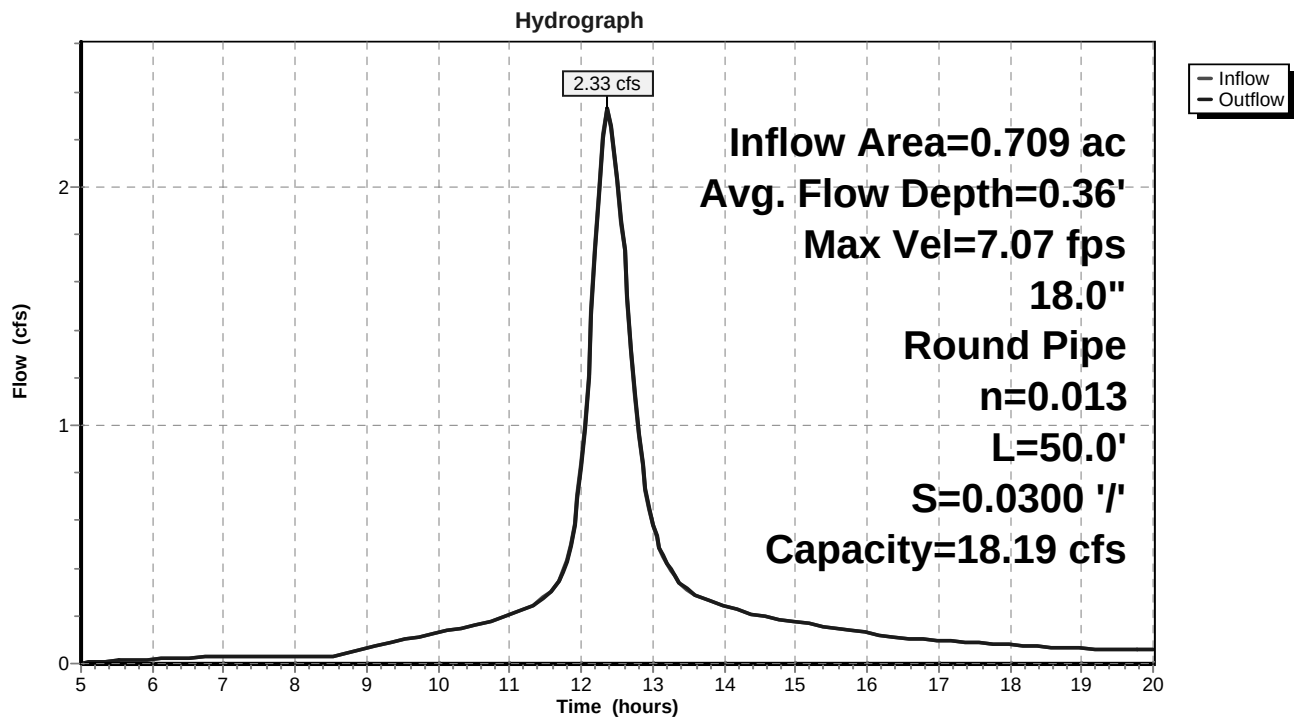
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Max. Velocity= 7.07 fps, Min. Travel Time= 0.1 min  
Avg. Velocity= 2.94 fps, Avg. Travel Time= 0.3 min

Peak Storage= 16 cf @ 12.37 hrs  
Average Depth at Peak Storage= 0.36'  
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 18.19 cfs

18.0" Round Pipe  
n= 0.013 Corrugated PE, smooth interior  
Length= 50.0' Slope= 0.0300 '/'  
Inlet Invert= 72.50', Outlet Invert= 71.00'



### Reach 15R: SD System



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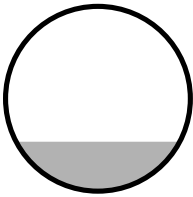
### Summary for Reach 16R: SD System

Inflow Area = 0.968 ac, 56.10% Impervious, Inflow Depth > 4.39" for 25 YR event  
Inflow = 3.39 cfs @ 12.26 hrs, Volume= 0.354 af  
Outflow = 3.38 cfs @ 12.28 hrs, Volume= 0.354 af, Atten= 0%, Lag= 1.3 min

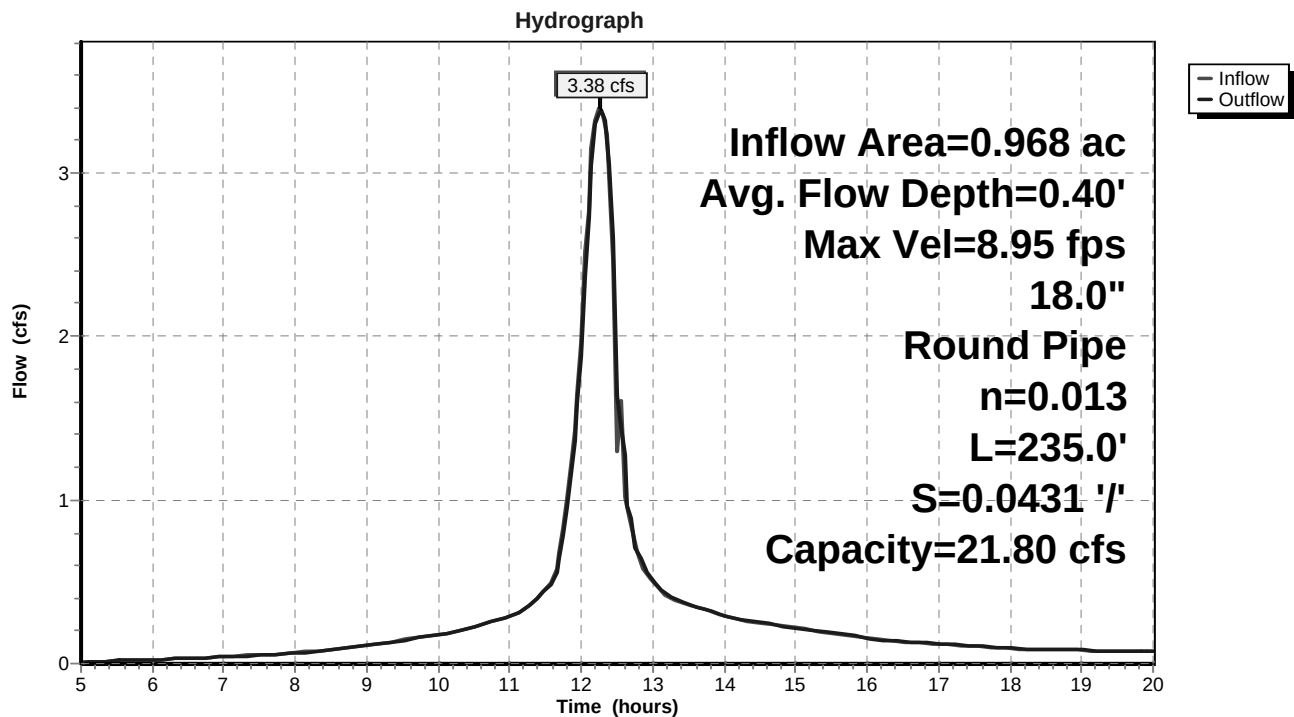
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Max. Velocity= 8.95 fps, Min. Travel Time= 0.4 min  
Avg. Velocity= 3.65 fps, Avg. Travel Time= 1.1 min

Peak Storage= 89 cf @ 12.28 hrs  
Average Depth at Peak Storage= 0.40'  
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 21.80 cfs

18.0" Round Pipe  
n= 0.013 Corrugated PE, smooth interior  
Length= 235.0' Slope= 0.0431 '/'  
Inlet Invert= 80.80', Outlet Invert= 70.68'



### Reach 16R: SD System



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Pond 11P: Stormtech Chambers 2

Inflow Area = 0.709 ac, 66.57% Impervious, Inflow Depth > 4.59" for 25 YR event  
Inflow = 2.51 cfs @ 12.28 hrs, Volume= 0.271 af  
Outflow = 2.33 cfs @ 12.37 hrs, Volume= 0.266 af, Atten= 7%, Lag= 5.0 min  
Primary = 0.03 cfs @ 6.95 hrs, Volume= 0.035 af  
Secondary = 2.30 cfs @ 12.37 hrs, Volume= 0.231 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Peak Elev= 74.87' @ 12.37 hrs Surf.Area= 0.017 ac Storage= 0.023 af

Plug-Flow detention time= 19.3 min calculated for 0.265 af (98% of inflow)  
Center-of-Mass det. time= 11.9 min ( 775.4 - 763.5 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                  |
|--------|--------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | 73.00' | 0.015 af      | <b>4.75'W x 7.20'L x 3.50'H Prismatoid</b> x 22<br>0.060 af Overall - 0.023 af Embedded = 0.037 af x 40.0% Voids                                                     |
| #2     | 73.50' | 0.023 af      | <b>StormTech SC-740</b> x 22 Inside #1<br>Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf<br>Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap |
| #3     | 80.60' | 0.002 af      | <b>4.00'D x 6.00'H Vertical Cone/Cylinder</b>                                                                                                                        |
|        |        | 0.040 af      | Total Available Storage                                                                                                                                              |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                                                       |
|--------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 73.00' | <b>0.03 cfs Exfiltration at all elevations</b>                                                                                                                                                                       |
| #2     | Secondary | 73.50' | <b>10.0" Round Culvert</b><br>L= 20.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 73.50' / 73.40' S= 0.0050 ' /' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf        |
| #3     | Secondary | 76.50' | <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=0.03 cfs @ 6.95 hrs HW=73.14' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.03 cfs)

**Secondary OutFlow** Max=2.29 cfs @ 12.37 hrs HW=74.86' (Free Discharge)

↑ **2=Culvert** (Barrel Controls 2.29 cfs @ 4.19 fps)

↑ **3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Post Development 2

Prepared by Gorrill Palmer

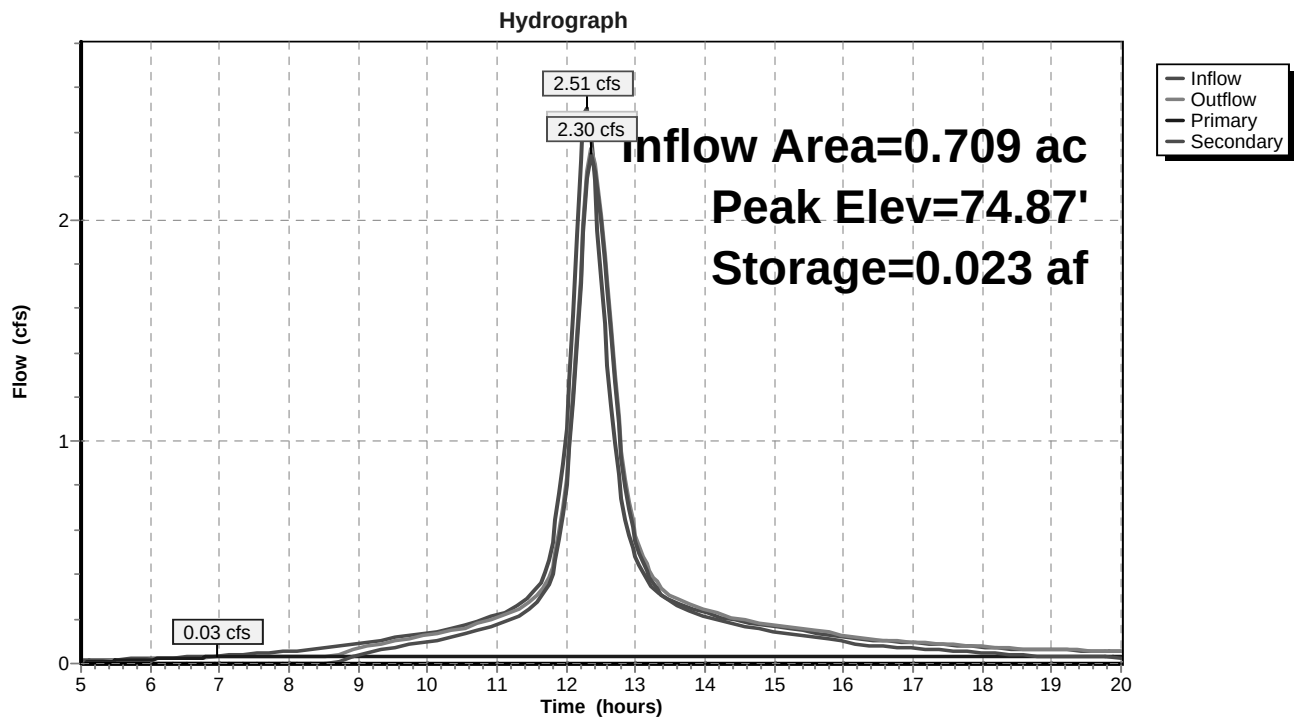
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Type III 24-hr 25 YR Rainfall=5.80"

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### Pond 11P: Stormtech Chambers 2



## Post Development 2

Prepared by Gorrill Palmer

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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Pond 14P: Stormtech Chambers 1

Inflow Area = 0.968 ac, 56.10% Impervious, Inflow Depth > 4.39" for 25 YR event  
Inflow = 4.04 cfs @ 12.17 hrs, Volume= 0.354 af  
Outflow = 3.39 cfs @ 12.26 hrs, Volume= 0.354 af, Atten= 16%, Lag= 5.2 min  
Primary = 0.03 cfs @ 12.10 hrs, Volume= 0.004 af  
Secondary = 3.36 cfs @ 12.26 hrs, Volume= 0.350 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Peak Elev= 82.22' @ 12.26 hrs Surf.Area= 0.024 ac Storage= 0.010 af

Plug-Flow detention time= 0.7 min calculated for 0.353 af (100% of inflow)  
Center-of-Mass det. time= 0.6 min ( 763.0 - 762.3 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                                                                                  |
|--------|--------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | 81.45' | 0.020 af      | <b>4.75'W x 7.20'L x 3.50'H Prismatoid</b> x 30<br>0.082 af Overall - 0.032 af Embedded = 0.051 af x 40.0% Voids                                                     |
| #2     | 81.95' | 0.032 af      | <b>StormTech SC-740</b> x 30 Inside #1<br>Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf<br>Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap |
| #3     | 86.96' | 0.002 af      | <b>4.00'D x 7.00'H Vertical Cone/Cylinder</b>                                                                                                                        |
|        |        | 0.054 af      | Total Available Storage                                                                                                                                              |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                                                         |
|--------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 81.45' | <b>0.03 cfs Exfiltration at all elevations</b>                                                                                                                                                                         |
| #2     | Secondary | 80.17' | <b>10.0" Round Culvert</b><br>L= 20.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 80.17' / 80.00' S= 0.0085 ' S= 0.0085 ' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf |
| #3     | Secondary | 84.95' | <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=0.03 cfs @ 12.10 hrs HW=81.74' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.03 cfs)

**Secondary OutFlow** Max=3.35 cfs @ 12.26 hrs HW=82.22' (Free Discharge)

↑ **2=Culvert** (Inlet Controls 3.35 cfs @ 6.15 fps)

↑ **3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Post Development 2

Prepared by Gorrill Palmer

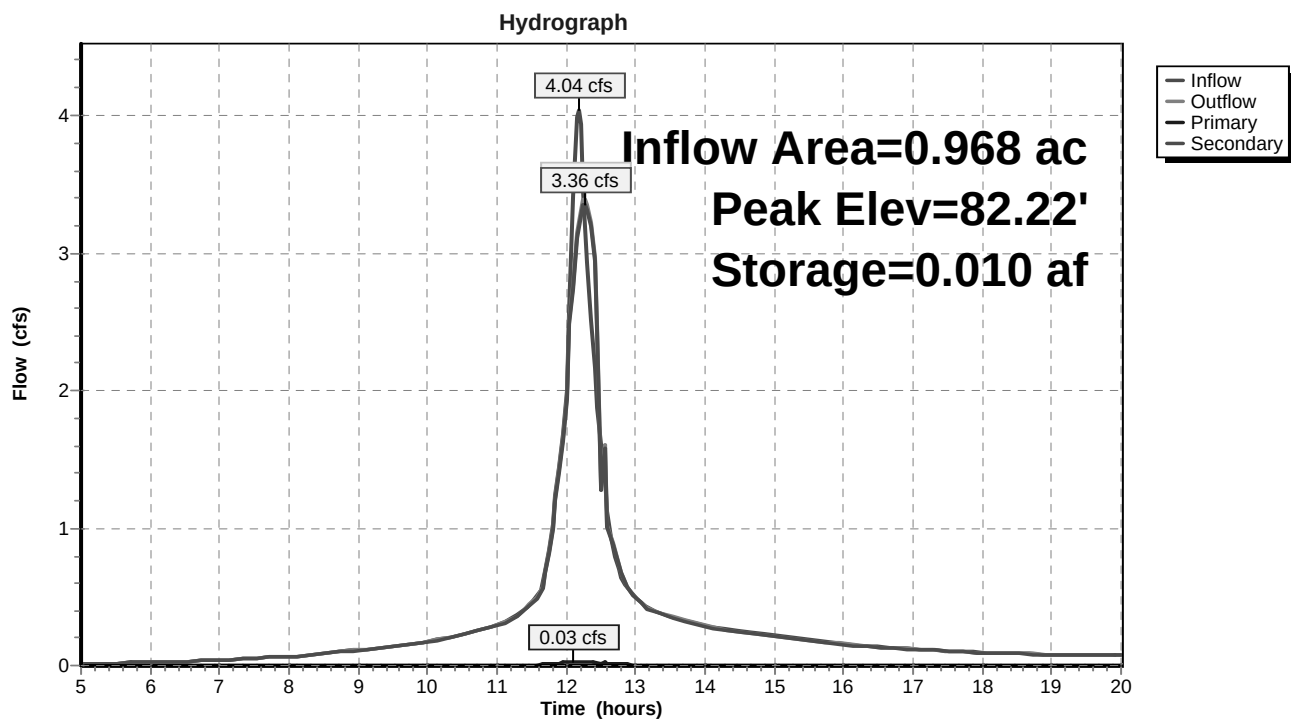
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Type III 24-hr 25 YR Rainfall=5.80"

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### Pond 14P: Stormtech Chambers 1





**ATTACHMENT C**  
**Filtterra and Grassed Underdrained Soil Filter**  
**Sizing Calculations**

Notes

- 1) refer to hand calculations for breakdown of lot square footage and calculations
- 2) Area from lots assumed from existing conditions
- 3) Driveway width assumed at 18'

1

| Filterra Sizing    |    |                        |              |             |       |                        |                       |              |                   |
|--------------------|----|------------------------|--------------|-------------|-------|------------------------|-----------------------|--------------|-------------------|
| Filterra           | RT | Sta                    | 5+12         | to          | 9+97  | 485 ft                 | ROW                   |              |                   |
|                    |    | Width                  |              |             |       | 14 ft                  |                       |              |                   |
|                    |    | Area                   |              |             |       | 6,790 sq ft            |                       |              |                   |
|                    |    | Radius at Entrance     |              |             |       | 72 sq ft               |                       |              |                   |
|                    |    | 6 trail parking spaces |              |             |       | 972 sq ft              |                       |              |                   |
| Impervious Area    |    |                        |              |             |       | 7,834 sq ft            | 4X8 Filterra Required |              |                   |
| Vegetated Area     |    |                        |              |             |       | - sq ft                |                       |              |                   |
| 0.4*Vegetated Area |    |                        |              |             |       | - sq ft                |                       |              |                   |
| Subtotal Area      |    |                        |              |             |       | 7,834 sq ft            |                       |              |                   |
|                    |    |                        |              |             |       | 0.18 ac                |                       |              |                   |
| Filterra           | LT | Sta                    | 5+12         | to          | 9+97  | 485 ft                 | ROW                   |              |                   |
|                    |    | Width                  |              |             |       | 14 ft                  |                       |              |                   |
|                    |    | Area                   |              |             |       | 6,790 sq ft            |                       |              |                   |
|                    |    | Radius at Entrance     |              |             |       | 72 sq ft               |                       |              |                   |
|                    |    | Driveway Aprons        | 5 on LT side |             |       | 1,000 sq ft            |                       |              |                   |
|                    |    | Esplanade              | 6 ft width   | 373' length |       | 2,238 sq ft            |                       |              |                   |
|                    |    | Sidewalk               | 5 ft width   | 373' length |       | 1,865 sq ft            |                       |              |                   |
|                    |    | Lot 1                  |              |             |       |                        |                       | LOTS         |                   |
|                    |    | Vegeated Area          |              |             |       |                        |                       |              | 461 sq ft         |
|                    |    | Impervious Roof        |              |             |       |                        |                       |              | - Dripline Filter |
|                    |    | Impervious Driveway    |              |             |       |                        |                       |              | 450 sq ft         |
|                    |    | Lot 2                  |              |             |       |                        |                       |              |                   |
|                    |    | Vegeated Area          |              |             |       |                        |                       |              | 2,460 sq ft       |
|                    |    | Impervious Roof        |              |             |       |                        |                       |              | - Dripline Filter |
|                    |    | Impervious Driveway    |              |             |       |                        |                       |              | 558 sq ft         |
|                    |    | Lot 3                  |              |             |       |                        |                       |              |                   |
|                    |    | Vegeated Area          |              |             |       |                        |                       |              | 4,044 sq ft       |
|                    |    | Impervious Roof        |              |             |       |                        |                       |              | - Dripline Filter |
|                    |    | Impervious Driveway    |              |             |       |                        |                       |              | 558 sq ft         |
|                    |    | Lot 4                  |              |             |       |                        |                       |              |                   |
|                    |    | Vegeated Area          |              |             |       |                        |                       |              | 4,350 sq ft       |
|                    |    | Impervious Roof        |              |             |       |                        |                       |              | - Dripline Filter |
|                    |    | Impervious Driveway    |              |             |       |                        |                       |              | 432 sq ft         |
|                    |    | Lot 5                  |              |             |       |                        |                       |              |                   |
|                    |    | Vegeated Area          |              |             |       |                        |                       |              | 1,605 sq ft       |
|                    |    | Impervious Roof        |              |             |       |                        |                       |              | - Dripline Filter |
|                    |    | Impervious Driveway    |              |             |       |                        |                       |              | 198 sq ft         |
|                    |    | Lot 6                  |              |             |       |                        |                       |              |                   |
|                    |    | Vegeated Area          |              |             |       |                        |                       |              | 2,127 sq ft       |
|                    |    | Impervious Roof        |              |             |       |                        |                       |              | - Dripline Filter |
|                    |    | Impervious Driveway    |              |             |       |                        |                       |              | - sq ft           |
|                    |    | Impervious Area        |              |             |       |                        |                       | 11,923 sq ft |                   |
| Vegetated Area     |    |                        |              |             |       | 17,285.00 sq ft        |                       |              |                   |
| 0.4*Vegetated Area |    |                        |              |             |       | 6,914.00 sq ft         |                       |              |                   |
| Subtotal Area      |    |                        |              |             |       | 18,837.00 sq ft        |                       |              |                   |
|                    |    |                        |              |             |       | 0.432 ac               |                       |              |                   |
|                    |    |                        |              |             |       | 6X12 Filterra Required |                       |              |                   |
|                    |    | Sta                    | 11+45        | to          | 14+10 | 265 ft                 | ROW                   |              |                   |
|                    |    | Width                  |              |             |       | 14 ft                  |                       |              |                   |
|                    |    | Area                   |              |             |       | 3,710 sq ft            |                       |              |                   |
|                    |    | Driveway Aprons        | 4 on RT side |             |       | 800 sq ft              |                       |              |                   |
|                    |    | Esplanade              | 6 ft width   | 120' length |       | 720 sq ft              |                       |              |                   |
|                    |    | Sidewalk               | 5 ft width   | 120' length |       | 600 sq ft              |                       |              |                   |
|                    |    | Lot 13                 |              |             |       |                        |                       |              |                   |

4

|                    |    |                                  |          |                   |                       |
|--------------------|----|----------------------------------|----------|-------------------|-----------------------|
| Filterra           | RT | Vegetated Area                   | 629      | sq ft             | LOTS                  |
|                    |    | Impervious Roof                  | -        | Dripline Filter   |                       |
|                    |    | Impervious Driveway              | 360      | sq ft             |                       |
|                    |    | Lot 14                           |          |                   |                       |
|                    |    | Vegetated Area                   | 2,354    | sq ft             |                       |
|                    |    | Impervious Roof                  | -        | Dripline Filter   |                       |
|                    |    | Impervious Driveway              | 360      | sq ft             |                       |
|                    |    | Lot 15                           |          |                   |                       |
|                    |    | Vegetated Area                   | 3,058    | sq ft             |                       |
|                    |    | Impervious Roof                  | -        | Dripline Filter   |                       |
|                    |    | Impervious Driveway              | 360      | sq ft             |                       |
|                    |    | Lot 16                           |          |                   |                       |
|                    |    | Vegetated Area                   | 1,568    | sq ft             |                       |
|                    |    | Impervious Roof                  | -        | Dripline Filter   |                       |
|                    |    | Impervious Driveway              | 1,200    |                   |                       |
|                    |    |                                  |          |                   |                       |
| Impervious Area    |    |                                  | 7,390    | sq ft             | 6X8 Filterra Required |
| Vegetated Area     |    |                                  | 8,329    | sq ft             |                       |
| 0.4*Vegetated Area |    |                                  | 3,331.60 | sq ft             |                       |
| Subtotal Area      |    |                                  | 10,722   | sq ft             |                       |
|                    |    |                                  | 0.25     | ac                |                       |
| Filterra           | LT | Sta 11+45 to 14+05               | 260      | ft                | ROW                   |
|                    |    | Width                            | 14       | ft                |                       |
|                    |    | Area                             | 3,640    | sq ft             |                       |
|                    |    | Driveway Aprons 3 on LT Side     | 600      | sq ft             |                       |
|                    |    | Esplanade 6 ft width 170' length | 1,020    | sq ft             |                       |
|                    |    | Sidewalk 5 ft width 170' length  | 850      | sq ft             | Lots                  |
|                    |    | Lot 7                            |          |                   |                       |
|                    |    | Vegetated Area                   | 1,492    | sq ft             |                       |
|                    |    | Impervious Roof                  | -        | Dripline Filter   |                       |
|                    |    | Impervious Driveway              | 176      |                   |                       |
|                    |    | Lot 8                            |          |                   |                       |
|                    |    | Vegetated Area                   | 1,477    | sq ft             |                       |
|                    |    | Impervious Roof                  | -        | Dripline Filter   |                       |
|                    |    | Impervious Driveway              | 360      | sq ft             |                       |
|                    |    | Lot 9                            |          |                   |                       |
|                    |    | Vegetated Area                   | 1,503    | sq ft             |                       |
|                    |    | Impervious Roof                  | -        | Dripline Filter   |                       |
|                    |    | Impervious Driveway              | 414      | sq ft             |                       |
|                    |    | Lot 10                           |          |                   |                       |
|                    |    | Vegetated Area                   | 800      | sq ft             |                       |
|                    |    | Impervious Roof                  | -        | Dripline Filter   |                       |
|                    |    | Impervious Driveway              | 414      | sq ft             |                       |
|                    |    | Lot 11                           |          |                   |                       |
|                    |    | Vegetated Area                   | -        | Untreated/Biocell |                       |
|                    |    | Impervious Roof                  | -        | Dripline Filter   |                       |
|                    |    | Impervious Driveway              | -        | Untreated         |                       |
|                    |    | Lot 12                           |          |                   |                       |
|                    |    | Vegetated Area                   | -        | Untreated/Biocell |                       |
|                    |    | Impervious Roof                  | -        | Dripline Filter   |                       |
|                    |    | Impervious Driveway              | -        | Untreated         |                       |
|                    |    |                                  |          |                   |                       |
| Impervious Area    |    |                                  | 6,454    | sq ft             | 6X6 Filterra Required |
| Vegetated Area     |    |                                  | 6,292    | sq ft             |                       |
| 0.4*Vegetated Area |    |                                  | 2,517    | sq ft             |                       |
| Subtotal Area      |    |                                  | 8,971    | sq ft             |                       |
|                    |    |                                  | 0.21     | ac                |                       |

- 1) refer to hand calculations for breakdown of lot square footage and calculations
- 2) Storage size calculated from 1" of runoff for impervious areas and 0.4" of runoff from vegetated areas
- 3) Depth of bio cell storage assumed at 1' x the surface area (3:1 side slope not included for storage at this time)
- 4) 1' storage depth - 6" pooling in bio cell and 6" assumed storage in filter media

| Bio Cell Sizing |             |                   |                |
|-----------------|-------------|-------------------|----------------|
| 1               | Soil Filter | Proposed<br>Area  | 305 sq ft      |
|                 | Sizing      | Impervious Area   | - sq ft        |
|                 |             | Vegetated Area    | 8,576.00 sq ft |
|                 |             | Surface Area Min. | 171.52 sq ft   |
|                 |             | Storage Size      | 285.87 CF      |
| 2               | Soil Filter | Proposed<br>Area  | 442 sq ft      |
|                 | Sizing      | Impervious Area   | 2,464.00 sq ft |
|                 |             | Vegetated Area    | 6,080.00 sq ft |
|                 |             | Surface Area Min. | 244.80 sq ft   |
|                 |             | Storage Size      | 408.00 CF      |
| 3               | Soil Filter | Proposed<br>Area  | 354.00 sq ft   |
|                 | Sizing      | Impervious Area   | 400.00 sq ft   |
|                 |             | Vegetated Area    | 5,296.00 sq ft |
|                 |             | Surface Area Min. | 125.92 sq ft   |
|                 |             | Storage Size      | 209.87 CF      |
|                 |             | Proposed          |                |

4

|             |                   |                 |  |
|-------------|-------------------|-----------------|--|
| Soil Filter | Area              | 440.00 sq ft    |  |
| Sizing      | Impervious Area   | - sq ft         |  |
|             | Vegetated Area    | 9,592.00 sq ft  |  |
|             | Surface Area Min. | 191.84 sq ft    |  |
|             | Storage Size      | 319.73 CF       |  |
| Soil Filter | Proposed<br>Area  | 677 sq ft       |  |
| Sizing      | Impervious Area   | 400 sq ft       |  |
|             | Vegetated Area    | 14,035.00 sq ft |  |
|             | Surface Area Min. | 300.70 sq ft    |  |
|             | Storage Size      | 501.167CF       |  |

5

**ATTACHMENT D**  
**Correspondence of Manufactures Review and**  
**Approval of Proposed Filterra Design**

Benjamin M. Grondin  
Gorrill Palmer  
707 Sable Oaks Drive, Suite 30  
South Portland, ME 04106

May 19, 2017

**RE: Hope Avenue Subdivision (Contech Reference No. 551,609)  
Review of Filterra Design**

Dear Mr. Grondin:

The purpose of this letter is to document Contech Engineered Solutions' review of the plans and the proposed application of the Filterra water quality units for the Hope Avenue Subdivision site in Portland, ME.

Contech Engineered Solutions (Contech) has reviewed the Filterra design for this project. We believe both the Filterra configuration with internal bypass and standard offline configuration are appropriate water quality solutions for this site. The Filterra system is approved for use by MEDEP as an alternate to the General Standards of the Stormwater Rules (Chapter 500) if designed, installed, and maintained in accordance with the provisions noted in the February 2, 2017 approval letter from the MEDEP.

Based on our review, the Filterras were designed in accordance with the sizing design guidelines to treat 90% of the annual runoff volume prior to bypass. In order to adequately treat the runoff from this area, Contech recommends the following units:

| <u>Unit Name</u> | <u>Impervious Area</u> | <u>Filterra Size</u> | <u>Model Name</u> |
|------------------|------------------------|----------------------|-------------------|
| Filterra 1       | 0.18 ac                | 8x4                  | FTIB-C-C0804      |
| Filterra 2       | 0.43 ac                | 12x6                 | FTIB-C-C1206      |
| Filterra 3       | 0.25 ac                | 8x6                  | FT0806            |
| Filterra 4       | 0.21 ac                | 6x6                  | FT0606            |

Our systems require periodic maintenance to continue operating properly. Given typical runoff pollutant loading rates, Contech recommends maintenance inspections on an annual basis. Based on the location of the system, we anticipate replacement of the mulch layer every 12 months for the system to continue to remove pollutants. Contech will be responsible for the first year of maintenance as included in the purchase of the Filterra unit; subsequent years of maintenance shall be performed by a third party at the owner's expense.

This system is expected to operate in accordance with Contech's design intent. Please feel free to contact me if you have any questions or concerns.

Sincerely,



Christopher J. Allen  
Contech Engineered Solutions, LLC.  
(443) 457-1519  
[callen@conteches.com](mailto:callen@conteches.com)



707 Sable Oaks Drive, Suite 30  
South Portland, Maine 04106  
207.772.2515

May 18, 2017

Jamie Cough  
Central Maine Power  
162 Canco Road  
Portland, ME 04103

Re: Brandy Lane Residential Subdivision  
22 Hope Avenue, Portland  
Letter of Ability to Serve

Dear Jamie:

LBW, LLC. has retained Gorrill Palmer to prepare plans and permit applications for a proposed residential subdivision at 22 Hope Ave. The site is shown on Assessor's Map 448 A004, is approximately 6.46 acres in size and is located in the Conditional Zone. As required by the reviewing authorities, we are writing to request a letter indicating the ability of Central Maine Power to serve this project. A preliminary utility plan is enclosed for your review.

#### **Description of Development Site**

The project site is located at 22 Hope Ave and consists of Tax Map 448 A004 as shown on the Portland Assessor's Map. The site is approximately 6.46 acres in size and has approximately 120 feet of frontage along Hope Avenue.

The project site is currently undeveloped with a landcover of woodlands. Topography in the area of the proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 40%. The steeper slopes are associated with drainage ways at the front and rear of the site. Abutting land uses include:

- North – Maine Turnpike Spur
- West – Residential
- South – Residential
- East – Resource Protection

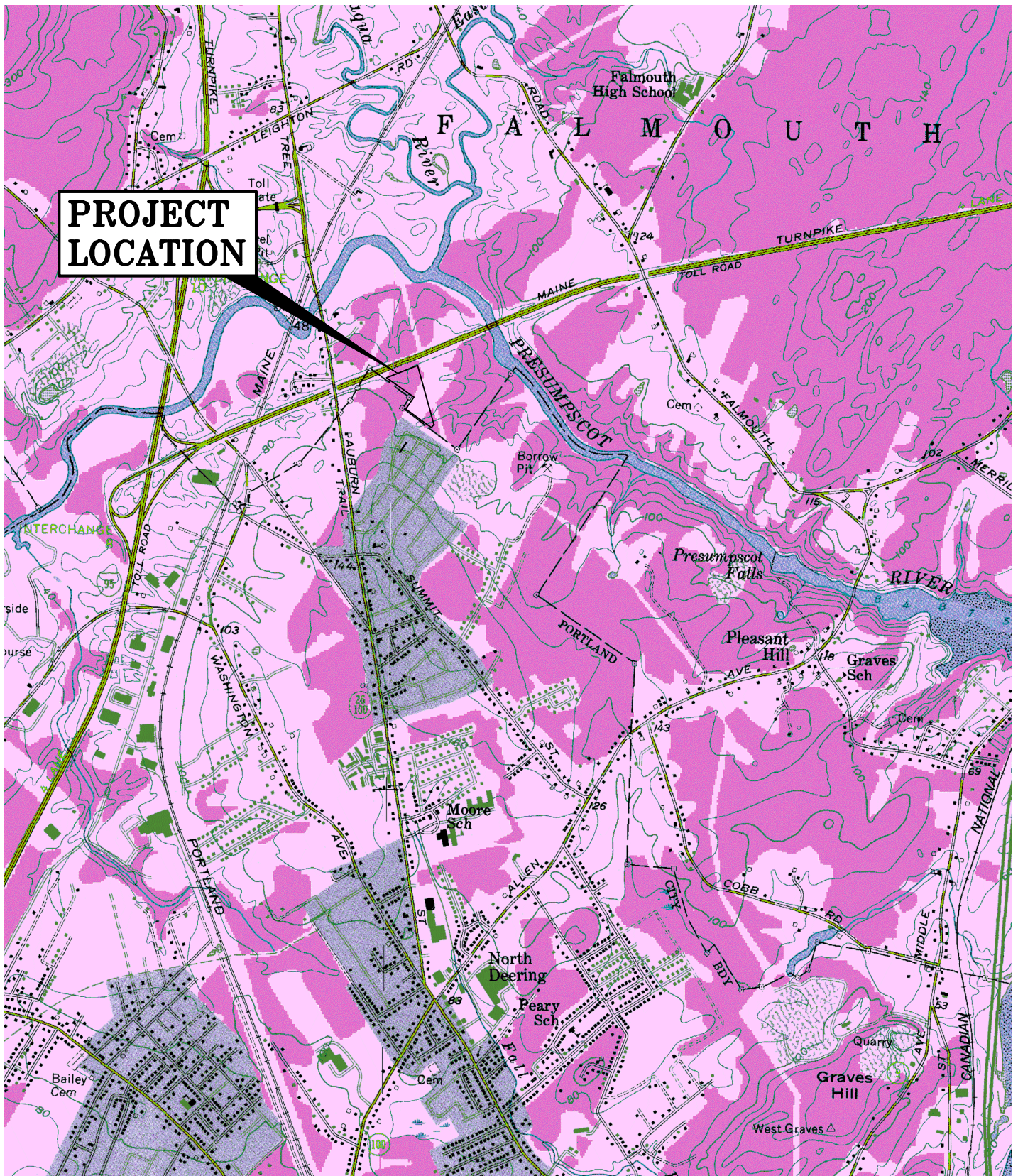
Refer to Figure 1 – Location Map following this page for the project location.

#### **Project Description**

The project is a residential subdivision development consisting of a sixteen lots with public water and sewer. Existing electric service is located on the opposite side of Hope Avenue. The proposed electrical would have underground service.

At this time, service requirements are not known. It is anticipated that this development would have single phase electric service requirements similar to other residential developments within the Greater Portland area.





**U.S.G.S. Location Map**  
 Riverwalk Subdivision- Portland, Maine  
 U.S.G.S. Map Portland West, Maine-7.5 Minute Series (Topographic)

|                                |                   |
|--------------------------------|-------------------|
| Design: DJG                    | Date: JAN 2017    |
| Draft: CG                      | Job No.: 98089.06 |
| Checked: DER                   | Scale: NTS        |
| File Name: 98089.1-LOCMAP1.dwg |                   |



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 207.657.6910

Figure

1





**Ability to Serve**

In support of the applications to the reviewing authorities, we are writing to request a letter indicating the ability of Central Maine Power Company to serve the project. In addition, we are interested in receiving:

- Indication as to the acceptability of the proposed layout.
- Indication of the Utility Company responsible for the setting of poles in this area.
- Information as to any easements that you may require on-site.
- Any estimate of construction and connection fees
- Any other information that you believe would be useful as this project proceeds.

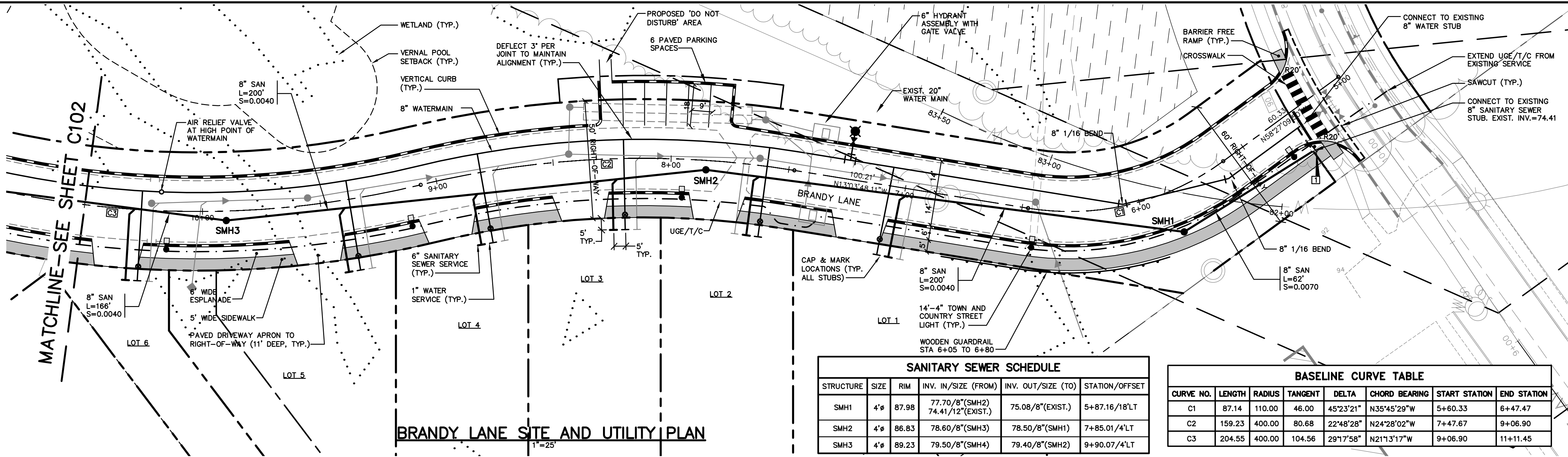
Please contact me If you have any questions relative to this matter at 772-2515 or at [bgrondin@gorrillpalmer.com](mailto:bgrondin@gorrillpalmer.com).

Sincerely,

Gorrill Palmer

Benjamin M. Grondin  
Design Engineer

Copy: Burt Wolf



**PAVEMENT LEGEND**

ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS:

BITUMINOUS SIDEWALK

**CURBING LEGEND**

VERTICAL GRANITE CURB

**STRIPING LEGEND**

SIGNAGE, STRIPING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION & REFLECTIVITY.

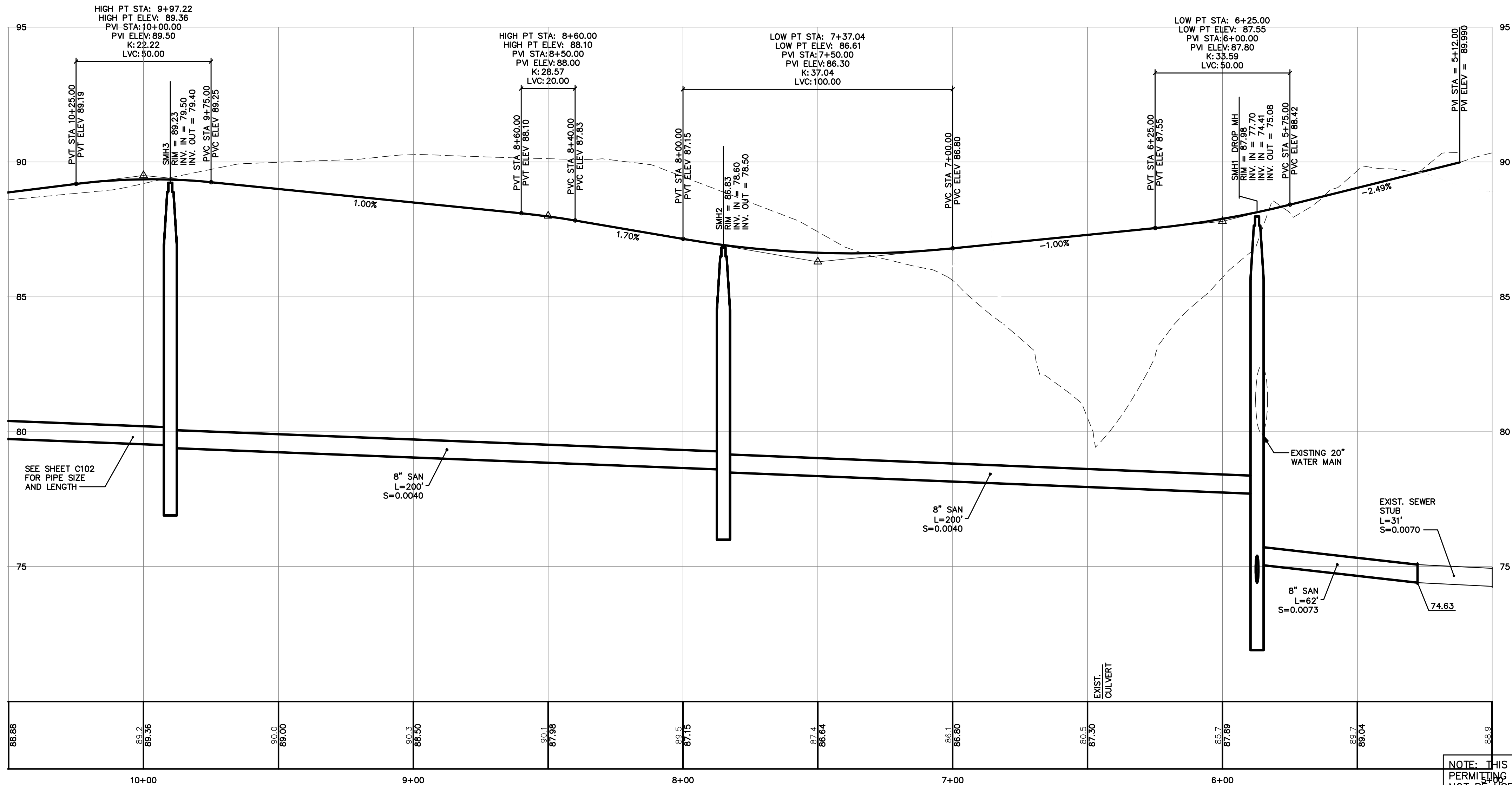
12"SL - 12" WIDTH STOP LINE  
4"SWLL - 4" WIDTH SOLID WHITE LANE LINE  
4"DYCL - 4" WIDTH DOUBLE YELLOW CENTERLINE  
4"DWLL - 4" WIDTH DASHED WHITE LANE LINE

**SIGN LEGEND**

STOP  
R1-1  
30"x 30"

**UTILITY NOTES:**

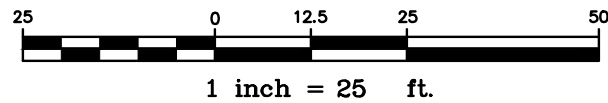
1. INSTALL WATER SERVICE 10' FROM DRIVEWAY OR IN DRIVEWAY PROTECTED WITH VALVE BOX.
1. 5' SEPARATION BETWEEN WATER AND SEWER.



BRANDY LANE SITE AND UTILITY PROFILE

1"=25' HORIZ.  
1"=2.5' VERT.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



C:\CAD WORKING\98089.08 Riverwalk Long Road\DWG\98089-08-PP-SP.dwg - 5/17/2017 1:14 PM

| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: DJG                                                                                                                                                                                 | Draft: CG     | Date: JAN 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-SP.dwg                                                                                                                                                               |               |                   |
| This plan shall not be modified without written permission from Gorriil Palmer(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP. |               |                   |



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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Site and Utility Plan and Profile              |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.  
**C101**



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|      |          |                                  |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |
| Rev. | Date     | Revision                         |

|                                   |         |     |
|-----------------------------------|---------|-----|
|                                   |         |     |
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                            |               |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: DJG                                                                                                                                                                                | Draft: CG     | Date: JAN 2017    |
| Checked: DER                                                                                                                                                                               | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-SP.dwg                                                                                                                                                              |               |                   |
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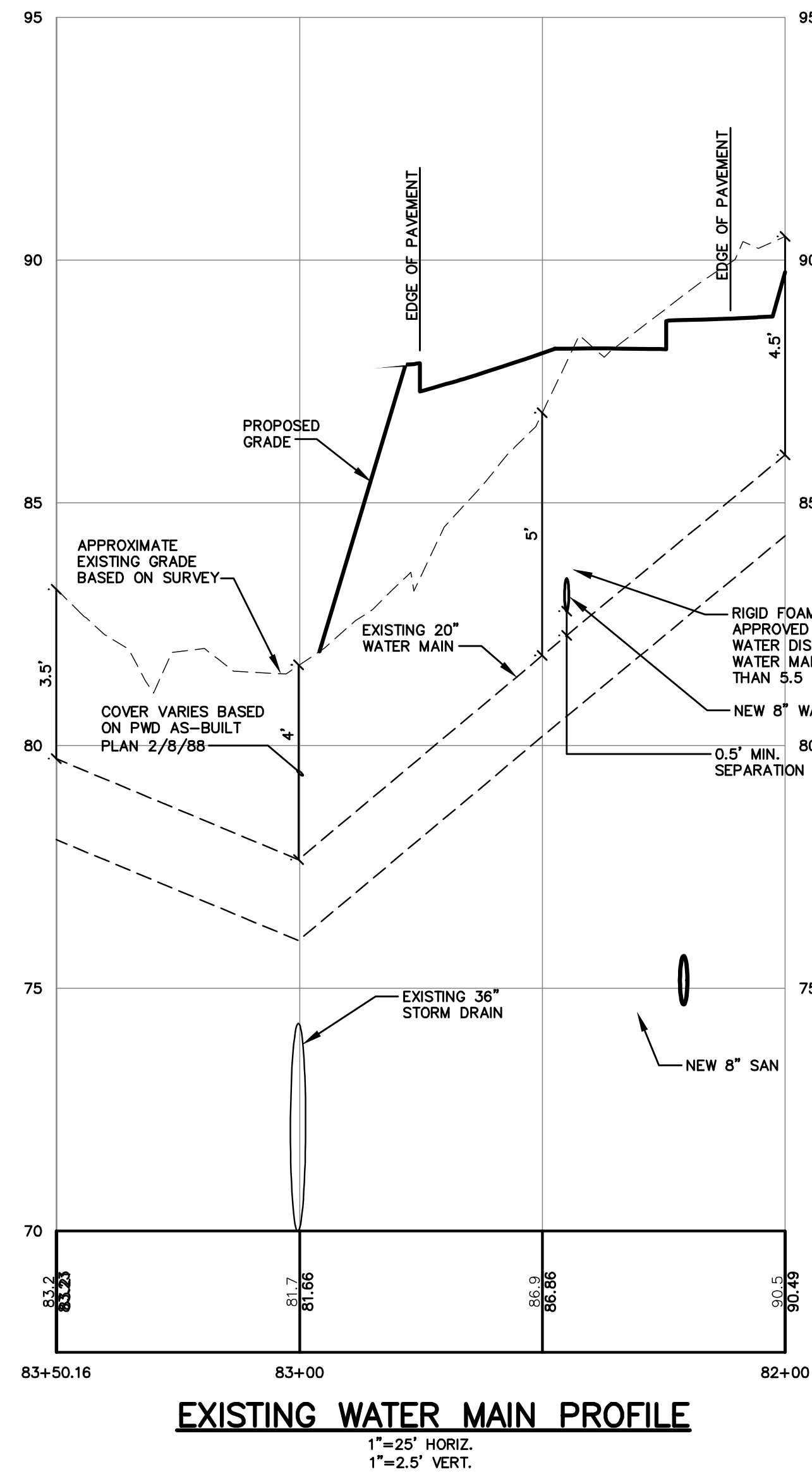
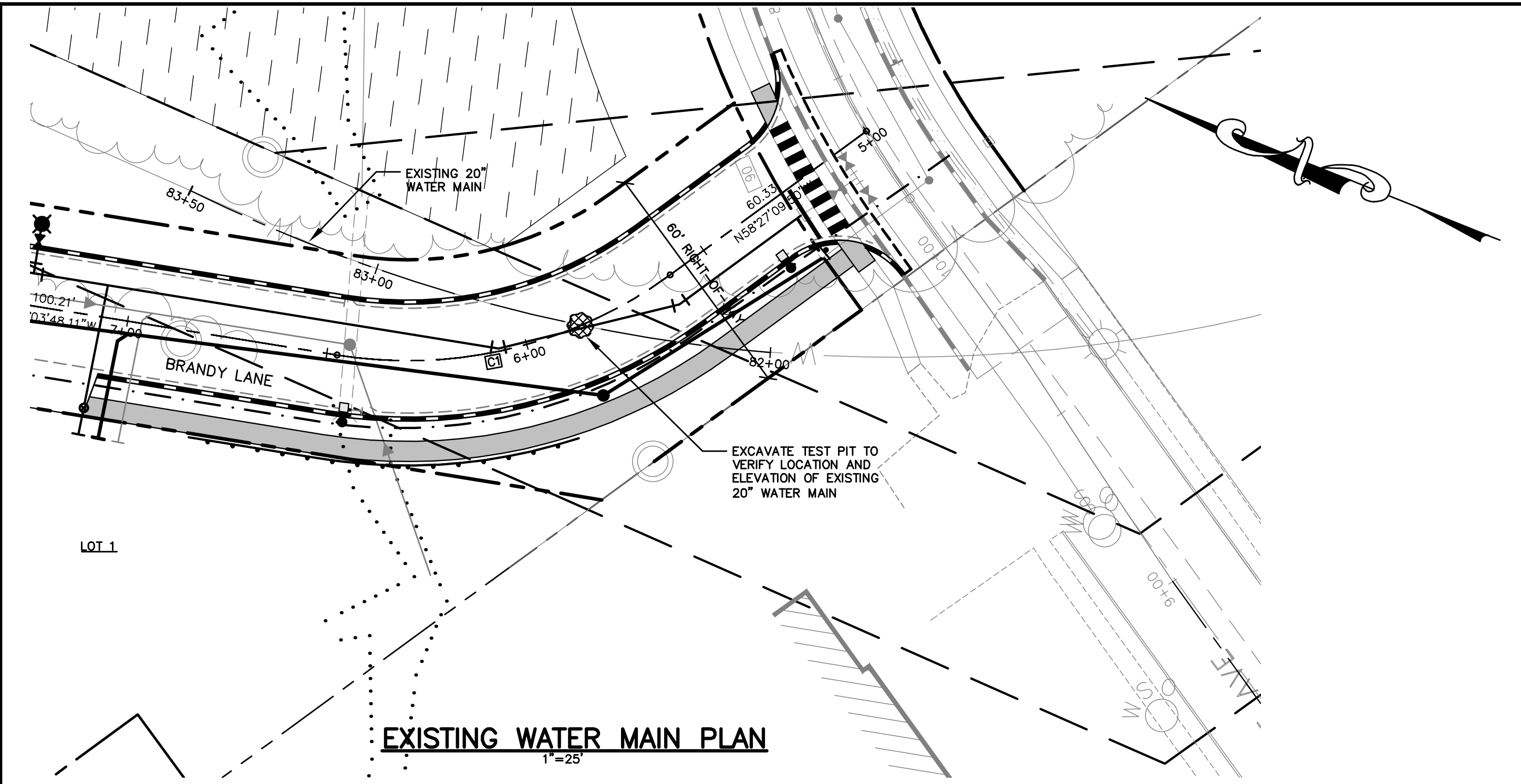


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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Water Main Plan and Profile                    |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

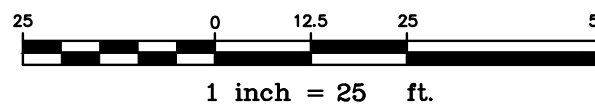
C101A



#### NOTES:

1. BASELINE STATIONS ARE FROM PORTLAND WATER DISTRICT AS-BUILT PLAN 2/8/88.
2. COVER DEPTHS AS NOTED ARE FROM PORTLAND WATER DISTRICT AS-BUILT PLAN AT LOCATIONS OF EXISTING 20" WATER MAIN.

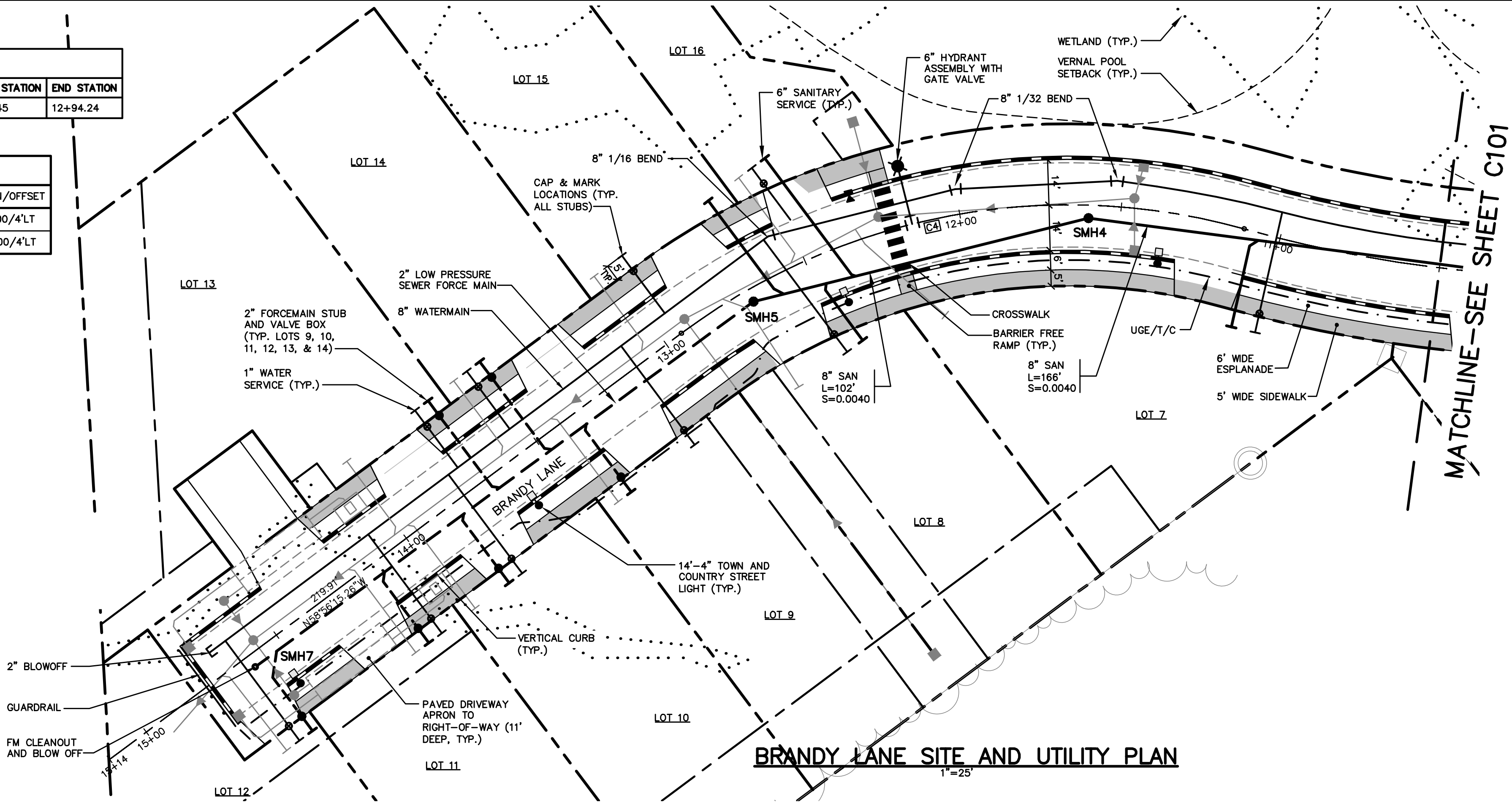
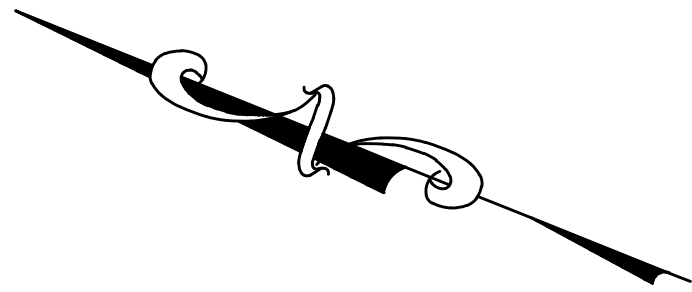
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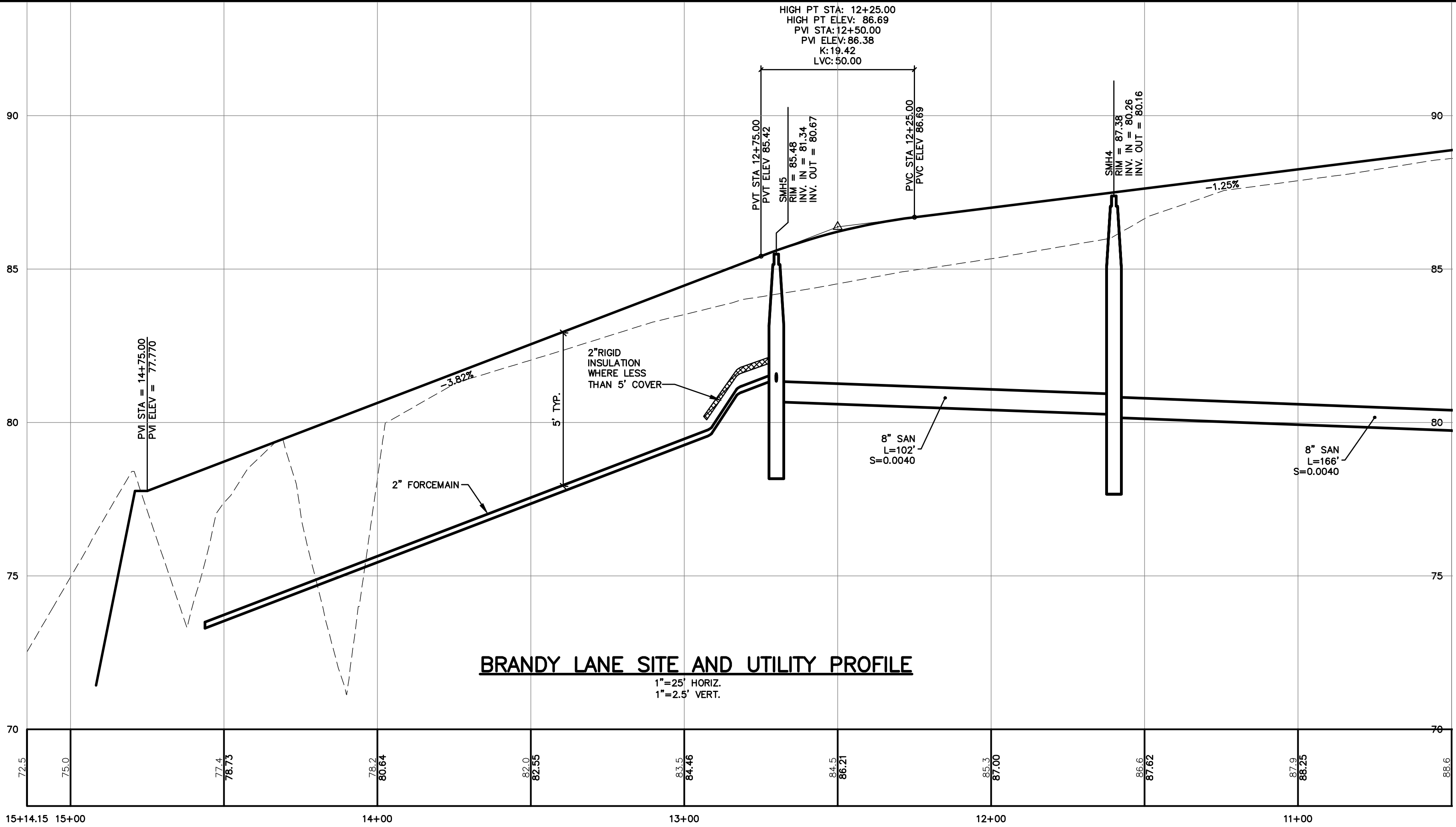
| BASELINE CURVE TABLE |        |        |         |           |               |               |             |
|----------------------|--------|--------|---------|-----------|---------------|---------------|-------------|
| CURVE NO.            | LENGTH | RADIUS | TANGENT | DELTA     | CHORD BEARING | START STATION | END STATION |
| C4                   | 182.79 | 200.00 | 98.34   | 52°21'58" | N32°45'16"W   | 11+11.45      | 12+94.24    |

| SANITARY SEWER SCHEDULE |      |       |                      |                     |                |
|-------------------------|------|-------|----------------------|---------------------|----------------|
| STRUCTURE               | SIZE | RIM   | INV. IN./SIZE (FROM) | INV. OUT./SIZE (TO) | STATION/OFFSET |
| SMH4                    | 4'ø  | 87.38 | 80.26/8"(SMH5)       | 80.16/8"(SMH3)      | 11+60.00/4'LT  |
| SMH5                    | 4'ø  | 85.48 | 81.34/2"(FM)         | 80.67/8"(SMH4)      | 12+70.00/4'LT  |



| PAVEMENT LEGEND                                        |                       |
|--------------------------------------------------------|-----------------------|
| ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS: |                       |
|                                                        | BITUMINOUS SIDEWALK   |
| CURBING LEGEND                                         |                       |
|                                                        | VERTICAL GRANITE CURB |

- UTILITY NOTES:
1. INSTALL WATER SERVICE 10' FROM DRIVEWAY OR IN DRIVEWAY PROTECTED WITH VALVE BOX.
  1. 5' SEPARATION BETWEEN WATER AND SEWER.



NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

1 inch = 25 ft.

|      |          |                                  |
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| Rev. | Date     | Revision                         |
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| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: DJG                                                                                                                                                                                 | Draft: CG     | Date: JAN 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-SP.dwg                                                                                                                                                               |               |                   |
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| Drawing Name: | Site and Utility Plan and Profile              |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

C102

May 18, 2017

Jay Arnold  
Portland Water District  
225 Douglas Street  
Portland, Maine 04104

Re: Brandy Lane Residential Subdivision  
22 Hope Avenue, Portland  
Letter of Ability to Serve

Dear Mr. Arnold:

LBW, LLC. has retained Gorrill Palmer to prepare plans and permit applications for a proposed residential subdivision at 22 Hope Ave. The site is shown on Assessor's Map 448 A004, is approximately 6.46 acres in size and is located in the Conditional Zone. As required by the reviewing authorities, we are writing to request a letter indicating the ability of Portland Water District to serve this project. A preliminary utility plan is enclosed for your review.

### **Description of Development Site**

The project site is located at 22 Hope Ave and consists of Tax Map 448 A004 as shown on the Portland Assessor's Map. The site is approximately 6.46 acres in size and has approximately 120 feet of frontage along Hope Avenue.

The project site is currently undeveloped with a landcover of woodlands. Topography in the area of the proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 40%. The steeper slopes are associated with drainage ways at the front and rear of the site. Abutting land uses include:

- North – Maine Turnpike Spur
- West – Residential
- South – Residential
- East – Resource Protection

Refer to Figure 1 – Location Map following this page for the project location.

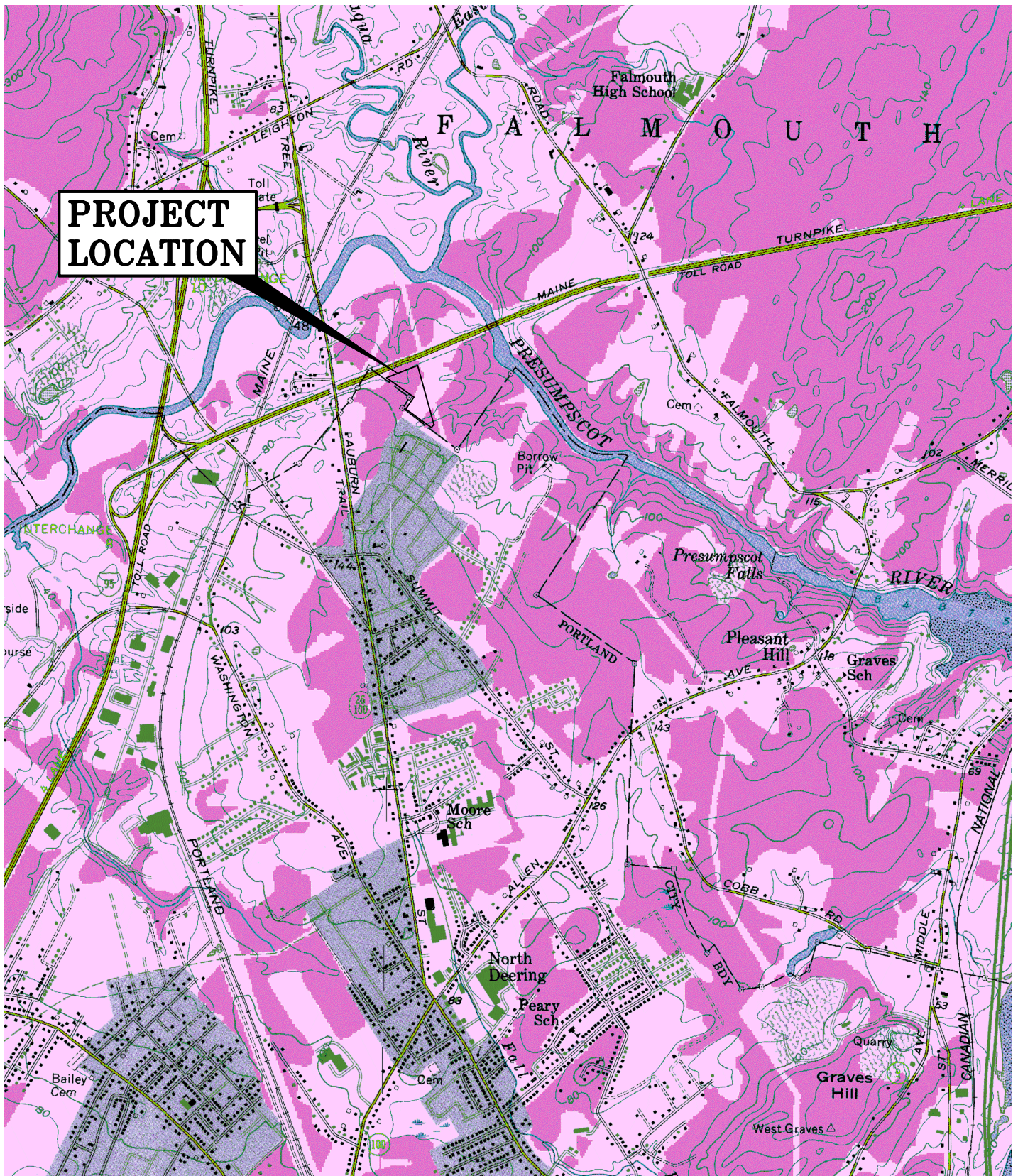
### **Project Description**

The project is a residential subdivision development consisting of a sixteen lots with water service by Portland Water District and wastewater service by the City of Portland. The utility plan shows the construction of two fire hydrants.

### **Existing Service**

An existing 8" water main stub is located in Hope Ave at the location of the proposed entrance. The project proposes to connect each lot with a 1" water service as depicted on the enclosed preliminary utility plan. A 20" existing water main crosses the proposed roadway between stations 5+50 to 6+25.





**U.S.G.S. Location Map**  
 Riverwalk Subdivision- Portland, Maine  
 U.S.G.S. Map Portland West, Maine-7.5 Minute Series (Topographic)

|                                |                   |
|--------------------------------|-------------------|
| Design: DJG                    | Date: JAN 2017    |
| Draft: CG                      | Job No.: 98089.06 |
| Checked: DER                   | Scale: NTS        |
| File Name: 98089.1-LOCMAP1.dwg |                   |



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Figure

1





This existing water main is assumed to have 5.5 feet of cover based upon profile provided by Portland Water District. With the proposed roadway profile, the bottom of the 20" water main would be at a max depth of less than 10 feet. A copy of the profile of the proposed roadway over the existing 20" water main is included with this letter.

### **Anticipated Flows**

The anticipated wastewater generation for the development was computed using the Maine Subsurface Waste Water Disposal Rules Section 4.E.I for single-family dwelling units and Table 4A. Based on the publication Water Supply and Pollution Control, Third Edition, by Clark, Viessman and Hammer, Chapter 4, Section 5; the peak daily use can be considered to about 180% of the average daily use. The table below is a summary of the wastewater generation that is anticipated for the development.

| <b><i>Anticipated Wastewater Generation</i></b> |                                                       |                                           |
|-------------------------------------------------|-------------------------------------------------------|-------------------------------------------|
|                                                 | Average<br>Daily<br>Wastewater<br>Generation<br>(gpd) | Peak Daily Wastewater<br>Generation (gpd) |
| Proposed 16 lot single family subdivision       | 3200                                                  | 5,760                                     |

The Water/Wastewater Generation Calculation sheet is attached to this letter.

### **Ability to Serve**

In support of the applications to the reviewing authorities, we are writing to request a letter indicating the ability of Portland Water District to serve the project. In addition, we are interested in receiving:

- An estimate for any work the Water District would perform within the right-of-way.
- Information as to any easements that the District may require on-site.
- Any results of hydrant tests in the vicinity of the site.
- Any other information that you believe would be useful as this project proceeds.

Please contact me if you have any questions relative to this matter at 772-2515 or [bgrondin@gorrillpalmer.com](mailto:bgrondin@gorrillpalmer.com).

Sincerely,

Gorrill Palmer

Benjamin M. Grondin  
Design Engineer

Copy: Burt Wolf



|                                                                                                             |               |                                             |      |          |
|-------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------|------|----------|
|  <b>GORRILL<br/>PALMER</b> | JOB           | 98089.08 Brandy Lane (Hope Ave Subdivision) |      |          |
|                                                                                                             | SHEET NO.     | 1                                           | OF   | 1        |
|                                                                                                             | CALCULATED BY | DJG                                         | DATE | 1/5/2017 |
|                                                                                                             | CHECKED BY    |                                             | DATE |          |
|                                                                                                             | SCALE         | N/A                                         |      |          |

Task: Determine daily water demand/wastewater generation for proposed development of Hope Ave Subdivision

Reference: 1. Maine Subsurface Waste Water Disposal Rules for peak flow rates 2015  
 2. Water Supply and Pollution Control, Third Edition, By Clark, Viessman & Hammer  
 Chapter 4, Section 5

Assumptions: Proposed development assumed to consist of the following:  
 Sixteen residential single family units with four bedrooms per unit.

|                              |    |          |
|------------------------------|----|----------|
| Single Family Dwelling Units | 16 | units    |
| with 4 bedroom/Unit =        | 64 | bedrooms |

Calculations:

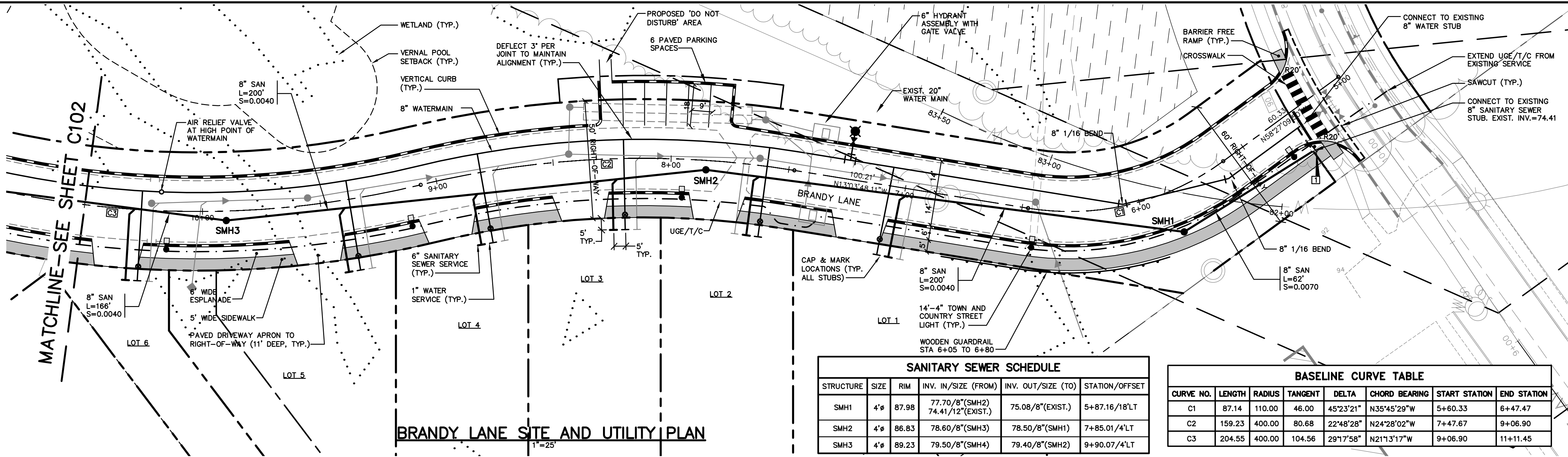
Single Family Dwellings From Ref. 1, Section 4.E.1, peak flow rate Table 4A  
 360 gpd/unit

**Peak Water/Wastewater Generation: 5760 gpd**

**Average Water/Wastewater Generation (Ref. 2): 3200 gpd**  
 (peak flow =180% of average flow)

**Average Daily Water/Wastewater Generation for Proposed Development: 3200 gpd**

**Peak Daily Water/Wastewater Generation for Proposed Development: 5760 gpd**



**PAVEMENT LEGEND**

ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS:

BITUMINOUS SIDEWALK

**CURBING LEGEND**

VERTICAL GRANITE CURB

**STRIPING LEGEND**

SIGNAGE, STRIPING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION & REFLECTIVITY.

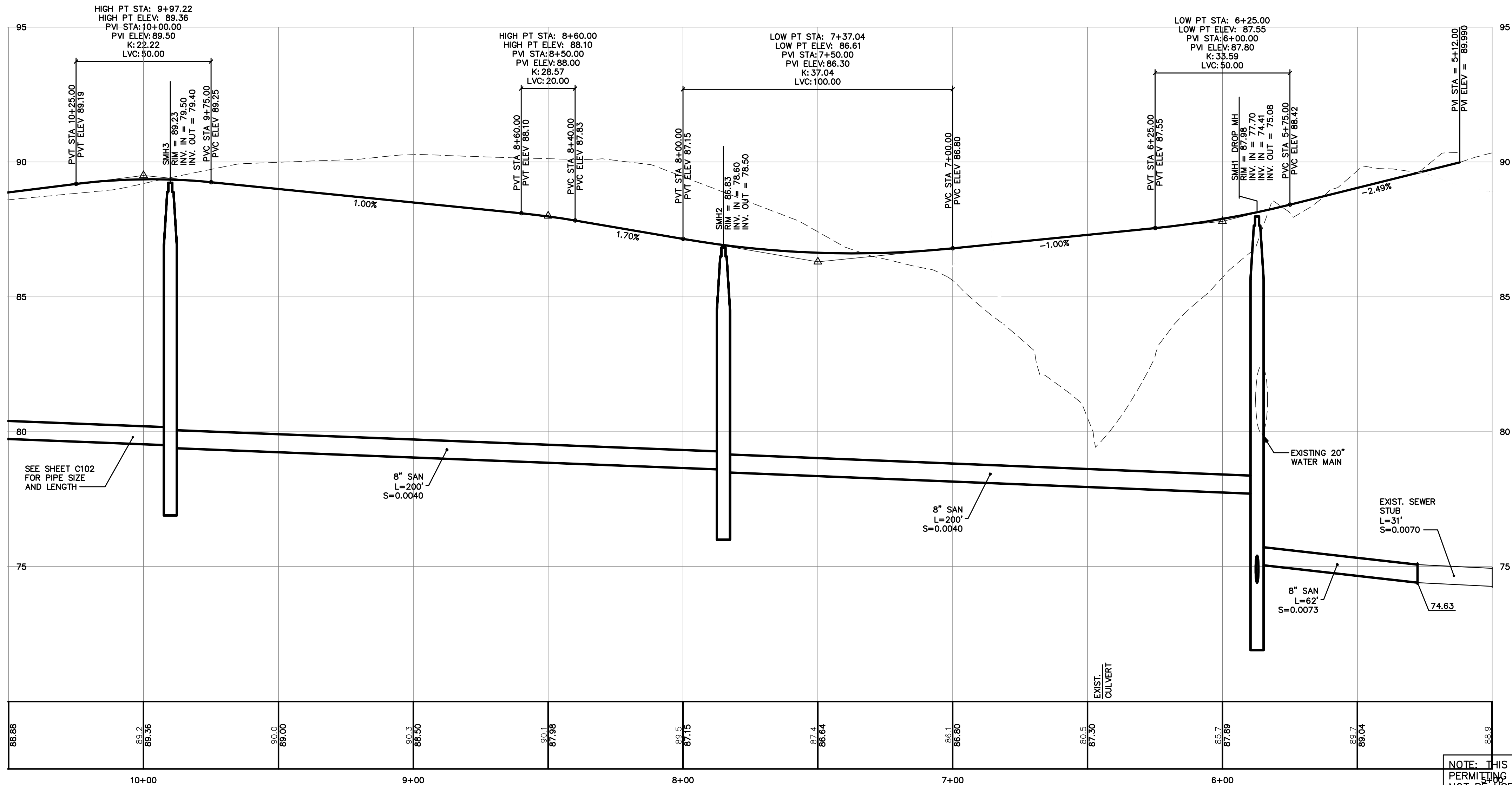
12"SL - 12" WIDTH STOP LINE  
4"SWLL - 4" WIDTH SOLID WHITE LANE LINE  
4"DYCL - 4" WIDTH DOUBLE YELLOW CENTERLINE  
4"DWLL - 4" WIDTH DASHED WHITE LANE LINE

**SIGN LEGEND**

STOP  
R1-1  
30"x 30"

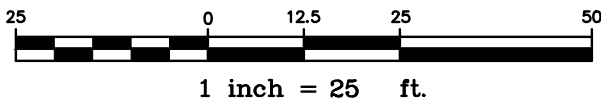
**UTILITY NOTES:**

1. INSTALL WATER SERVICE 10' FROM DRIVEWAY OR IN DRIVEWAY PROTECTED WITH VALVE BOX.
1. 5' SEPARATION BETWEEN WATER AND SEWER.



**BRANDY LANE SITE AND UTILITY PROFILE**  
1"=25' HORIZ.  
1"=2.5' VERT.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



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|------|----------|----------------------------------|
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| Design: DJG                                                                                                                                                                                | Draft: CG     | Date: JAN 2017    |
| Checked: DER                                                                                                                                                                               | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-SP.dwg                                                                                                                                                              |               |                   |
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| Drawing Name: | Site and Utility Plan and Profile              |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.  
**C101**



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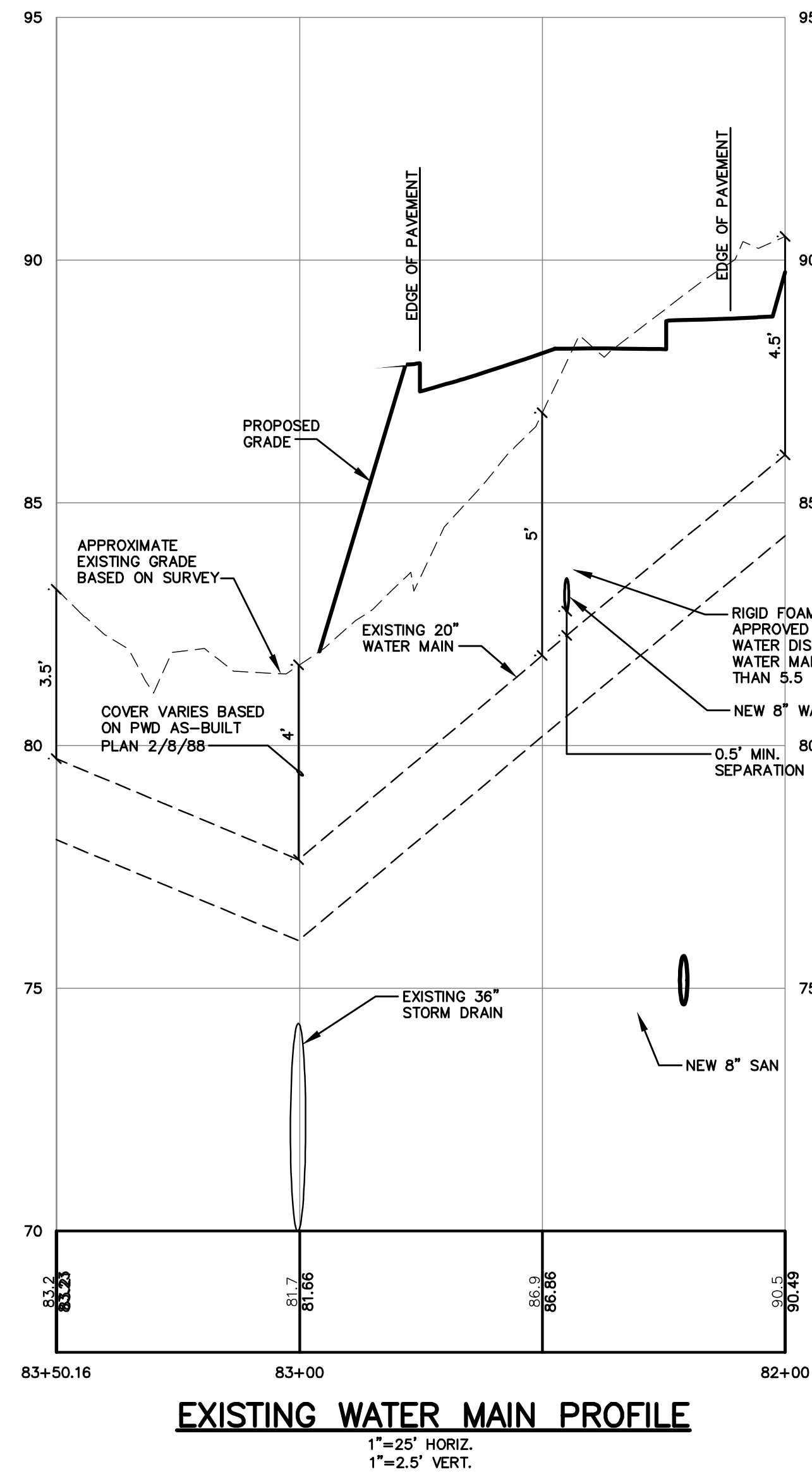
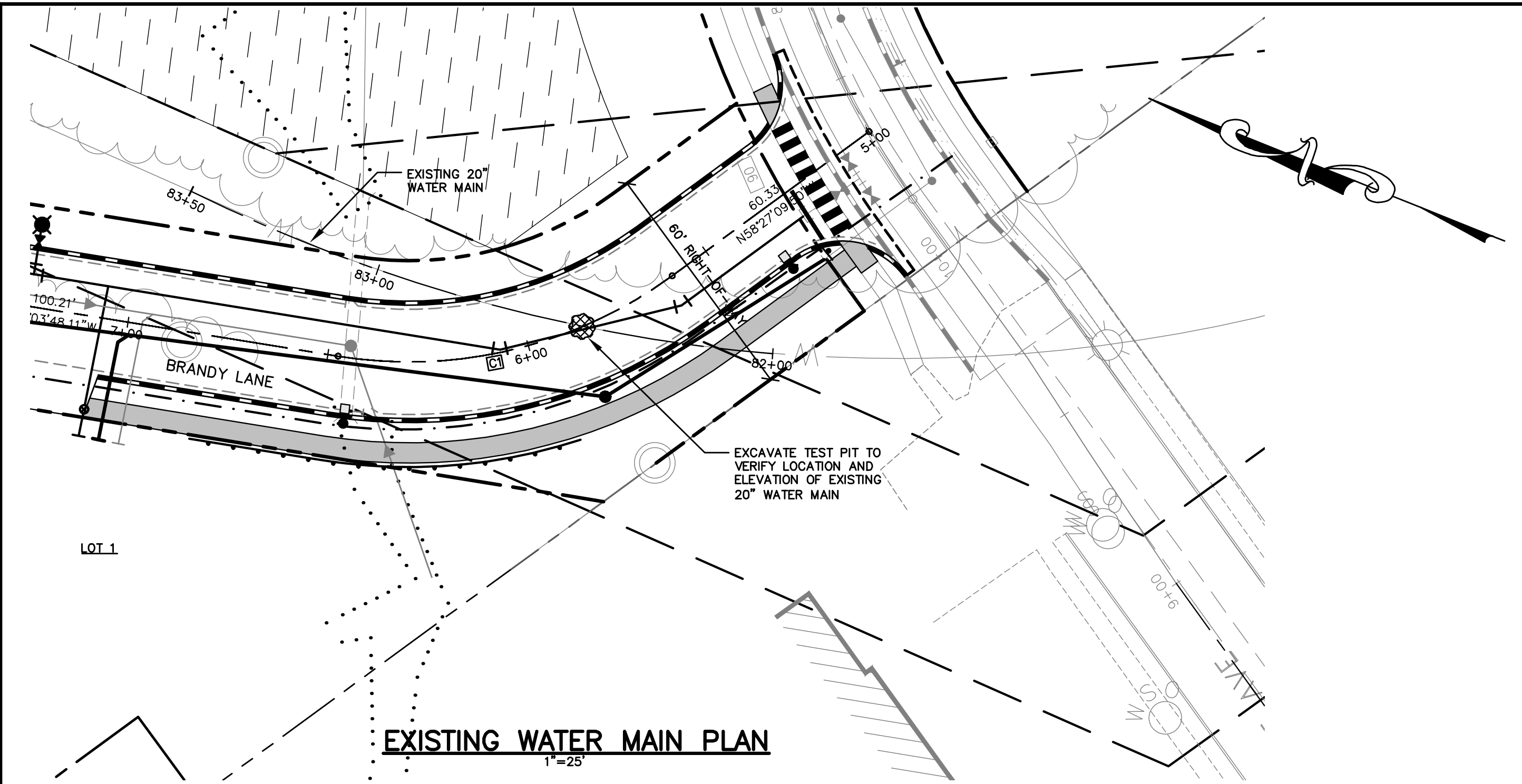


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|               |                                                |
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| Drawing Name: | Water Main Plan and Profile                    |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

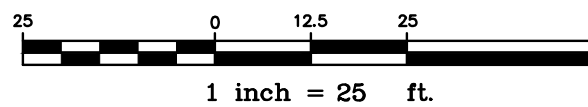
C101A



#### NOTES:

1. BASELINE STATIONS ARE FROM PORTLAND WATER DISTRICT AS-BUILT PLAN 2/8/88.
2. COVER DEPTHS AS NOTED ARE FROM PORTLAND WATER DISTRICT AS-BUILT PLAN AT LOCATIONS OF EXISTING 20" WATER MAIN.

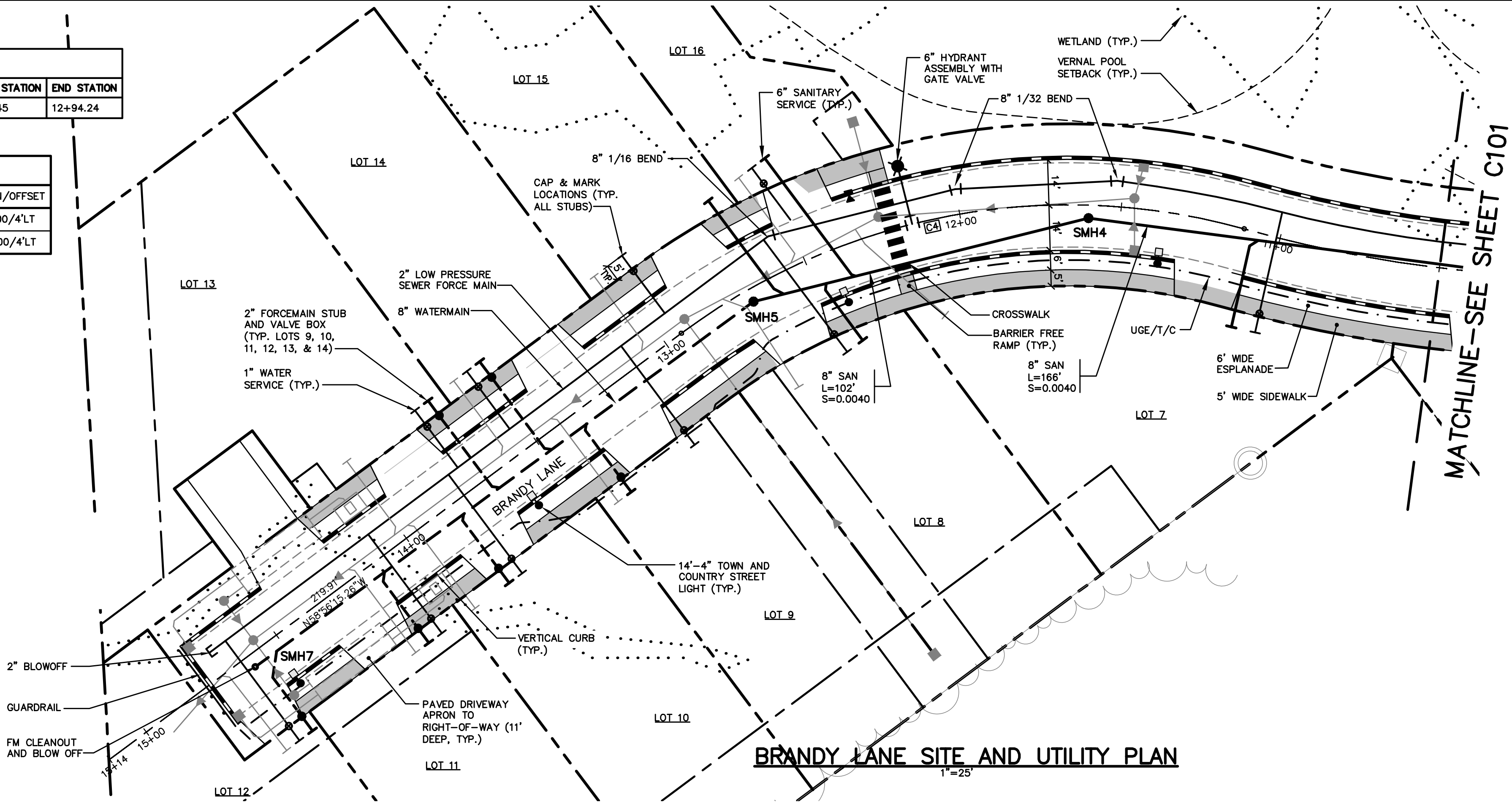
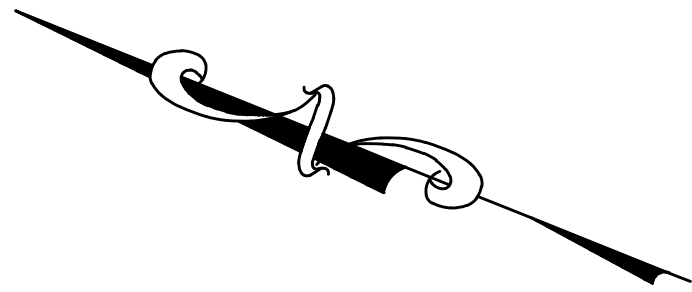
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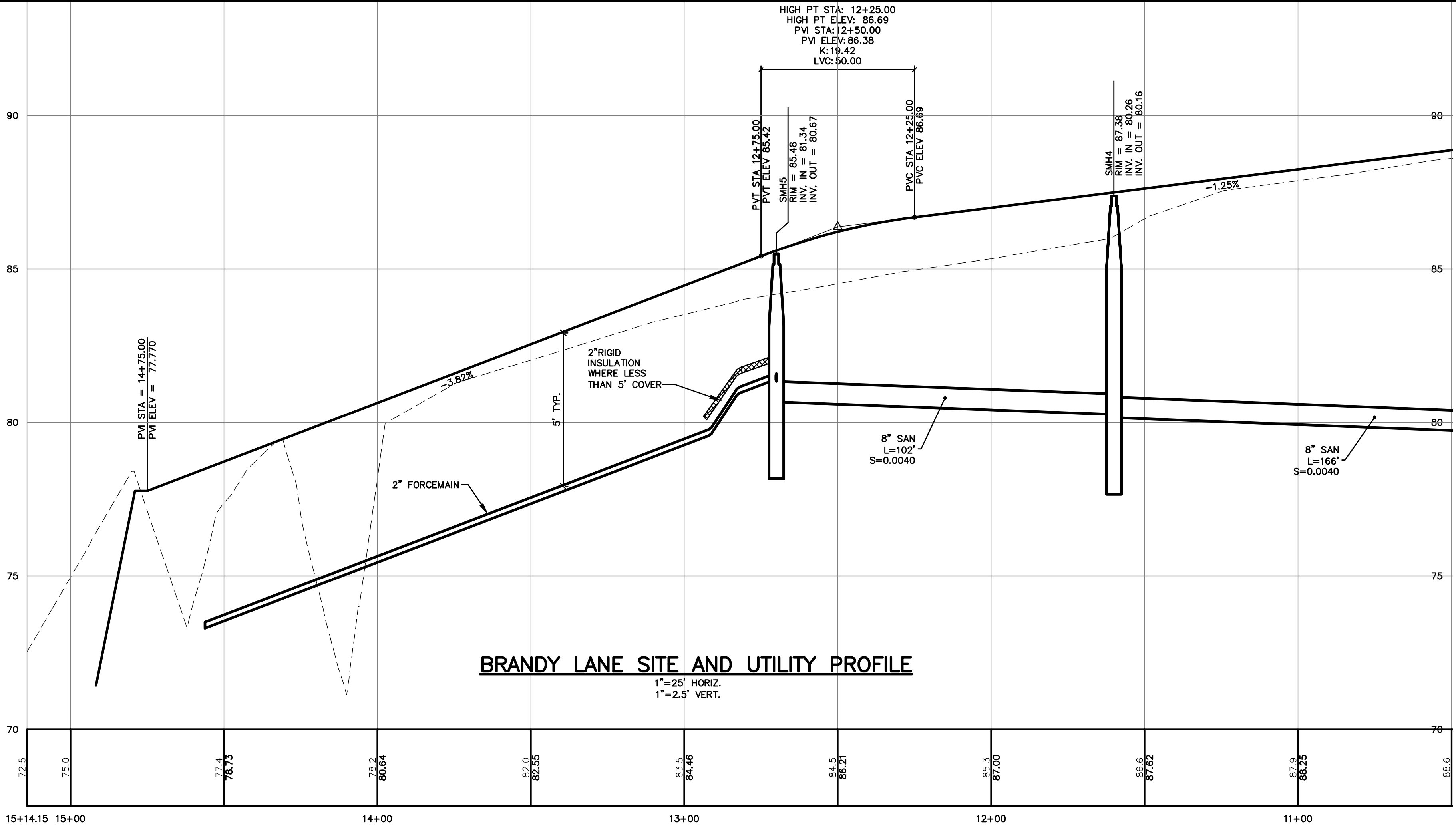
| BASELINE CURVE TABLE |        |        |         |           |               |               |             |
|----------------------|--------|--------|---------|-----------|---------------|---------------|-------------|
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|-------------------------|------|-------|----------------------|---------------------|----------------|
| STRUCTURE               | SIZE | RIM   | INV. IN./SIZE (FROM) | INV. OUT./SIZE (TO) | STATION/OFFSET |
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| SMH5                    | 4'ø  | 85.48 | 81.34/2"(FM)         | 80.67/8"(SMH4)      | 12+70.00/4'LT  |



| PAVEMENT LEGEND                                        |                       |
|--------------------------------------------------------|-----------------------|
| ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS: |                       |
|                                                        | BITUMINOUS SIDEWALK   |
| CURBING LEGEND                                         |                       |
|                                                        | VERTICAL GRANITE CURB |

- UTILITY NOTES:
1. INSTALL WATER SERVICE 10' FROM DRIVEWAY OR IN DRIVEWAY PROTECTED WITH VALVE BOX.
  1. 5' SEPARATION BETWEEN WATER AND SEWER.



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25 0 12.5 25 50  
1 inch = 25 ft.

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Drawing No.  
**C102**

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May 18, 2017

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

Re: Brandy Lane Residential Subdivision  
22 Hope Avenue, Portland  
Letter of Ability to Serve

Dear Mr. Roland,

LBW, LLC. has retained Gorrill Palmer to prepare plans and permit applications for a proposed residential subdivision at 22 Hope Ave. The site is shown on Assessor's Map 448 A004, is approximately 6.46 acres in size and is located in the Conditional Zone. As required by the reviewing authorities, we are writing to request a letter indicating the ability of the Department of Public Services to serve this project. A preliminary utility plan is enclosed for your review.

### **Description of Development Site**

The project site is located at 22 Hope Ave and consists of Tax Map 448 A004 as shown on the Portland Assessor's Map. The site is approximately 6.46 acres in size and has approximately 120 feet of frontage along Hope Avenue.

The project site is currently undeveloped with a landcover of woodlands. Topography in the area of the proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 40%. The steeper slopes are associated with drainage ways at the front and rear of the site. Abutting land uses include:

- North – Maine Turnpike Spur
- West – Residential
- South – Residential
- East – Resource Protection

Refer to Figure 1 – Location Map following this page for the project location.

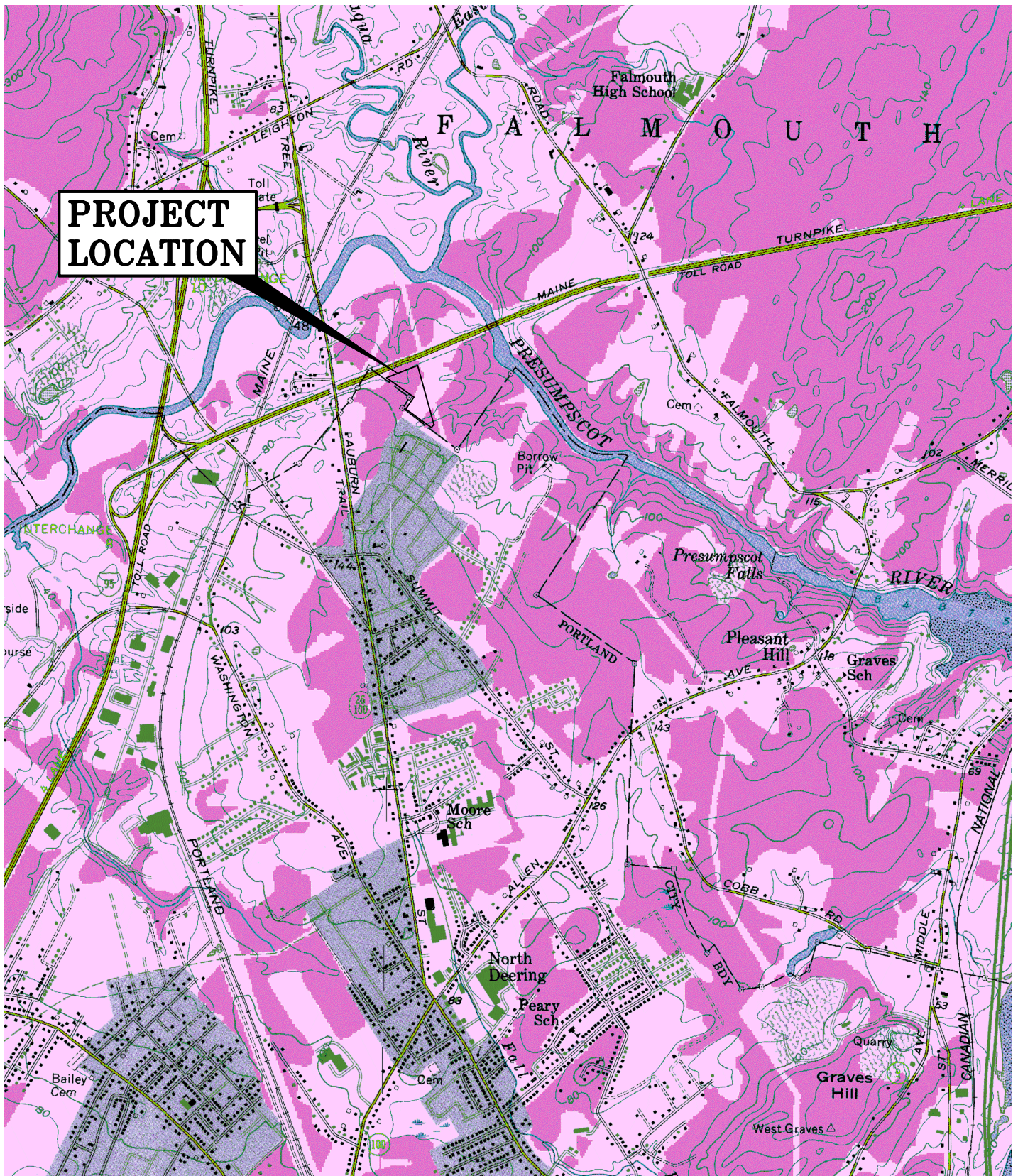
### **Project Description**

The project is a residential subdivision development consisting of a sixteen lots with wastewater service by the Department of Public Services.

### **Existing Service**

An existing 8" sanitary sewer stub is located in Hope Ave at the location of the proposed entrance. The project proposes to connect each lot with a 6" sanitary sewer service. Lots 9, 10, 11, 12, 13, and 14 are proposed to be served by a low pressure force main system due to existing topography as depicted on the enclosed preliminary utility plan.





**U.S.G.S. Location Map**  
 Riverwalk Subdivision- Portland, Maine  
 U.S.G.S. Map Portland West, Maine-7.5 Minute Series (Topographic)

|                                |                   |
|--------------------------------|-------------------|
| Design: DJG                    | Date: JAN 2017    |
| Draft: CG                      | Job No.: 98089.06 |
| Checked: DER                   | Scale: NTS        |
| File Name: 98089.1-LOCMAP1.dwg |                   |



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Figure

1





### **Anticipated Flows**

The anticipated wastewater generation for the development was computed using the Maine Subsurface Waste Water Disposal Rules Section 4.E.I for single-family dwelling units and Table 4A. Based on the publication Water Supply and Pollution Control, Third Edition, by Clark, Viessman and Hammer, Chapter 4, Section 5; the peak daily use can be considered to about 180% of the average daily use. The table below is a summary of the wastewater generation that is anticipated for the development.

| <b><i>Anticipated Wastewater Generation</i></b> |                                           |                                        |
|-------------------------------------------------|-------------------------------------------|----------------------------------------|
|                                                 | Average Daily Wastewater Generation (gpd) | Peak Daily Wastewater Generation (gpd) |
| Proposed 16 lot single family subdivision       | 3200                                      | 5,760                                  |

The Water/Wastewater Generation Calculation sheet is attached to this letter.

### **Ability to Serve**

Attached to this letter is the City of Portland Wastewater Capacity Application from the Level III Site Plan Application which will be submitted to the City. In support of the applications to the reviewing authorities, we are writing to request a letter indicating the ability of the Department of Public Services to serve the proposed project. In addition, we are interested in receiving:

- Information as to any easements that the Department of Public Services may require on-site.
- Any impact or connection fees associated with the development.
- Issues relating to any combined stormwater/sewer system which may affect the project.
- Any other information that you believe would be useful as this project proceeds.

Please contact me if you have any questions relative to this matter at 772-2515 or at [bgrondin@gorrillpalmer.com](mailto:bgrondin@gorrillpalmer.com).

Sincerely,

Gorrill Palmer

A handwritten signature in black ink that reads 'Benjamin M. Grondin'.

Benjamin M. Grondin  
Design Engineer

Copy: Burt Wolf



|                                                                                   |               |                                             |      |          |
|-----------------------------------------------------------------------------------|---------------|---------------------------------------------|------|----------|
|  | JOB           | 98089.08 Brandy Lane (Hope Ave Subdivision) |      |          |
|                                                                                   | SHEET NO.     | 1                                           | OF   | 1        |
|                                                                                   | CALCULATED BY | DJG                                         | DATE | 1/5/2017 |
|                                                                                   | CHECKED BY    |                                             | DATE |          |
|                                                                                   | SCALE         | N/A                                         |      |          |

Task: Determine daily water demand/wastewater generation for proposed development of Hope Ave Subdivision

Reference: 1. Maine Subsurface Waste Water Disposal Rules for peak flow rates 2015  
 2. Water Supply and Pollution Control, Third Edition, By Clark, Viessman & Hammer  
 Chapter 4, Section 5

Assumptions: Proposed development assumed to consist of the following:  
 Sixteen residential single family units with four bedrooms per unit.

|                              |    |          |
|------------------------------|----|----------|
| Single Family Dwelling Units | 16 | units    |
| with 4 bedroom/Unit =        | 64 | bedrooms |

Calculations:

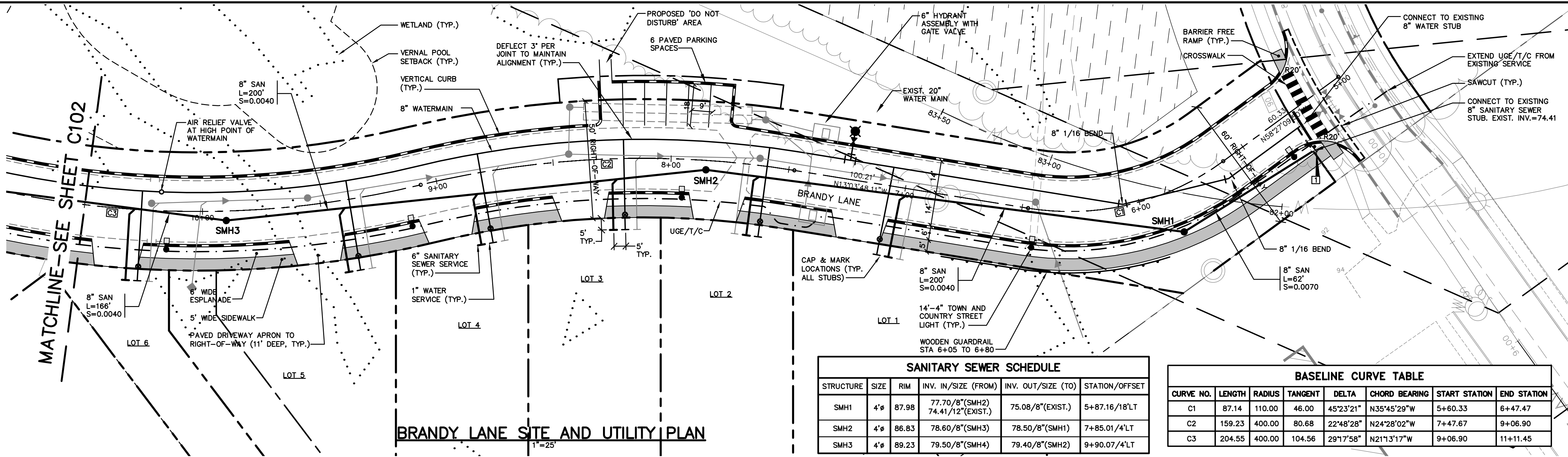
Single Family Dwellings From Ref. 1, Section 4.E.1, peak flow rate Table 4A  
 360 gpd/unit

**Peak Water/Wastewater Generation: 5760 gpd**

**Average Water/Wastewater Generation (Ref. 2): 3200 gpd**  
 (peak flow =180% of average flow)

**Average Daily Water/Wastewater Generation for Proposed Development: 3200 gpd**

**Peak Daily Water/Wastewater Generation for Proposed Development: 5760 gpd**



**PAVEMENT LEGEND**

ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS:

BITUMINOUS SIDEWALK

**CURBING LEGEND**

VERTICAL GRANITE CURB

**STRIPING LEGEND**

SIGNAGE, STRIPING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION & REFLECTIVITY.

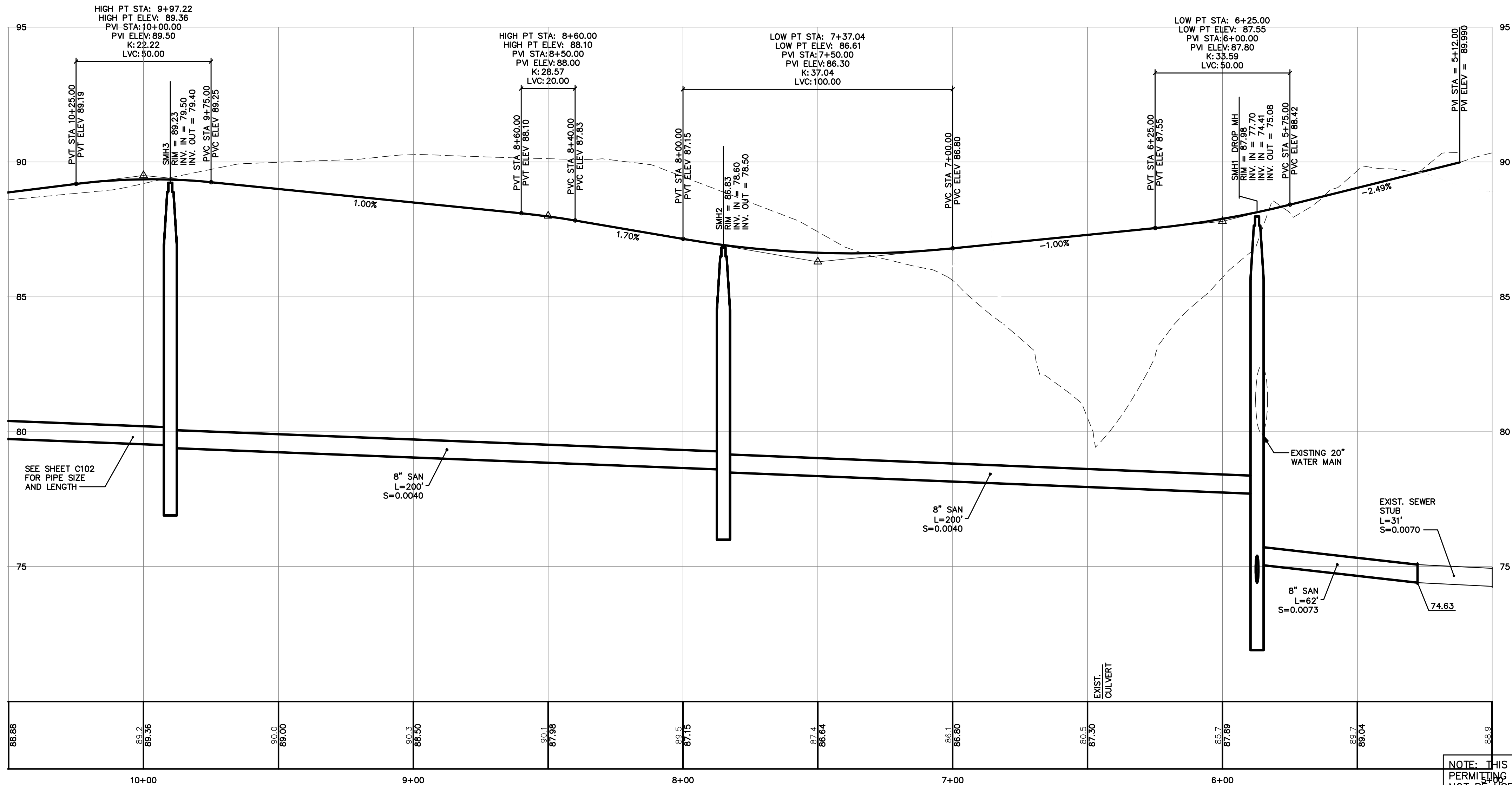
12"SL - 12" WIDTH STOP LINE  
4"SWLL - 4" WIDTH SOLID WHITE LANE LINE  
4"DYCL - 4" WIDTH DOUBLE YELLOW CENTERLINE  
4"DWLL - 4" WIDTH DASHED WHITE LANE LINE

**SIGN LEGEND**

STOP  
R1-1  
30"x 30"

**UTILITY NOTES:**

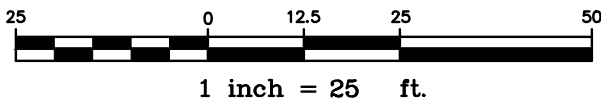
1. INSTALL WATER SERVICE 10' FROM DRIVEWAY OR IN DRIVEWAY PROTECTED WITH VALVE BOX.
1. 5' SEPARATION BETWEEN WATER AND SEWER.



BRANDY LANE SITE AND UTILITY PROFILE

1"=25' HORIZ.  
1"=2.5' VERT.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



C:\CAD WORKING\98089.08 Riverwalk Long Road\DWG\98089-08-PP-SP.dwg - 5/17/2017 1:14 PM

| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: DJG                                                                                                                                                                                 | Draft: CG     | Date: JAN 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-SP.dwg                                                                                                                                                               |               |                   |
| This plan shall not be modified without written permission from Gorrell Palmer(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP. |               |                   |



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207.772.2515

|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Site and Utility Plan and Profile              |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.  
**C101**



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|      |          |                                  |
|------|----------|----------------------------------|
|      |          |                                  |
|      |          |                                  |
|      |          |                                  |
|      |          |                                  |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |
| Rev. | Date     | Revision                         |

|                                   |         |     |
|-----------------------------------|---------|-----|
|                                   |         |     |
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                            |               |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: DJG                                                                                                                                                                                | Draft: CG     | Date: JAN 2017    |
| Checked: DER                                                                                                                                                                               | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-SP.dwg                                                                                                                                                              |               |                   |
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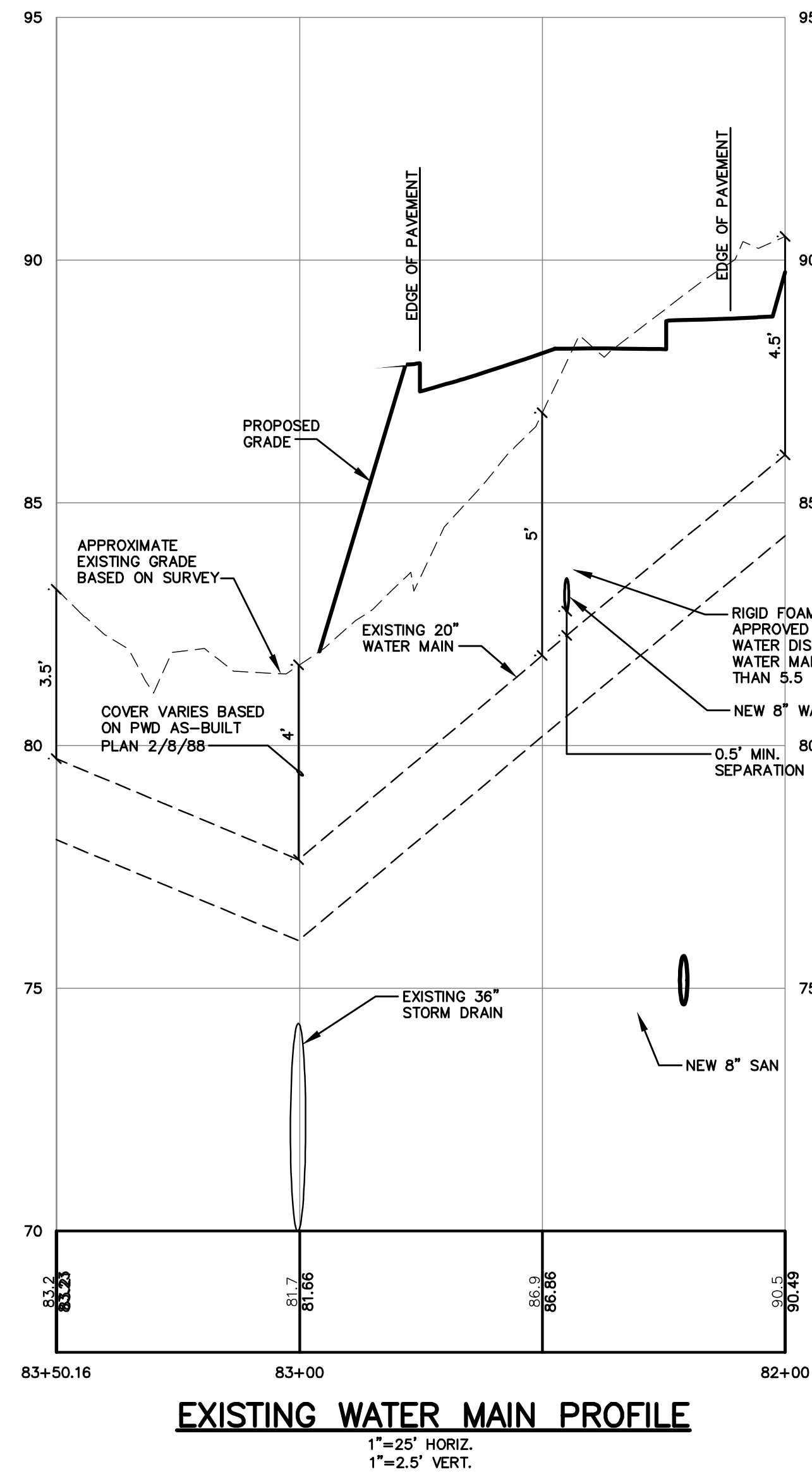
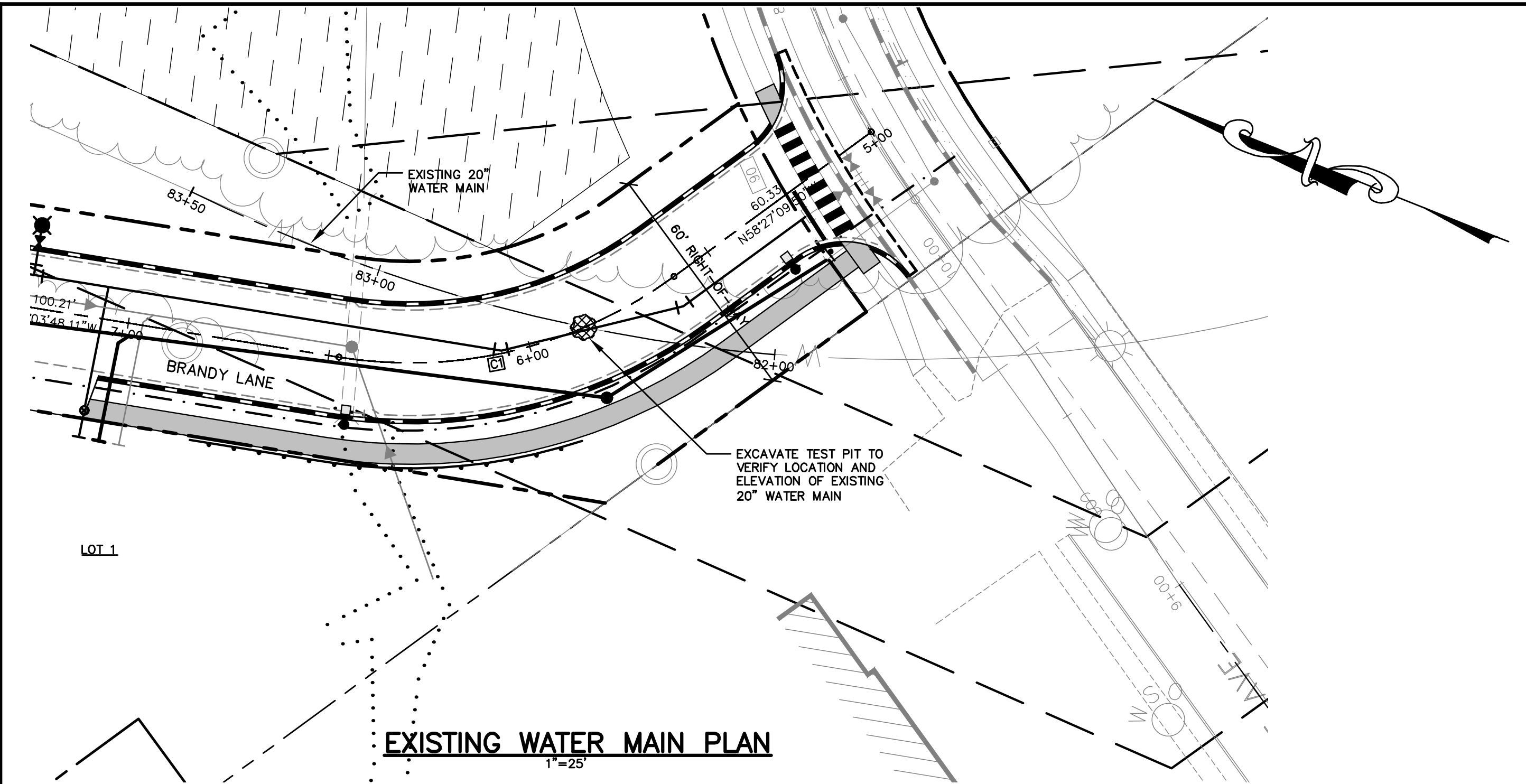


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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Water Main Plan and Profile                    |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

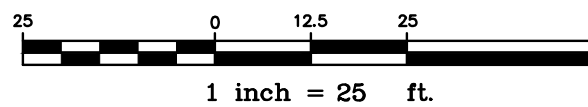
C101A



**NOTES:**

1. BASELINE STATIONS ARE FROM PORTLAND WATER DISTRICT AS-BUILT PLAN 2/8/88.
2. COVER DEPTHS AS NOTED ARE FROM PORTLAND WATER DISTRICT AS-BUILT PLAN AT LOCATIONS OF EXISTING 20" WATER MAIN.

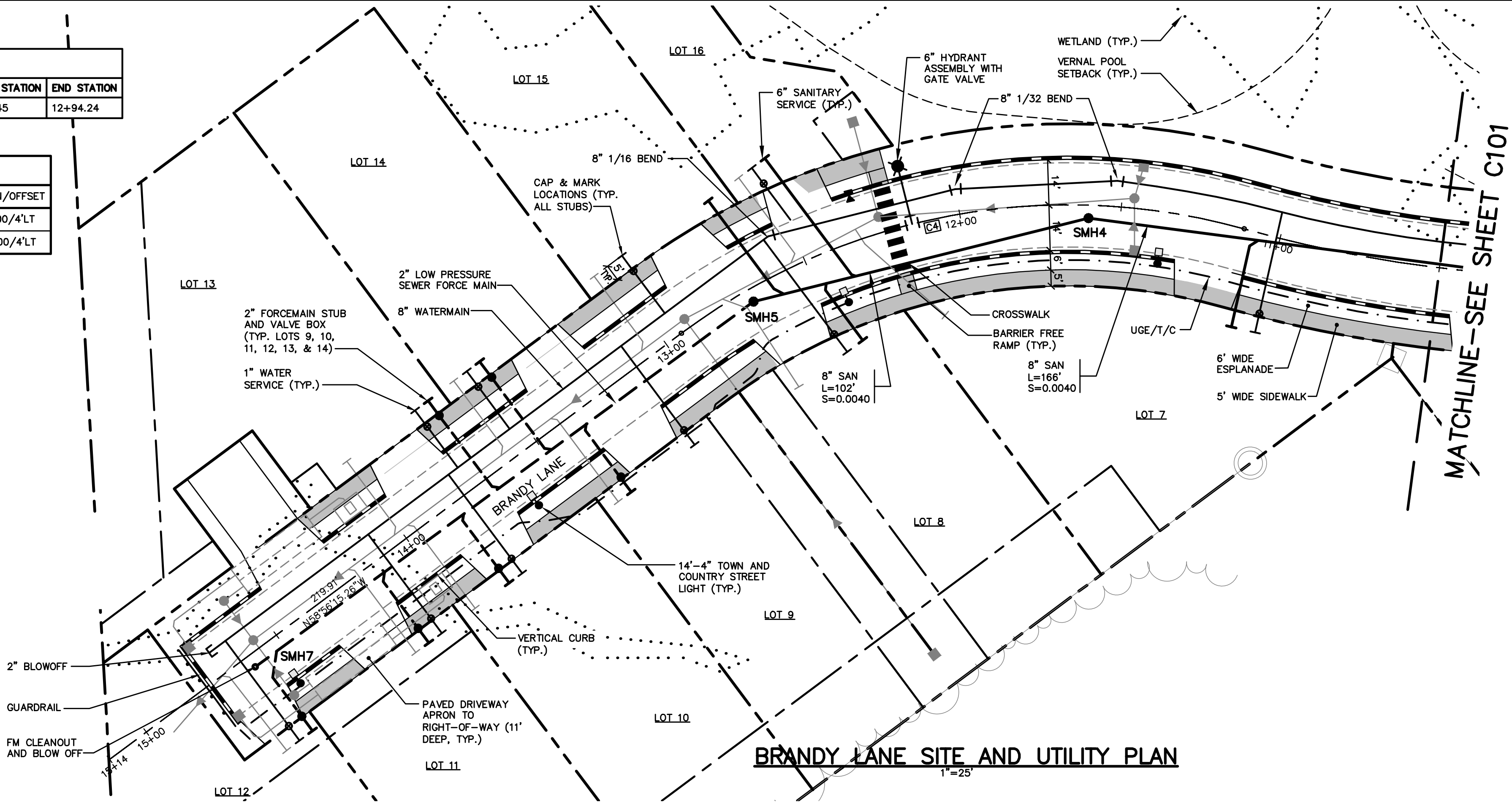
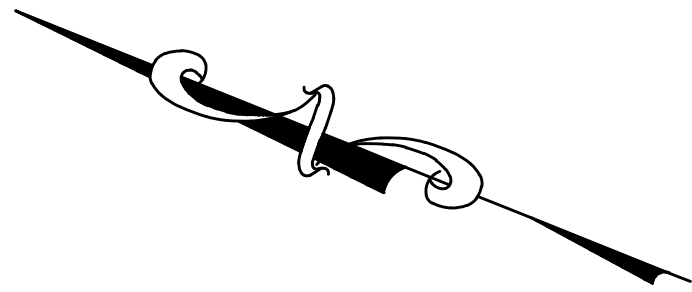
NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.





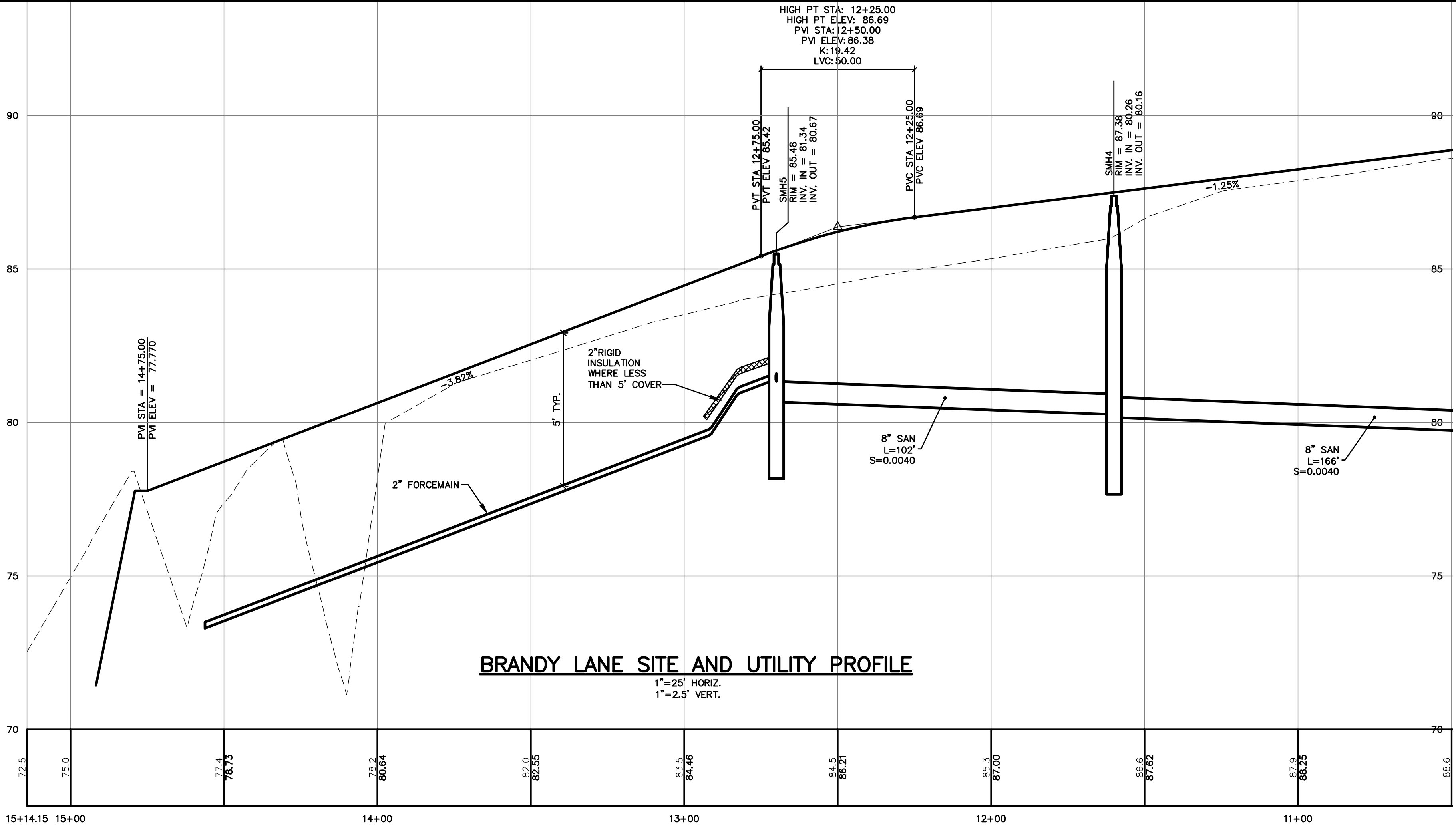
| BASELINE CURVE TABLE |        |        |         |           |               |               |             |
|----------------------|--------|--------|---------|-----------|---------------|---------------|-------------|
| CURVE NO.            | LENGTH | RADIUS | TANGENT | DELTA     | CHORD BEARING | START STATION | END STATION |
| C4                   | 182.79 | 200.00 | 98.34   | 52°21'58" | N32°45'16"W   | 11+11.45      | 12+94.24    |

| SANITARY SEWER SCHEDULE |      |       |                      |                     |                |
|-------------------------|------|-------|----------------------|---------------------|----------------|
| STRUCTURE               | SIZE | RIM   | INV. IN./SIZE (FROM) | INV. OUT./SIZE (TO) | STATION/OFFSET |
| SMH4                    | 4'ø  | 87.38 | 80.26/8"(SMH5)       | 80.16/8"(SMH3)      | 11+60.00/4'LT  |
| SMH5                    | 4'ø  | 85.48 | 81.34/2"(FM)         | 80.67/8"(SMH4)      | 12+70.00/4'LT  |



| PAVEMENT LEGEND                                        |                       |
|--------------------------------------------------------|-----------------------|
| ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS: |                       |
|                                                        | BITUMINOUS SIDEWALK   |
| CURBING LEGEND                                         |                       |
|                                                        | VERTICAL GRANITE CURB |

- UTILITY NOTES:
1. INSTALL WATER SERVICE 10' FROM DRIVEWAY OR IN DRIVEWAY PROTECTED WITH VALVE BOX.
  1. 5' SEPARATION BETWEEN WATER AND SEWER.



NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

1 inch = 25 ft.

C:\CAD WORKING\98089.08 Riverwalk Long Road\DWG\98089-08-PP-SP.dwg - 5/17/2017 1:15 PM

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| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: DJG                                                                                                                                                                                 | Draft: CG     | Date: JAN 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-SP.dwg                                                                                                                                                               |               |                   |
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Site and Utility Plan and Profile              |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

C102



707 Sable Oaks Drive, Suite 30  
South Portland, Maine 04106  
207.772.2515

May 23, 2017

Mr. Kirk Mohney  
State Historic Preservation Officer  
Maine Historic Preservation Commission  
55 Capitol Street, State House Station 65  
Augusta, ME 04333-0065

Subject: Presence of Historical Areas  
Brandy Lane Residential Subdivision  
22 Hope Avenue, Portland, Maine

Dear Mr. Mohney,

LBW, LLC has retained Gorrill Palmer to prepare design plans and permit applications for a proposed residential subdivision at 22 Hope Avenue. The site is shown on Assessor's Map 448 A004 and is approximately 6.46 acres in size.

The project site is shown on the attached Location Map.

As required by the reviewing authorities, Gorrill Palmer requests information from your department relative to the presence of any nearby structure or area with historical, architectural or archeological significance as defined by the National Historic Preservation Act.

Thank you for your consideration. If you have any questions regarding the proposed project, please contact our office.

Sincerely,

Gorrill Palmer

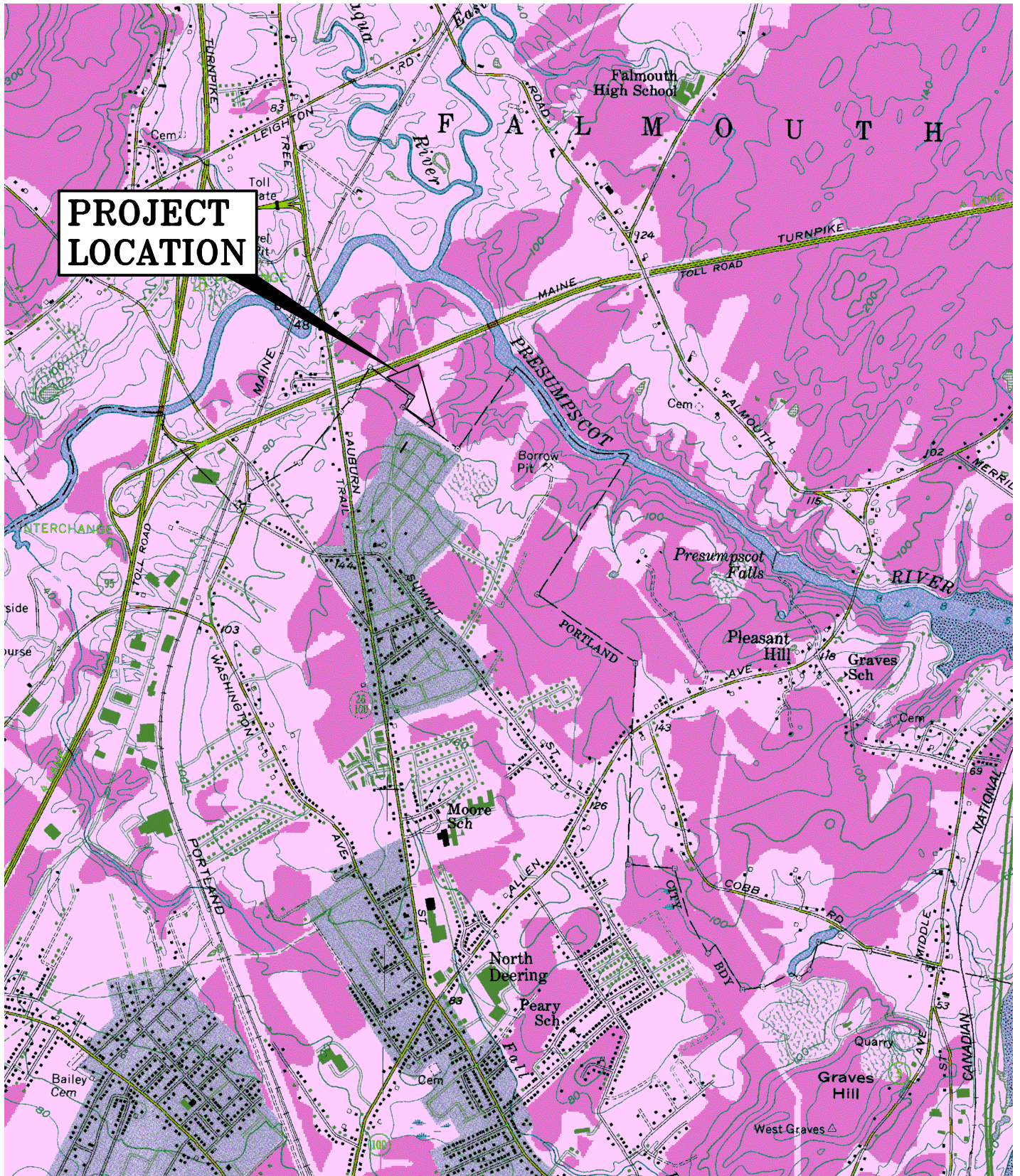
A handwritten signature in black ink, reading 'Benjamin M. Grondin'.

Benjamin M. Grondin  
Design Engineer

Enclosure

bmg/U:\98089.08 - Design and Permitting 'Long' Road\IP Applications\Local\Resource Letters\Mohney\_5-23-2017.doc





**U.S.G.S. Location Map**  
 Brandy Lane Subdivision- Portland, Maine  
 U.S.G.S. Map Portland West, Maine-7.5 Minute Series (Topographic)

|                                |                   |
|--------------------------------|-------------------|
| Design: DJG                    | Date: MAY 2017    |
| Draft: CG                      | Job No.: 98089.06 |
| Checked: DER                   | Scale: NTS        |
| File Name: 98089.1-LOCMAP1.dwg |                   |



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 207.657.6910

Figure

1





707 Sable Oaks Drive, Suite 30  
South Portland, Maine 04106  
207.772.2515

May 23, 2017

Mr. John Perry  
Environmental Review Coordinator  
Maine Dept. of Inland Fisheries & Wildlife  
284 State Street  
41 State House Station  
Augusta, ME 04333-0041

Subject: Presence of Essential Habitat  
Brandy Lane Residential Subdivision  
22 Hope Avenue, Portland, Maine

Dear Mr. Perry,

LBW, LLC has retained Gorrill Palmer to prepare design plans and permit applications for a proposed residential subdivision at 22 Hope Avenue. The site is shown on Assessor's Map 448 A004 and is approximately 6.46 acres in size.

The project site is shown on the attached Location Map.

As required by the reviewing authorities, Gorrill Palmer requests information from your department regarding any threatened, endangered, and special status wildlife or fisheries species and/or habitats, within the project area which might be impacted by this project.

Thank you for your consideration. If you have any questions regarding the proposed project, please contact our office.

Sincerely,

Gorrill Palmer

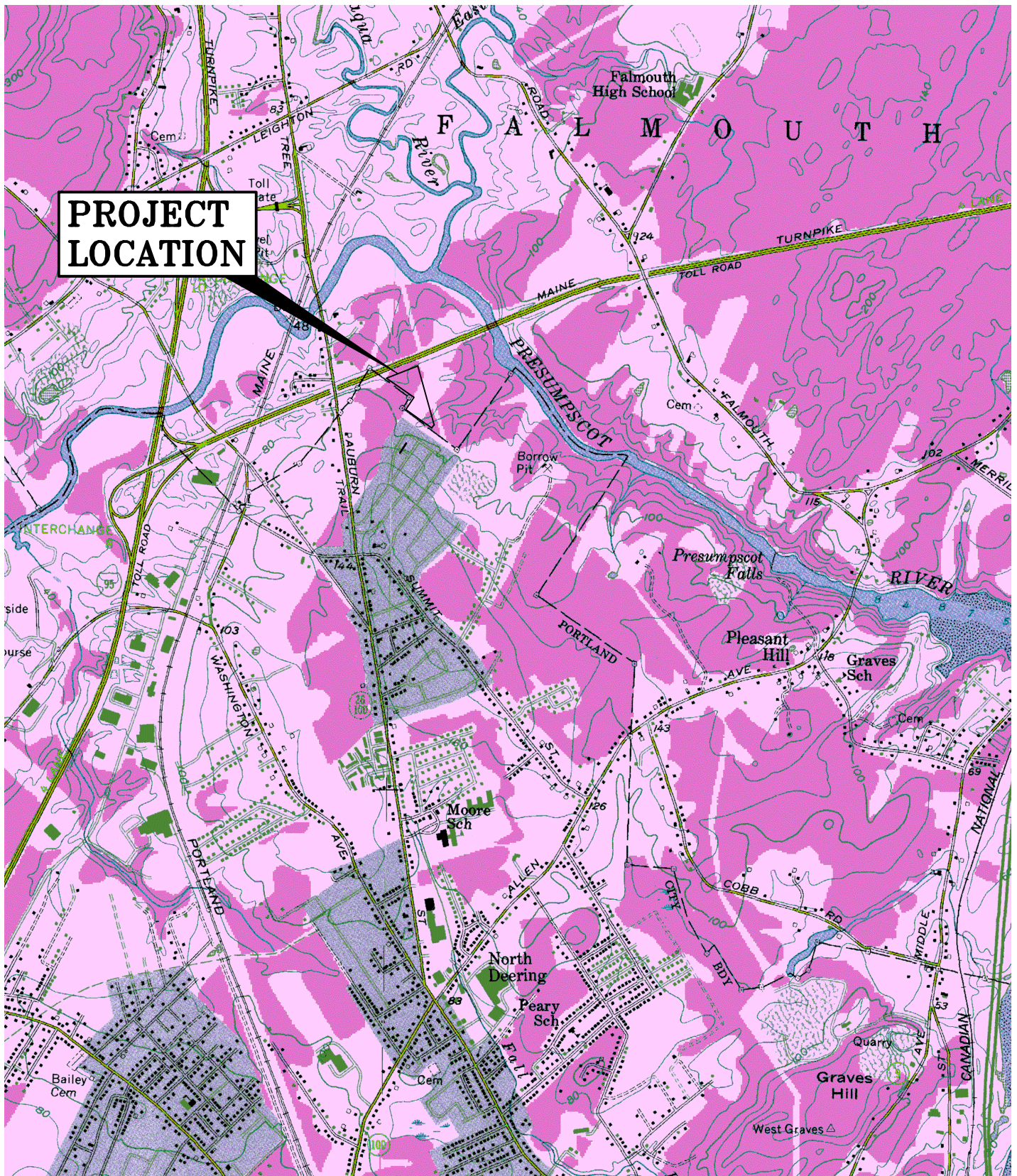
A handwritten signature in black ink, reading 'Benjamin M. Grondin'.

Benjamin M. Grondin  
Design Engineer

Enclosure

bmg/U:\98089.08 - Design and Permitting 'Long' Road\IP Applications\Local\Resource Letters\Perry\_5-23-2017.doc





**U.S.G.S. Location Map**  
 Brandy Lane Subdivision- Portland, Maine  
 U.S.G.S. Map Portland West, Maine-7.5 Minute Series (Topographic)

|                                |                   |
|--------------------------------|-------------------|
| Design: DJG                    | Date: MAY 2017    |
| Draft: CG                      | Job No.: 98089.06 |
| Checked: DER                   | Scale: NTS        |
| File Name: 98089.1-LOCMAP1.dwg |                   |



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 207.657.6910





**PAUL R. LePAGE**  
GOVERNOR

**STATE OF MAINE**  
**DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY**  
93 STATE HOUSE STATION  
AUGUSTA, MAINE 04333

**WALTER E. WHITCOMB**  
COMMISSIONER

May 23, 2017

Benjamin Grondin  
Gorrill Palmer  
707 Sable Oaks Drive, Suite 30  
South Portland, ME 04106

Via email: [bgrondin@gorrillpalmer.com](mailto:bgrondin@gorrillpalmer.com)

Re: Rare and exemplary botanical features in proximity to: Project 98089.06, Brandy Lane Subdivision, 22 Hope Ave, Portland, Maine

Dear Mr. Grondin:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received May 23, 2017 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Portland, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

**MOLLY DOCHERTY, DIRECTOR**  
MAINE NATURAL AREAS PROGRAM



PHONE: (207) 287-8044  
FAX: (207) 287-8040  
[WWW.MAINE.GOV/DACF/MNAP](http://WWW.MAINE.GOV/DACF/MNAP)

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. The Natural Areas Program welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by the Natural Areas Program are to be published in any form, the Program should be informed at the outset and credited as the source.

The Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for \$150.00 for two hours of our services.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,



Don Cameron | Ecologist | Maine Natural Areas Program  
207-287-8041 | [don.s.cameron@maine.gov](mailto:don.s.cameron@maine.gov)

# Rare and Exemplary Botanical Features within 4 miles of Project: #98089.06, Brandy Lane Subdivision, 22 Hope Ave, Portland, Maine

| Common Name                               | State Status | State Rank | Global Rank | Date Last Observed | Occurrence Number | Habitat                                                                                     |
|-------------------------------------------|--------------|------------|-------------|--------------------|-------------------|---------------------------------------------------------------------------------------------|
| <b>Allegheny Vine</b>                     |              |            |             |                    |                   |                                                                                             |
|                                           | E            | S1         | G4          | 1860-10            | 9                 | Rocky summits and outcrops (non-forested, upland),Dry barrens (partly forested, upland)     |
| <b>American Sea-blite</b>                 |              |            |             |                    |                   |                                                                                             |
|                                           | T            | S2         | G5          | 1932-09-12         | 5                 | Tidal wetland (non-forested, wetland)                                                       |
| <b>Bottlebrush Grass</b>                  |              |            |             |                    |                   |                                                                                             |
|                                           | SC           | S3         | G5          | 1905-09-13         | 10                | Hardwood to mixed forest (forest, upland)                                                   |
| <b>Broad Beech Fern</b>                   |              |            |             |                    |                   |                                                                                             |
|                                           | SC           | S2         | G5          | 1872-08            | 15                | Hardwood to mixed forest (forest, upland)                                                   |
|                                           | SC           | S2         | G5          | 2001-08-28         | 28                | Hardwood to mixed forest (forest, upland)                                                   |
| <b>Clothed Sedge</b>                      |              |            |             |                    |                   |                                                                                             |
|                                           | E            | S1         | G5          | 2000-06-06         | 5                 | Dry barrens (partly forested, upland)                                                       |
| <b>Columbia Water-meal</b>                |              |            |             |                    |                   |                                                                                             |
|                                           | SC           | S2         | G5          | 2002-08-04         | 2                 | Open water (non-forested, wetland)                                                          |
| <b>Ebony Spleenwort</b>                   |              |            |             |                    |                   |                                                                                             |
|                                           | SC           | S2         | G5          | 1910-06-06         | 10                | Rocky summits and outcrops (non-forested, upland),Hardwood to mixed forest (forest, upland) |
| <b>Engelmann's Spikerush</b>              |              |            |             |                    |                   |                                                                                             |
|                                           | PE           | SH         | G4G5Q       | 1916-08-31         | 2                 | Open wetland, not coastal nor rivershore (non-forested, wetland)                            |
| <b>Enriched Northern Hardwoods Forest</b> |              |            |             |                    |                   |                                                                                             |
|                                           | <null>       | S3         | GNR         | 2001-08-28         | 34                | Hardwood to mixed forest (forest, upland)                                                   |
| <b>Fern-leaved False Foxglove</b>         |              |            |             |                    |                   |                                                                                             |
|                                           | SC           | S3         | G5          | 1902-09-02         | 13                | Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)             |
| <b>Foxtail Bog-clubmoss</b>               |              |            |             |                    |                   |                                                                                             |

## Rare and Exemplary Botanical Features within 4 miles of Project: #98089.06, Brandy Lane Subdivision, 22 Hope Ave, Portland, Maine

| Common Name                 | State Status | State Rank | Global Rank | Date Last Observed | Occurrence Number | Habitat                                                                                                               |
|-----------------------------|--------------|------------|-------------|--------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------|
|                             | E            | S1         | G5          | 2014-09-24         | 1                 | <null>                                                                                                                |
| <b>Great Blue Lobelia</b>   |              |            |             |                    |                   |                                                                                                                       |
|                             | PE           | SX         | G5          | 1905-09            | 3                 | Forested wetland,Non-tidal rivershore (non-forested, seasonally wet)                                                  |
| <b>Hollow Joe-pye Weed</b>  |              |            |             |                    |                   |                                                                                                                       |
|                             | SC           | S2         | G5?         | 2014-06-18         | 24                | Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland) |
|                             | SC           | S2         | G5?         | 2011-08-04         | 19                | Open wetland, not coastal nor rivershore (non-forested, wetland),Old field/roadside (non-forested, wetland or upland) |
| <b>Horned Pondweed</b>      |              |            |             |                    |                   |                                                                                                                       |
|                             | SC           | S2         | G5          | 1913-09-13         | 9                 | Tidal wetland (non-forested, wetland)                                                                                 |
| <b>Marsh Milkwort</b>       |              |            |             |                    |                   |                                                                                                                       |
|                             | PE           | SH         | G5T4        | 1903-08-18         | 1                 | Dry barrens (partly forested, upland),Open wetland, not coastal nor rivershore (non-forested, wetland)                |
| <b>Missouri Rockcress</b>   |              |            |             |                    |                   |                                                                                                                       |
|                             | T            | S1         | G5?Q        | 1905-06-11         | 5                 | Rocky summits and outcrops (non-forested, upland),Hardwood to mixed forest (forest, upland)                           |
| <b>Mountain-laurel</b>      |              |            |             |                    |                   |                                                                                                                       |
|                             | SC           | S2         | G5          | 1985-08-01         | 13                | Conifer forest (forest, upland),Hardwood to mixed forest (forest, upland)                                             |
| <b>Mountain Honeysuckle</b> |              |            |             |                    |                   |                                                                                                                       |
|                             | E            | S2         | G5          | 2014-08-03         | 14                | Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)                                       |
|                             | E            | S2         | G5          | 2007-07-30         | 10                | Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)                                       |
|                             | E            | S2         | G5          | 2007-10-05         | 11                | Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)                                       |
| <b>Pitch Pine Woodland</b>  |              |            |             |                    |                   |                                                                                                                       |
|                             | <null>       | S3         | G2          | 2005-12-08         | 28                | Rocky summits and outcrops (non-forested, upland)                                                                     |

## Rare and Exemplary Botanical Features within 4 miles of Project: #98089.06, Brandy Lane Subdivision, 22 Hope Ave, Portland, Maine

| Common Name                             | State Status | State Rank | Global Rank | Date Last Observed | Occurrence Number | Habitat                                                                                     |
|-----------------------------------------|--------------|------------|-------------|--------------------|-------------------|---------------------------------------------------------------------------------------------|
| <b>Rattlesnake Hawkweed</b>             |              |            |             |                    |                   |                                                                                             |
|                                         | E            | S1         | G5T4Q       | 1909-07            | 1                 | Dry barrens (partly forested, upland)                                                       |
| <b>Screwstem</b>                        |              |            |             |                    |                   |                                                                                             |
|                                         | T            | S1         | G5          | 2014-09-24         | 17                | Coastal non-tidal wetland (non-forested, wetland)                                           |
| <b>Slender Knotweed</b>                 |              |            |             |                    |                   |                                                                                             |
|                                         | PE           | SH         | G5          | 1902-09-07         | 1                 | Dry barrens (partly forested, upland)                                                       |
| <b>Small Reed Grass</b>                 |              |            |             |                    |                   |                                                                                             |
|                                         | SC           | S3         | G5          | 2011-08-28         | 18                | Old field/roadside (non-forested, wetland or upland)                                        |
| <b>Smooth Winterberry Holly</b>         |              |            |             |                    |                   |                                                                                             |
|                                         | SC           | S3         | G5          | 2010-06-13         | 32                | Forested wetland                                                                            |
| <b>Spotted Pondweed</b>                 |              |            |             |                    |                   |                                                                                             |
|                                         | T            | S1         | G5          | 1995-10-01         | 3                 | Open water (non-forested, wetland)                                                          |
| <b>Tidal Marsh Estuary Ecosystem</b>    |              |            |             |                    |                   |                                                                                             |
|                                         | <null>       | S3         | GNR         | 2011-08-25         | 8                 | Tidal wetland (non-forested, wetland)                                                       |
| <b>Upper Floodplain Hardwood Forest</b> |              |            |             |                    |                   |                                                                                             |
|                                         | <null>       | S3         | GNR         | 2010-06-23         | 20                | Forested wetland                                                                            |
| <b>Upright Bindweed</b>                 |              |            |             |                    |                   |                                                                                             |
|                                         | T            | S2         | G4G5        | 2007-06-28         | 5                 | Dry barrens (partly forested, upland), Old field/roadside (non-forested, wetland or upland) |
| <b>Variable Sedge</b>                   |              |            |             |                    |                   |                                                                                             |
|                                         | E            | S1         | G3          | 1911               | 8                 | Dry barrens (partly forested, upland), Hardwood to mixed forest (forest, upland)            |
|                                         | E            | S1         | G3          | 1911-06-29         | 9                 | Dry barrens (partly forested, upland), Hardwood to mixed forest (forest, upland)            |
|                                         | E            | S1         | G3          | 2012-08-09         | 1                 | Dry barrens (partly forested, upland), Hardwood to mixed forest                             |

## Rare and Exemplary Botanical Features within 4 miles of Project: #98089.06, Brandy Lane Subdivision, 22 Hope Ave, Portland, Maine

| Common Name                     | State Status | State Rank | Global Rank | Date Last Observed | Occurrence Number | Habitat                                                                                             |
|---------------------------------|--------------|------------|-------------|--------------------|-------------------|-----------------------------------------------------------------------------------------------------|
|                                 | E            | S1         | G3          | 2006-07-12         | 6                 | (forest, upland)<br>Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland) |
|                                 | E            | S1         | G3          | 2014-09-24         | 4                 | Dry barrens (partly forested, upland),Hardwood to mixed forest (forest, upland)                     |
| <b>Vasey's Pondweed</b>         |              |            |             |                    |                   |                                                                                                     |
|                                 | SC           | S2         | G4          | 1901-08-04         | 7                 | Open water (non-forested, wetland)                                                                  |
| <b>Water-plantain Spearwort</b> |              |            |             |                    |                   |                                                                                                     |
|                                 | PE           | SH         | G4          | 1903-07-29         | 2                 | Open water (non-forested, wetland)                                                                  |
| <b>Wild Garlic</b>              |              |            |             |                    |                   |                                                                                                     |
|                                 | SC           | S2         | G5          | 1918-07-16         | 6                 | Forested wetland,Hardwood to mixed forest (forest, upland)                                          |



## STATE RARITY RANKS

- S1** Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
- S2** Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- S3** Rare in Maine (20-100 occurrences).
- S4** Apparently secure in Maine.
- S5** Demonstrably secure in Maine.
- SU** Under consideration for assigning rarity status; more information needed on threats or distribution.
- SNR** Not yet ranked.
- SNA** Rank not applicable.
- S#?** Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).

**Note:** **State Rarity Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

## GLOBAL RARITY RANKS

- G1** Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.
- G2** Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- G3** Globally rare (20-100 occurrences).
- G4** Apparently secure globally.
- G5** Demonstrably secure globally.
- GNR** Not yet ranked.

**Note:** **Global Ranks** are determined by NatureServe.

## STATE LEGAL STATUS

**Note:** State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's **Endangered** and **Threatened** plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

- E** ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.
- T** THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

## NON-LEGAL STATUS

- SC** SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.
- PE** Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

## ELEMENT OCCURRENCE RANKS - EO RANKS

Element Occurrence ranks are used to describe the quality of a rare plant population or natural community based on three factors:

- **Size**: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- **Condition**: For communities, condition includes presence of representative species, maturity of species, and evidence of human-caused disturbance. For plants, factors include species vigor and evidence of human-caused disturbance.
- **Landscape context**: Land uses and/or condition of natural communities surrounding the observed area. Ability of the observed community or population to be protected from effects of adjacent land uses.

These three factors are combined into an overall ranking of the feature of **A**, **B**, **C**, or **D**, where **A** indicates an **excellent** example of the community or population and **D** indicates a **poor** example of the community or population. A rank of **E** indicates that the community or population is **extant** but there is not enough data to assign a quality rank. The Maine Natural Areas Program tracks all occurrences of rare (S1-S3) plants and natural communities as well as A and B ranked common (S4-S5) natural communities.

**Note:** **Element Occurrence Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines Element Occurrence ranks for animals.

Visit our website for more information on rare, threatened, and endangered species!  
<http://www.maine.gov/dacf/mnap>



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Maine Ecological Services Field Office

P. O. Box A

East Orland, ME 04431

Phone: (207) 469-7300 Fax: (207) 902-1588

<http://www.fws.gov/mainefieldoffice/index.html>



In Reply Refer To:

May 23, 2017

Consultation Code: 05E1ME00-2017-SLI-0609

Event Code: 05E1ME00-2017-E-01160

Project Name: Brandy Lane

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: [http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html) Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: <http://www.fws.gov/mainefieldoffice/Project%20review4.html>

Additionally, wind energy projects should follow the wind energy guidelines: <http://www.fws.gov/windenergy/> for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

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<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm> and at:  
<http://www.towerkill.com>; and at:  
<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Maine Ecological Services Field Office**

P. O. Box A

East Orland, ME 04431

(207) 469-7300

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## Project Summary

Consultation Code: 05E1ME00-2017-SLI-0609

Event Code: 05E1ME00-2017-E-01160

Project Name: Brandy Lane

Project Type: LAND - CLEARING

Project Description: 22 Hope Avenue, approximately 6.46 acres

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/43.72406262400402N70.28952407923211W>



Counties: Cumberland, ME

## Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

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## Mammals

NAME

STATUS

Northern Long-eared Bat (*Myotis septentrionalis*) Threatened

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/9045>

## Critical habitats

There are no critical habitats within your project area.

### **Post-Construction Stormwater Management Plan**

As part of the Stormwater Permit, the applicant is required to meet the standards in Section 5 of the City of Portland Technical Manual for Stormwater Management. The General Standard in item IV. Submission Requirements states that a project must submit a Post-Construction Stormwater Inspection & Maintenance Plan per Maine DEP Chapter 500 Appendix B with reporting requirements per Chapter 32 of City of Portland Code of Ordinances, and a Stormwater Maintenance Agreement. The management plan shall comply to Chapter 32 of City of Portland Code of Ordinances as follows:

- (a) The owner or operator of a BMP shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all municipal and state inspection, cleaning and maintenance requirements of the approved post-construction stormwater management plan.
- (b) If the BMP requires maintenance, repair or replacement to function as intended by the approved post-construction stormwater management plan, the owner or operator of the BMP shall take corrective action(s) to address the deficiency or deficiencies as soon as possible after the deficiency is discovered and shall provide record of the deficiency and corrective action(s) to the Homeowner's Association in an annual report.
- (c) The owner or operator of a BMP 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 to the Homeowner's Association, certifying that the person has inspected the BMP(s) and that they are adequately maintained and functioning as intended by the approved post-construction stormwater management plan, or that they require maintenance or repair, including the record of the deficiency and corrective action(s) taken.

## **STORMWATER MANAGEMENT**

### **12.1 Overview**

This Exhibit demonstrates the developer has made adequate provision for controlling Stormwater Runoff.

### **12.2 Introduction**

LBW, LLC has retained Gorrill Palmer to prepare plans and permit applications for a proposed residential subdivision off Hope Avenue. The site is shown on Assessor's Map 448 Lot A004, is approximately 6.46 acres in size and is located in the Conditional Zone. Figure 1 is a map showing the project location. The developer will construct the roadway, driveway aprons, utility services 5 feet beyond the right-of-way, and stormwater appurtenances. Lot development will also be by the developer of the subdivision. This stormwater permit application includes an allowance for developed area on each lot. The developer is currently seeking a subdivision permit from the City of Portland and a Stormwater Permit reviewed by the City of Portland under their delegated authority. The plans prepared by Gorrill Palmer include the infrastructure necessary to serve the project. This narrative contains the Stormwater Management measures which are appropriate for the site.

### **12.3 Development Description**

The project is a residential subdivision consisting of 16 single family residential lots, a 950 linear foot roadway, and associated infrastructure off 22 Hope Avenue in Portland, Maine.

The project site is currently undeveloped with a landcover of brush and woods. Topography in the area of the proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 40%. The steeper slopes are associated with drainage ways at the front and rear of the site.

Abutting land uses include:

- North – Maine Turnpike Spur
- West – Residential
- South – Residential
- East – Resource Protection

The development of the site will create approximately 1.6 acres of impervious area with a total disturbed area of approximately 4.1 acres.

### **12.4 Surface Water**

There are no lakes located on, adjacent to or downstream of the project site. The site contains several drainage ways which outlet to the Presumpscot River, which is north and east of the site.

### **12.5 General Topography**

Topography in the area of the proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 40%. The steeper slopes are associated with drainage ways at the front and rear of the site. Elevations on site range from 90' at Hope Avenue to 74' at the southwesterly property line.

## **12.6 Flooding**

Based upon the FEMA maps, the site is located within a Zone C floodplain. Zone C is defined as “areas of minimal flooding”.

Section 5.III of the Technical Manual States,

*“Developments as specified under Section II Applicability in Portland must comply with the most recent version of the Maine Department of Environmental Protection (Maine DEP) Chapter 500 Rules for Stormwater Management, including but not limited to the standards for Urban Impaired Stream, Basic, General, and Flooding Standards for the suitability, design, installation, and maintenance of systems to comply with the General and Flooding Standards are provided in Volume III of the Maine Stormwater Best Management Practices Manual.”*

## **12.7 Natural Drainage Ways**

The project as currently proposed includes alteration of a natural drainage way in the northern portion of the site. The drainage way is located in an area of proposed house lots. Therefore, the drainage way is to be filled to provide a level area for development. Piping systems and stormwater BMPs are designed to re-route water draining to the area.

## **12.8 Alterations to Land Cover**

Changes in land cover will include removal of wooded areas of the project site and the addition of paved surfaces, buildings, and lawns.

## **12.9 Stormwater Management Control**

Section 14-526.b.3.b of the Land Use Ordinance states that all development other than Level I residential shall comply with Section 5 of the Technical Manual including Basic, General, and Flooding standards as applicable to prevent and control the release of pollutants to waterbodies, watercourses, wetlands and groundwater, and reduce adverse impacts associated with increases or changes in flow, soil erosion and sedimentation.

Section 5.II.b and Section 5.I I.c of the Technical Manual states that Level II and III site plans shall be required to submit a stormwater management plan pursuant to the regulations of Maine DEP Chapter 500 Stormwater Management Rules, including Basic, General and Flooding standards.

The Basic Standard is presented in the Erosion and Sedimentation Control report included with this permit application. The General Standard and Flooding Standard are presented as follows:

The development will utilize 4 Filterrras, 3 systems of StormTech chambers, 5 Grassed Underdrained Soil Filters, and 16 Roof Dripline Filters to provide water quality treatment and storage.

The Maine Department of Environmental Protection rules and regulations regarding stormwater concentrate on four stormwater management objectives:

- Effective Pollutant Removal
- Cooling
- Channel Protection
- Flood Control

These objectives may be met either directly by providing BMP's that manage and treat the runoff after it has been created, or indirectly by incorporating low impact development site planning concepts to minimize production and contamination of runoff by maximizing infiltration and evapotranspiration.

### **12.9.1 Current Treatment Methods**

Under the General Standard, the project is required to meet the BMP Standards as the development site is not tributary to a lake watershed. The BMP Standard requires no less than 95% of the impervious area and no less than 80% of the developed area associated with a project to be controlled. The house lot development will be treated to the required 95% and 80% levels. The proposed roadway will be treated as a linear project and the project will provide treatment for runoff according to the requirements for a linear project. For a linear portion of a project the BMP Standard requires no less than 75% of the impervious area and no less than 50% of the developed area associated with a project to be controlled. The four treatment measures listed in Chapter 500 and described in Volume III of the Stormwater BMP Manual are:

- Wetponds
- Filters
- Infiltration
- Buffers

Below is a brief description of each treatment method.

#### Wetpond with detention above the permanent pool:

Wet ponds are stormwater detention impoundments that have a permanent pool of water and have the capacity to temporarily store storm water runoff while it is released at a controlled rate. They can be designed to provide flood control as well as water quality treatment. Properly sized and maintained, wet ponds can achieve high rates of removal for a number of urban pollutants, including sediment and the pollutants associated with sediment, such as trace metals, hydrocarbons, BOD, nutrients, and pesticides. The addition of an underdrained gravel trench in the bench area around the permanent pool allows for slow, extended release of stormwater without risk of blockage and effective cooling to avoid thermal impacts. This BMP treatment method is generally used to treat runoff from large drainage areas.

#### Filters

Filtration BMPs have shown to be very effective at removing a wide range of pollutants from stormwater runoff, particularly organic soil filter medias. They can be constructed in combination with infiltration practices, or with an underdrain filter, where infiltration is not feasible. Soil filters can be designed and constructed using common materials. Underdrained soil filters control stormwater quality by capturing and retaining runoff and passing it through a

filter bed comprised of a specific soil media. Various filter medias may be used, the most common including sand filters and organic filters. Once through the soil media, the runoff is collected in a perforated underdrain pipe and discharged to the receiving water. The filter and underdrain provides for slow release of smaller storm events, minimizing stream channel erosion, as well as cooling the discharge. Vegetated underdrain soil filters can also be designed to provide detention above the channel protection volume.

### Infiltration

Infiltration measures control stormwater quantity and quality, by retaining all or part of runoff on-site and discharging it into the ground. Infiltration is designed to occur at the surface (as in infiltration basins and to a degree vegetated swales and buffers), or in subsurface systems (e.g., infiltration trenches and infiltrators). The basic function of an infiltration system is to remove a portion of runoff from the total runoff volume of the site and treatment comes about through absorption, straining, microbial decomposition in the soil and trapping of particulate matter within pretreatment areas. Pretreatment to remove sediments, grease and oils is required prior to discharge to the infiltration measure. Possible pretreatment measures include filter strips, swales with check dams, sand filters, sediment traps, grease and oil traps, and sediment basins.

### Buffers

Buffer strips are natural, undisturbed strips of natural vegetation or planted strips of close growing vegetation adjacent to and downslope of developed areas. As stormwater runoff travels over the buffer area, vegetation slows the runoff and traps particulate pollutants. They are also effective for phosphorus removal when designed in accordance with the volume III BMP technical design manual. The buffers are preceded by a level lip spreader which allows for thermal cooling of the runoff and a distribution of the flow to a sheet flow rather than direct discharge. The effectiveness of buffers for pollutant removal depends on the flow path length and slope, the buffer berm length, the soil permeability, the size of drainage area, and the type and density of vegetation. Buffers are used to treat runoff from relatively small amounts of impervious area, as typically found in residential developments and small commercial and industrial sites. This type of BMP requires minimal maintenance and provides an aesthetically pleasing area.

## **12.9.2 Approach and Analysis for Quality**

The proposed development will be required to meet the BMP Standard under the General Standard. Based upon review of the four recommended and approved methods for mitigating the increased frequency and duration of channel erosive flows, as required by the BMP Standards, the developer is proposing to use sixteen Roof Dripline Filters, five grassed underdrained soil filters and four filterterraces coupled with Stormtech systems to provide cooling, and storage to provide water quality control.

The sixteen Roof Dripline Filters, five grassed underdrained soil filters and four filterterraces coupled with Stormtech systems are proposed for treatment of runoff from the roadway and developed area of 16 residential house lots. The impervious roof area of house lots are proposed to be treated with Roof Dripline Filters due to their lot locations and limitations presented by existing topography. In addition to the limitations presented by existing topography and narrow development area, in order to provide adequate treatment for the house lots, five grassed underdrained soil filters would be required. Test pits should be conducted prior to construction to confirm the seasonal high groundwater elevation. Until test

pits have been conducted, it is assumed filters would need to be lined with an impermeable membrane since the project site consists of Type D soils. In order to meet the Land Use Ordinance and adhere to the City of Portland's Technical Manual Low Impact Design technologies were investigated. Filterra systems are a subsurface bioretention system with an inlet set at the curb line of the roadway. Due to the small footprint of Filterra systems, they were chosen to treat the linear portion of the site as well as some of the lot area. Stormtech chambers sized to contain the water quality volume are connected to the Filterra systems in accordance with the MDEP BMP Standards.

### **12.9.3 Water Quality Sizing Requirements**

Under BMP standards the development is required to treat the runoff from 95% of the project's impervious area and from 80% of the project's developed area for the house lot development, and for the linear portion, treatment is required for 75% of the impervious area and 50% of the developed area.

#### **Roof Dripline Filter**

Roof Dripline Filtration will be utilized for the residential units on lots. The dripline provides treatment for the tributary roof area. The reservoir layer is designed to provide storage for the 25-Year rainfall of 5.8 inches in order to meet the Flooding Standard in accordance with MDEP BMP 7.5. A 40% void ratio was used to calculate the storage. The Drip Strip Detail for the assumed house footprint is included in the detail sheets.

The individual lot treatment is shown in the following table. The house lots are assumed to contain 1,540 square feet of roof area, except for lot 7 which is assumed to contain 1,237 square feet of roof area. Due to the limited development footprint, a lawn and driveway area was calculated for each lot.



| TABLE I                |                 |                 |                                               |                                                                            |
|------------------------|-----------------|-----------------|-----------------------------------------------|----------------------------------------------------------------------------|
| PROPOSED LOT TREATMENT |                 |                 |                                               |                                                                            |
| LOT NUMBER             | FRONT ROOF      | REAR ROOF       | DRIVEWAY                                      | LAWN                                                                       |
| 1                      | Dripline Filter | Dripline Filter | 450 sf /Filterra 2                            | 461 sf /Filterra 2<br>1,264 sf /Soil Filter 1                              |
| 2                      | Dripline Filter | Dripline Filter | 558 sf /Filterra 2                            | 2,460 sf /Filterra 2<br>4,000 sf /Soil Filter 1                            |
| 3                      | Dripline Filter | Dripline Filter | 558 sf /Filterra 2                            | 4,044 sf /Filterra 2<br>480 sf /Soil Filter 1                              |
| 4                      | Dripline Filter | Dripline Filter | 432 sf /Filterra 2                            | 4,350 sf /Filterra 2<br>3,824 sf /Soil Filter 2                            |
| 5                      | Dripline Filter | Dripline Filter | 198 sf /Filterra 2                            | 1,605 sf /Filterra 2                                                       |
| 6                      | Dripline Filter | Dripline Filter | 2,464 sf /Soil Filter 2                       | 2,127 sf /Filterra 2<br>2,832 sf /Soil Filter 1<br>2,256 sf /Soil Filter 2 |
| 7                      | Dripline Filter | Dripline Filter | 176 sf /Filterra 4<br>400 sf /Soil Filter 3   | 1,492 sf /Filterra 4<br>3,344 sf /Soil Filter 3                            |
| 8                      | Dripline Filter | Dripline Filter | 360 sf /Filterra 4                            | 1,477 sf /Filterra 4<br>1,952 sf /Soil Filter 3                            |
| 9                      | Dripline Filter | Dripline Filter | 414 sf /Filterra 4                            | 1,503 sf /Filterra 4<br>1,928 sf /Soil Filter 4                            |
| 10                     | Dripline Filter | Dripline Filter | 414 sf /Filterra                              | 800 sf /Filterra 4<br>2,560 sf /Soil Filter 4                              |
| 11                     | Dripline Filter | Dripline Filter | None                                          | 2,496 sf /Soil Filter 4                                                    |
| 12                     | Dripline Filter | Dripline Filter | None                                          | 2,608 sf /Soil Filter 4                                                    |
| 13                     | Dripline Filter | Dripline Filter | 360 sf /Filterra 3                            | 629 sf /Filterra 3<br>4,368 sf /Soil Filter 5                              |
| 14                     | Dripline Filter | Dripline Filter | 360 sf /Filterra 3                            | 2,354 sf /Filterra 3<br>832 sf /Soil Filter 5                              |
| 15                     | Dripline Filter | Dripline Filter | 360 sf /Filterra 3                            | 3,058 sf /Filterra 3<br>265 sf /Soil Filter 5                              |
| 16                     | Dripline Filter | Dripline Filter | 1,200 sf /Filterra 3<br>400 sf /Soil Filter 5 | 1,568 sf /Filterra 3<br>8,835 sf /Soil Filter 5                            |

### Filterra

The proposed Filterras will treat the stormwater runoff from a portion of the roadway as shown on the Post Development Watershed Plan enclosed in Attachment A of this report. The driveway aprons, trail parking area, and turnaround are included in the linear portion of the project. It has been assumed that the roadway sideslopes will be mowed no more than twice a year, therefore they were not considered as developed area.

The Filterra systems have been design in accordance with the MDEP approval letter dated February 2, 2017. The sizing is in accordance with the manufacturers standard New England Testing Results. Based upon discussion with Contech representatives, the Filterra unit was sized based upon the tributary impervious area and an equivalent impervious area for the tributary vegetated area. The equivalent area is calculated by multiplying the vegetated area by

0.4 to account for the MDEP treatment requirement of 0.4" of runoff from vegetated areas. The Filterra outflow and bypass have been directed to a Stormtech chamber system designed to retain the water quality volume, based upon 1" of runoff from impervious areas and 0.4" of runoff from vegetated area. An Isolator Row has been included to allow for maintenance of the system. Outlet control structures with the weir set at the water quality elevation will detain the water quality volume. The water quality volume will be conveyed from the chambers by the underdrain outlet. Flow from larger storms will overtop the weir and be conveyed to the discharge point through the stormdrain system.

The following table presents the filterras performance.

| <b>TABLE 2</b>                  |                 |                 |
|---------------------------------|-----------------|-----------------|
| <b>Filterra 1</b>               |                 |                 |
|                                 | <b>REQUIRED</b> | <b>PROVIDED</b> |
| <b>Impervious Area</b>          |                 |                 |
| Roadway                         |                 | 7,834 sq. ft.   |
| House lot                       |                 | 0 sq. ft.       |
| <b>Vegetated Developed Area</b> |                 |                 |
| Roadway                         |                 | 0 sq. ft.       |
| House Lot                       |                 | 0 sq. ft.       |
| <b>Filterra Size</b>            | 4 X 8           | 4 X 8           |
| <b>Water Quality Volume</b>     | 653 cu. ft.     |                 |
| <b>SC-740 Stormtech</b>         | 9               | 9               |

| <b>TABLE 3</b>                  |                 |                 |
|---------------------------------|-----------------|-----------------|
| <b>Filterra 2</b>               |                 |                 |
|                                 | <b>REQUIRED</b> | <b>PROVIDED</b> |
| <b>Impervious Area</b>          |                 |                 |
| Roadway                         |                 | 9,727 sq. ft.   |
| House lot                       |                 | 2,196 sq. ft.   |
| <b>Vegetated Developed Area</b> |                 |                 |
| Roadway                         |                 | 2,238 sq. ft.   |
| House Lot                       |                 | 15,047 sq. ft.  |
| <b>Filterra Size</b>            | 7 X 13          | 7 X 13          |
| <b>Water Quality Volume</b>     | 1570 cu. ft.    |                 |
| <b>SC-740 Stormtech</b>         | 21              | 21              |

| TABLE 4                         |             |               |
|---------------------------------|-------------|---------------|
| Filtterra 3                     |             |               |
|                                 | REQUIRED    | PROVIDED      |
| <b>Impervious Area</b>          |             |               |
| Roadway                         |             | 5,110 sq. ft. |
| House lot                       |             | 2,280 sq. ft. |
| <b>Vegetated Developed Area</b> |             |               |
| Roadway                         |             | 720 sq. ft.   |
| House Lot                       |             | 7,609 sq. ft. |
| <b>Filtterra Size</b>           | 6 X 10      | 6 X 10        |
| <b>Water Quality Volume</b>     | 894 cu. ft. |               |
| <b>SC-740 Stormtech</b>         | 12          | 12            |

| TABLE 5                         |          |               |
|---------------------------------|----------|---------------|
| Filtterra 4                     |          |               |
|                                 | REQUIRED | PROVIDED      |
| <b>Impervious Area</b>          |          |               |
| Roadway                         |          | 5,090 sq. ft. |
| House lot                       |          | 1,364 sq. ft. |
| <b>Vegetated Developed Area</b> |          |               |
| Roadway                         |          | 1,020 sq. ft. |
| House Lot                       |          | 5,272 sq. ft. |
| <b>Filtterra Size</b>           | 6 X 8    | 6 X 8         |
| <b>Water Quality Volume</b>     | 748      |               |
| <b>SC-740 Stormtech</b>         | 10       | 10            |

#### Grassed Underdrained Soil Filter

Due to the project site's topography and layout, in order to provide the required 95% treatment of impervious area and 80% treatment of the developed area, Grassed Underdrained Soil Filters are proposed to reach the required treatment levels. The Grassed Underdrained Soil Filters are currently oversized for the treatment area to be conservative for the sites unique layout.

Grassed Underdrained Soil Filters are defined in Volume III, Section 7 of the Stormwater Management Best Management Practices Manual published by the Maine Department of Environmental Protection. The development will be required to provide the treatment volume for 1.0 inch times the subcatchments impervious area plus 0.4 inch times the subcatchments landscaped developed area. The surface area of the filters are required to be no less than the sum of 5% of the impervious area and 2% of the landscaped area draining to the filters. The channel protection volume is allowed to pond up to 18" deep within the filters. Runoff from larger storms will be conveyed from the filters by spillways with its crest set at the channel protection elevation. A valve will be placed on the filters underdrain to regulate the outflow through the soil media. The valve will be field adjusted to maintain the outflow time between 24 and 48 hours for the channel protection volume. Yearly maintenance of the filters will include monitoring the outflow after a rainfall event to ensure the outflow time is within the required parameters. The filter media will be a layered system consisting of 12" of sand and 6" of loamy topsoil with a transition layer of 2" of the topsoil rototilled into the sand layer. The

attached Watershed Map was utilized to determine the water surface elevation for larger storms.

The following tables present the Grassed Underdrained Soil Filter information:

| <b>TABLE 6</b>                            |                 |                 |
|-------------------------------------------|-----------------|-----------------|
| <b>GRASSED UNDERDRAINED SOIL FILTER 1</b> |                 |                 |
|                                           | <b>REQUIRED</b> | <b>PROVIDED</b> |
| Impervious Area                           |                 | 0 sq. ft.       |
| Developed Area (non-impervious)           |                 | 8,576 sq. ft.   |
| Treatment Volume                          | 286 cu. ft.     | 305 cu. ft.     |
| Filter Surface Area                       | 172 sq. ft.     | 305 sq. ft.     |
| Cell Base Elevation                       |                 | 86 ft.          |
| Overflow Outlet Elevation                 |                 | 87.5 ft.        |

| <b>TABLE 7</b>                            |                 |                 |
|-------------------------------------------|-----------------|-----------------|
| <b>GRASSED UNDERDRAINED SOIL FILTER 2</b> |                 |                 |
|                                           | <b>REQUIRED</b> | <b>PROVIDED</b> |
| Impervious Area                           |                 | 2,464 sq. ft.   |
| Developed Area (non-impervious)           |                 | 6,080 sq. ft.   |
| Treatment Volume                          | 408 cu. ft.     | 442 cu. ft.     |
| Filter Surface Area                       | 245 sq. ft.     | 442 sq. ft.     |
| Cell Base Elevation                       |                 | 88 ft.          |
| Overflow Outlet Elevation                 |                 | 89.5 ft.        |

| <b>TABLE 8</b>                            |                 |                 |
|-------------------------------------------|-----------------|-----------------|
| <b>GRASSED UNDERDRAINED SOIL FILTER 3</b> |                 |                 |
|                                           | <b>REQUIRED</b> | <b>PROVIDED</b> |
| Impervious Area                           |                 | 400 sq. ft.     |
| Developed Area (non-impervious)           |                 | 5296 sq. ft.    |
| Treatment Volume                          | 210 cu. ft.     | 354 cu. ft.     |
| Filter Surface Area                       | 126 sq. ft.     | 354 sq. ft.     |
| Cell Base Elevation                       |                 | 82 ft.          |
| Overflow Outlet Elevation                 |                 | 83.5 ft.        |

| <b>TABLE 9</b>                            |                 |                 |
|-------------------------------------------|-----------------|-----------------|
| <b>GRASSED UNDERDRAINED SOIL FILTER 4</b> |                 |                 |
|                                           | <b>REQUIRED</b> | <b>PROVIDED</b> |
| Impervious Area                           |                 | 0 sq. ft.       |
| Developed Area (non-impervious)           |                 | 9,592 sq. ft.   |
| Treatment Volume                          | 320 cu. ft.     | 440 cu. ft.     |
| Filter Surface Area                       | 191 sq. ft.     | 440 sq. ft.     |
| Cell Base Elevation                       |                 | 79 ft.          |
| Overflow Outlet Elevation                 |                 | 80.5 ft.        |

| <b>TABLE 10</b>                           |                 |                 |
|-------------------------------------------|-----------------|-----------------|
| <b>GRASSED UNDERDRAINED SOIL FILTER 5</b> |                 |                 |
|                                           | <b>REQUIRED</b> | <b>PROVIDED</b> |
| Impervious Area                           |                 | 400 sq. ft.     |
| Developed Area (non-impervious)           |                 | 14,035 sq. ft.  |
| Treatment Volume                          | 502 cu. ft.     | 677 cu. ft.     |
| Filter Surface Area                       | 301 sq. ft.     | 677 sq. ft.     |
| Cell Base Elevation                       |                 | 80 ft.          |
| Overflow Outlet Elevation                 |                 | 81.5 ft.        |

#### **12.9.4 Conclusion – Overall Treatment**

The following table summarizes the proposed treatment for the linear portion of the project. The roadway, sidewalk, turnaround, trail parking, and driveway aprons are the impervious areas associated with the linear portion of the project. The esplanade is the landscaped area associated with the linear portion of the project.

| <b>TABLE 11 – LINEAR PORTION</b>                       |                   |                                               |
|--------------------------------------------------------|-------------------|-----------------------------------------------|
|                                                        | <b>IMPERVIOUS</b> | <b>DEVELOPED</b><br>(Impervious + Landscaped) |
| Area treated by Filterrras (sf)                        | 27,761            | 31,739                                        |
| Area treated by Grassed Underdrained Soil Filters (sf) | 0                 | 0                                             |
| Total Area Treated (sf)                                | 27,761            | 31,739                                        |
| Area Untreated (sf)                                    | 8,189             | 8,855                                         |
| Total Area of Project (sf)                             | 35,950            | 40,594                                        |
| Percent Treated                                        | 77.2%             | 78.2%                                         |
| Percent Required                                       | 75%               | 50%                                           |

The following table summarizes the proposed treatment for the house lot portion of the project. The house lots are assumed to contain 1,540 square feet of roof area except for lot 7 which is assumed to contain 1,237 square feet of roof area. Due to the limited development footprint, a lawn and driveway area was calculated for each lot.

| TABLE 12 – HOUSE LOTS                                  |            |                                        |
|--------------------------------------------------------|------------|----------------------------------------|
|                                                        | IMPERVIOUS | DEVELOPED<br>(Impervious + Landscaped) |
| Area treated by Filterrras (sf)                        | 5,840      | 33,768                                 |
| Area treated by Grassed Underdrained Soil Filters (sf) | 3,264      | 47,108                                 |
| Roof Dripline Filters (sf)                             | 24,337     | 36,657                                 |
| Total Area Treated (sf)                                | 33,441     | 117,533                                |
| Area Untreated (sf)                                    | 660        | 21,331                                 |
| Total Area of Project (sf)                             | 34,101     | 138,864                                |
| Percent Treated                                        | 98%        | 85%                                    |
| Percent Required                                       | 95%        | 80%                                    |

The proposed development of the residential subdivision will utilize four Filterrras, five Grassed Underdrained Soil Filters and twelve Roof Dripline Filters to mitigate the development as required by the BMP Standards. The development is required to control runoff from no less than 95% of the impervious area and no less than 80% of the developed area and, for the linear portion of the project, the development is required to control runoff from no less than 75% of the impervious area and no less than 50% of the developed area. As proposed, the development is controlling approximately 95% of the created impervious area, and approximately 82% of the developed area for the house lots, and is controlling approximately 75.2% of the created impervious area, and approximately 76.4% of the developed area for the linear portion, which meets or exceeds the required control.

A Water Quality Map is included in attachment A.

#### **12.9.5 Water Quantity Sizing Requirements**

The stormwater management study provides an analysis of predevelopment and post development stormwater runoff rates.

The Natural Resource Conservation Service Medium Intensity Soil Survey was used to identify onsite and offsite soils. The project site is comprised of hydrologic soil types B, C, and D. An excerpt from the Medium Intensity Soil Survey follows this page.

The SCS TR-20 methodology, using the HydroCad program, was employed by Gorrill Palmer to analyze predevelopment and post-development conditions. A 24-hour, SCS Type III storm distribution for the two, ten and twenty five year storm frequencies was used. The corresponding rainfall amounts for these storms are 3.1", 4.6" and 5.8" respectively.

Land use cover, delineations of watershed hydraulic flow paths, and hydrologic soils data were obtained using the following data:

1. Portland 7.5 Minute Quadrangle Maps prepared by the U.S.G.S.
2. On-site topographic survey with 2' contour intervals from an existing conditions plan of the site.

3. Aerial Photography of the project site, obtained from the Maine Office of GIS.
4. Natural Resource Conservation Service Medium Intensity Soil Survey
5. Field Reconnaissance.

#### **Predevelopment Conditions**

The drainage study analyzes the watershed in the predevelopment condition as depicted on the Predevelopment Watershed Map.

The predevelopment was analyzed as two subcatchments and two points of interest (POI) were analyzed. POI 1 is the location in a swale at the lot's eastern boundary and the POI 2 is the location in a swale at the lots northern boundary.

Subcatchment 1S consists of the drainage area to POI 1. Most of Subcatchment 1S is off site.

Subcatchment 2S consists of the drainage area to POI 2.

A watershed map for the predevelopment conditions is attached to this section as drawing number W1. The predevelopment conditions were analyzed using HydroCAD modeling. Table 13 presents the peak flow rates at the point of interest in the predevelopment condition.

| <b>Table 13 - Predevelopment Peak Flow Rates (cfs)</b> |                        |              |              |
|--------------------------------------------------------|------------------------|--------------|--------------|
| <b>Point of Interest</b>                               | <b>Peak Flow (cfs)</b> |              |              |
|                                                        | <b>2 YR</b>            | <b>10 YR</b> | <b>25 YR</b> |
|                                                        | <b>Pre</b>             | <b>Pre</b>   | <b>Pre</b>   |
| POI # 1                                                | 18.6                   | 42.9         | 64.4         |
| POI # 2                                                | 9.1                    | 19.8         | 29.2         |

Copies of the calculations for the predevelopment conditions are included in Attachment B.

#### **Post Development Conditions**

Analysis for the post development condition consists of determining post development peak flows and limiting the post development flows to predevelopment levels. The Post Development was analyzed as six subcatchments and two points of interest (POI) were analyzed. POI 1 is the location in a swale at the lot's eastern boundary and the POI 2 is the location in a swale at the lot's northern boundary.

Subcatchment 1S is composed of offsite and onsite area draining to the culvert shown on the plan set.

Subcatchment 7S is the area tributary to the Stormtech Subsurface Chamber Systems.

Subcatchment 9S is the onsite area tributary to POI 1.

These subcatchments are routed to the existing culvert and swale, POI 1.

Subcatchment 2S is composed of offsite and onsite area tributary to proposed stormdrain system.



Subcatchment 6S is the onsite area tributary to POI 2.

Subcatchment 11S is the area tributary to the Stormtech Subsurface Chamber Systems.

These subcatchments are routed to the proposed stormdrain system and swale, POI 2.

The runoff from the roof areas of twelve lot's is stored within the drip strips in accordance with MDEP BMP 7.5. Since the Flooding Standard has been met by storing the 25-Year Rainfall, the twelve roof areas have been removed from the post development HydroCAD model, due to the many assumptions required to route twelve small areas through the drip strip storage and outlets. The post development watershed area is less than the predevelopment area due to the removal of the roofs.

A watershed map for the post development conditions is attached to this section as drawing number W2. Attachment B includes the TR-20 calculations.

The runoff from subcatchments 7S and 11S was routed through the Stormtech chambers which are part of the Filterra water quality system. The chambers provide some attenuation of the tributary runoff.

A comparison of Pre and Post Development peak flows is presented in the following table:

| Table 15 - Post Development Peak Flow Rates (cfs) |                 |      |       |      |       |      |
|---------------------------------------------------|-----------------|------|-------|------|-------|------|
| Point of Interest                                 | Peak Flow (cfs) |      |       |      |       |      |
|                                                   | 2 YR            |      | 10 YR |      | 25 YR |      |
|                                                   | Pre             | Post | Pre   | Post | Pre   | Post |
| POI # 1                                           | 18.6            | 17.4 | 42.9  | 43.3 | 64.4  | 64.6 |
| POI # 2                                           | 9.1             | 9.6  | 19.9  | 19.2 | 29.2  | 27.6 |

As shown in the table above, the Post Development peak flow for the 25-Year storm is less than the peak flow from the Pre Development storm for POI 1.

The Post Development peak flow for the 10-Year storm at POI 2 is less than the Pre Development peak flow.

The Post Development peak flow increases slightly from Pre Development levels for the 25-Year and 10-Year storms at POI 1 and the 2-Year storm at POI 2. The following table presents the increase:

| Table 16 – Post Development Peak Flow Increases |                 |                   |               |                   |               |                   |
|-------------------------------------------------|-----------------|-------------------|---------------|-------------------|---------------|-------------------|
| Point of Interest                               | Peak Flow (cfs) |                   |               |                   |               |                   |
|                                                 | 2-Year Storm    |                   | 10-Year Storm |                   | 25-Year Storm |                   |
|                                                 | Increase        | % of Pre Develop. | Increase      | % of Pre Develop. | Increase      | % of Pre Develop. |
| POI # 1                                         | -               | -                 | 0.4           | 0.9               | 0.2           | 0.3               |
| POI # 2                                         | 0.5             | 5.5               | -             | -                 | -             | -                 |

Due to the proximity of the Presumpscot River to the project, these slight increases are considered to be insignificant.

#### **12.9.6 Conclusion – Overall Water Quantity**

As a result of attenuation within the proposed Stormtech chambers, and the storage of the 25-Year Rainfall within drip strips at 12 house lot's, the peak Post Development runoff has been reduced to be at or below Pre Development levels for the 25-Year storm at POI 2 and for the 10-Year storm at POI 2. The slight increase in peak flow for the 25-Year and 10-Year storms at POI 1 and for the 2-Year storm at POI 2 is considered insignificant due to the location of the parcel just upstream from the Presumpscot River.

#### **12.10 Construction BMPs**

Additional water quality treatment will be provided during construction by best management practices (BMP). Standard BMPs to be employed include siltation fencing around the downslope construction perimeter, riprap, stabilized construction entrances, and erosion control fabrics applied to slopes prior to revegetation.

#### **12.11 Maintenance of Facilities**

See the Erosion and Sedimentation Control report for this project.

#### **12.12 Conclusion**

Gorrill Palmer has been retained by LBW, LLC. to prepare plans and permit applications for a proposed residential subdivision, located off Hope Avenue in Portland, Maine. The proposed development will include 16 residential lots, an approximately 950 linear foot of roadway and associated infrastructure. As a result, the proposed development will create more than 1 acre of impervious area but less than 3 acres of impervious area, and thereby require a Stormwater Law Permit Application. Based upon the attached calculations, the proposed development meets or exceeds the requirement of the BMP Standard through the use of Filterrras, Drip Strips, and Grassed Underdrained Soil Filters. The project also meets the flooding standard due to attenuation of runoff within the BMP treatment facilities.

#### **12.13 Attachments**

Attached to this section are the following items:

Attachment A – Watershed Map, Water Quality Map

Attachment B – TR-20 Calculations

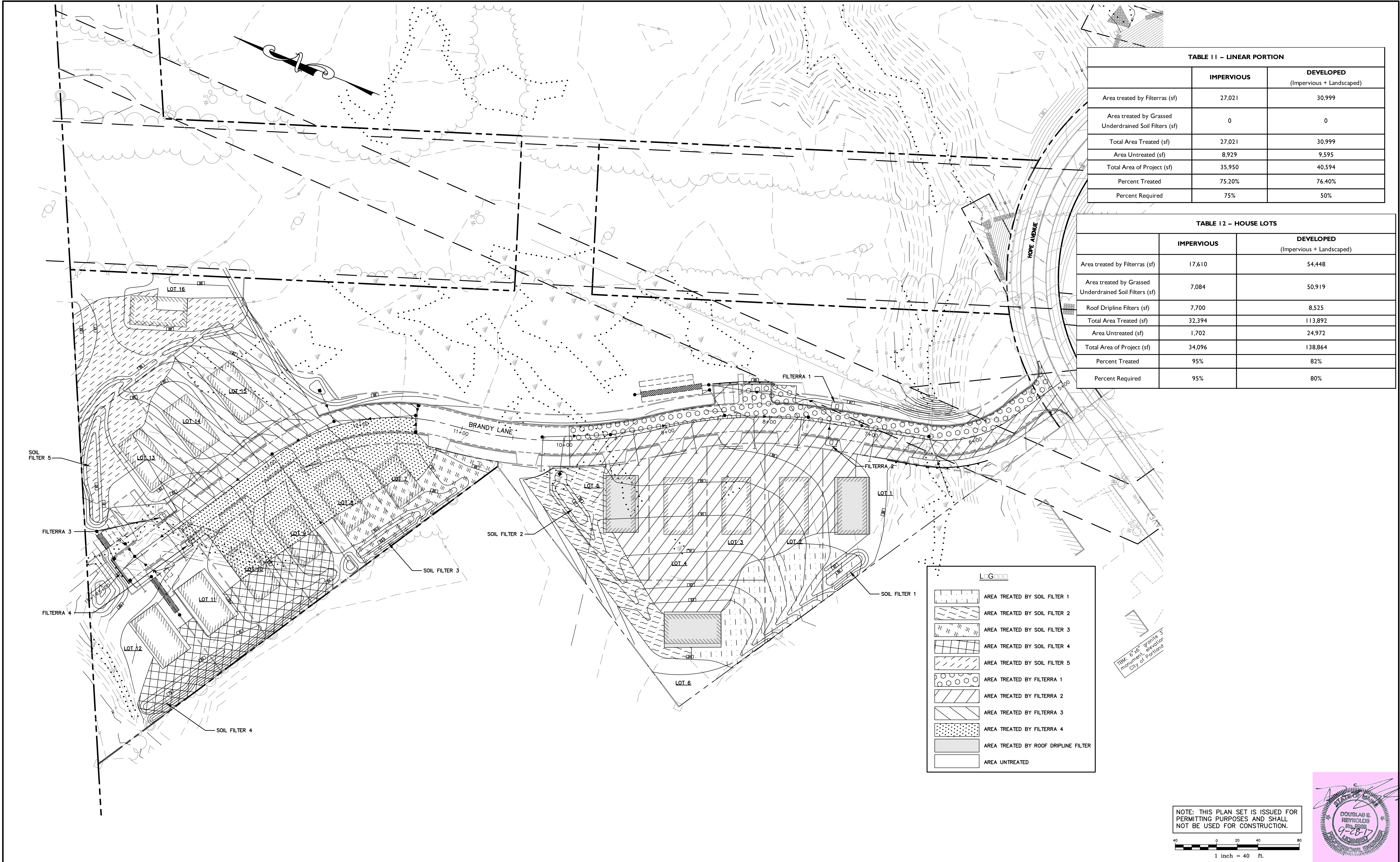
Attachment C – Filterrra and Grassed Underdrained Soil Filter sizing calculations

Attachment D – Correspondence of manufacturers review and approval of proposed Filterrra design

**ATTACHMENT A**  
**Watershed Map and Water Quality Map**



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| TABLE 11 - LINEAR PORTION                              |            |                                        |
|--------------------------------------------------------|------------|----------------------------------------|
|                                                        | IMPERVIOUS | DEVELOPED<br>(Impervious + Landscaped) |
| Area treated by Terras (sf)                            | 27,021     | 30,999                                 |
| Area treated by Grassed Underdrained Soil Filters (sf) | 0          | 0                                      |
| Total Area Treated (sf)                                | 27,021     | 30,999                                 |
| Area Untreated (sf)                                    | 8,929      | 9,595                                  |
| Total Area of Project (sf)                             | 35,950     | 40,594                                 |
| Percent Treated                                        | 75.20%     | 76.40%                                 |
| Percent Required                                       | 75%        | 50%                                    |

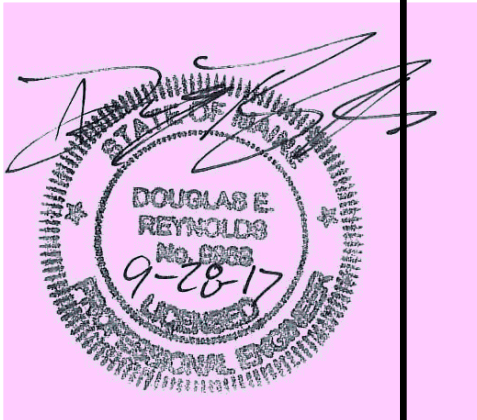
| TABLE 12 - HOUSE LOTS                                  |            |                                        |
|--------------------------------------------------------|------------|----------------------------------------|
|                                                        | IMPERVIOUS | DEVELOPED<br>(Impervious + Landscaped) |
| Area treated by Terras (sf)                            | 17,610     | 54,448                                 |
| Area treated by Grassed Underdrained Soil Filters (sf) | 7,084      | 50,919                                 |
| Roof Dripline Filters (sf)                             | 7,700      | 8,525                                  |
| Total Area Treated (sf)                                | 32,394     | 113,892                                |
| Area Untreated (sf)                                    | 1,702      | 24,972                                 |
| Total Area of Project (sf)                             | 34,096     | 138,864                                |
| Percent Treated                                        | 95%        | 82%                                    |
| Percent Required                                       | 95%        | 80%                                    |

| LEGEND |                                      |
|--------|--------------------------------------|
|        | AREA TREATED BY SOIL FILTER 1        |
|        | AREA TREATED BY SOIL FILTER 2        |
|        | AREA TREATED BY SOIL FILTER 3        |
|        | AREA TREATED BY SOIL FILTER 4        |
|        | AREA TREATED BY SOIL FILTER 5        |
|        | AREA TREATED BY TERRAS 1             |
|        | AREA TREATED BY TERRAS 2             |
|        | AREA TREATED BY TERRAS 3             |
|        | AREA TREATED BY TERRAS 4             |
|        | AREA TREATED BY ROOF DRIPLINE FILTER |
|        | AREA UNTREATED                       |

NOTE: 6" x 6" granite 3" minimum elevation City of Portland

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

40 0 20 40 80  
1 inch = 40 ft.



| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

| Design:                                                                                                                                                                                     | Draft:        | Date:             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| AMP                                                                                                                                                                                         | CG            | SEPT 2014         |
| Checked: AMP                                                                                                                                                                                | Scale: 1"=40' | Job No.: 98089.08 |
| File Name: 98089-08-WQ.dwg                                                                                                                                                                  |               |                   |
| This plan shall not be modified without written permission from Gorrill Palmer(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP. |               |                   |
| LEVEL III SUBDIVISION APPLICATION                                                                                                                                                           | 5/12/17       | DER               |
| MDEP STORMWATER PRE APP                                                                                                                                                                     | 1/23/17       | AMP               |
| PRICING                                                                                                                                                                                     | 9/16/16       | AMP               |
| PRE-APPLICATION MEETING WITH CITY                                                                                                                                                           | 6/24/16       | AMP               |
| Issued For                                                                                                                                                                                  | Date          | By                |



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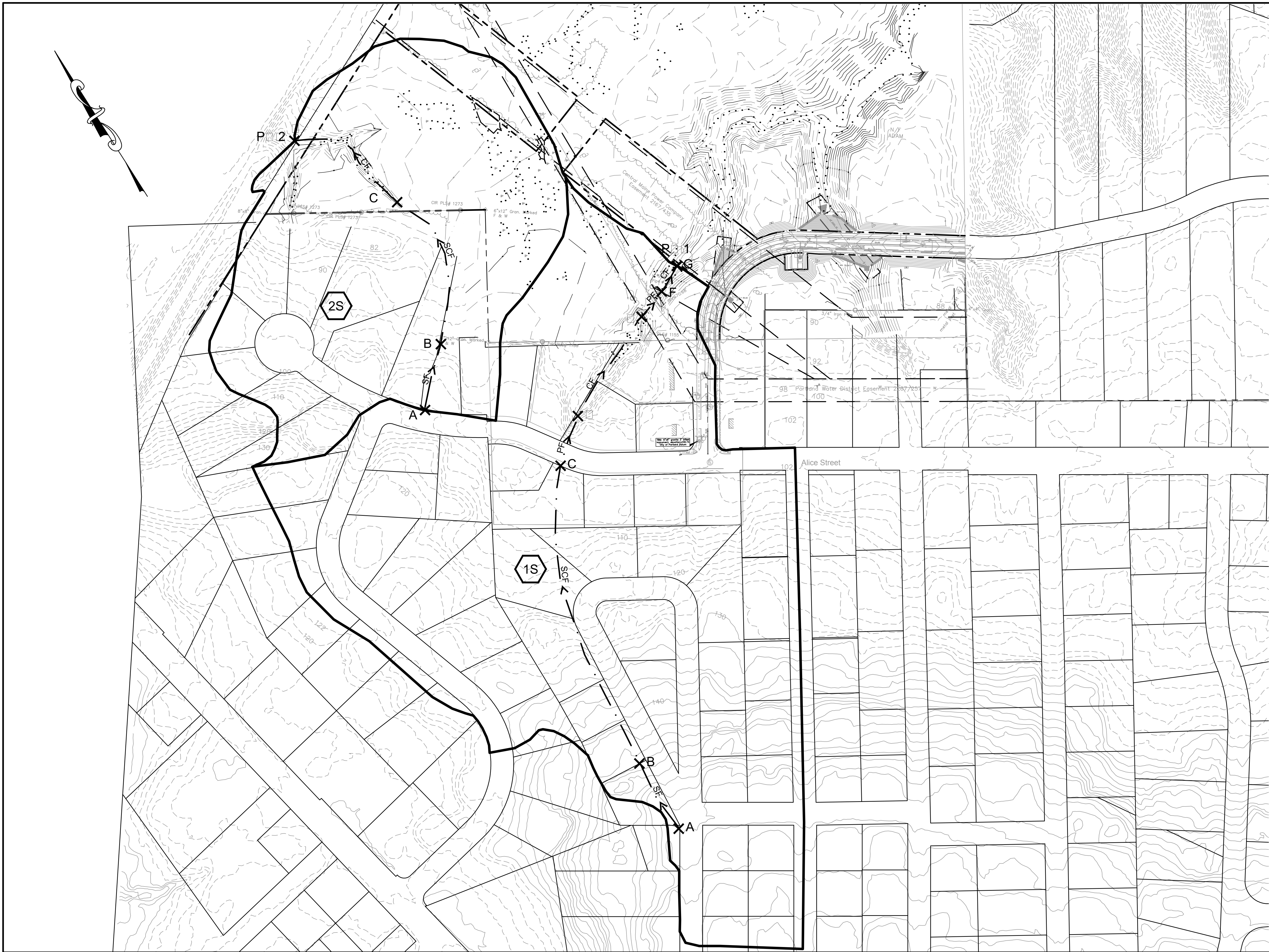
|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Water Quality Plan                             |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

WQ



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LEGEND

1

TIME OF CONCENTRATION FLOW PATH

WATERSHED BOUNDARY

WETLAND BOUNDARY

SF

SHEET FLOW

PF

PIPE FLOW

SCF

SHALLOW CONCENTRATED FLOW

CF

CHANNEL FLOW

P

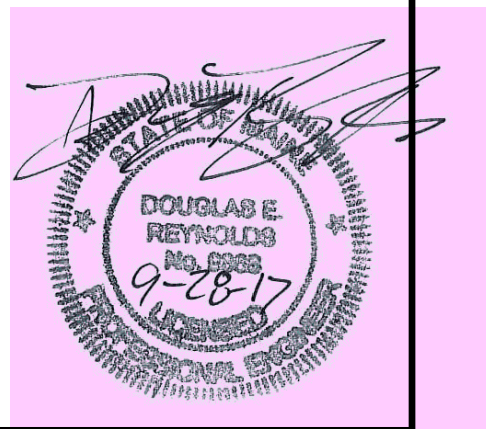
POINT OF INTEREST

1

REACH

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

100 0 50 100 200  
1 inch = 100 ft.



| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                            |                |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------|
| Design: DER                                                                                                                                                                                | Draft: CG      | Date: FEB 2017    |
| Checked: AMP                                                                                                                                                                               | Scale: 1"=100' | Job No.: 98089-08 |
| File Name: 98089-08-WS-PRE.dwg                                                                                                                                                             |                |                   |
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Pre Development Watershed Map                  |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

W1



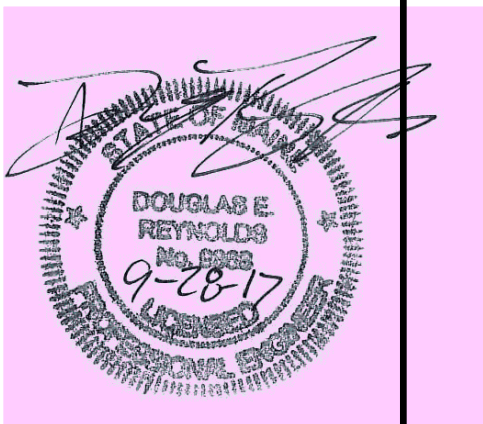
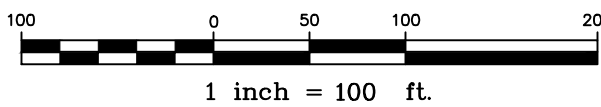
C:\CAD Working\98089.08 Riverwalk Long Road\DWG\98089-08-WS-POST.dwg - 9/28/2017 3:16 PM



# LEGEND

- SUBCATCHMENT AREA
- TIME OF CONCENTRATION FLOW PATH
- WATERSHED BOUNDARY
- WETLAND BOUNDARY
- SHEET FLOW
- PIPE FLOW
- SHALLOW CONCENTRATED FLOW
- CHANNEL FLOW
- POINT OF INTEREST
- REACH

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: AMP                                                                                                                                                                                 | Draft: CG     | Date: SEPT 2014   |
| Checked: AMP                                                                                                                                                                                | Scale: 1"=40' | Job No.: 98089.08 |
| File Name: 98089-08-WS-POST.dwg                                                                                                                                                             |               |                   |
| This plan shall not be modified without written permission from Gorrill Palmer(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP. |               |                   |



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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | POST DEVELOPMENT WATERSHED MAP                 |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

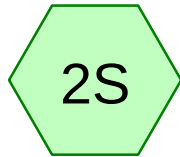
Drawing No.

W2

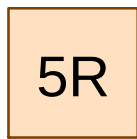


**ATTACHMENT B**  
**TR-20 Calculations**

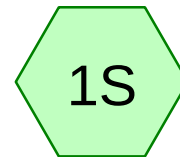




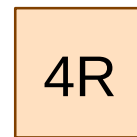
Subcatchment 2



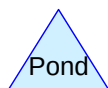
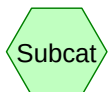
POI 2



Subcatchment 1



POI 1



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Type III 24-hr 2 YR Rainfall=3.10"

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Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

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

### Subcatchment1S: Subcatchment1

Runoff Area=23.093 ac 31.06% Impervious Runoff Depth>0.83"  
Flow Length=1,365' Tc=12.0 min CN=73 Runoff=18.61 cfs 1.603 af

### Subcatchment2S: Subcatchment2

Runoff Area=10.771 ac 20.98% Impervious Runoff Depth>0.93"  
Flow Length=800' Tc=15.6 min CN=75 Runoff=9.05 cfs 0.838 af

### Reach 4R: POI 1

Inflow=18.61 cfs 1.603 af  
Outflow=18.61 cfs 1.603 af

### Reach 5R: POI 2

Inflow=9.05 cfs 0.838 af  
Outflow=9.05 cfs 0.838 af

**Total Runoff Area = 33.864 ac Runoff Volume = 2.441 af Average Runoff Depth = 0.86"**  
**72.15% Pervious = 24.433 ac 27.85% Impervious = 9.431 ac**

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Type III 24-hr 10 YR Rainfall=4.60"

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Runoff by SCS TR-20 method, UH=SCS

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

### Subcatchment1S: Subcatchment1

Runoff Area=23.093 ac 31.06% Impervious Runoff Depth>1.81"  
Flow Length=1,365' Tc=12.0 min CN=73 Runoff=42.89 cfs 3.493 af

### Subcatchment2S: Subcatchment2

Runoff Area=10.771 ac 20.98% Impervious Runoff Depth>1.96"  
Flow Length=800' Tc=15.6 min CN=75 Runoff=19.79 cfs 1.763 af

### Reach 4R: POI 1

Inflow=42.89 cfs 3.493 af  
Outflow=42.89 cfs 3.493 af

### Reach 5R: POI 2

Inflow=19.79 cfs 1.763 af  
Outflow=19.79 cfs 1.763 af

**Total Runoff Area = 33.864 ac Runoff Volume = 5.255 af Average Runoff Depth = 1.86"**  
**72.15% Pervious = 24.433 ac 27.85% Impervious = 9.431 ac**

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Type III 24-hr 25 YR Rainfall=5.80"

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Page 4

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

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

### Subcatchment1S: Subcatchment1

Runoff Area=23.093 ac 31.06% Impervious Runoff Depth>2.71"  
Flow Length=1,365' Tc=12.0 min CN=73 Runoff=64.44 cfs 5.215 af

### Subcatchment2S: Subcatchment2

Runoff Area=10.771 ac 20.98% Impervious Runoff Depth>2.89"  
Flow Length=800' Tc=15.6 min CN=75 Runoff=29.18 cfs 2.593 af

### Reach 4R: POI 1

Inflow=64.44 cfs 5.215 af  
Outflow=64.44 cfs 5.215 af

### Reach 5R: POI 2

Inflow=29.18 cfs 2.593 af  
Outflow=29.18 cfs 2.593 af

**Total Runoff Area = 33.864 ac Runoff Volume = 7.808 af Average Runoff Depth = 2.77"**  
**72.15% Pervious = 24.433 ac 27.85% Impervious = 9.431 ac**

**Pre Development**

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Type III 24-hr 25 YR Rainfall=5.80"

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Page 1

**Summary for Subcatchment 1S: Subcatchment 1**

Runoff = 64.44 cfs @ 12.17 hrs, Volume= 5.215 af, Depth&gt; 2.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 10.530    | 61 | 1/4 acre lots, 38% imp, HSG A |
| 0.979     | 81 | 1/3 acre lots, 30% imp, HSG C |
| 9.244     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 0.718     | 70 | Woods, Good, HSG C            |
| 1.277     | 77 | Woods, Good, HSG D            |
| 0.345     | 72 | 1/3 acre lots, 30% imp, HSG B |
| 23.093    | 73 | Weighted Average              |
| 15.921    |    | Pervious Area                 |
| 7.172     |    | Impervious Area               |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------|
| 7.9      | 150           | 0.0800        | 0.32              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"                                                                       |
| 3.0      | 700           | 0.0680        | 3.91              |                | <b>Shallow Concentrated Flow, B-C</b><br>Grassed Waterway Kv= 15.0 fps                                                          |
| 0.3      | 100           | 0.0050        | 5.91              | 29.00          | <b>Circular Channel (pipe), C-D</b><br>Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63'<br>n= 0.013 Corrugated PE, smooth interior |
| 0.3      | 280           | 0.0570        | 16.89             | 101.31         | <b>Channel Flow, D-E</b><br>Area= 6.0 sf Perim= 5.6' r= 1.07'<br>n= 0.022 Earth, clean & straight                               |
| 0.3      | 55            | 0.0010        | 2.86              | 14.05          | <b>Circular Channel (pipe), E-F</b><br>Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63'<br>n= 0.012 Concrete pipe, finished        |
| 0.2      | 80            | 0.0100        | 7.07              | 42.43          | <b>Channel Flow, F-G</b><br>Area= 6.0 sf Perim= 5.6' r= 1.07'<br>n= 0.022 Earth, clean & straight                               |
| 12.0     | 1,365         | Total         |                   |                |                                                                                                                                 |

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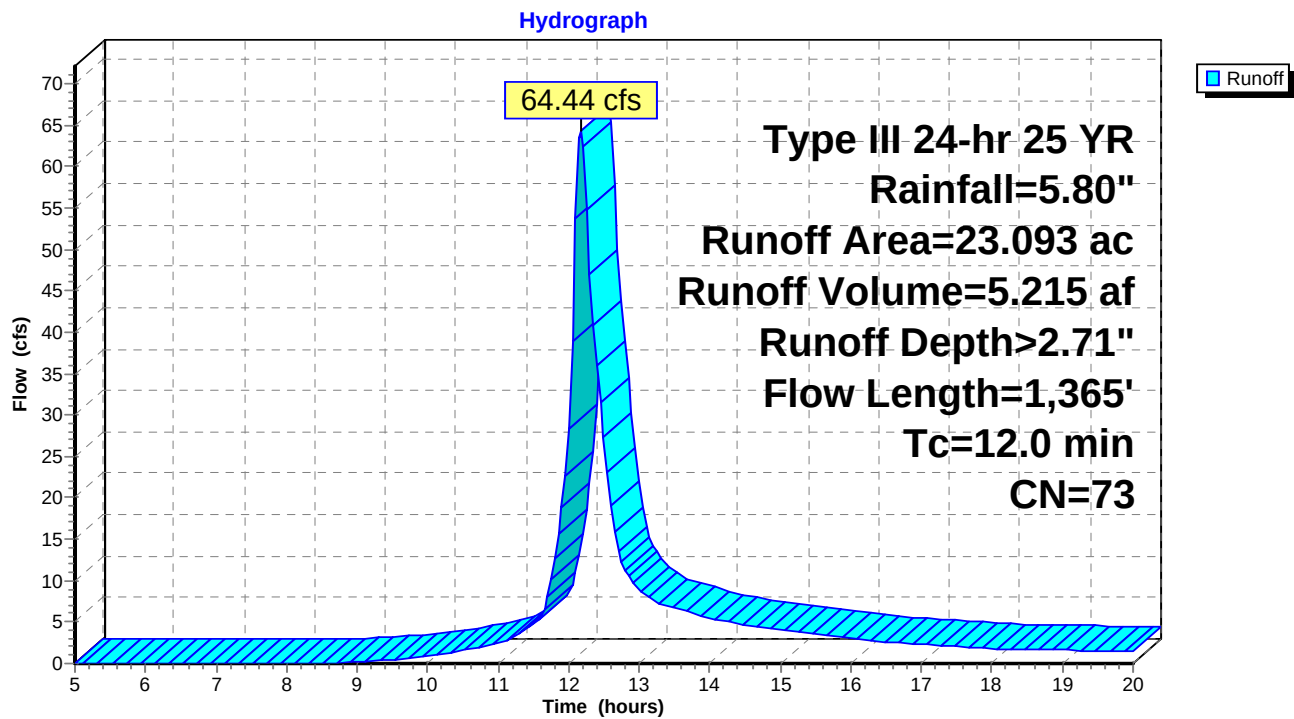
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Type III 24-hr 25 YR Rainfall=5.80"

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### Subcatchment 1S: Subcatchment 1





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Type III 24-hr 25 YR Rainfall=5.80"

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**Summary for Subcatchment 2S: Subcatchment 2**

Runoff = 29.18 cfs @ 12.22 hrs, Volume= 2.593 af, Depth&gt; 2.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 3.212     | 61 | 1/4 acre lots, 38% imp, HSG A |
| 0.192     | 80 | 1/2 acre lots, 25% imp, HSG C |
| 2.607     | 87 | 1/4 acre lots, 38% imp, HSG D |
| 0.157     | 70 | Woods, Good, HSG C            |
| 4.603     | 77 | Woods, Good, HSG D            |
| 10.771    | 75 | Weighted Average              |
| 8.512     |    | Pervious Area                 |
| 2.259     |    | Impervious Area               |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                       |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------------------------------------|
| 8.9      | 150           | 0.0600        | 0.28              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"                                         |
| 6.4      | 370           | 0.0375        | 0.97              |                | <b>Shallow Concentrated Flow, B-C</b><br>Woodland Kv= 5.0 fps                                     |
| 0.3      | 280           | 0.0400        | 14.14             | 84.87          | <b>Channel Flow, C-D</b><br>Area= 6.0 sf Perim= 5.6' r= 1.07'<br>n= 0.022 Earth, clean & straight |
| 15.6     | 800           | Total         |                   |                |                                                                                                   |

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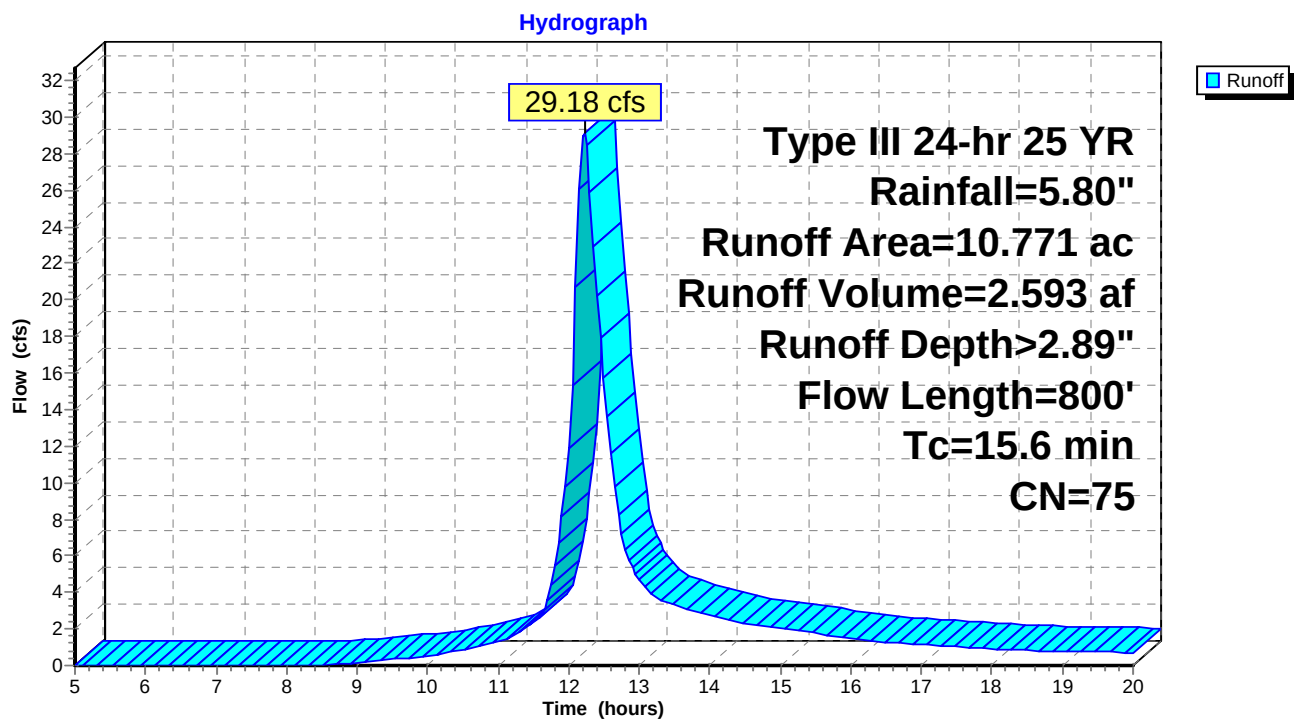
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Type III 24-hr 25 YR Rainfall=5.80"

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### Subcatchment 2S: Subcatchment 2



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Reach 4R: POI 1

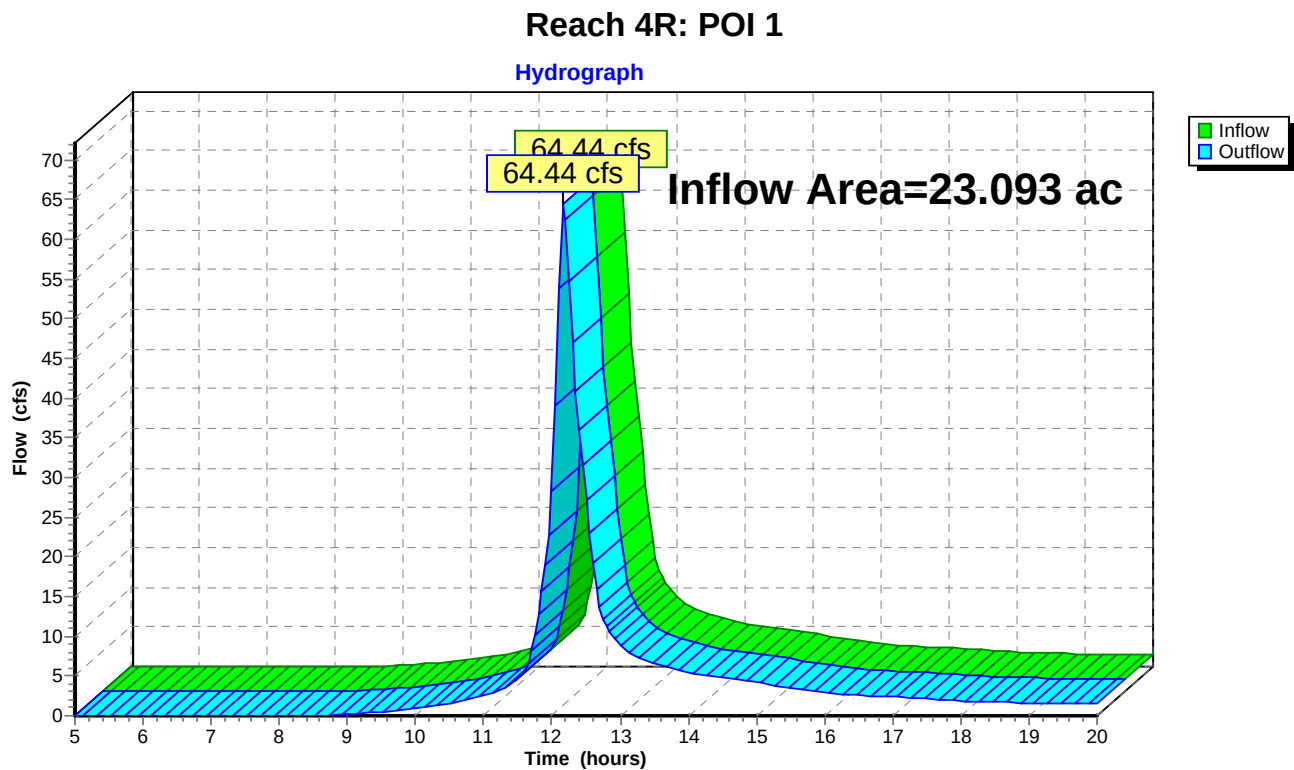
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 23.093 ac, 31.06% Impervious, Inflow Depth > 2.71" for 25 YR event

Inflow = 64.44 cfs @ 12.17 hrs, Volume= 5.215 af

Outflow = 64.44 cfs @ 12.17 hrs, Volume= 5.215 af, Atten= 0%, Lag= 0.0 min

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



## Pre Development

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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Reach 5R: POI 2

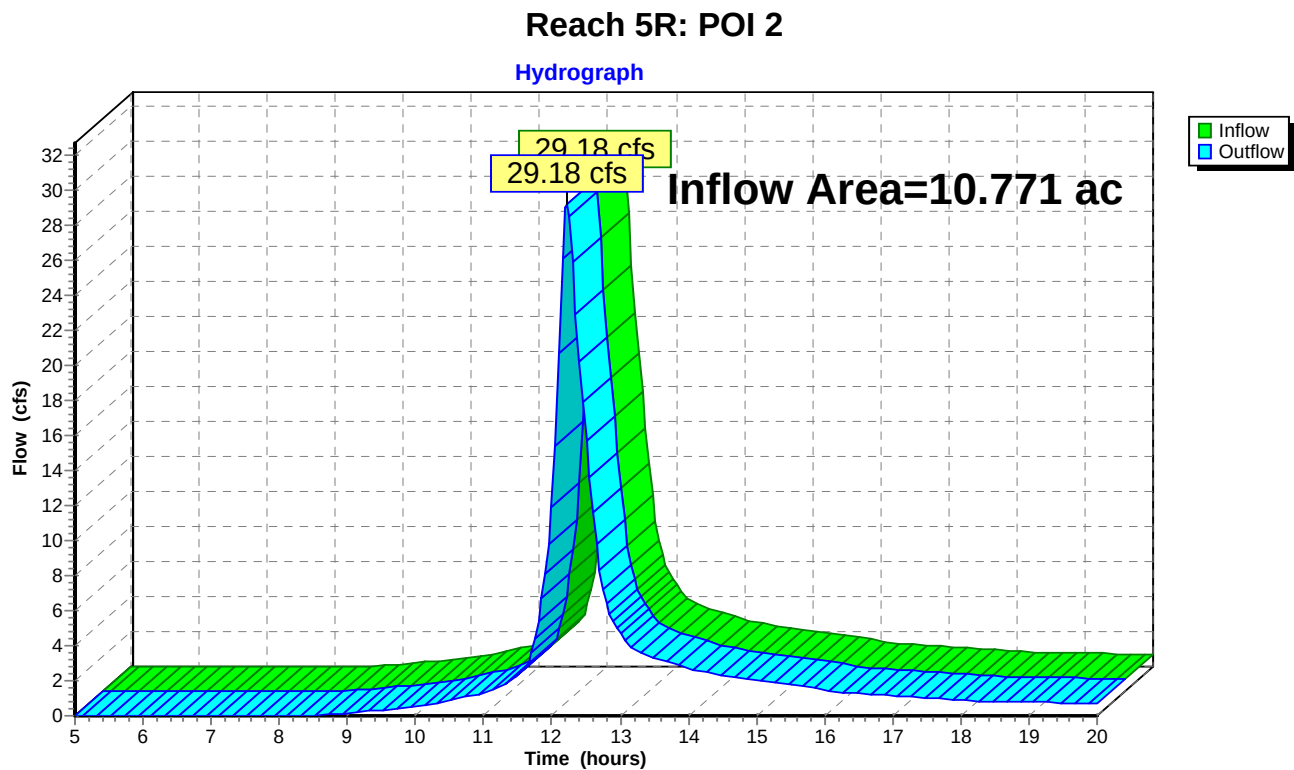
[40] Hint: Not Described (Outflow=Inflow)

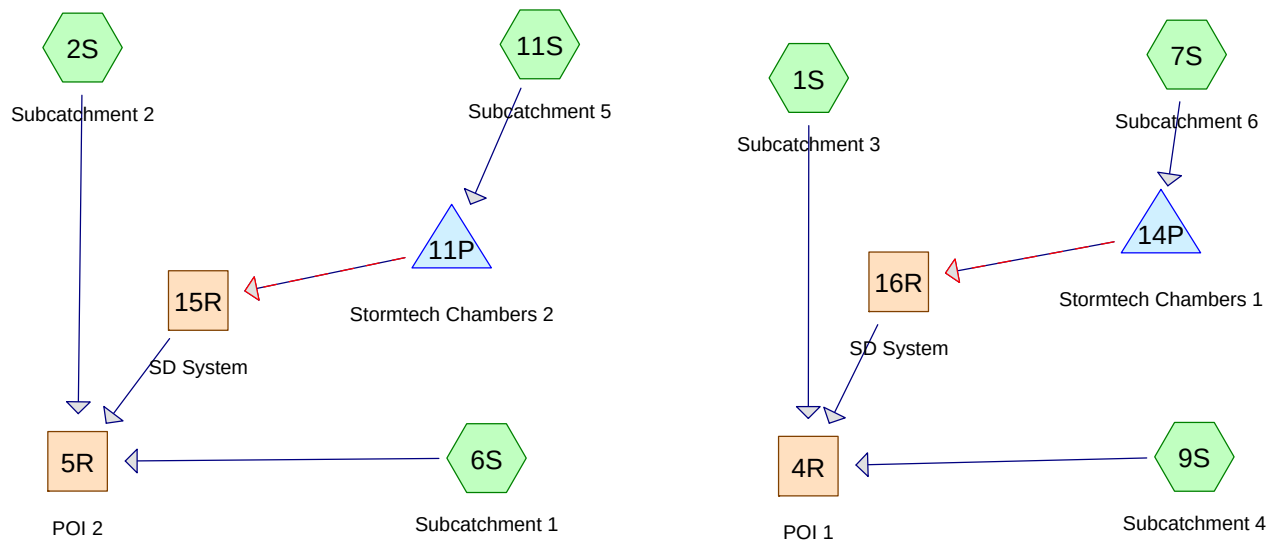
Inflow Area = 10.771 ac, 20.98% Impervious, Inflow Depth > 2.89" for 25 YR event

Inflow = 29.18 cfs @ 12.22 hrs, Volume= 2.593 af

Outflow = 29.18 cfs @ 12.22 hrs, Volume= 2.593 af, Atten= 0%, Lag= 0.0 min

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





## Post Development 2

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Type III 24-hr 2 YR Rainfall=3.10"

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Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

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

|                                                                                                                                                                |                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subcatchment1S: Subcatchment3</b>                                                                                                                           | Runoff Area=21.404 ac 33.51% Impervious Runoff Depth>0.83"<br>Flow Length=1,365' Tc=11.8 min CN=73 Runoff=17.33 cfs 1.486 af                     |
| <b>Subcatchment2S: Subcatchment2</b>                                                                                                                           | Runoff Area=7.169 ac 36.52% Impervious Runoff Depth>0.93"<br>Flow Length=855' Tc=15.8 min CN=75 Runoff=6.00 cfs 0.558 af                         |
| <b>Subcatchment6S: Subcatchment1</b>                                                                                                                           | Runoff Area=2.737 ac 10.76% Impervious Runoff Depth>1.21"<br>Flow Length=610' Tc=25.6 min CN=80 Runoff=2.53 cfs 0.277 af                         |
| <b>Subcatchment7S: Subcatchment6</b>                                                                                                                           | Runoff Area=0.968 ac 56.10% Impervious Runoff Depth>1.95"<br>Flow Length=365' Tc=12.8 min CN=90 Runoff=1.87 cfs 0.157 af                         |
| <b>Subcatchment9S: Subcatchment4</b>                                                                                                                           | Runoff Area=0.569 ac 0.00% Impervious Runoff Depth>0.78"<br>Flow Length=240' Tc=30.9 min CN=72 Runoff=0.29 cfs 0.037 af                          |
| <b>Subcatchment11S: Subcatchment5</b>                                                                                                                          | Runoff Area=0.709 ac 66.57% Impervious Runoff Depth>2.12"<br>Flow Length=250' Tc=21.5 min CN=92 Runoff=1.20 cfs 0.125 af                         |
| <b>Reach 4R: POI 1</b>                                                                                                                                         | Inflow=17.42 cfs 1.625 af<br>Outflow=17.42 cfs 1.625 af                                                                                          |
| <b>Reach 5R: POI 2</b>                                                                                                                                         | Inflow=9.55 cfs 0.921 af<br>Outflow=9.55 cfs 0.921 af                                                                                            |
| <b>Reach 15R: SD System</b>                                                                                                                                    | Avg. Depth=0.31' Max Vel=6.55 fps Inflow=2.17 cfs 0.087 af<br>D=24.0" n=0.013 L=50.0' S=0.0300 ' /' Capacity=39.18 cfs Outflow=1.93 cfs 0.087 af |
| <b>Reach 16R: SD System</b>                                                                                                                                    | Avg. Depth=0.35' Max Vel=7.46 fps Inflow=1.75 cfs 0.102 af<br>D=12.0" n=0.013 L=230.0' S=0.0379 ' /' Capacity=6.94 cfs Outflow=1.69 cfs 0.102 af |
| <b>Pond 11P: Stormtech Chambers 2</b>                                                                                                                          | Peak Elev=77.43' Storage=0.038 af Inflow=1.20 cfs 0.125 af<br>Primary=0.03 cfs 0.030 af Secondary=2.14 cfs 0.057 af Outflow=2.17 cfs 0.087 af    |
| <b>Pond 14P: Stormtech Chambers 1</b>                                                                                                                          | Peak Elev=83.41' Storage=0.052 af Inflow=1.87 cfs 0.157 af<br>Primary=0.03 cfs 0.029 af Secondary=1.72 cfs 0.073 af Outflow=1.75 cfs 0.102 af    |
| <b>Total Runoff Area = 33.556 ac Runoff Volume = 2.639 af Average Runoff Depth = 0.94"</b><br><b>66.92% Pervious = 22.457 ac 33.08% Impervious = 11.099 ac</b> |                                                                                                                                                  |



## Post Development 2

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Type III 24-hr 10 YR Rainfall=4.60"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

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

**Subcatchment1S: Subcatchment3** Runoff Area=21.404 ac 33.51% Impervious Runoff Depth>1.82"  
Flow Length=1,365' Tc=11.8 min CN=73 Runoff=40.00 cfs 3.238 af

**Subcatchment2S: Subcatchment2** Runoff Area=7.169 ac 36.52% Impervious Runoff Depth>1.96"  
Flow Length=855' Tc=15.8 min CN=75 Runoff=13.10 cfs 1.173 af

**Subcatchment6S: Subcatchment1** Runoff Area=2.737 ac 10.76% Impervious Runoff Depth>2.36"  
Flow Length=610' Tc=25.6 min CN=80 Runoff=4.95 cfs 0.538 af

**Subcatchment7S: Subcatchment6** Runoff Area=0.968 ac 56.10% Impervious Runoff Depth>3.29"  
Flow Length=365' Tc=12.8 min CN=90 Runoff=3.08 cfs 0.266 af

**Subcatchment9S: Subcatchment4** Runoff Area=0.569 ac 0.00% Impervious Runoff Depth>1.73"  
Flow Length=240' Tc=30.9 min CN=72 Runoff=0.69 cfs 0.082 af

**Subcatchment11S: Subcatchment5** Runoff Area=0.709 ac 66.57% Impervious Runoff Depth>3.48"  
Flow Length=250' Tc=21.5 min CN=92 Runoff=1.93 cfs 0.206 af

**Reach 4R: POI 1** Inflow=43.33 cfs 3.534 af  
Outflow=43.33 cfs 3.534 af

**Reach 5R: POI 2** Inflow=19.22 cfs 1.879 af  
Outflow=19.22 cfs 1.879 af

**Reach 15R: SD System** Avg. Depth=0.30' Max Vel=6.47 fps Inflow=2.05 cfs 0.168 af  
D=24.0" n=0.013 L=50.0' S=0.0300 ' /' Capacity=39.18 cfs Outflow=1.94 cfs 0.168 af

**Reach 16R: SD System** Avg. Depth=0.47' Max Vel=8.58 fps Inflow=3.59 cfs 0.215 af  
D=12.0" n=0.013 L=230.0' S=0.0379 ' /' Capacity=6.94 cfs Outflow=3.07 cfs 0.214 af

**Pond 11P: Stormtech Chambers 2** Peak Elev=77.35' Storage=0.038 af Inflow=1.93 cfs 0.206 af  
Primary=0.03 cfs 0.033 af Secondary=2.02 cfs 0.134 af Outflow=2.05 cfs 0.168 af

**Pond 14P: Stormtech Chambers 1** Peak Elev=83.54' Storage=0.052 af Inflow=3.08 cfs 0.266 af  
Primary=0.03 cfs 0.033 af Secondary=3.56 cfs 0.182 af Outflow=3.59 cfs 0.215 af

**Total Runoff Area = 33.556 ac Runoff Volume = 5.502 af Average Runoff Depth = 1.97"**  
**66.92% Pervious = 22.457 ac 33.08% Impervious = 11.099 ac**

## Post Development 2

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Type III 24-hr 25 YR Rainfall=5.80"

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Page 4

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

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

**Subcatchment1S: Subcatchment3** Runoff Area=21.404 ac 33.51% Impervious Runoff Depth>2.71"  
Flow Length=1,365' Tc=11.8 min CN=73 Runoff=60.09 cfs 4.834 af

**Subcatchment2S: Subcatchment2** Runoff Area=7.169 ac 36.52% Impervious Runoff Depth>2.89"  
Flow Length=855' Tc=15.8 min CN=75 Runoff=19.32 cfs 1.726 af

**Subcatchment6S: Subcatchment1** Runoff Area=2.737 ac 10.76% Impervious Runoff Depth>3.35"  
Flow Length=610' Tc=25.6 min CN=80 Runoff=6.99 cfs 0.765 af

**Subcatchment7S: Subcatchment6** Runoff Area=0.968 ac 56.10% Impervious Runoff Depth>4.39"  
Flow Length=365' Tc=12.8 min CN=90 Runoff=4.04 cfs 0.354 af

**Subcatchment9S: Subcatchment4** Runoff Area=0.569 ac 0.00% Impervious Runoff Depth>2.60"  
Flow Length=240' Tc=30.9 min CN=72 Runoff=1.05 cfs 0.123 af

**Subcatchment11S: Subcatchment5** Runoff Area=0.709 ac 66.57% Impervious Runoff Depth>4.59"  
Flow Length=250' Tc=21.5 min CN=92 Runoff=2.51 cfs 0.271 af

**Reach 4R: POI 1** Inflow=64.63 cfs 5.258 af  
Outflow=64.63 cfs 5.258 af

**Reach 5R: POI 2** Inflow=27.65 cfs 2.723 af  
Outflow=27.65 cfs 2.723 af

**Reach 15R: SD System** Avg. Depth=0.34' Max Vel=7.01 fps Inflow=2.72 cfs 0.233 af  
D=24.0" n=0.013 L=50.0' S=0.0300 ' /' Capacity=39.18 cfs Outflow=2.53 cfs 0.233 af

**Reach 16R: SD System** Avg. Depth=0.55' Max Vel=9.13 fps Inflow=4.41 cfs 0.301 af  
D=12.0" n=0.013 L=230.0' S=0.0379 ' /' Capacity=6.94 cfs Outflow=3.99 cfs 0.301 af

**Pond 11P: Stormtech Chambers 2** Peak Elev=77.81' Storage=0.038 af Inflow=2.51 cfs 0.271 af  
Primary=0.03 cfs 0.035 af Secondary=2.69 cfs 0.198 af Outflow=2.72 cfs 0.233 af

**Pond 14P: Stormtech Chambers 1** Peak Elev=83.59' Storage=0.052 af Inflow=4.04 cfs 0.354 af  
Primary=0.03 cfs 0.035 af Secondary=4.38 cfs 0.266 af Outflow=4.41 cfs 0.301 af

**Total Runoff Area = 33.556 ac Runoff Volume = 8.073 af Average Runoff Depth = 2.89"**  
**66.92% Pervious = 22.457 ac 33.08% Impervious = 11.099 ac**

**Post Development 2**

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Type III 24-hr 25 YR Rainfall=5.80"

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**Summary for Subcatchment 1S: Subcatchment 3**

Runoff = 60.09 cfs @ 12.17 hrs, Volume= 4.834 af, Depth&gt; 2.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 10.530    | 61 | 1/4 acre lots, 38% imp, HSG A |
| 0.979     | 81 | 1/3 acre lots, 30% imp, HSG C |
| 9.244     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 0.345     | 72 | 1/3 acre lots, 30% imp, HSG B |
| 0.125     | 70 | Woods, Good, HSG C            |
| 0.181     | 80 | >75% Grass cover, Good, HSG D |
| 21.404    | 73 | Weighted Average              |
| 14.232    |    | Pervious Area                 |
| 7.172     |    | Impervious Area               |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                         |
|----------|---------------|---------------|-------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 7.9      | 150           | 0.0800        | 0.32              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"                                                                           |
| 3.0      | 700           | 0.0680        | 3.91              |                | <b>Shallow Concentrated Flow, B-C</b><br>Grassed Waterway Kv= 15.0 fps                                                              |
| 0.3      | 100           | 0.0050        | 5.91              | 29.00          | <b>Circular Channel (pipe), C-D</b><br>Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63'<br>n= 0.013 Corrugated PE, smooth interior     |
| 0.2      | 243           | 0.0570        | 16.89             | 101.31         | <b>Channel Flow, D-E</b><br>Area= 6.0 sf Perim= 5.6' r= 1.07'<br>n= 0.022 Earth, clean & straight                                   |
| 0.2      | 92            | 0.0100        | 9.44              | 66.70          | <b>Circular Channel (pipe), E-F</b><br>Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75'<br>n= 0.013 Concrete pipe, bends & connections |
| 0.2      | 80            | 0.0150        | 8.66              | 51.97          | <b>Channel Flow, F-G</b><br>Area= 6.0 sf Perim= 5.6' r= 1.07'<br>n= 0.022 Earth, clean & straight                                   |
| 11.8     | 1,365         | Total         |                   |                |                                                                                                                                     |

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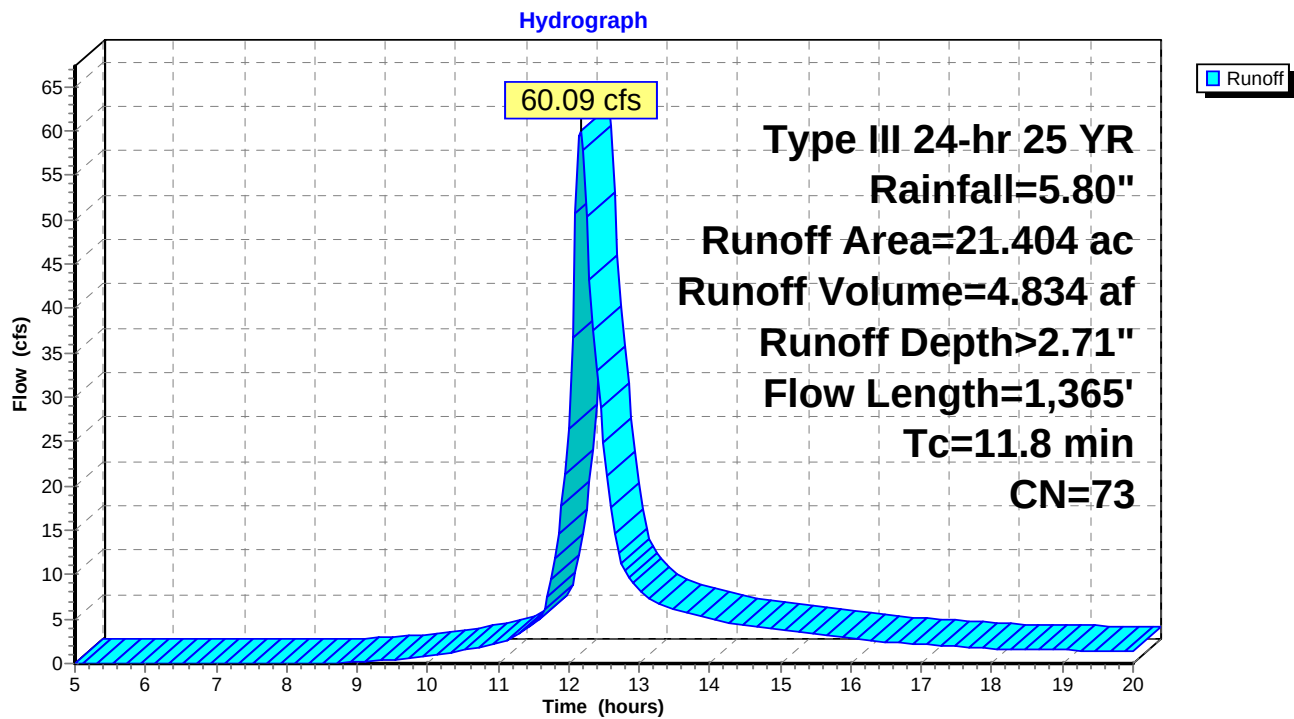
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Type III 24-hr 25 YR Rainfall=5.80"

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### Subcatchment 1S: Subcatchment 3



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Type III 24-hr 25 YR Rainfall=5.80"

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**Summary for Subcatchment 2S: Subcatchment 2**

Runoff = 19.32 cfs @ 12.22 hrs, Volume= 1.726 af, Depth&gt; 2.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 3.212     | 61 | 1/4 acre lots, 38% imp, HSG A |
| 0.192     | 80 | 1/2 acre lots, 25% imp, HSG C |
| 2.607     | 87 | 1/4 acre lots, 38% imp, HSG D |
| 0.141     | 83 | 1/4 acre lots, 38% imp, HSG C |
| 1.017     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 7.169     | 75 | Weighted Average              |
| 4.551     |    | Pervious Area                 |
| 2.618     |    | Impervious Area               |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------|
| 8.9      | 150           | 0.0600        | 0.28              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"                                                                       |
| 6.3      | 340           | 0.0325        | 0.90              |                | <b>Shallow Concentrated Flow, B-C</b><br>Woodland Kv= 5.0 fps                                                                   |
| 0.6      | 365           | 0.0204        | 10.28             | 32.31          | <b>Circular Channel (pipe), C-D</b><br>Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 Corrugated PE, smooth interior |
| 15.8     | 855           | Total         |                   |                |                                                                                                                                 |

## Post Development 2

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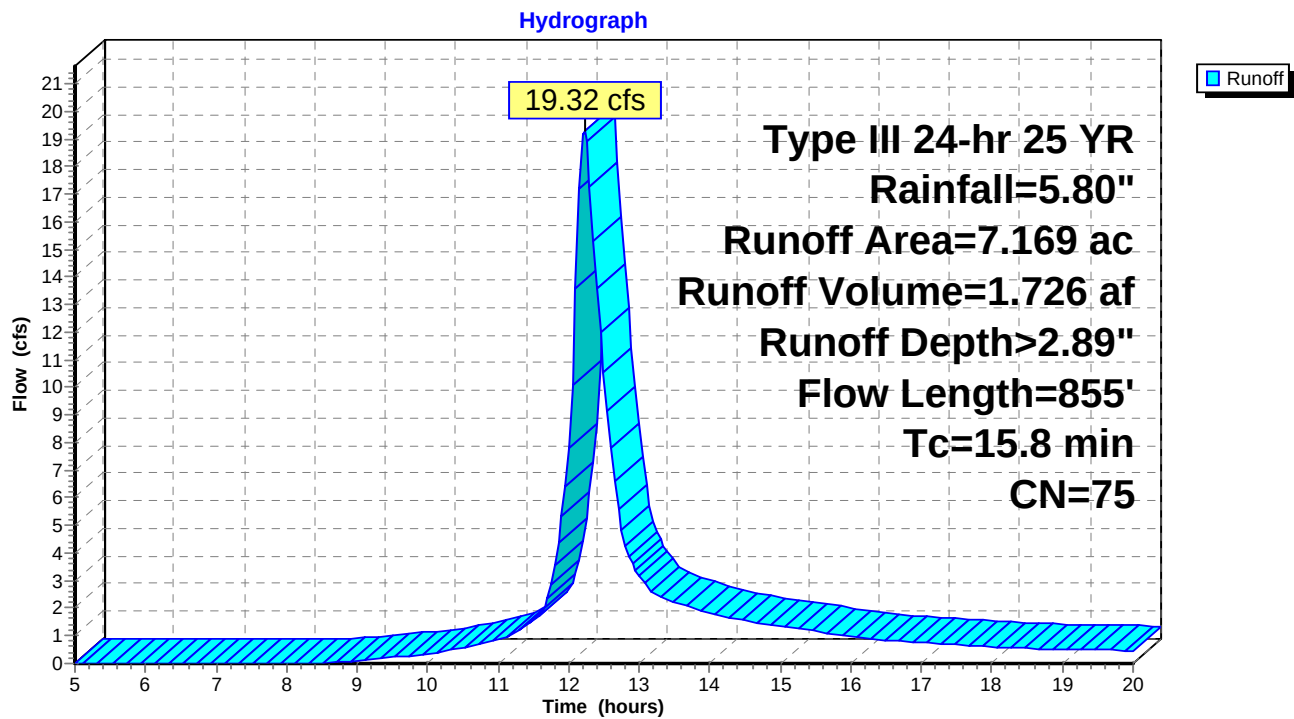
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Type III 24-hr 25 YR Rainfall=5.80"

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### Subcatchment 2S: Subcatchment 2





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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 6S: Subcatchment 1

Runoff = 6.99 cfs @ 12.35 hrs, Volume= 0.765 af, Depth> 3.35"

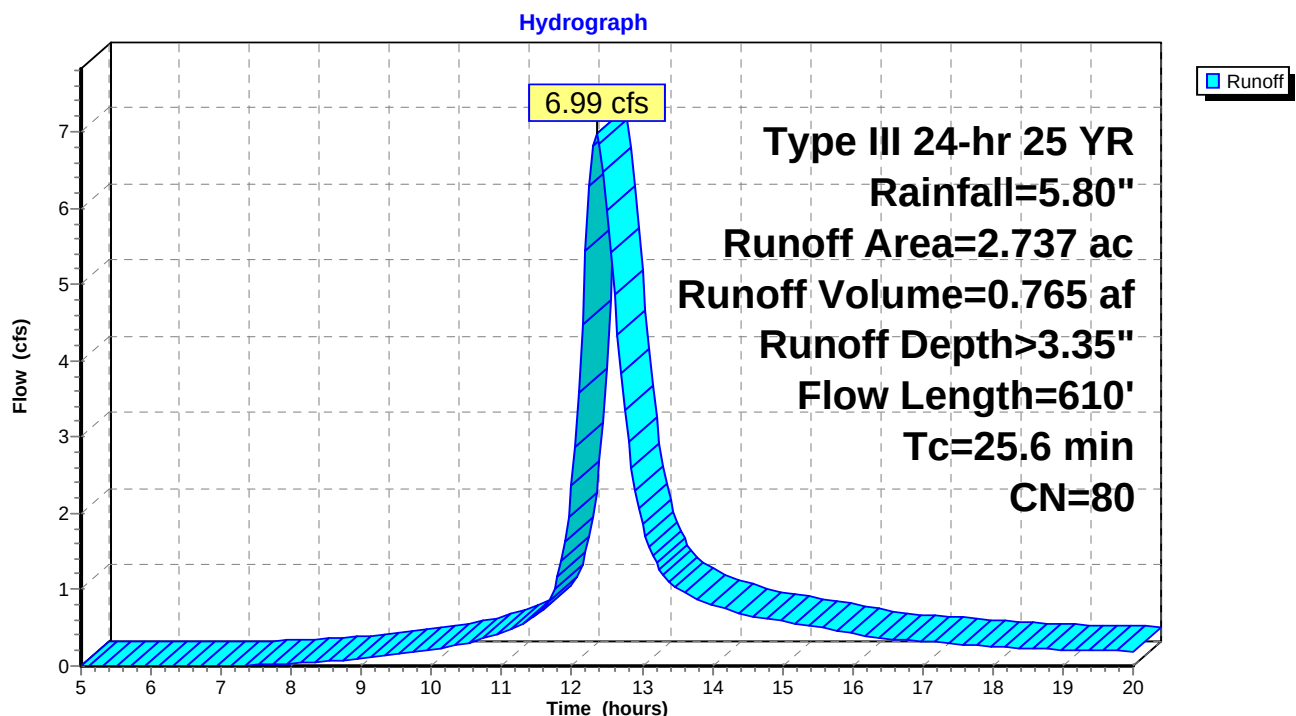
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 1.954     | 77 | Woods, Good, HSG D            |
| 0.698     | 86 | 1/3 acre lots, 30% imp, HSG D |
| 0.085     | 98 | Paved roads w/curbs & sewers  |
| 2.737     | 80 | Weighted Average              |
| 2.443     |    | Pervious Area                 |
| 0.294     |    | Impervious Area               |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                                                                                     |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------|
| 18.3     | 100           | 0.0310        | 0.09              |                | <b>Sheet Flow, A-B</b><br>Woods: Light underbrush n= 0.400 P2= 3.10"                                                            |
| 6.6      | 140           | 0.0050        | 0.35              |                | <b>Shallow Concentrated Flow, B-C</b><br>Woodland Kv= 5.0 fps                                                                   |
| 0.7      | 370           | 0.0200        | 8.41              | 14.86          | <b>Circular Channel (pipe), C-D</b><br>Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38'<br>n= 0.013 Corrugated PE, smooth interior |
| 25.6     | 610           | Total         |                   |                |                                                                                                                                 |

### Subcatchment 6S: Subcatchment 1



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### Summary for Subcatchment 7S: Subcatchment 6

Runoff = 4.04 cfs @ 12.17 hrs, Volume= 0.354 af, Depth> 4.39"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

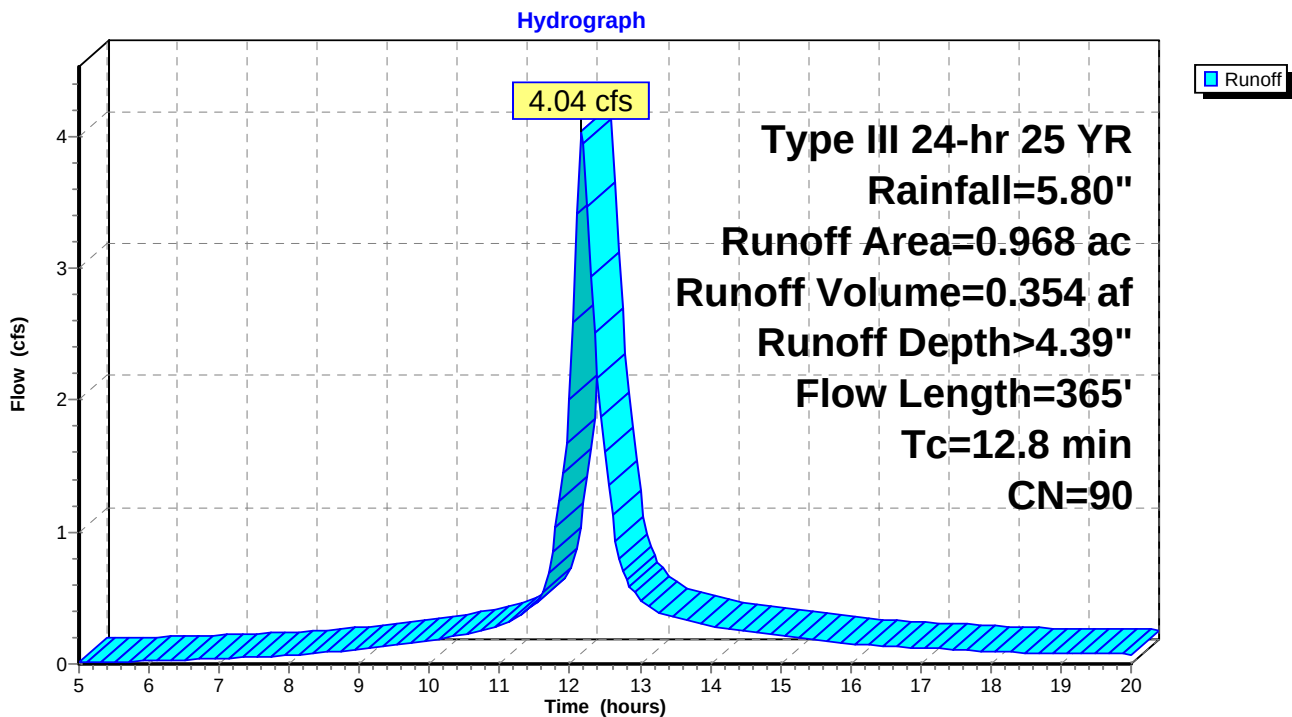
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.543     | 98 | Paved roads w/curbs & sewers  |
| 0.425     | 80 | >75% Grass cover, Good, HSG D |
| 0.968     | 90 | Weighted Average              |
| 0.425     |    | Pervious Area                 |
| 0.543     |    | Impervious Area               |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                                            |
|----------|---------------|---------------|-------------------|----------------|------------------------------------------------------------------------|
| 11.0     | 150           | 0.0350        | 0.23              |                | <b>Sheet Flow, A-B</b><br>Grass: Short n= 0.150 P2= 3.10"              |
| 0.2      | 15            | 0.0050        | 1.06              |                | <b>Shallow Concentrated Flow, B-C</b><br>Grassed Waterway Kv= 15.0 fps |
| 1.6      | 200           | 0.0100        | 2.03              |                | <b>Shallow Concentrated Flow, C-D</b><br>Paved Kv= 20.3 fps            |
| 12.8     | 365           | Total         |                   |                |                                                                        |

### Subcatchment 7S: Subcatchment 6



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Subcatchment 9S: Subcatchment 4

Runoff = 1.05 cfs @ 12.44 hrs, Volume= 0.123 af, Depth> 2.60"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

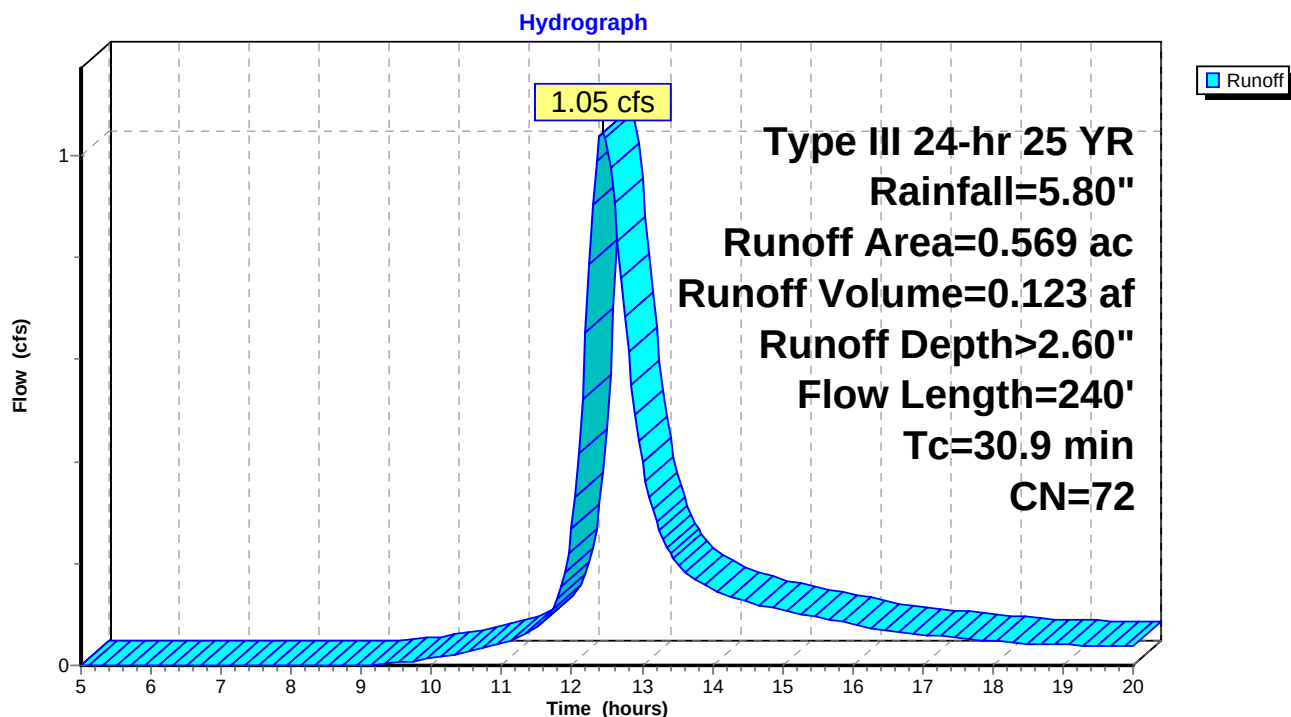
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description        |
|-----------|----|--------------------|
| 0.379     | 70 | Woods, Good, HSG C |
| 0.190     | 77 | Woods, Good, HSG D |
| 0.569     | 72 | Weighted Average   |
| 0.569     |    | Pervious Area      |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                                |
|----------|---------------|---------------|-------------------|----------------|--------------------------------------------|
| 30.2     | 150           | 0.0200        | 0.08              |                | <b>Sheet Flow, A-B</b>                     |
|          |               |               |                   |                | Woods: Light underbrush n= 0.400 P2= 3.10" |
| 0.7      | 90            | 0.1800        | 2.12              |                | <b>Shallow Concentrated Flow, B-G</b>      |
|          |               |               |                   |                | Woodland Kv= 5.0 fps                       |
| 30.9     | 240           | Total         |                   |                |                                            |

### Subcatchment 9S: Subcatchment 4



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### Summary for Subcatchment 11S: Subcatchment 5

Runoff = 2.51 cfs @ 12.28 hrs, Volume= 0.271 af, Depth> 4.59"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

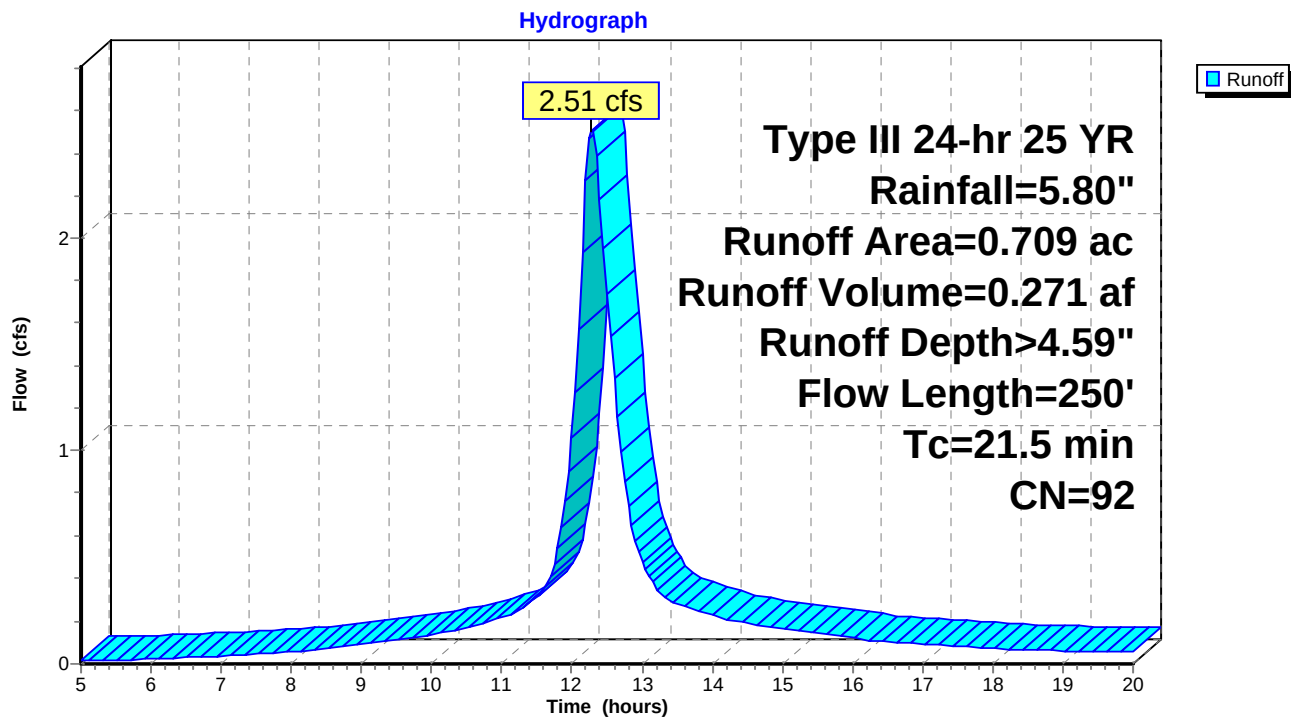
Type III 24-hr 25 YR Rainfall=5.80"

| Area (ac) | CN | Description                   |
|-----------|----|-------------------------------|
| 0.472     | 98 | Paved roads w/curbs & sewers  |
| 0.237     | 80 | >75% Grass cover, Good, HSG D |
| 0.709     | 92 | Weighted Average              |
| 0.237     |    | Pervious Area                 |
| 0.472     |    | Impervious Area               |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description                           |
|----------|---------------|---------------|-------------------|----------------|---------------------------------------|
| 20.9     | 125           | 0.0125        | 0.10              |                | <b>Sheet Flow, A-B</b>                |
|          |               |               |                   |                | Grass: Dense n= 0.240 P2= 3.10"       |
| 0.6      | 125           | 0.0325        | 3.66              |                | <b>Shallow Concentrated Flow, B-C</b> |
|          |               |               |                   |                | Paved Kv= 20.3 fps                    |
| 21.5     | 250           | Total         |                   |                |                                       |

### Subcatchment 11S: Subcatchment 5



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Type III 24-hr 25 YR Rainfall=5.80"

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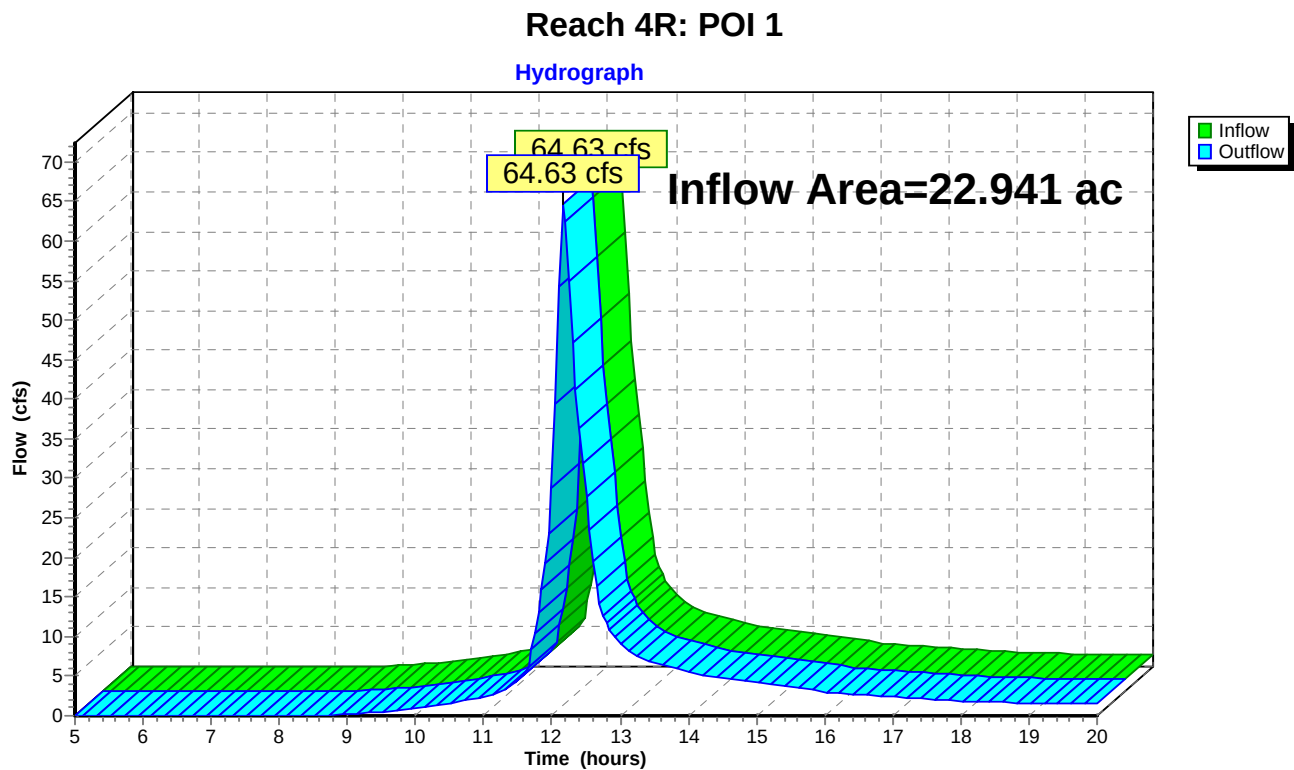
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### Summary for Reach 4R: POI 1

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

Inflow Area = 22.941 ac, 33.63% Impervious, Inflow Depth > 2.75" for 25 YR event  
Inflow = 64.63 cfs @ 12.17 hrs, Volume= 5.258 af  
Outflow = 64.63 cfs @ 12.17 hrs, Volume= 5.258 af, Atten= 0%, Lag= 0.0 min

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



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Type III 24-hr 25 YR Rainfall=5.80"

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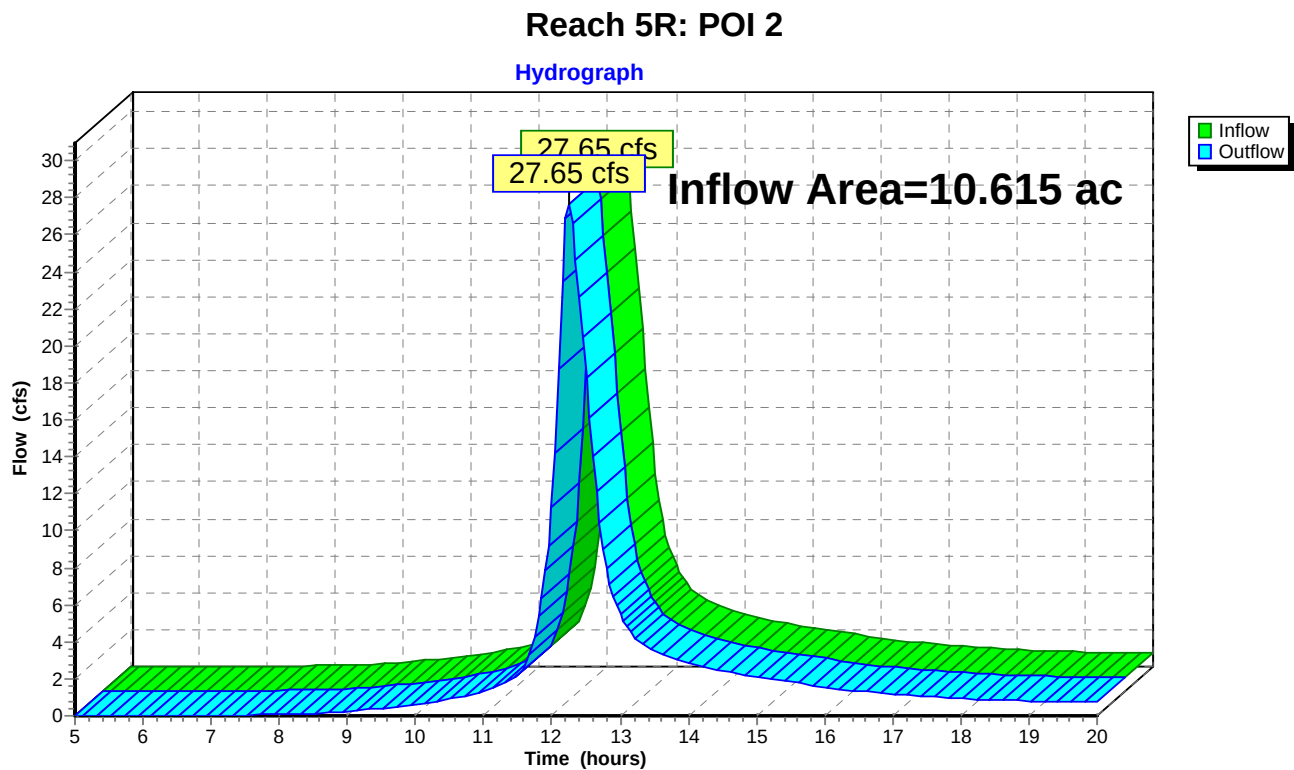
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### Summary for Reach 5R: POI 2

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

Inflow Area = 10.615 ac, 31.88% Impervious, Inflow Depth > 3.08" for 25 YR event  
Inflow = 27.65 cfs @ 12.25 hrs, Volume= 2.723 af  
Outflow = 27.65 cfs @ 12.25 hrs, Volume= 2.723 af, Atten= 0%, Lag= 0.0 min

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



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Type III 24-hr 25 YR Rainfall=5.80"

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### Summary for Reach 15R: SD System

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.709 ac, 66.57% Impervious, Inflow Depth > 3.94" for 25 YR event  
Inflow = 2.72 cfs @ 12.30 hrs, Volume= 0.233 af  
Outflow = 2.53 cfs @ 12.29 hrs, Volume= 0.233 af, Atten= 7%, Lag= 0.0 min

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

Max. Velocity= 7.01 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 2.59 fps, Avg. Travel Time= 0.3 min

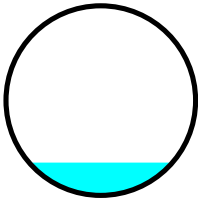
Peak Storage= 18 cf @ 12.29 hrs, Average Depth at Peak Storage= 0.34'

Bank-Full Depth= 2.00', Capacity at Bank-Full= 39.18 cfs

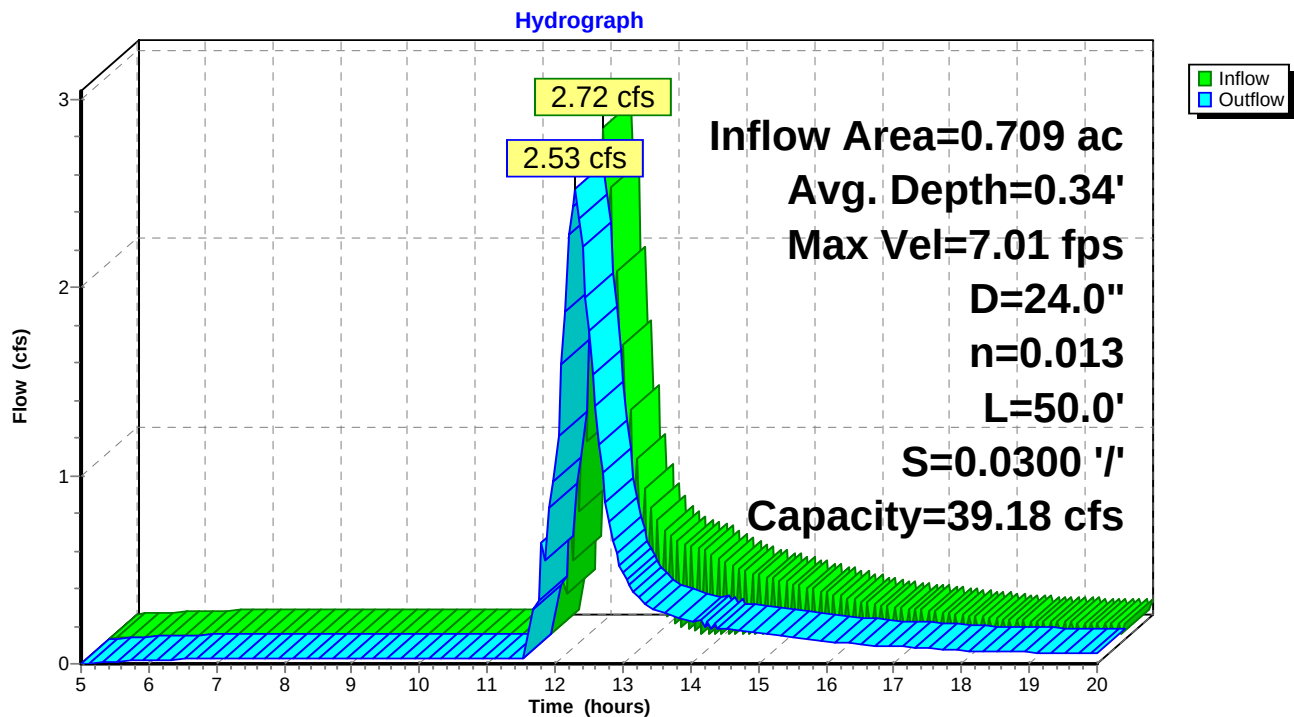
24.0" Diameter Pipe, n= 0.013 Corrugated PE, smooth interior

Length= 50.0' Slope= 0.0300 '/'

Inlet Invert= 72.50', Outlet Invert= 71.00'



### Reach 15R: SD System





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### Summary for Reach 16R: SD System

[52] Hint: Inlet/Outlet conditions not evaluated

[78] Warning: Submerged Pond 14P Primary device # 1 by 0.39'

Inflow Area = 0.968 ac, 56.10% Impervious, Inflow Depth > 3.73" for 25 YR event  
Inflow = 4.41 cfs @ 12.19 hrs, Volume= 0.301 af  
Outflow = 3.99 cfs @ 12.19 hrs, Volume= 0.301 af, Atten= 9%, Lag= 0.0 min

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

Max. Velocity= 9.13 fps, Min. Travel Time= 0.4 min

Avg. Velocity = 3.23 fps, Avg. Travel Time= 1.2 min

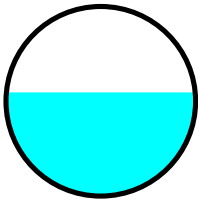
Peak Storage= 101 cf @ 12.18 hrs, Average Depth at Peak Storage= 0.55'

Bank-Full Depth= 1.00', Capacity at Bank-Full= 6.94 cfs

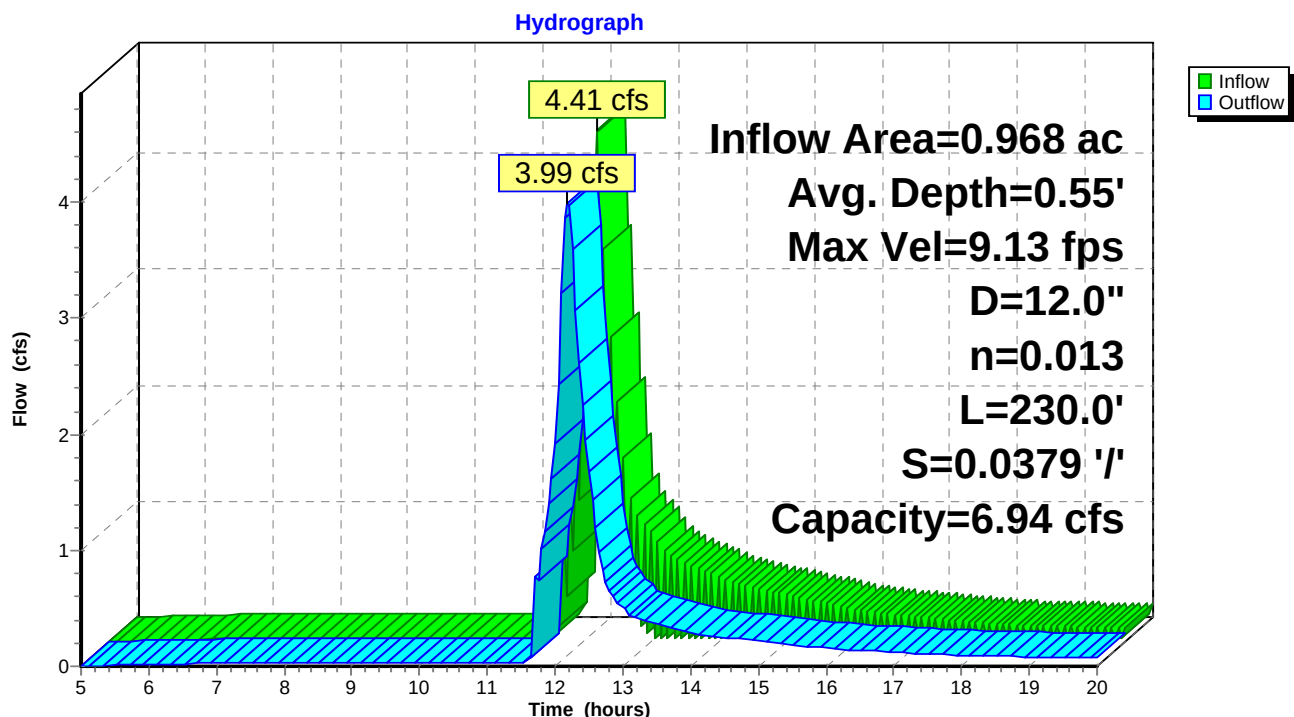
12.0" Diameter Pipe, n= 0.013 Corrugated PE, smooth interior

Length= 230.0' Slope= 0.0379 '/'

Inlet Invert= 79.54', Outlet Invert= 70.82'



### Reach 16R: SD System



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### Summary for Pond 11P: Stormtech Chambers 2

[82] Warning: Early inflow requires earlier time span

[88] Warning: Qout>Qin may require Finer Routing>1

[85] Warning: Oscillations may require Finer Routing>1

Inflow Area = 0.709 ac, 66.57% Impervious, Inflow Depth > 4.59" for 25 YR event  
Inflow = 2.51 cfs @ 12.28 hrs, Volume= 0.271 af  
Outflow = 2.72 cfs @ 12.30 hrs, Volume= 0.233 af, Atten= 0%, Lag= 0.8 min  
Primary = 0.03 cfs @ 6.95 hrs, Volume= 0.035 af  
Secondary = 2.69 cfs @ 12.30 hrs, Volume= 0.198 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Peak Elev= 77.81' @ 12.30 hrs Surf.Area= 0.017 ac Storage= 0.038 af

Plug-Flow detention time= 65.4 min calculated for 0.232 af (86% of inflow)  
Center-of-Mass det. time= 24.3 min ( 787.8 - 763.5 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                             |
|--------|--------|---------------|-----------------------------------------------------------------------------------------------------------------|
| #1     | 73.26' | 0.015 af      | <b>4.75'W x 7.20'L x 3.50'H Prismaoid</b> x 22<br>0.060 af Overall - 0.023 af Embedded = 0.037 af x 40.0% Voids |
| #2     | 73.76' | 0.023 af      | <b>44.6"W x 30.0"H x 7.12'L StormTech SC-740</b> x 22 Inside #1                                                 |
| #3     | 80.60' | 0.002 af      | <b>4.00'D x 6.00'H Vertical Cone/Cylinder</b>                                                                   |
|        |        | 0.040 af      | Total Available Storage                                                                                         |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                                                       |
|--------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 73.26' | <b>0.03 cfs Exfiltration at all elevations</b>                                                                                                                                                                       |
| #2     | Device 3  | 73.82' | <b>10.0" x 20.0' long Culvert</b> CPP, square edge headwall, Ke= 0.500<br>Outlet Invert= 73.62' S= 0.0100 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior                                                   |
| #3     | Secondary | 76.76' | <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=0.03 cfs @ 6.95 hrs HW=73.39' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

**Secondary OutFlow** Max=2.67 cfs @ 12.30 hrs HW=77.80' (Free Discharge)

↑**3=Broad-Crested Rectangular Weir** (Passes 2.67 cfs of 20.16 cfs potential flow)

↑**2=Culvert** (Inlet Controls 2.67 cfs @ 4.90 fps)

## Post Development 2

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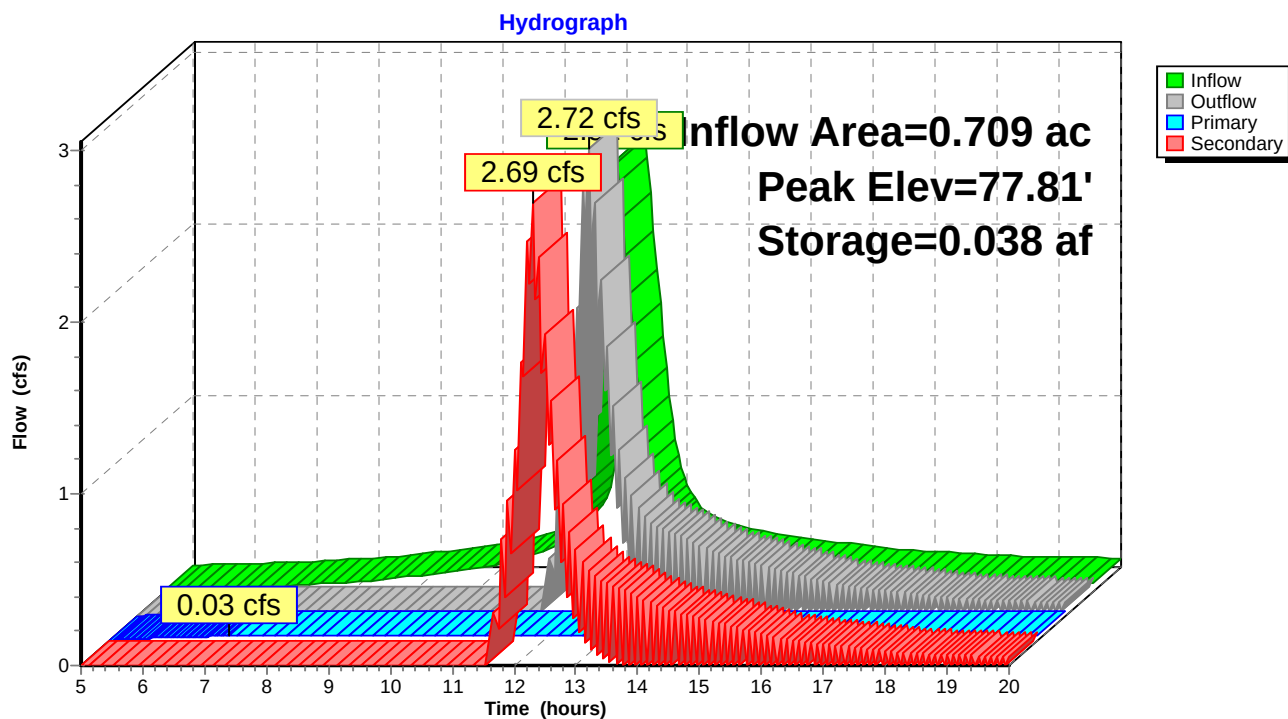
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### Pond 11P: Stormtech Chambers 2



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### Summary for Pond 14P: Stormtech Chambers 1

[82] Warning: Early inflow requires earlier time span

[88] Warning: Qout>Qin may require Finer Routing>1

[85] Warning: Oscillations may require Finer Routing>1

Inflow Area = 0.968 ac, 56.10% Impervious, Inflow Depth > 4.39" for 25 YR event  
Inflow = 4.04 cfs @ 12.17 hrs, Volume= 0.354 af  
Outflow = 4.41 cfs @ 12.19 hrs, Volume= 0.301 af, Atten= 0%, Lag= 1.4 min  
Primary = 0.03 cfs @ 7.00 hrs, Volume= 0.035 af  
Secondary = 4.38 cfs @ 12.19 hrs, Volume= 0.266 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3  
Peak Elev= 83.59' @ 12.19 hrs Surf.Area= 0.024 ac Storage= 0.052 af

Plug-Flow detention time= 70.2 min calculated for 0.301 af (85% of inflow)  
Center-of-Mass det. time= 26.1 min ( 788.4 - 762.3 )

| Volume | Invert | Avail.Storage | Storage Description                                                                                              |
|--------|--------|---------------|------------------------------------------------------------------------------------------------------------------|
| #1     | 79.69' | 0.020 af      | <b>4.75'W x 7.20'L x 3.50'H Prismatoid</b> x 30<br>0.082 af Overall - 0.032 af Embedded = 0.051 af x 40.0% Voids |
| #2     | 80.19' | 0.032 af      | <b>44.6"W x 30.0"H x 7.12'L StormTech SC-740</b> x 30 Inside #1                                                  |
| #3     | 86.96' | 0.002 af      | <b>4.00'D x 7.00'H Vertical Cone/Cylinder</b>                                                                    |
|        |        | 0.054 af      | Total Available Storage                                                                                          |

| Device | Routing   | Invert | Outlet Devices                                                                                                                                                                                                       |
|--------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Primary   | 79.69' | <b>0.03 cfs Exfiltration at all elevations</b>                                                                                                                                                                       |
| #2     | Device 3  | 80.25' | <b>24.0" x 5.0' long Culvert</b> CPP, square edge headwall, Ke= 0.500<br>Outlet Invert= 80.05' S= 0.0400 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior                                                    |
| #3     | Secondary | 83.19' | <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=0.03 cfs @ 7.00 hrs HW=79.84' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

**Secondary OutFlow** Max=4.20 cfs @ 12.19 hrs HW=83.58' (Free Discharge)

↑**3=Broad-Crested Rectangular Weir** (Weir Controls 4.20 cfs @ 1.77 fps)

↑**2=Culvert** (Passes 4.20 cfs of 9.51 cfs potential flow)

## Post Development 2

Prepared by Gorrill Palmer

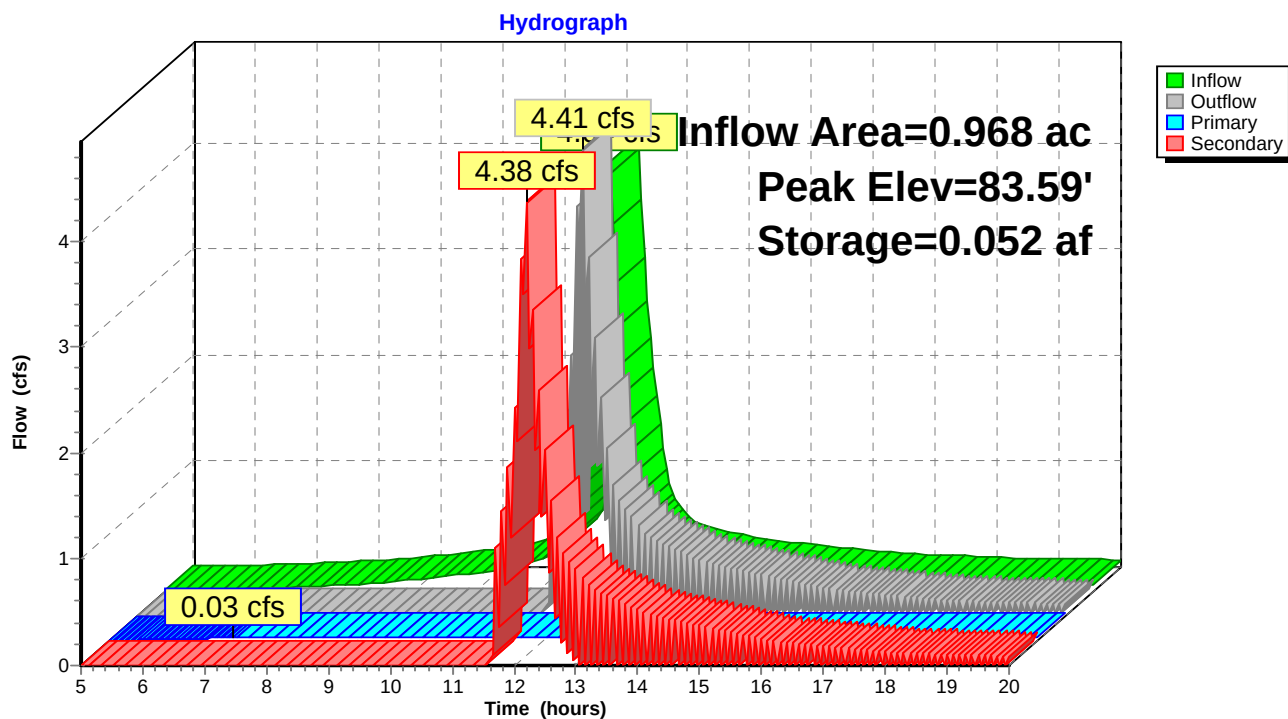
HydroCAD® 8.50 s/n 001265 © 2007 HydroCAD Software Solutions LLC

Type III 24-hr 25 YR Rainfall=5.80"

Printed 9/27/2017

Page 17

### Pond 14P: Stormtech Chambers 1



**ATTACHEMENT C**

**CULVERT AND GRATE CALCULATIONS**



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JOB 8089.08 BRANDY LANE  
SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
CALCULATED BY DJG DATE 9/15/17  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE \_\_\_\_\_

### CATCH BASIN 6

AREA: 2.737 ACRES, 119,224 SF

$T_c = 25.6 \text{ min}$  (FROM HYDROCAD)

$i_{25} = 3.25$ ,  $C = 0.80$

$Q_{25} = (0.80)(3.25)(2.737) = 7.12 \text{ CFS}$

MANNINGS CAPACITY → FOR PIPE FROM CB6 TO DMH8

$$Q = (1.48/n) A R^{(2/3)} S^{(1/2)}$$

$D = 18"$ ,  $A = 1.766 \text{ SF}$ ,  $R = 0.375 \text{ FT}$   
 $n = 0.011$ ,  $S = 0.0058 \text{ FT/FT}$

$Q = 9.539 \text{ CFS (CAPACITY)}$  ✓ GOOD





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JOB 98089.08 - BRANDY LANE

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY DJV DATE 09/19/17

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE \_\_\_\_\_

DMH 1 - EVALUATION OF THE EXISTING 36"  
RCP CULVERT. MANNING'S CAPACITY  
FROM DMH 1 TO PLUNGE POOL

ASSUME:  $Q_{25} = 64.63 \text{ CFS}$

$$n = 0.012$$

KNOWN:  $D = 36" = 3'$

$$S = \frac{72.14 - 70.68}{54'} = 0.027$$

SOLVE:  $A = \frac{\pi}{4} D^2$ ,  $P = \pi D$ ,  $R = \frac{A}{P}$

$$Q = \frac{1.49}{n} A (R^{2/3}) (S^{1/2})$$

$$A = \frac{\pi}{4} (3')^2 = 7.069 \text{ SF}$$

$$R = \frac{A}{P} = \frac{\frac{\pi D^2}{4}}{\pi D} = \frac{D}{4}$$

$$R = \frac{3'}{4} = 0.75$$

$$Q = \frac{1.49}{0.012} (7.069) (0.75)^{2/3} (0.027)^{1/2}$$

$$Q = 119.0 \text{ CFS}$$



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JOB 98089.08 BRANDY LANE  
SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
CALCULATED BY DJG DATE 9/27/17  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE \_\_\_\_\_

CULVERT AT STA 12+90

AREA TO CULVERT INLET = 7.169 AC, 312,282 SF

$T_c = 15.8$  MINUTES (FROM HYDROCAD)

$CN = 0.75$   $i_{25} = 4.1$

$Q_{25} = (0.75)(4.1)(7.169) = \underline{22.04 \text{ CFS}}$

USE 24" DIAMETER CULVERT

$H_w/D = 1.5$ ,  $H_w = 3'$

CULVERT CAPACITY,  $n = 0.012$ ,  $S = 0.022$

FROM MANNING'S EQ  $\rightarrow$  CAPACITY = 34.9 CFS ✓OK

## CATCH BASIN INLET CAPACITY (BASED ON PONDED WATER)

Gorrill-Palmer Consulting Engineers, Inc.

### JOB DATA

Project: 98089.08 Brandy Lane  
Calc. by: DJG  
Date: 9/28/2017  
Pipe at: CB6

### EQUATIONS:

Orifice equation,  $Q_o = CA(2gh)^{1/2}$ , Ref: Vennard & Street, 6th ed., p. 535

C = entrance coefficient = 0.6 for square edge openings, Ref: Ibid

A = area of flow

g = gravitational constant = 32.2 feet/second<sup>2</sup>

h = head in feet

Clogging factor = 2/3 (i.e., flow reduced by 1/3) Ref: Seelye, "Design", 1960, p. 18-27

Weir flow,  $Q_w = 3.3P(h)^{1.5}$ , Ref: "Inlet Grate Capacities", Neenah Found.Co., 1987, p. 52

P = perimeter of grate in feet = perimeter of outside edge of grate, Ref: Ibid

h = head in feet

### INPUT:

|                        |                      |                   |
|------------------------|----------------------|-------------------|
| Head (h) =             | 0.77 ft              |                   |
| Open Area (A) =        | 3.70 ft <sup>2</sup> | Neenah R-1878 B8G |
| Flow Coefficient (C) = | 0.60                 | Double Grate      |
| Clogging Factor (f) =  | 0.66                 |                   |
| Grate Perimeter (P) =  | 12.60 ft             |                   |

### OUTPUT:

|                         |                 |
|-------------------------|-----------------|
| Orifice Capacity (Qo) : | 10.3 cfs        |
| Weir Capacity (Qw) =    | 28.1 cfs        |
| Inlet Capacity =        | <u>10.3</u> cfs |

September 28, 2017

Mathew Grooms  
Planning and Urban Development Department  
City of Portland  
Fourth Floor, City Hall  
389 Congress Street  
Portland, Maine 04101

Subject: Brandy Lane Subdivision – Portland, ME  
Request for Additional Information

Dear Mathew,

Per correspondence with you, the Dept. of Public Works, and others, additional information has been requested relative to the permitting for the Brandy Lane Subdivision. The items that you requested are listed below followed by additional information, if appropriate.

**Woodard & Curran Peer Review Comments**

**Comment (1):** *The Applicant has noted that a MDEP NRPA Tier I wetland permit and approval from the ACOE are required, copies of all permit approvals should be forwarded to the City upon receipt.*

**Response:** Copies of all permit approvals will be forwarded to the City upon receipt.

**Comment (2):** *The Applicant has included letters to utilities in their application. Ability to serve confirmation should be provided when available.*

**Response:** Copies of confirmation of ability to serve letters will be forwarded to the City upon receipt.

**Comment (3a):** *In accordance with Section 5 of the City of Portland Technical Manual, a Subdivision 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.*
  - *Additional silt fence should be installed in some areas along the western property line adjacent to proposed grading activities.*

**Response:** A revised grading plan with additional silt fence along the western property line is included with this submission. The stormwater treatment systems (Stormtechs) have been moved to outside the right-of-way, please see attached drainage plan in plan set provided.

**Comment (4a):** *We have the following comments on the proposed stormwater management system for the site:*

- a) *The HydroCAD model for the Post-Development system includes six subcatchments that are not connected to the stormdrainage system. We understand that the Applicant is not connecting the roof drain*



*filters to the model, and we are in agreement that this is appropriate, but it appears based on the impervious surface designations on the disconnected subcatchments that more than just the roofs are included. Additional clarification is required.*

**Response:** Revised HydroCAD and TR-20 calculations showing pre and post development systems is included with this submission. The 6 subcatchments were “dummy” subcatchments not included in calculations.

**Comment (4b):** *The Applicant has noted in their stormwater narrative that roadway sideslopes are anticipated to be mowed more than twice per year and have not been included in the developed area. Please clarify this statement, and how the sideslope areas have been accounted for in the stormwater calculations.*

**Response:** As stated in the letter, the roadway sideslopes will be mowed no more than twice a year; excluding the area from the city’s development calculations. A revised Section 12 – Stormwater management report is included with this submission.

**Comment (4c):** *It is noted that the Maine DEP now allows for the installation of Filterra Tree Box filters without the use of an isolator row. It is understood that this may be providing some flow attenuation, but the Applicant may consider eliminating the isolator row if it helps with fitting stormwater treatment on the site, but outside of the right-of-way as is now required by the City.*

**Response:** The isolator row will remain in the plan set. Please see the plan set for stormwater treatment locations included with this submission.

**Comment (4d):** *The HydroCAD model has modeled all proposed stormdrain pipes as 18 inches in diameter. The drawings show 12-inch pipe. The Applicant should verify pipe size and that it has been adequately designed to accommodate flow.*

**Response:** The HydroCAD model and drainage plan have been revised to show the correct and matching pipe sizes proposed. Please see attached calculations following the stormwater report for pipe sizing relative to expected flows.

**Comment (4e):** *The Applicant is maintaining drainage that passes beneath the proposed roadway at the southern end of the site. A 36-inch pipe currently exists at this location. The upstream, western end of this pipe will be replaced, but the eastern, outlet end of the existing pipe will be maintained. The Applicant should provide information on any existing condition and any known capacity issues that exist. While overall flow at the study point at this location is not increasing, concentrated flow from the development is being added to this pipe. The adequacy of this pipe should be addressed.*

**Response:** Included at the end of the stormwater report are calculations showing the capacity of the pipe due to the proposed concentrated flow at the culvert.

**Comment (4f):** *The Applicant should consider a drop manhole structure for DMH I. The pipe from the roadway has an invert that is almost 8 feet higher than the existing 36-inch pipe that is being tied into the structure.*

**Response:** DMH I has been revised as an outside drop manhole structure. Please see the revised grading plan and drainage details included with this submission.



**Comment (4g):** *The Applicant should note the sizes of the proposed foundation stubs. Are these stubs also intended to connect to the roof drip strip piping? Additional clarification on the use of the stubs to the stormwater system from each lot should be provided.*

**Response:** The proposed foundation drain stubs are 6" pipe. The roof drip strip piping and foundation drains will be connected to the proposed foundation drain stub upon construction of the lots. A revised drainage and grading plan showing the sizes is included with this submission.

**Comment (4h):** *Catch Basin 6 is located within Lot 16 in a drainage easement. Based on grading, it is unclear what area this will be collecting. If it is collecting a large, offsite area, the adequacy of the catch basin grate and proposed pipe size to manage flow should be considered.*

**Response:** Catch basin 6 is collecting area above the site. CB6 is collecting the southern portion of subcatchment 6s, shown on the attached post watershed map. Calculations showing the proposed pipe size are provided and included with this submission.

**Comment (4i):** *The underdrain soil filters are not shown on the drainage plan and profile sheets. We recommend showing these for clarity of grading.*

**Response:** A revised grading and drainage plan is attached showing the underdrain soil filters.

**Comment (4j):** *Details should be provided for the rip rap outlets with rip rap sizing and thickness as appropriate for the pipe sizes and anticipated flow.*

**Response:** Details have been added to sheet C402 in the attached plan set relative to rip rap sizing and thickness.

**Comment (4k):** *Maintenance of the stormwater management features has been described in the Erosion & Sedimentation Control Report. A stormwater maintenance agreement will be required from the Applicant. Additional information should be provided on the ownership and maintenance of the stormwater treatment systems throughout the subdivision, i.e., will a homeowners association be put into place to pay for and manage the maintenance throughout the site.*

**Response:** A stormwater maintenance agreement is included in the revised stormwater report attached. Additional notes have been added to the plan set to clarify ownership and maintenance.

#### **City of Portland Dept. of Public Works Comments**

##### **Sheet C101 & C102**

**Comment:** *The Department of Public Works (DPW) does not accept ownership of low pressure force-mains within the right-of-way. The "association" is required to retain ownership and maintenance the forcemain.*

**Response:** A note has been added to the plan set requiring the association to retain ownership and maintenance of the force main.

**Comment:** *Refer to the Utility Locations in Streets detail in Section 1 of the Technical Manual for proposed utility locations within the City ROW. Proposed utilities should be revised to more align with the above detail to the extent possible*





**Response:** The location and alignment of proposed has been placed relative to the existing sewer and water main stubs off Hope Avenue. The alignment of utilities follows the street detail in Section I of the Technical Manual to the best extent practical.

**Comment:** *Sanitary sewer and water mains should maintain ten (10) feet in separation (per PWD standards).*

**Response:** Revisions have been made to maintain 10' separation between the sewer and water from Station 5+50 to Station 7+25 and from Station 9+00 to Station 11+00. Please see plan set included with this submission.

**Comment:** *Sanitary sewer slope shall be no less than .4 percent (.4%) when existing conditions govern, however a greater slope is recommended. Please review the proposed gravity sewer main to see if the slope could be increased from the minimum.*

**Response:** The proposed gravity sewer main is now shown with a .5 percent (0.5%) slope. The sewer schedule and profile have been updated and is included in this submission.

**Comment:** *Where practical, manhole structures should be located in center of the travel lane or in a location outside of axle tracking.*

**Response:** The locations of proposed manhole covers is in accordance with Figure I-4 from the City's Technical Manual. Manhole structures have been located outside of axle tracking to the best extent practical.

**Comment:** *Proposed utilities should cross perpendicular (to the extent possible) to the existing 20- inch water main.*

**Response:** The angle of intersection between the proposed 8" water main and the existing 20" water main has been revised to achieve as close to perpendicular as possible. Please see layout and utility plan included with this submission.

**Comment:** *Profile(s) should include all utilities (proposed and existing) to identify potential crossing conflicts.*

**Response:** Profiles have been revised to show all utilities (proposed and existing) in the plan over profile sheets included with this submission.

**Comment:** *Revise note on proposed curb to include type (vertical granite curb).*

**Response:** The note has been revised to include the word "granite."

#### Sheet C103, C104 & C105

**Comment:** *DPW does not permit stormwater treatment structures (structural BMP's) within the City right-of-way for proposed subdivisions.*

**Response:** Stormwater treatment structures have been moved to outside the right-of-way. Please see updated grading and drainage plans included with this submission.





**Comment:** *Provide detail on DMH1. Does the existing 36" RCP connect/terminate at DMH1? Label existing 36" in profile.*

**Response:** Additional notes have been added to the drainage plans to clarify the proposed DMH I. The existing 36" culvert has been added to the profile of the drainage and utility sheets.

**Comment:** *What are the flows to CB5 and CB6? Are the grates modeled? What storm event do they pass prior to overflowing towards the down gradient lots?*

**Response:** Calculations showing the flows and pipe assumptions are attached following the stormwater report. The pipes have been sized to pass a 25 year storm. CB5 has been revised and is now proposed as a culvert. CB6 has been modeled with a Neenah R-1878 B8G double grate. Calculations proving the adequacy of the grate can be found following the stormwater report.

General Comments:

**Comment:** *Provide/clarify grading at intersection.*

**Response:** Plans have been revised to clarify grading at the intersection with Hope Avenue.

**Comment:** *Provide riprap sizing and thickness at all proposed locations.*

**Response:** Additional details have been added to the plan set at all proposed rip rap locations.

**Comment:** *The applicant should consider proposing screening from the Falmouth Spur.*

**Response:** Screening from the Falmouth Spur will be installed at the discretion of the abutter.

**Comment:** *Please revise the construction management plan to include the details presented in the attached draft plan.*

**Response:** A revised construction management plan is included with this submission.

**Comment:** *Details should be in accordance with the City's Technical Manual.*

**Response:** The plan set has been revised to represent the City's technical manual to best extent practical.

Subdivision Plat Review Comments (Mr. Bill Scott):

**Comment (1):** *The plan is very "busy" in places and that makes it hard to read. Lightening the contours or removing them altogether would help a lot. Also, it appears that some of the CAD point blocks were left "on" which is causing some double symbols and double descriptions for a lot of the monumentation. Freezing this layer would also help de-clutter the plan.*

**Response:** A revised subdivision plat can be found in the plan set included with this submission.

**Comment (2):** *A portion of Hope Avenue appears to show design layers. There are some double symbols and descriptions to clean up.*



**Response:** The plan set has been revised to address the clean-up items. Please see the plan set included with this submission.

**Comment (3):** *Please add "see Note 2" to subdivision plat North Arrow.*

**Response:** The notes have been added to the subdivision plat.

**Comment (4):** *Please label the easement type that crosses Lot 1 and 2.*

**Response:** The notes have been added to the subdivision plat.

**Comment (5):** *The proposed street line figure has a misclosure of 0.086'. Please minimize misclosure.*

**Response:** Upon further review of the closure by the surveyor of the proposed road, it was found to close properly.

**Rest of Plan Set (Mr. Bill Scott):**

**Comment (1):** *Add a note to the Cover Sheet to verify that the elevations for this project are on the City's datum. They should also say which City benchmark was used as the basis for the survey.*

**Response:** A note has been added to the cover sheet. Please see the plan set included with this submission.

**Comment (2):** *All TBM's used to control construction on this site should be labeled as to location, description and elevation. These should be labeled on all of the sheets showing proposed manhole and catch basin structures with elevations.*

**Response:** TBM's have been labeled and added to the appropriate plan set.

**Comment (3):** *Please show the center line PC's, PT's and PRC's and label the stationing of each on the Overall Subdivision Plan sheet and on the plan and profile sheets.*

**Response:** The labels and stationing notes have been added to the Overall Subdivision Plan and on the plan and profile sheets. Please see the plan set included with this submission.

**Staff Review Comments**

**Comment (1):** *The applicant shall provide a revised sidewalk detail which demonstrates an acceptable 2% cross-slope across proposed driveway aprons as required under Section 1.8.3 of the City's Technical Manual.*

**Response:** A revised sidewalk and driveway apron detail is included in the plan set included with this submission.

**Comment (2):** *A tree plan, showing groups of existing, sizeable trees which the subdivider intends to preserve should be provide. Please note, this plan can be submitted as a separate plan.*

**Response:** A proposed tree line has been added to the grading sheets in the plan set included with this submission.



**Comment (3):** *As required in under Section 14-499(f), a minimum of two street trees shall be provided per lot, and shown on applicable plan sheets.*

**Response:** A note has been added to the plan set to meet the City of Portland landscaping standard. Please see the plan set included with this submission.

**Comment (4):** *Please note, it is understood that the submission of a construction management plan shall be recommended to the Planning Board as a condition for approval with the understanding that this document be provide and approved by DPW and Planning prior to the issuance of any building permits.*

**Response:** A draft Construction Management Plan is included with this submission.

**Comment (5):** *Please note, it is understood that utility capacity letters shall be recommended as a condition for approval with the understanding that those documents be received prior to the issuance of any building permits.*

**Response:** Utility capacity response letters plan will be forwarded to the appropriate reviewing authorities prior to final approval.

**Comment (6):** *At present, parking for the Presumpscot Preserve Trail head is shown to be partially located within easements 2 and 4. The applicant shall provide evidence that parking is permitted in this location.*

**Response:** Proposed parking spaces have been shifted north alongside Brandy Lane in order to avoid overlap with the Portland Water District Easement. The drainage features have been moved accordingly. Please see the plan set included with this submission.

**Comment (7):** *Would the applicant consider placing some kind of guard-rail or barrier between the proposed parking for the trail head and the start of the trail.*

**Response:** A wooden guardrail has been added as a barrier between the trail and proposed parking. Please see attached layout and utility plan.

**Comment (8):** *From the submitted documents, it is not clear who will be maintaining the temporary pedestrian easement located on this property. Can the applicant provide all applicable easement documentation as referenced on the recording plat.*

**Response:** An agreement will be made between Portland Trails and the owner prior to construction.

**Comment (9):** *On the recording plat, the location of all easements should be clearly called out, specifically referencing the 25' drainage easement which runs along the westerly property lines of lots 1 and 2, and the northerly property line of lot 13.*

**Response:** The subdivision plat has been revised to call out all easements.

**Comment (10):** *Provide the location and dimensions of all proposed exterior and rooftop mechanical equipment as well as associated details.*

**Response:** No exterior and rooftop mechanical equipment is proposed.

**Traffic Comments from Mr. Errico**



*Comment: A sidewalk shall be constructed on both sides of Brandy Lane per City standards. The applicant can request a waiver for sidewalks with supporting documentation per City waiver requirements.*

**Response:** The applicant is requesting a waiver from Section 14-498 (b) 8.a from the City of Portland Land Use Code for the construction of sidewalks on both sides of Brandy Lane due to the presence of wetlands and proposed use of subdivision. A sidewalk is proposed on the western side of the roadway for the entire length of the subdivision and connecting to Hope Avenue for pedestrian access. The construction of a sidewalk on the eastern side of the roadway will provide little to no positive impact on pedestrian circulation.

**Attachments:**

- Plan Set
- Section 12 – Stormwater Management Report
- Construction Management Plan

If you have any further questions please contact us.

Sincerely,  
Gorrill Palmer



Douglas E Reynolds P.E.  
Project Manager

Copy: Jim Wolf, W.A. One

DER/djg/U:\98089.08 - Design and Permitting 'Long' Road\IP Applications\Local\Site Plan Review\Response 9-14-2017\2017 09 15 comment response letter.doc



Matthew Grooms &lt;mgrooms@portlandmaine.gov&gt;

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## 22 Hope Ave Subdivision of Brandy Lane

---

Julie Armstrong <jarmstrong@cornerstonetitlecompany.com>  
To: mgrooms@portlandmaine.gov

Thu, Jul 27, 2017 at 12:07 PM

Good morning, Mr. Grooms,

Thank you for sending the notice of subdivision as described above. I wonder if the City has considered buying this parcel. It seems to me that this would be an ideal location for a softball/baseball/soccer complex and with city land quickly being used up for other purposes, it would make sense for the City to have a central location for fields as pretty much every single other town or city in the area. It amazes me that our tax dollars are not being put toward a project like this.....

*Julie Armstrong*

President

Cornerstone Title and Settlement Company, Inc.

1438 Washington Avenue

Portland, ME 04103

Phone: (207) 797-8595

Fax: (207) 797-8599

[closings@cornerstonetitlecompany.com](mailto:closings@cornerstonetitlecompany.com)

[www.cornerstonetitlecompany.com](http://www.cornerstonetitlecompany.com)

[jarmstrong@cornerstonetitlecompany.com](mailto:jarmstrong@cornerstonetitlecompany.com)

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**Be aware! Wire and online banking fraud is on the rise. If you receive an email containing wire transfer instructions, always call your closing agent immediately using a trusted phone number to verify the information prior to sending funds.**

## Google Groups

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### Application ID # 2017-117 or CBL #448 A004001

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**Steven Smalley** <ssmalley@kisales.com>

Sep 9, 2017 12:25 PM

Posted in group: **Planning Board**

I live at 88 Garsoe Drive in Portland and am writing you pertaining to the application of the Brandy lane subdivision proposal.

I hope I am not too late to be heard as we just found your post card.

My concerns are that of the following:

- Our streets are too narrow to support more cars / trucks. Too many cars speed on our street (a few speed bumps would be great) and now we have many new children in our neighborhood.
- These streets cannot handle more traffic as Garsoe is a cut through street to access these other neighborhoods.
- Exiting Garsoe onto Auburn street has NO LIGHT and is probably one of the most dangerous intersections in the city. (check to see how many accidents have happened here)

I would suggest the planning board come over to Garsoe during the morning and evening commutes and observe how dangerous our intersection.

Drivers from Garsoe and Washington Avenue Extension have to time their turns exactly at the same time to avoid hitting each other while trying to doge the traffic in both directions on Auburn Street.

We have too many accidents and one day there will be a fatal one due to the volume of traffic these surrounding neighborhoods create now not to mention adding more homes in this area.

I would hope the city takes a hard look at this and puts more faith in lives verses protentional tax revenue!

I appreciate you allowing us to voice our opinions.

Steven Smalley

88 Garsoe Drive

Portland, ME 04103

797-0890

Steven Smalley

Distributor Business Manager

KeyImpact Sales and Systems, Inc.

60 Gray Road, Unit #6

Falmouth, ME 04105

Cell 207-233-4445

ssmalley@kisalessales.com

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## **KEYIMPACT CALL CENTER**

MONDAY – FRIDAY, 8:30 AM -8:00 PM Eastern

Customerservice@kisalessales.com 844-462-8500



**Matthew Grooms** <mgrooms@portlandmaine.gov>

---

## 22 Hope Ave.

---

**Jaime Parker** <jaime@trails.org>  
To: Matthew Grooms <mgrooms@portlandmaine.gov>  
Cc: Kara Wooldrik <kara@trails.org>

Mon, Oct 2, 2017 at 10:58 AM

Hi Matt,

We saw the recent notice about the Conditional Use application and just want to catch up on where this project is. As you likely know this is a major entrance to the Portland Trails managed / City of Portland owned "Presumpscot River Preserve". I note a reference to 1.9 acres of OS as well.

Could you share the latest lot plan, and any info relevant to the trail access?

Thanks Matt,

Jaime

Jaime Parker  
Trails and Transportation Manager  
Portland Trails  
[jaime@trails.org](mailto:jaime@trails.org)  
329.6180

Non Sibi, Sed Omnibus

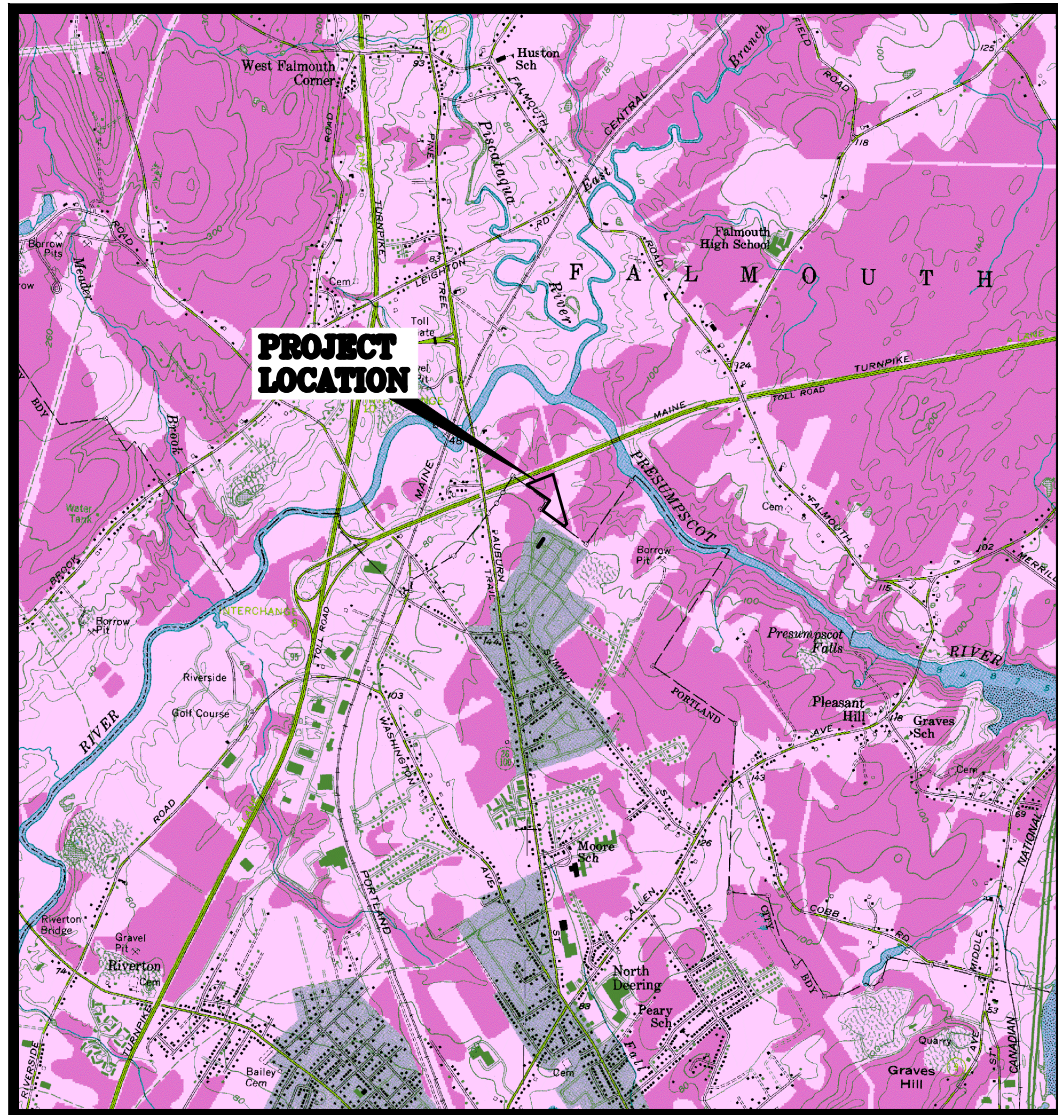


| PROJECT PARCEL SITE<br>PORTLAND ASSESSOR'S<br>MAP & LOT NUMBERS |      |
|-----------------------------------------------------------------|------|
| MAP                                                             | LOT  |
| 448                                                             | A004 |

**Applicant:**  
**LBW, LLC**  
P.O. BOX 1382  
PORTLAND, ME 04104  
CLIENT PHONE 207-776-0742

# BRANDY LANE SUBDIVISION

## PORTLAND, MAINE



**LOCATION MAP**  
N.T.S.

### LEGEND

| EXISTING | DESCRIPTION                       | PROPOSED |
|----------|-----------------------------------|----------|
|          | BUILDING                          |          |
|          | RIGHT OF WAY                      |          |
|          | PROPERTY LINE                     |          |
|          | BUILDING SETBACK                  |          |
|          | ZONE LINE                         |          |
|          | WETLAND BOUNDARY                  |          |
|          | GUIDE RAIL                        |          |
|          | EDGE OF PAVEMENT                  |          |
|          | EDGE OF GRAVEL DRIVE              |          |
|          | GRADING CONTOUR LINE              |          |
|          | SPOT ELEVATION                    |          |
|          | TREELINE                          |          |
|          | TREES & HEDGES                    |          |
|          | POLE WITH LIGHT FIXTURE(S)        |          |
|          | UTILITY POLE                      |          |
|          | FREESTANDING SIGN                 |          |
|          | PAINTED DIRECTIONAL TRAFFIC ARROW |          |
|          | OVERHEAD ELECTRIC/TELEPHONE       |          |
|          | UNDERGROUND ELECTRIC/TELEPHONE    |          |
|          | WATER LINE                        |          |
|          | STORM DRAIN LINE                  |          |
|          | CULVERT                           |          |
|          | HYDRANT                           |          |
|          | WATER GATE VALVE                  |          |
|          | WATER SHUT OFF VALVE              |          |
|          | MANHOLE                           |          |
|          | CATCH BASIN                       |          |
|          | TEST PIT                          |          |
|          | IRON ROD (SET)                    |          |
|          | IRON ROD (FOUND)                  |          |
|          | MONUMENT                          |          |
|          | RIPRAP                            |          |
|          | SILT FENCE - PERIMETER            |          |
|          | STONE SEDIMENT BARRIER            |          |
|          | FENCE                             |          |
|          | WELL                              |          |

### GENERAL NOTES

#### GENERAL NOTES

- TOPOGRAPHIC DATA AND EXISTING CONDITIONS WAS PREPARED BY TITCOMB AND ASSOCIATES OF FALMOUTH MAINE.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- 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 ON-SITE INSPECTIONS OF THE OWNER, THE CITY OF PORTLAND OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.
- 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.
- ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, AND/OR CITY OF PORTLAND SPECIFICATIONS.
- WETLANDS ON THIS PLAN WERE DELINEATED AND GPS LOCATED BY TRC.
- ELEVATIONS FOR THIS PROJECT ARE ON THE CITY'S DATUM.

#### PERMITTING NOTES

- THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF A SUBDIVISION APPROVAL FROM THE CITY OF PORTLAND. THE CONSTRUCTION WILL BE GOVERNED BY THE CITY OF PORTLAND ZONING ORDINANCE WHICH IS AVAILABLE FOR VIEWING AT THE OFFICE OF THE ENGINEER OR THE MUNICIPAL OFFICE.
- 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.

#### LAYOUT NOTES

- ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB.
- OFFSETS TO CATCH BASINS AND MANHOLES ARE TO THE CENTER OF THE FRAME.
- PIPE LENGTH EQUALS THE CENTER TO CENTER DISTANCES BETWEEN CATCH BASINS AND/OR MANHOLES MINUS ONE-HALF OF THE DIAMETER OF EACH CATCH BASIN OR MANHOLE.
- PROPERTY LINE AND R.O.W. MONUMENTS SHALL NOT BE DISTURBED BY CONSTRUCTION. IF DISTURBED, THEY SHALL BE RESET TO THEIR ORIGINAL LOCATIONS AT THE CONTRACTOR'S EXPENSE, BY A MAINE LICENSED LAND SURVEYOR.
- PROPOSED RIGHT OF WAY MONUMENTS AND PROPERTY LINE PINS SHALL BE INSTALLED UNDER THE DIRECTION OF A MAINE LICENSED LAND SURVEYOR.
- CURB RADI UNLESS OTHERWISE NOTED ON THE PLAN SHALL BE A MINIMUM OF 3'.

#### UTILITY NOTES

- ALL WATER UTILITY MATERIALS AND INSTALLATION METHODS SHALL CONFORM TO PORTLAND WATER DISTRICT STANDARDS. ALL WATER DISTRIBUTION PIPING SHALL BE CLASS 52 DUCTILE IRON PIPE, DOUBLE CEMENT LINED AND BITUMINOUS COATED CONFORMING TO AWWA/ANSI C104/A21.4. DISINFECTION OF WATER LINES SHALL CONFORM TO AWWA STANDARD C651, LATEST REVISION.
- THE LOCATION OF THE PROPOSED UNDERGROUND ELECTRICAL SERVICE IS APPROXIMATE AND THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION WITH CENTRAL MAINE POWER COMPANY.
- THRUST BLOCKS AND/OR LOCKING RETAINER GLANDS SHALL BE PLACED ON THE WATER DISTRIBUTION LINES AT ALL BENDS, TEES, VALVES, CHANGES IN DIRECTION, ETC. THE THRUST BLOCKS OR LOCKING RETAINER GLANDS SHALL MEET THE REQUIREMENTS OF THE PORTLAND WATER DISTRICT.
- TEST PITS AT ALL UTILITY CROSSINGS SHALL BE COMPLETED TWO WEEKS IN ADVANCE OF THE START OF CONSTRUCTION OR ORDERING OF MATERIALS. TEST PIT INFORMATION SHALL BE PROMPTLY PROVIDED TO ENGINEER FOR REVIEW.
- ALL GAS UTILITY MATERIALS AND INSTALLATION METHODS SHALL CONFORM TO UNITIL STANDARDS.

#### GRADING AND DRAINAGE NOTES

- UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE SHALL BE IN ACCORDANCE WITH MDOT SPECIFICATIONS SECTION 603-- PIPE CULVERTS AND STORM DRAINS, LATEST REVISION WITH THE EXCEPTION THAT THE ONLY ACCEPTABLE TYPES OF PIPE ARE AS FOLLOWS:  

REINFORCED CONCRETE PIPE, CLASS III  
POLYVINYL-CHLORIDE (PVC) PIPE  
SMOOTH BORE POLYETHYLENE - ADS OR HANCOR
- TOPSOIL STRIPPED IN AREAS OF CONSTRUCTION THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED ON SITE AT A LOCATION TO BE DESIGNATED BY THE OWNER. UNSUITABLE SOIL SHALL BE SEPARATED, REMOVED AND DISPOSED OF AT AN APPROVED DISPOSAL LOCATION OFF SITE.
- 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.

#### EROSION CONTROL NOTES

- LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE SITE.
- PRIOR TO BEGINNING ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES AND THE CONSTRUCTION ENTRANCE.
- ALL GROUND AREAS DISTURBED FOR CONSTRUCTION WILL BE GRADED, LOAMED AND SEEDED AS SOON AS POSSIBLE. PERMANENT SEED MIXTURE SHALL CONFORM TO THE SEEDING PLAN CONTAINED IN THE EROSION CONTROL NOTES INCLUDED ON SHEET C405.
- PRIOR TO PAVING, THE CONTRACTOR SHALL FLUSH SEDIMENT FROM ALL STORM DRAIN LINES, REMOVE ACCUMULATED SEDIMENT FROM SUMPS AND INVERTS AND PROPERLY DISPOSE OF.
- ALL CATCH BASINS WITH OUTLET PIPES 18" DIAMETER OR LESS SHALL BE PROVIDED WITH A "SNOUT" SEDIMENTATION HOOD PER DETAIL.
- SILT FENCES SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL NOTES.
- THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION ENTRANCE AS IT BECOMES SATURATED WITH MUD TO ENSURE THAT IT WORKS AS PLANNED DURING CONSTRUCTION.
- SILT REMOVED FROM AROUND INLETS AND BEHIND THE SILT FENCES SHALL BE PLACED ON A TOPSOIL STOCKPILE AND MIXED INTO IT FOR LATER USE IN LANDSCAPING OPERATIONS.
- EROSION CONTROL NOTES ACCOMPANY THIS PLAN SET AND ARE CONTAINED ON DRAWING C405 OF THIS PLAN SET.
- THE MAINTENANCE SCHEDULE FOR THE CATCH BASIN SEDIMENT SUMPS IS CONTAINED IN THE EROSION CONTROL NOTES INCLUDED ON SHEET C405.
- THE CONTRACTOR IS CAUTIONED THAT FAILURE TO COMPLY WITH THE SEQUENCE OF CONSTRUCTION, EROSION/SEDIMENT CONTROL PLAN, AND OTHER PERMIT REQUIREMENTS BASED UPON ANY THIRD PARTY REVIEW (ie MDOT) MAY RESULT IN MONETARY PENALTIES. THE CONTRACTOR SHALL BE ASSESSED ALL SUCH PENALTIES AT NO COST TO THE OWNER OR PERMITTEE.
- ALL NON-PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE LOAMED AND SEEDED, UNLESS OTHERWISE DIRECTED BY THE OWNER.
- ALL DISTURBED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL PRIOR TO PERMANENT SEEDING.

### PERMITS

#### TYPE OF PERMIT

NRPA TIER 1

SUBDIVISION APPLICATION

#### GOVERNING BODY

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION  
312 CANCO ROAD  
PORTLAND, ME 04103  
(207) 822-6300

CITY OF PORTLAND PLANNING DEPARTMENT  
398 CONGRESS STREET  
PORTLAND, ME 04101  
(207) 874-8719

#### STATUS

SUBMITTED:  
MAY 2017

SUBMITTED:  
MAY 24, 2017

### UTILITIES

#### WATER:

PORTLAND WATER DISTRICT  
225 DOUGLASS STREET  
PORTLAND, MAINE 04102  
(207) 774-5961  
CONTACT: JAY ARNOLD

#### SEWER:

PORTLAND PUBLIC WORKS DEPT.  
55 PORTLAND STREET  
PORTLAND, MAINE 04101  
(207) 874-8871  
CONTACT: BRAD ROLAND

#### ELECTRIC:

CENTRAL MAINE POWER  
162 CANCO ROAD  
PORTLAND, MAINE 04103  
(207) 826-2869  
CONTACT: JAMIE COUGH

#### TELEPHONE:

VERIZON  
5 DAVIS FARM ROAD  
PORTLAND, MAINE 04103  
(207) 797-1842

#### CABLE:

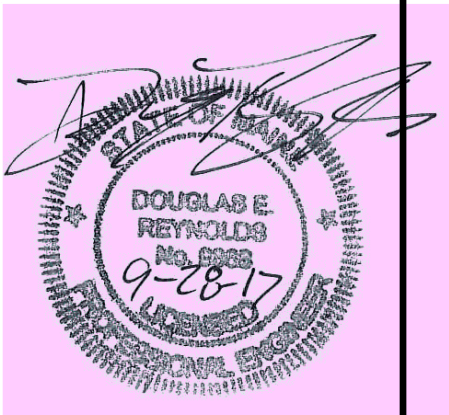
TIME WARNER CABLE  
118 JOHNSON ROAD  
PORTLAND, MAINE 04102  
(207) 775-3431  
CONTACT: MARK PELLETTIER

### INDEX

|       |                                                     |
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| C101A | EXISTING WATER MAIN PLAN AND PROFILE                |
| C102  | LAYOUT AND UTILITY PLAN AND PROFILE                 |
| C103  | OVERALL GRADING, DRAINAGE, AND EROSION CONTROL PLAN |
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CALL BEFORE YOU DIG  
1-888-344-7233

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

| Design:                           | Draft:        | Date:             |
|-----------------------------------|---------------|-------------------|
| BMG                               | CG            | MAY 2017          |
| Checked: DER                      | Scale: 1"=40' | Job No.: 98089.08 |
| File Name: 98089-08-COVER.dwg     |               |                   |
| LEVEL III SUBDIVISION APPLICATION | 5/12/17       | DER               |
| MDOT STORMWATER PRE APP           | 1/23/17       | AMP               |
| PRICING                           | 9/16/16       | AMP               |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16       | AMP               |
| Issued For                        | Date          | By                |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG     | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=40' | Job No.: 98089.08 |
| File Name: 98089-08-COVER.dwg                                                                                                                                                               |               |                   |
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Cover Sheet, General Notes, and Legend         |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

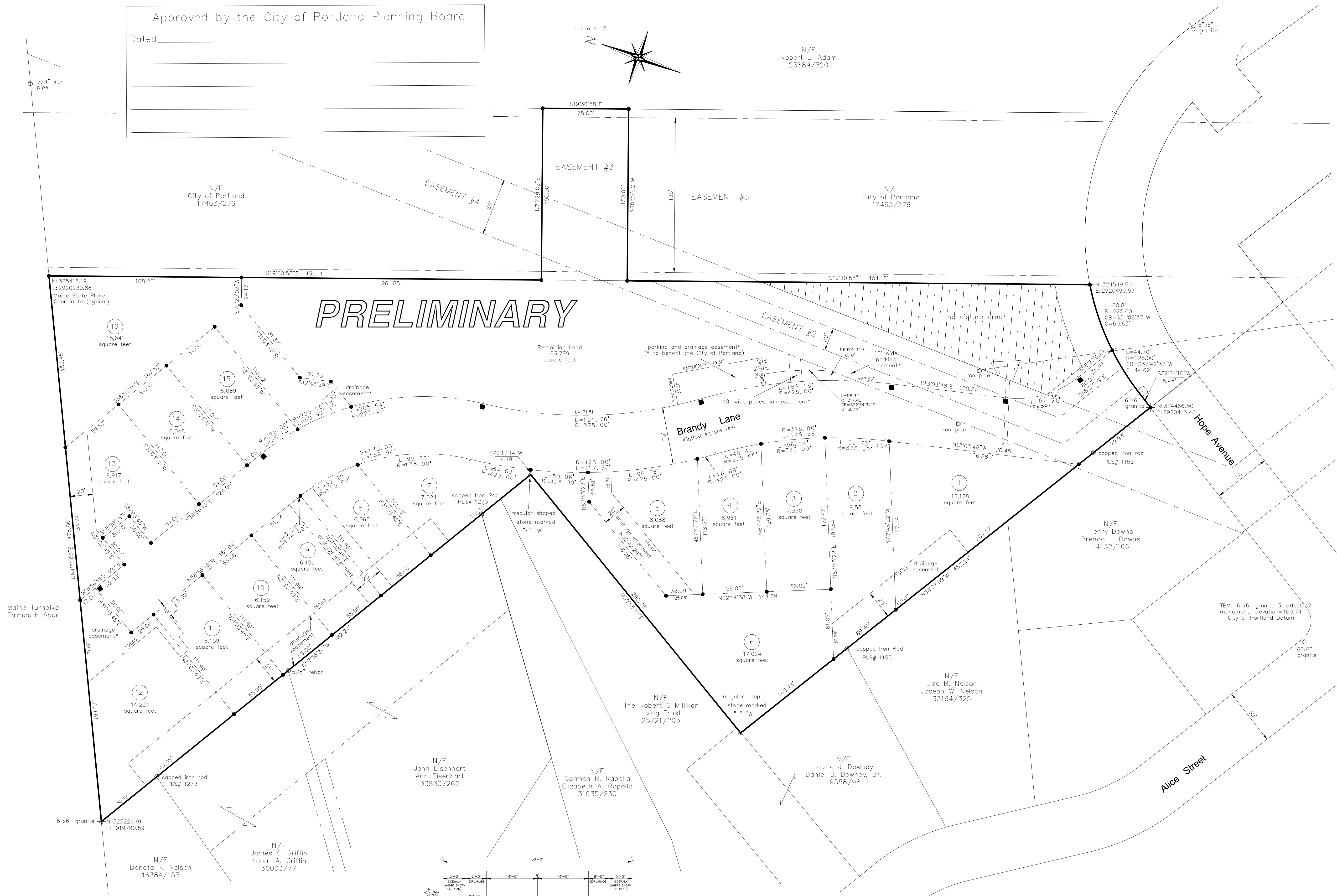
Drawing No.

C001



Approved by the City of Portland Planning Board

Dated



| LEGEND   |                                        |
|----------|----------------------------------------|
| ■        | Monument - to be set (6"x6"/3' offset) |
| □        | Monument - found                       |
| ○        | Iron marker - found                    |
| ●        | Iron marker - to be set (#5 rebar)     |
| —        | Property line (locus)                  |
| - - -    | Property line (abutter)                |
| - - -    | Proposed property line                 |
| - - -    | Easement line                          |
| N/F      | Now or formerly of                     |
| 1234/567 | Deed reference (Book/Page)             |

- PLAN REFERENCES**
- (1) Plan of Property for Robert Adam made by Land Use Consultants dated August 1978. Recorded in Plan Book 125, Pages 45 and 46.
  - (2) Presumpscot River Place Amended Recording Plot made for The Teal Company by Land Use Consultants dated May 10, 1983 and revised February 6, 1984. Recorded in Plan Book 141, Page 42.
  - (3) Plan of Crestview Acres, Section 5, made for Donald R. Peters by H.I. & E.C. Jordan dated December 24, 1969. Recorded in Plan Book 81, Page 23.
  - (4) Third Amended Recording Plot of Alice Street Subdivision made for Lloyd B. Wolf by Land Use Consultants dated February 27, 1996. Recorded in Plan Book 196, Page 319.
  - (5) Plan of Oatnuts Park owned by A.M. Hayes. Recorded on February 18, 1902 in Plan Book 9, Page 103.
  - (6) Plan of Valley View Heights (Curtis Road) made for C.H. Hanson Co. by H.I. & E.C. Jordan Company dated January 31, 1967. Recorded in Plan Book 74, Page 1.
  - (7) Presumpscot River Place II made for The Teal Company by Land Use Consultants dated June 26, 1984 and revised August 9, 1985. Recorded in Plan Book 149, Page 64.
  - (8) Auburn Pines Subdivision Plan made for Neptune Properties, Inc. by Pinkham & Greer dated April 28, 1999. Recorded in Plan Book 199, Page 393.
  - (9) Presumpscot River Place III-Subdivision Plan made for Robert Adam and Burt Wolf by Titcomb Associates dated December 4, 2001. Recorded in Plan Book 202, Page 650.
  - (10) Riverwalk Subdivision Plan made for Gorrill-Palmer by Titcomb Associates dated October 25, 2005 and revised February 24, 2006. Recorded in Plan Book 206, Page 412.

- NOTES**
- (1) Surveyors seal is for interior lot dimensions only. Property perimeter is based on plan reference #1.
  - (2) Bearings are based on True North as shown on plan reference #1. The Maine State Coordinates labeled for the perimeter corners were derived from GPS observations utilizing the NOAA OPUS application (NAD83 West Zone).
  - (3) Abutters noted on this plan are per City of Portland and Town of Falmouth records.
  - (4) Property lies within Zone X based on FIRM Community #230045 Panel #0008 B, dated October 16, 1984. It does not lie within a special flood hazard area.
  - (5) Reference is herein made to Private & Special Laws of Maine, Second Regular Session of the 120th Legislature, Chapter 62, S.P. 499-L.D. 1586, An Act to Separate Territory from the Town of Falmouth and Annex it to the City of Portland, approved April 2, 2002.
  - (6) The street monuments to be set will be in accordance with the City of Portland standards.

- EASEMENTS / ENCUMBRANCES**
- (1) Property is subject to a Temporary Easement granted to the City of Portland by Lloyd B. Wolf recorded in Book 26744, Page 103.
  - (2) Property is subject to a Temporary Pedestrian Easement granted to the City of Portland by Lloyd B. Wolf recorded in Book 23889, Page 346.
  - (3) Property is subject to a Pedestrian Easement granted to the City of Portland by Lloyd B. Wolf recorded in Book 23889, Page 349.
  - (4) Property is subject to an easement conveyed to Portland Water District recorded in Book 2267, Page 257.
  - (5) Property is subject to an easement conveyed to Central Maine Power Company by Philip E. Hamlin and Elizabeth G. Hamlin recorded in Book 2167, Page 435.

**TOTAL AREA**

281,318 square feet / 6.46 acres  
(includes the Remaining Land)

**OWNER OF RECORD**

Lloyd B. Wolf: Book 23889, Page 327  
9 Lovett's Field, South Portland, Maine

PLAN OF

Brandy Lane Subdivision Plat

MADE FOR

LBW, LLC

PG Box 1382

Portland, Maine

JOB #99064

DATE: May 5, 2017

SCALE: 1" = 40'

BOOK #

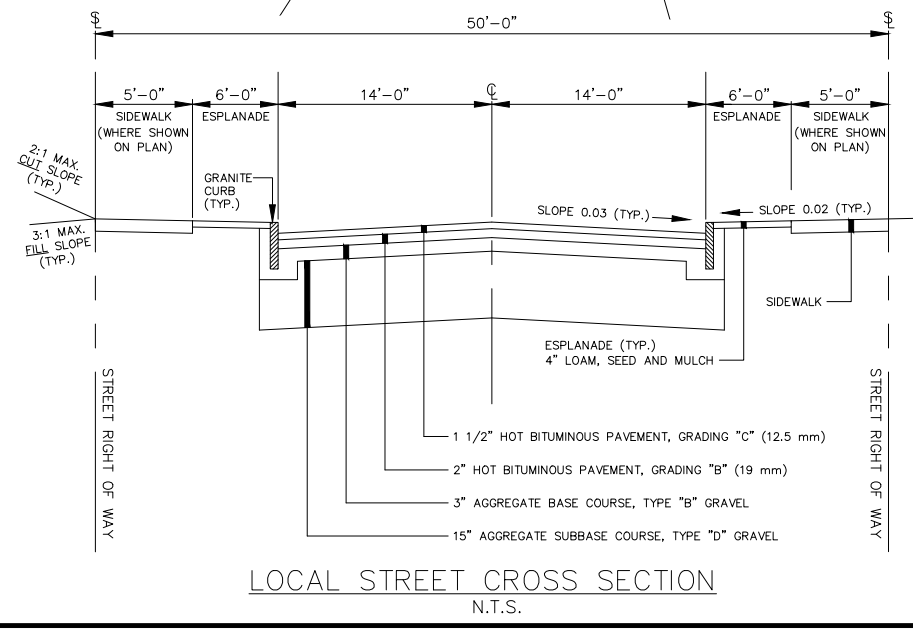
99064 Brandy Lane Sub

FILE #

133 Gray Road, Falmouth, Maine 04105

(207)797-9199 www.titcombsurvey.com

State of Maine, Cumberland ss  
Registry of Deeds  
Received \_\_\_\_\_ 20\_\_\_\_  
at \_\_\_\_h\_\_\_\_m\_\_\_\_M and recorded in  
Plan Book \_\_\_\_\_ Page \_\_\_\_\_  
Attest: \_\_\_\_\_  
Register

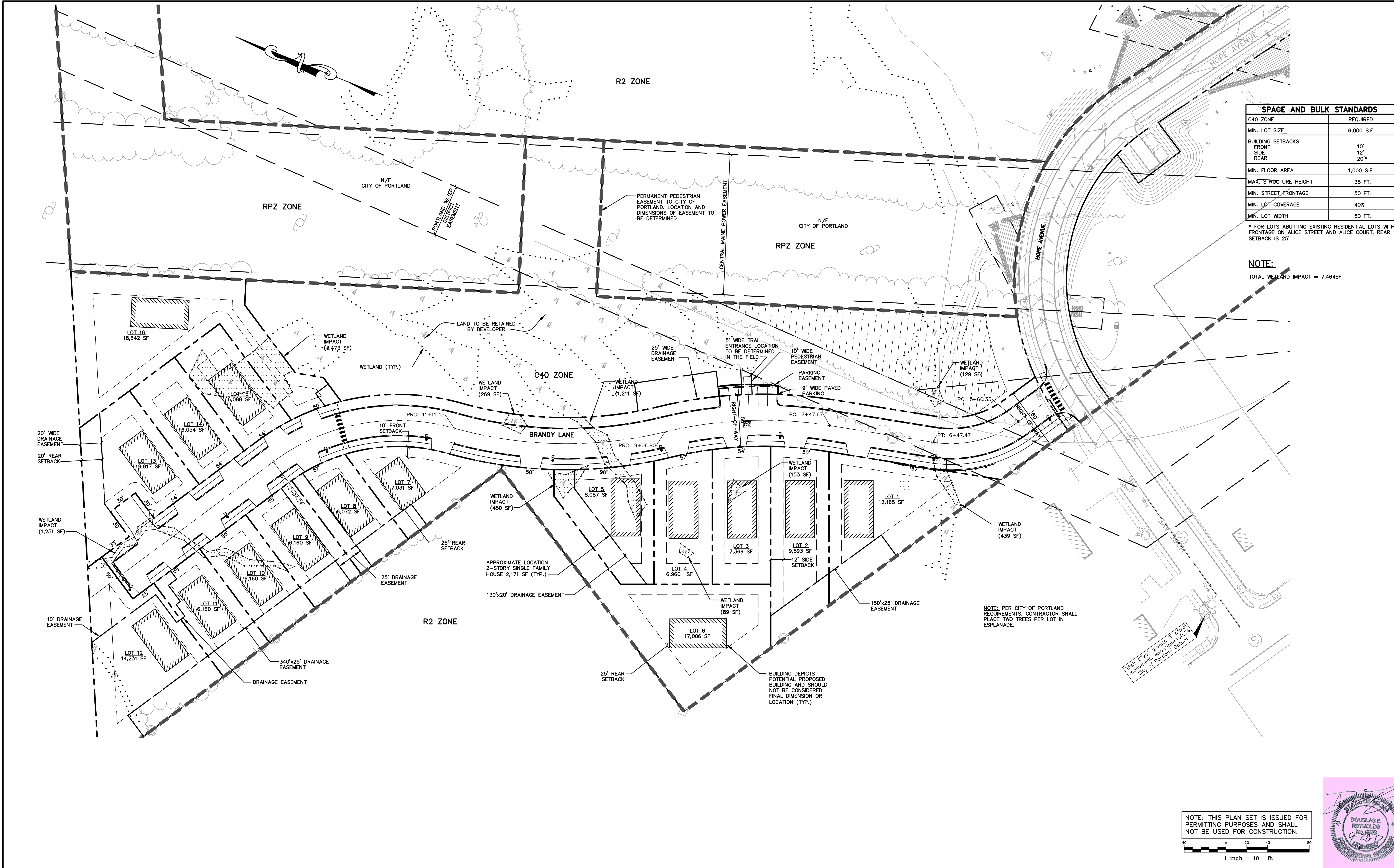


SURVEYOR'S SEAL IS FOR INTERIOR LOT CALCULATIONS ONLY. THE BOUNDARY PERIMETER IS BASED ON INFORMATION PROVIDED BY THE OWNER AND INFORMATION SHOWN ON A PLAN OF PROPERTY MADE FOR ROBERT ADAM BY LAND USE CONSULTANTS DATED AUGUST 1978 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 125, PAGES 45 AND 46. NO CERTIFICATIONS ARE STATED OR IMPLIED REGARDING THE ACCURACY OR VALIDITY OF THE PERIMETER BOUNDARIES.

Rex J. Croteau  
MAINE PLS #2273



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| SPACE AND BULK STANDARDS |            |
|--------------------------|------------|
| C40 ZONE                 | REQUIRED   |
| MIN. LOT SIZE            | 6,000 S.F. |
| BUILDING SETBACKS        |            |
| FRONT                    | 10'        |
| SIDE                     | 12'        |
| REAR                     | 20'        |
| MIN. FLOOR AREA          | 1,000 S.F. |
| MAX. STRUCTURE HEIGHT    | 35 FT.     |
| MIN. STREET FRONTAGE     | 50 FT.     |
| MIN. LOT COVERAGE        | 40%        |
| MIN. LOT WIDTH           | 50 FT.     |

\* FOR LOTS ABUTTING EXISTING RESIDENTIAL LOTS WITH FRONTAGE ON ALICE STREET AND ALICE COURT, REAR SETBACK IS 25'

NOTE:  
TOTAL WETLAND IMPACT = 7,464SF

| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG     | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=40' | Job No.: 98089.08 |
| File Name: 98089-08-SUBDIV.dwg                                                                                                                                                              |               |                   |
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Overall Subdivision Plan                       |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

|             |      |
|-------------|------|
| Drawing No. | C100 |
|-------------|------|







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|      |          |                                  |
|------|----------|----------------------------------|
|      |          |                                  |
|      |          |                                  |
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
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|                                   |         |     |
|-----------------------------------|---------|-----|
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| WDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        |         | By  |

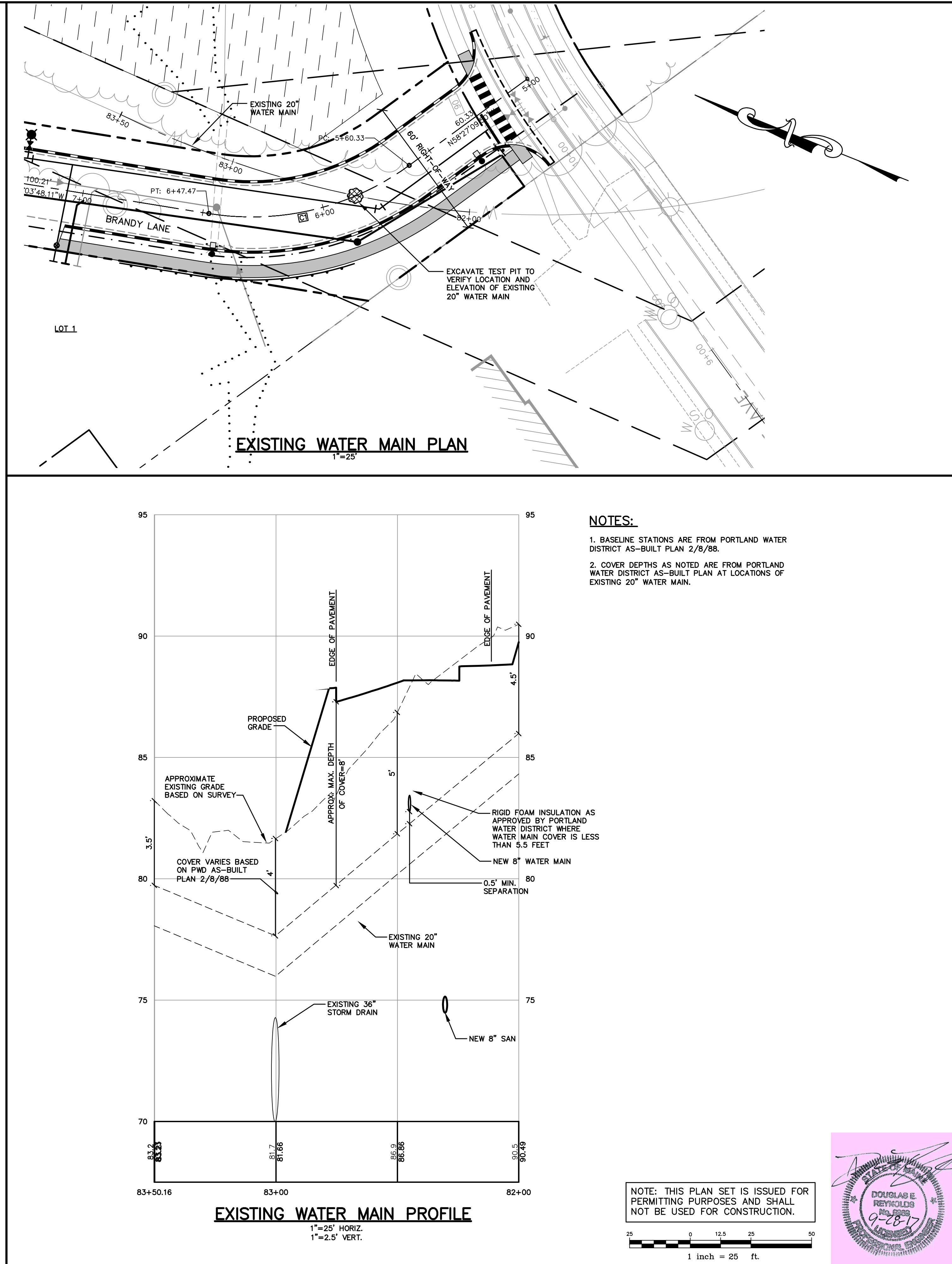
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| Design: BMG                                                                                                                                                                                 | Draft: CG     | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-SP.dwg                                                                                                                                                               |               |                   |
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Existing Water Main Plan and Profile           |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

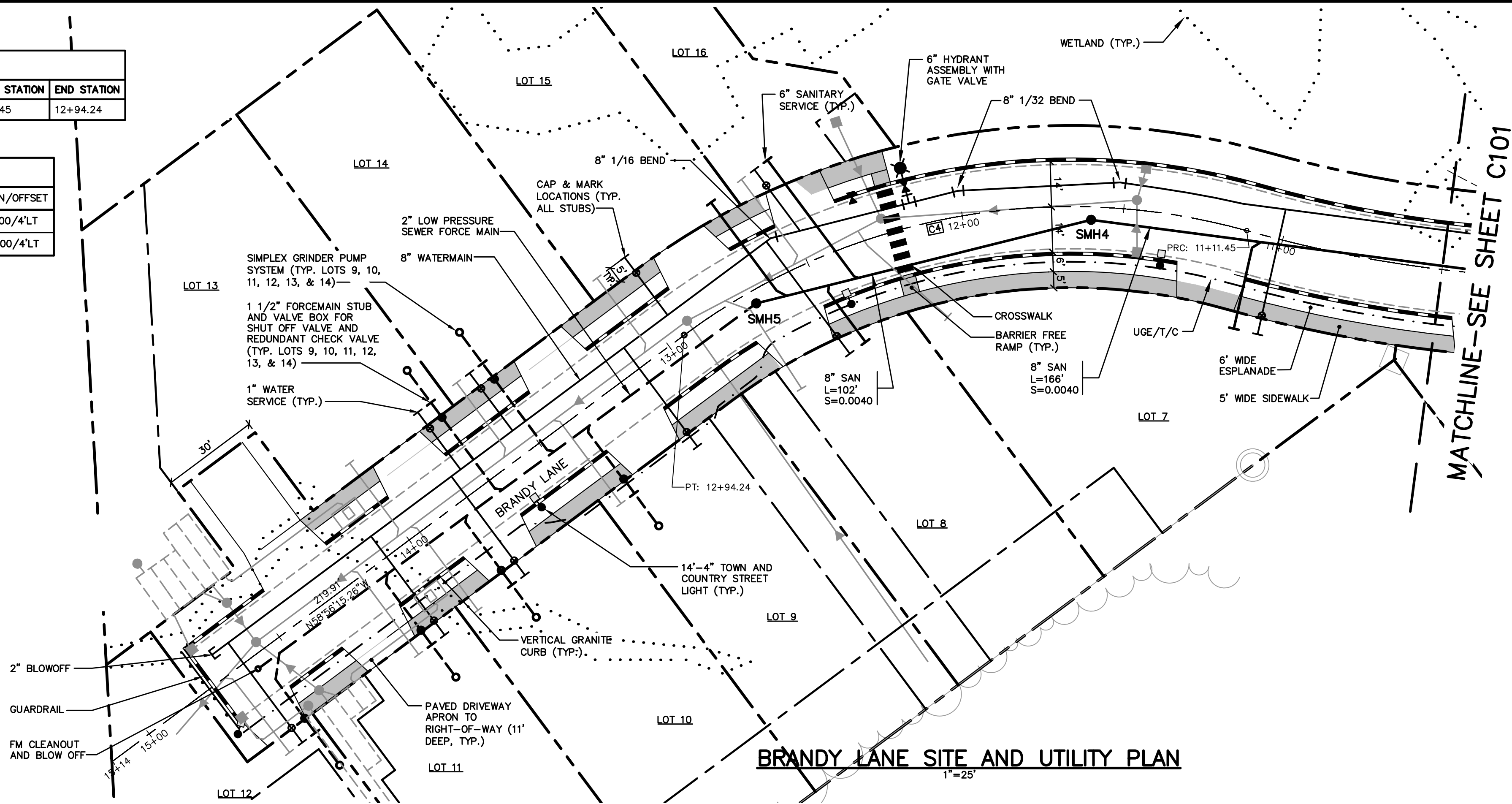
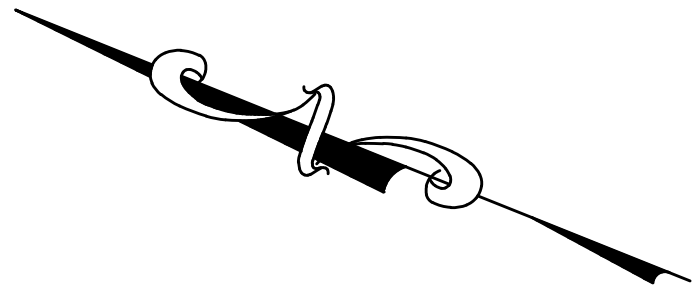
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|-------------|
| Drawing No. |
| C101A       |





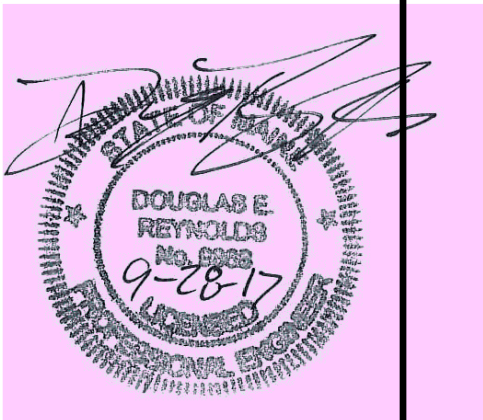
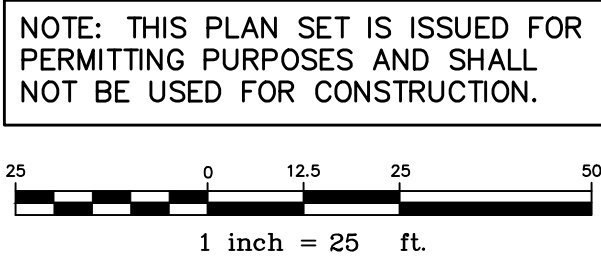
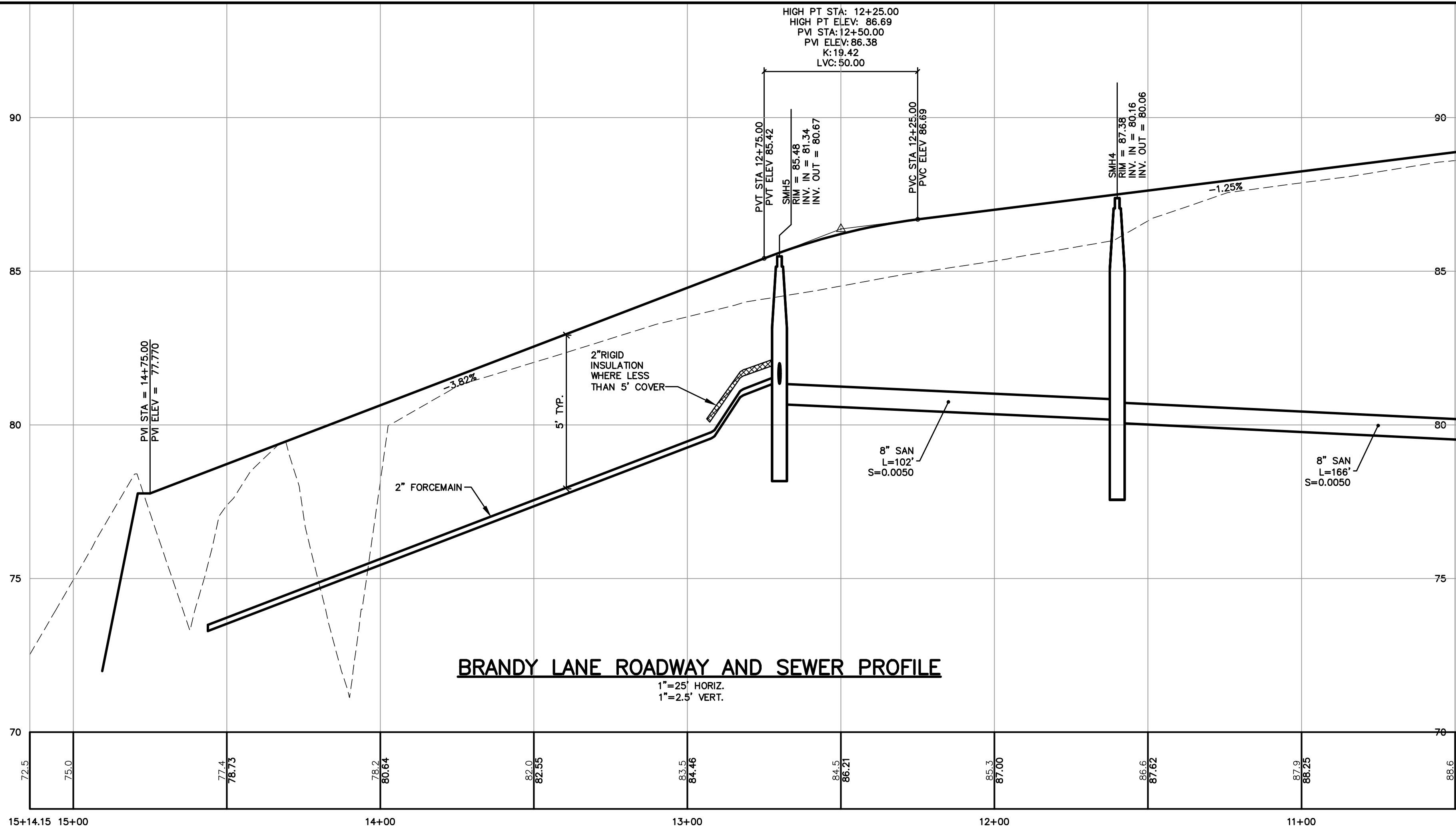
| BASELINE CURVE TABLE |        |        |         |           |               |               |             |
|----------------------|--------|--------|---------|-----------|---------------|---------------|-------------|
| CURVE NO.            | LENGTH | RADIUS | TANGENT | DELTA     | CHORD BEARING | START STATION | END STATION |
| C4                   | 182.79 | 200.00 | 98.34   | 52°21'58" | N32°45'16"W   | 11+11.45      | 12+94.24    |

| SANITARY SEWER SCHEDULE |      |       |                      |                     |                |  |
|-------------------------|------|-------|----------------------|---------------------|----------------|--|
| STRUCTURE               | SIZE | RIM   | INV. IN./SIZE (FROM) | INV. OUT./SIZE (TO) | STATION/OFFSET |  |
| SMH4                    | 4'ø  | 87.38 | 80.16/8"(SMH5)       | 80.06/8"(SMH3)      | 11+60.00/4'LT  |  |
| SMH5                    | 4'ø  | 85.48 | 81.34/2"(FM)         | 80.67/8"(SMH4)      | 12+70.00/4'LT  |  |



| PAVEMENT LEGEND                                        |                       |
|--------------------------------------------------------|-----------------------|
| ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS: |                       |
|                                                        | BITUMINOUS SIDEWALK   |
| CURBING LEGEND                                         |                       |
|                                                        | VERTICAL GRANITE CURB |

- UTILITY NOTES:
1. INSTALL WATER SERVICE 10' FROM DRIVEWAY OR IN DRIVEWAY PROTECTED WITH VALVE BOX.
  2. 5' SEPARATION BETWEEN WATER AND SEWER.
  3. THE HOMEOWNERS ASSOCIATION WILL RETAIN OWNERSHIP AND PROVIDE MAINTENANCE TO THE LOW PRESSURE SEWER SYSTEM.



| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG     | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-SP.dwg                                                                                                                                                               |               |                   |
| This plan shall not be modified without written permission from Gorrill Palmer(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP. |               |                   |



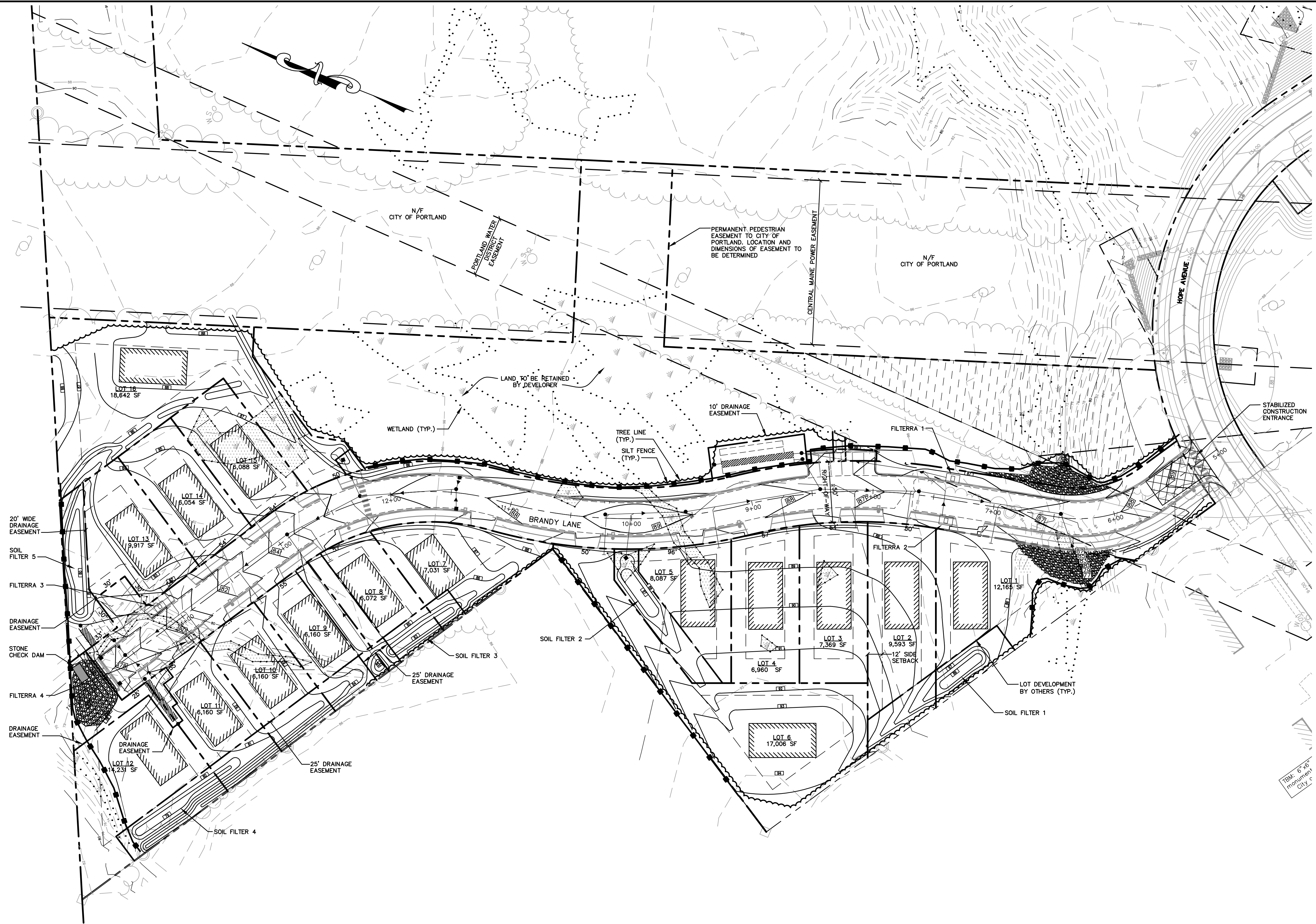
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Layout and Utility Plan and Profile            |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

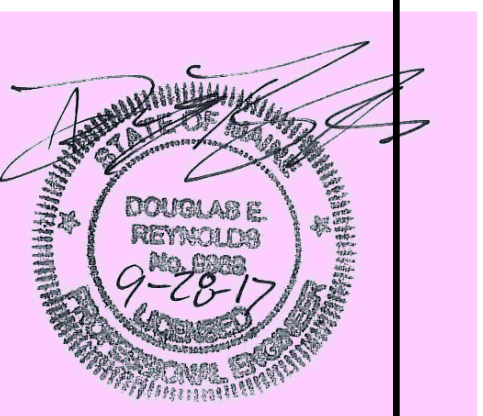
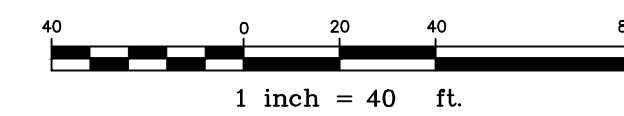
C102





- NOTES:**
1. GRADING SHOWN WITHIN BUILDING ENVELOPES OF RESIDENTIAL LOTS IS PRELIMINARY AND MAY BE MODIFIED FOR CONSTRUCTION OF HOUSE SUCH THAT IT DOES NOT EFFECT SUBCATCHMENT DRAINAGE AREAS.
  2. GRADING OF STORMWATER TREATMENT BMP'S AND DRAINAGE SWALES SHALL BE COMPLETED AS SHOWN ON THIS PLAN AND THE DETAIL SHEETS.
  3. DRIVEWAYS FOR LOTS 6 AND 16 SHALL BE SUPER ELEVATED TO DIVERT FLOW TO STORM WATER FEATURE AS SHOWN ON THIS PLAN.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



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| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG     | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=40' | Job No.: 98089.08 |
| File Name: 98089-08-GRADE-OVERALL.dwg                                                                                                                                                       |               |                   |
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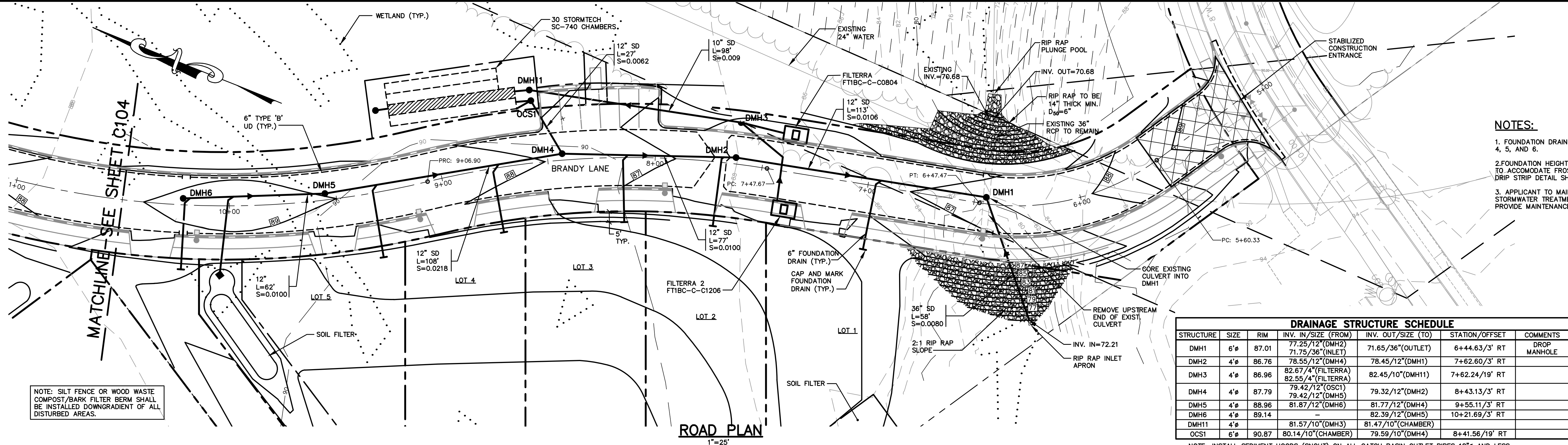


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|               |                                                     |
|---------------|-----------------------------------------------------|
| Drawing Name: | Overall Grading, Drainage, and Erosion Control Plan |
| Project:      | Brandy Lane<br>Portland, Maine                      |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104      |

Drawing No.  
**C103**

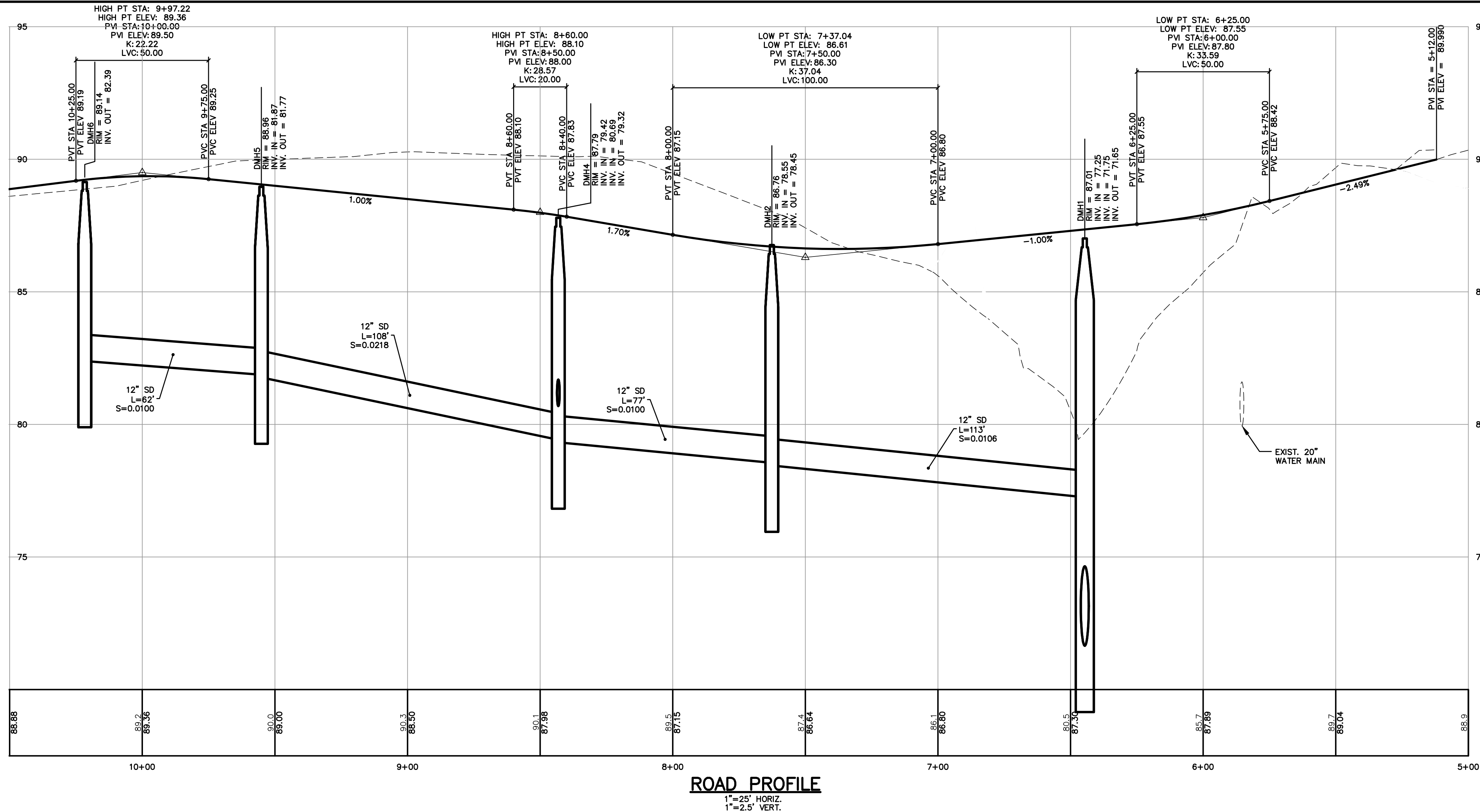




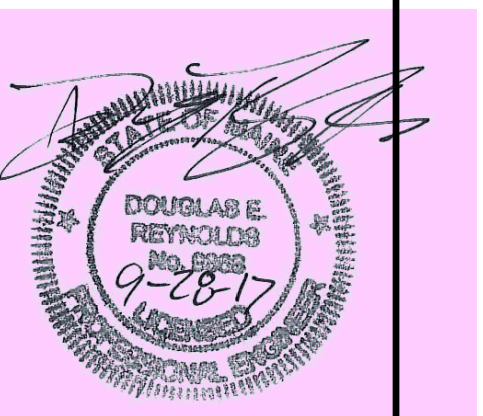
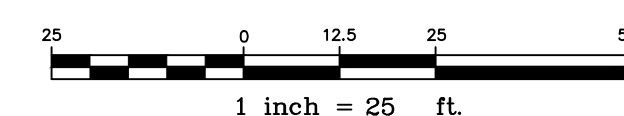
- NOTES:**
1. FOUNDATION DRAIN MAY REQUIRE PUMP ON LOTS 4, 5, AND 6.
  2. FOUNDATION HEIGHT MAY NEED TO BE INCREASED TO ACCOMMODATE FROST DEPTH AT DRIP STRIP. SEE DRIP STRIP DETAIL SHEET
  3. APPLICANT TO MAINTAIN OWNERSHIP OF STORMWATER TREATMENT STRUCTURES AND PROVIDE MAINTENANCE

| DRAINAGE STRUCTURE SCHEDULE |      |       |                                          |                    |                |              |
|-----------------------------|------|-------|------------------------------------------|--------------------|----------------|--------------|
| STRUCTURE                   | SIZE | RIM   | INV. IN/SIZE (FROM)                      | INV. OUT/SIZE (TO) | STATION/OFFSET | COMMENTS     |
| DMH1                        | 6"   | 87.01 | 77.25/12"(DMH2)<br>71.75/36"(INLET)      | 71.65/36"(OUTLET)  | 6+44.63/3' RT  | DROP MANHOLE |
| DMH2                        | 4"   | 86.76 | 78.55/12"(DMH4)                          | 78.45/12"(DMH1)    | 7+62.60/3' RT  |              |
| DMH3                        | 4"   | 86.96 | 82.67/4"(FILTRERA)<br>82.55/4"(FILTRERA) | 82.45/10"(DMH11)   | 7+62.24/19' RT |              |
| DMH4                        | 4"   | 87.79 | 79.42/12"(OCS1)                          | 79.32/12"(DMH2)    | 8+43.13/3' RT  |              |
| DMH5                        | 4"   | 88.96 | 79.42/12"(DMH5)                          | 81.77/12"(DMH4)    | 9+55.11/3' RT  |              |
| DMH6                        | 4"   | 89.14 | 81.87/12"(DMH6)                          | 82.39/12"(DMH5)    | 10+21.69/3' RT |              |
| DMH11                       | 4"   |       | 81.57/10"(DMH3)                          | 81.47/10"(CHAMBER) |                |              |
| OCS1                        | 6"   | 90.87 | 80.14/10"(CHAMBER)                       | 79.59/10"(DMH4)    | 8+41.56/19' RT |              |

NOTE: INSTALL SEDIMENT HOODS (SNOUT) ON ALL CATCH BASIN OUTLET PIPES 18" AND LESS.



NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG     | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-GRADE.dwg                                                                                                                                                            |               |                   |
| This plan shall not be modified without written permission from Gorrill Palmer(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP. |               |                   |

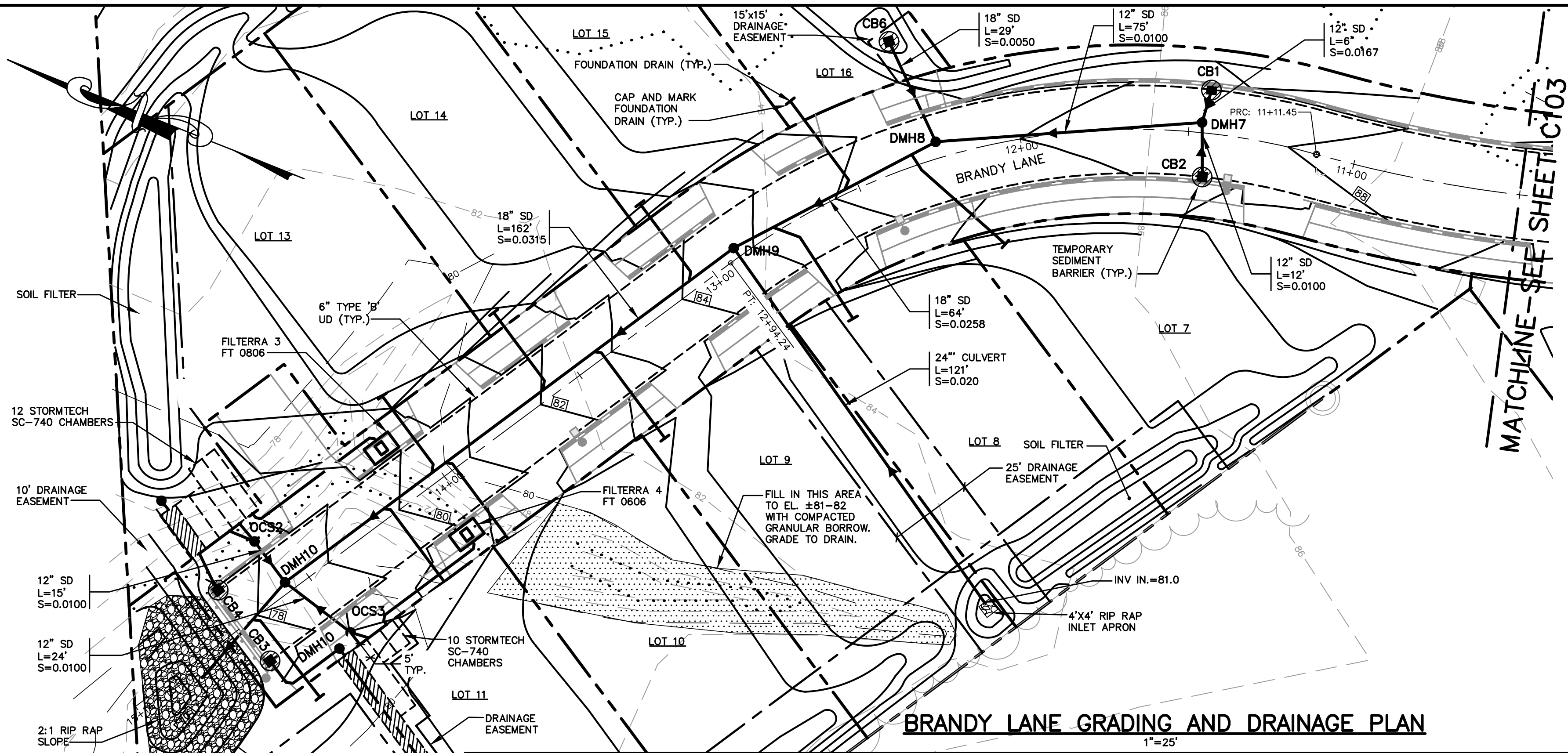


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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Grading and Drainage Plan and Profile          |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.  
**C104**





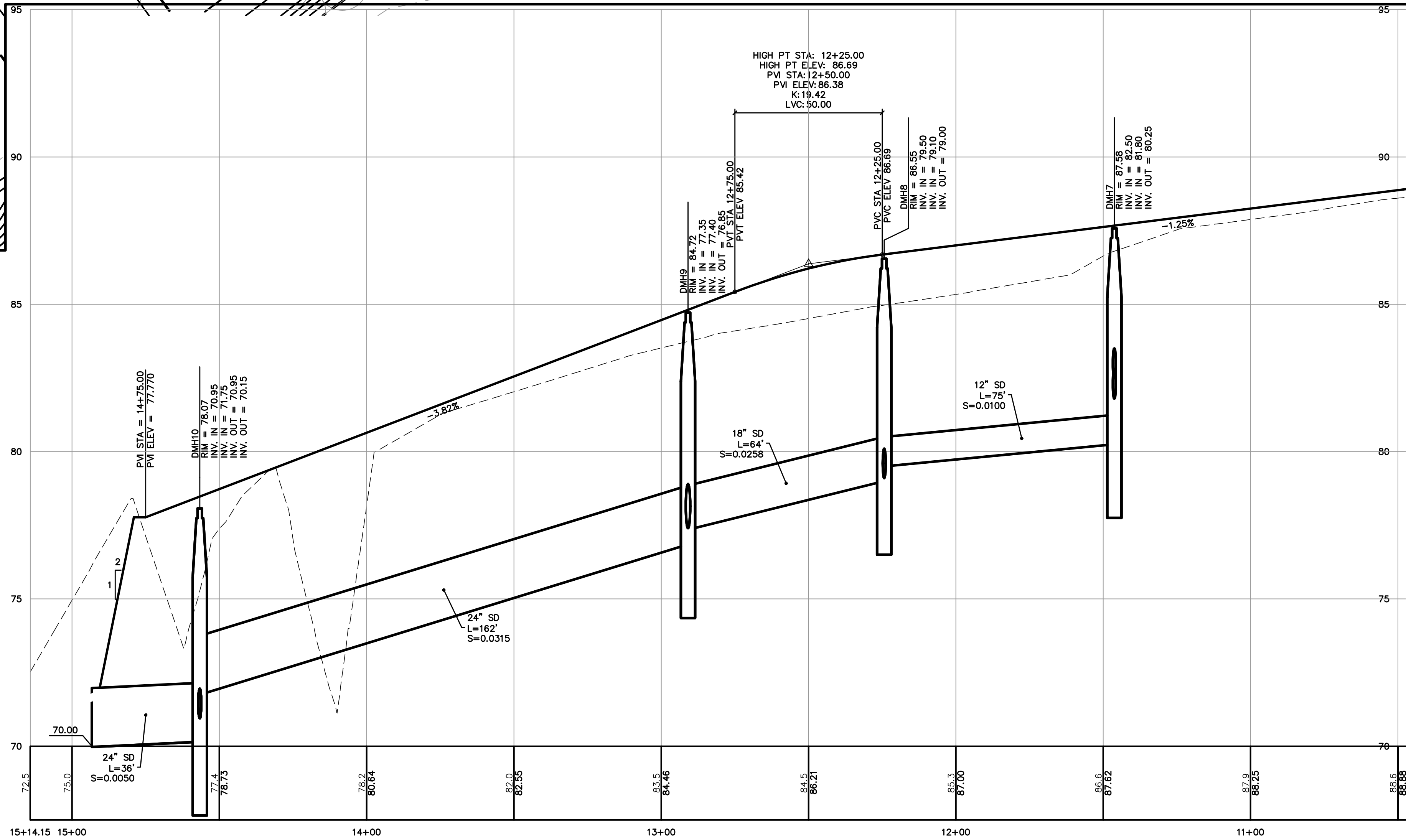
| DRAINAGE STRUCTURE SCHEDULE |      |       |                                                       |                      |                 |
|-----------------------------|------|-------|-------------------------------------------------------|----------------------|-----------------|
| STRUCTURE                   | SIZE | RIM   | INV. IN/SIZE (FROM)                                   | INV. OUT/SIZE (TO)   | STATION/OFFSET  |
| DMH7                        | 4"   | 87.58 | 82.50/6"(CB1)<br>81.80/6"(CB2)                        | 80.25/12"(DMH8)      | 11+46.24/3' RT  |
| DMH8                        | 4"   | 86.55 | 79.5/12"(DMH7)<br>79.1/18"(CB6)                       | 79.00/18"(DMH9)      | 12+24.33/5' RT  |
| DMH9                        | 4"   | 84.72 | 77.35/18"(DMH8)<br>78.58/18"(CULVERT)                 | 76.85/18"(DMH10)     | 12+90.93/3' RT  |
| DMH10                       | 4"   | 78.07 | 71.75/18"(DMH9)<br>72.96/12"(OCS2)<br>72.87/12"(OCS3) | 70.18/18"(OUTFALL)   | 14+56.64/3' RT  |
| DMH12                       | 4"   |       | 73.96/12"(CB3)                                        | 73.86/24"(CHAMBER)   |                 |
| CB1                         | 4"   | 87.11 | 83.60/6"(UD)                                          | 82.60/12"(DMH7)      | 11+44.48/13' RT |
| CB2                         | 4"   | 87.11 | 83.60/6"(UD)                                          | 81.92/12"(DMH7)      | 11+44.48/13' LT |
| CB3                         | 4"   | 77.26 | 73.96/6"(UD)                                          | 73.96/12"(STORMTECH) | 14+73.94/13' LT |
| CB4                         | 4"   | 77.26 | 73.96/6"(UD)                                          | 73.96/12"(STORMTECH) | 14+73.88/13' RT |
| CB6                         | 4"   | 83.23 | -                                                     | 79.23/18"(DMH8)      | 12+28.33/37' RT |
| OCS2                        | 6"   | 81.16 | 73.71/10"(CHAMBER)<br>73.21/4"(CHAMBER)               | 73.11/12"(DMH10)     | 14+56.64/22' RT |
| OCS3                        | 6"   | 81.66 | 73.71/10"(CHAMBER)<br>73.21/4"(CHAMBER)               | 73.11/12"(DMH10)     | 14+56.64/22' LT |

NOTE: INSTALL SEDIMENT HOODS (SNOUT) ON ALL CATCH BASIN OUTLET PIPES 18" AND LESS.

NOTES:

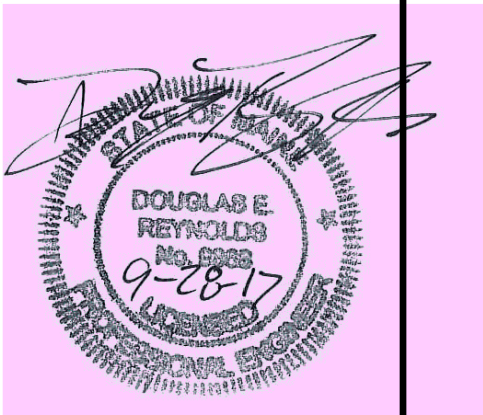
1. FOUNDATION DRAIN MAY REQUIRE PUMP ON LOTS 4, 5, AND 6.

2. FOUNDATION HEIGHT MAY NEED TO BE INCREASED TO ACCOMMODATE FROST DEPTH AT DRIP STRIP. SEE DRIP STRIP DETAIL SHEET



BRANDY LANE GRADING AND DRAINAGE PROFILE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



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|------|----------|----------------------------------|
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| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG     | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: 1"=25' | Job No.: 98089.08 |
| File Name: 98089-08-PP-GRADE.dwg                                                                                                                                                            |               |                   |
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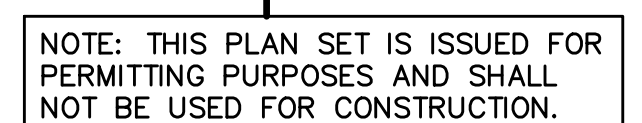
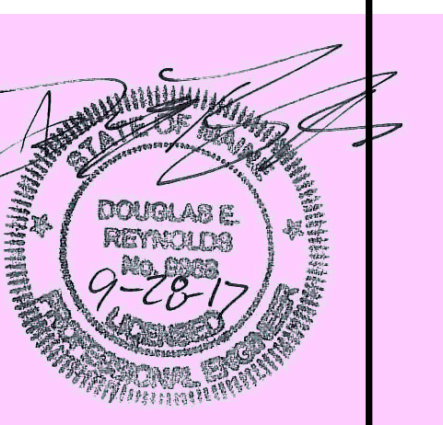
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|---------------|---------------------------------------------------------|
| Drawing Name: | Grading, Drainage, and Erosion Control Plan and Profile |
| Project:      | Brandy Lane<br>Portland, Maine                          |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104          |

Drawing No.

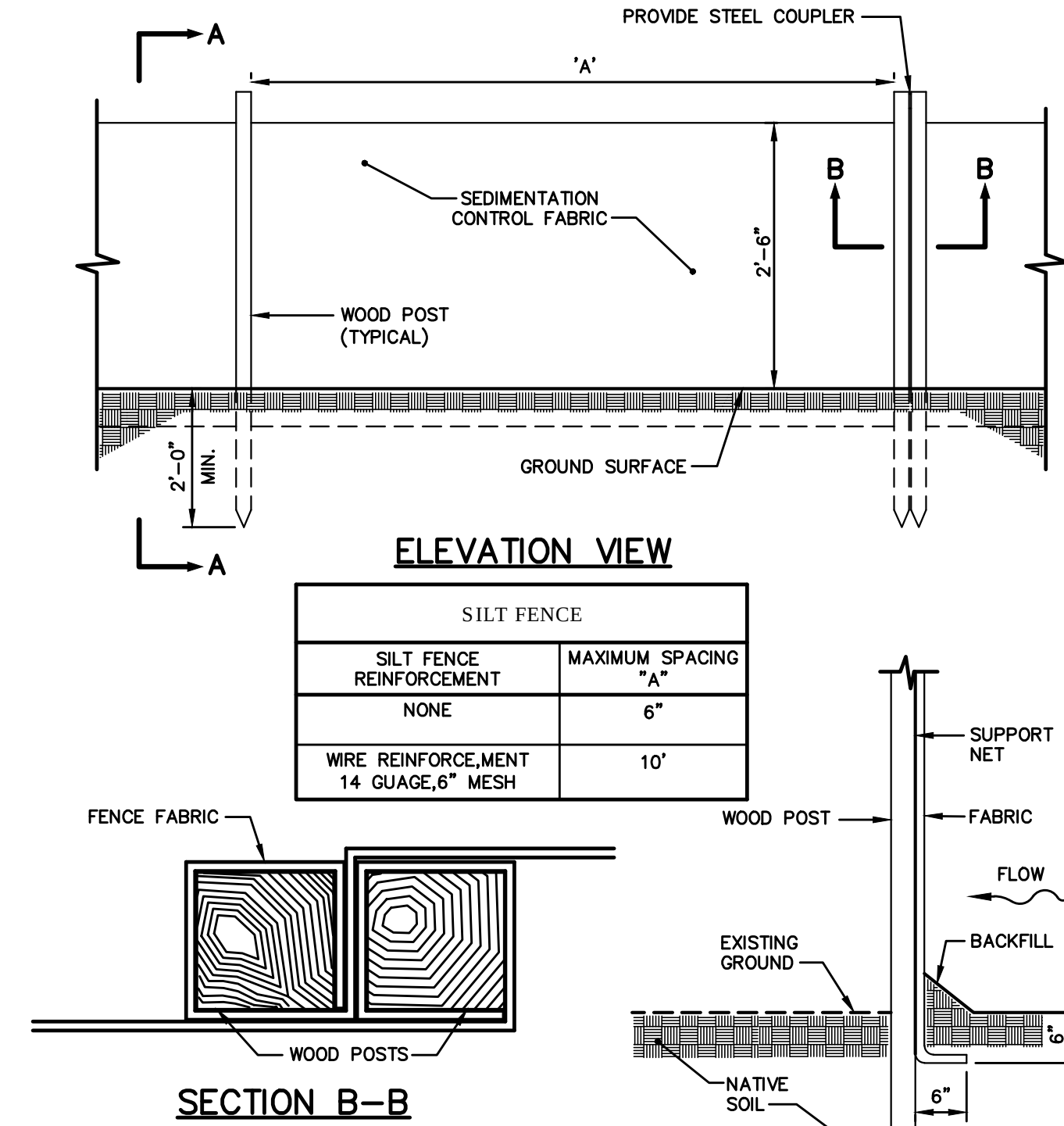
C105



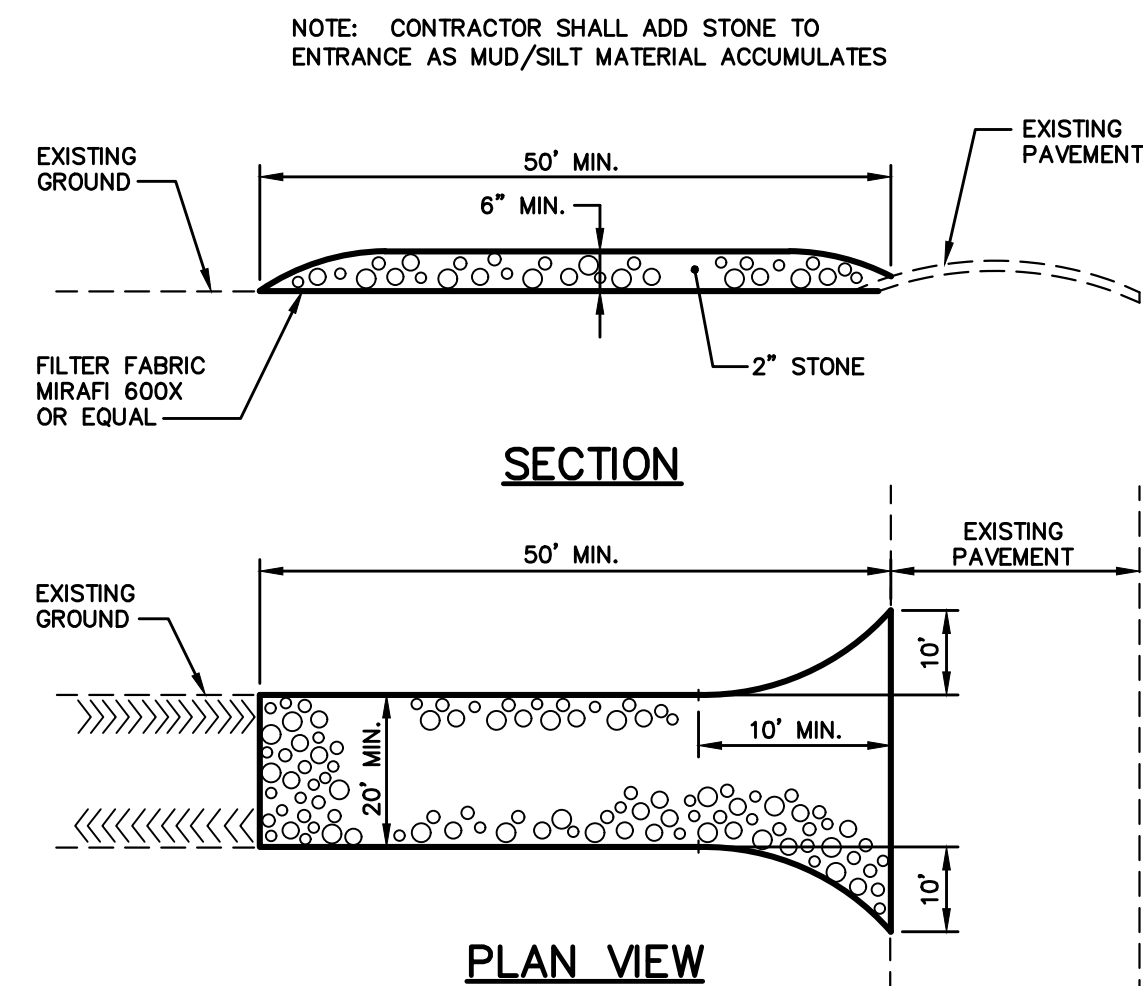
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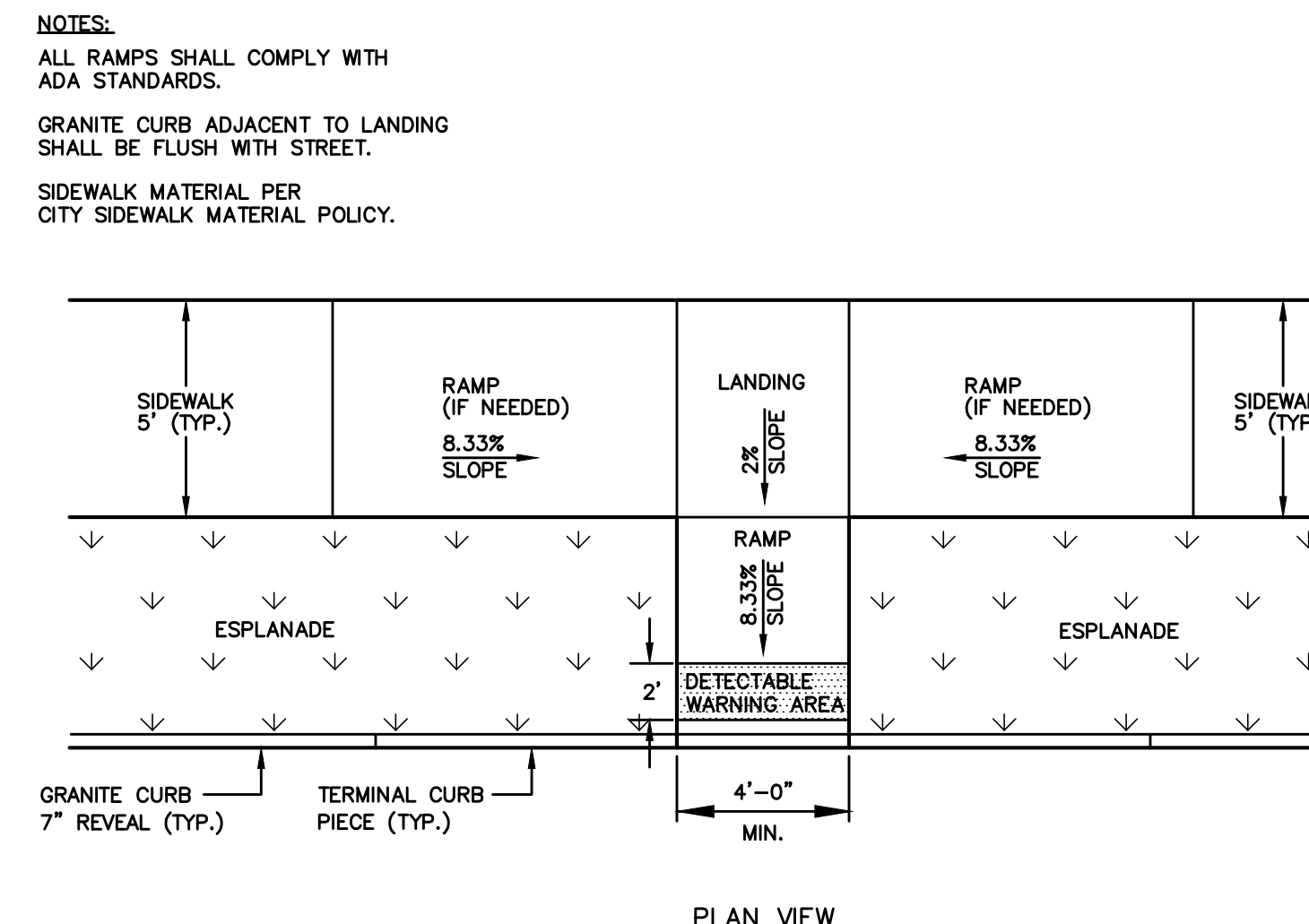
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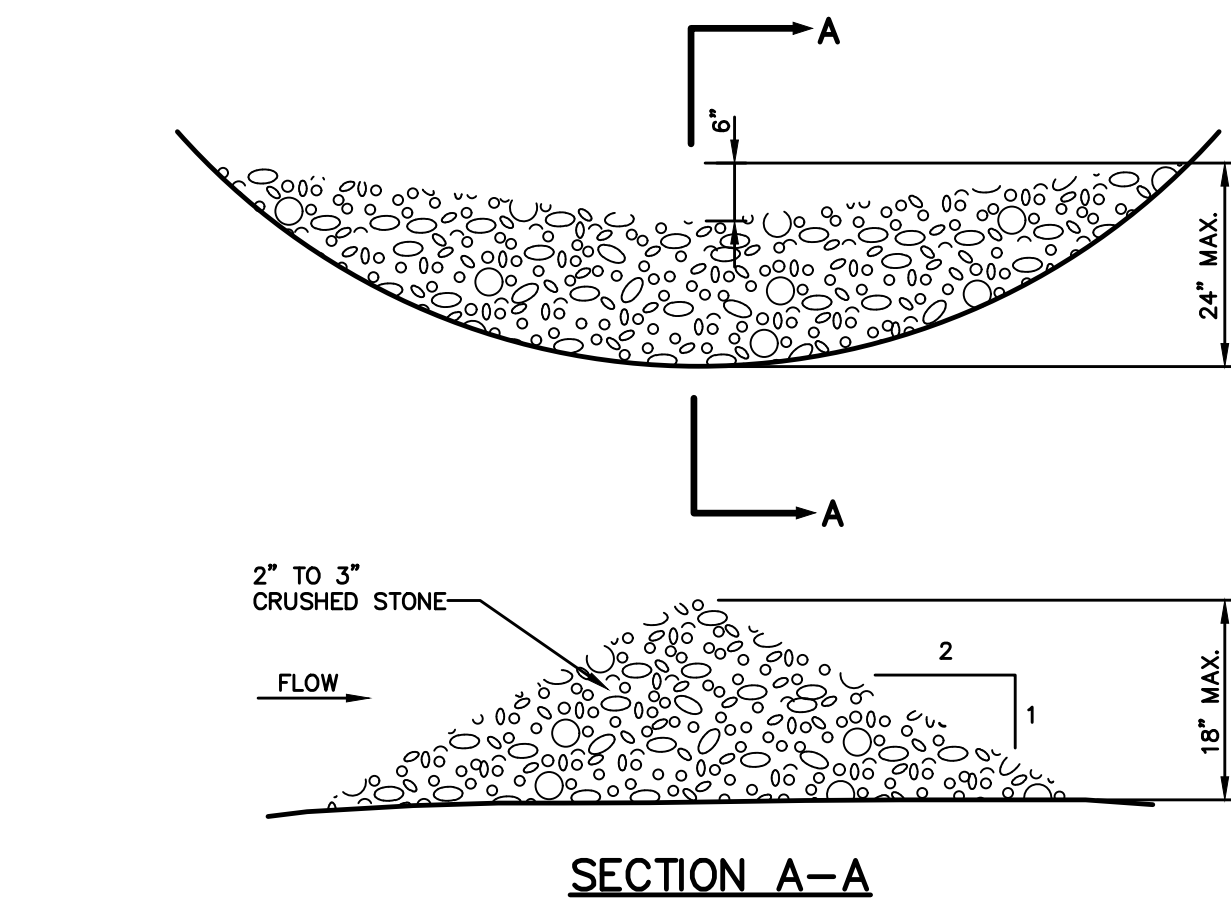
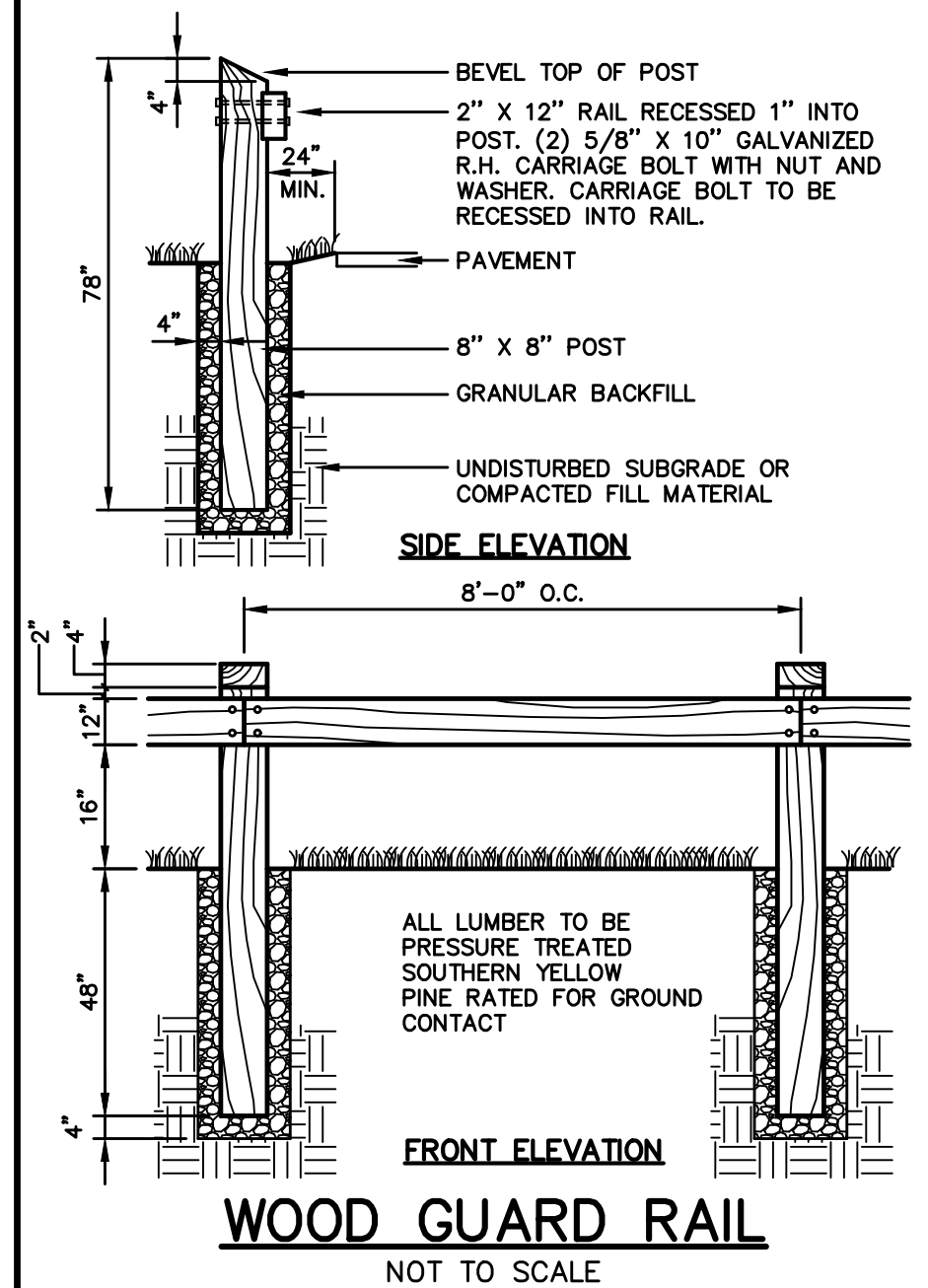
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NOT TO SCALE



**STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE



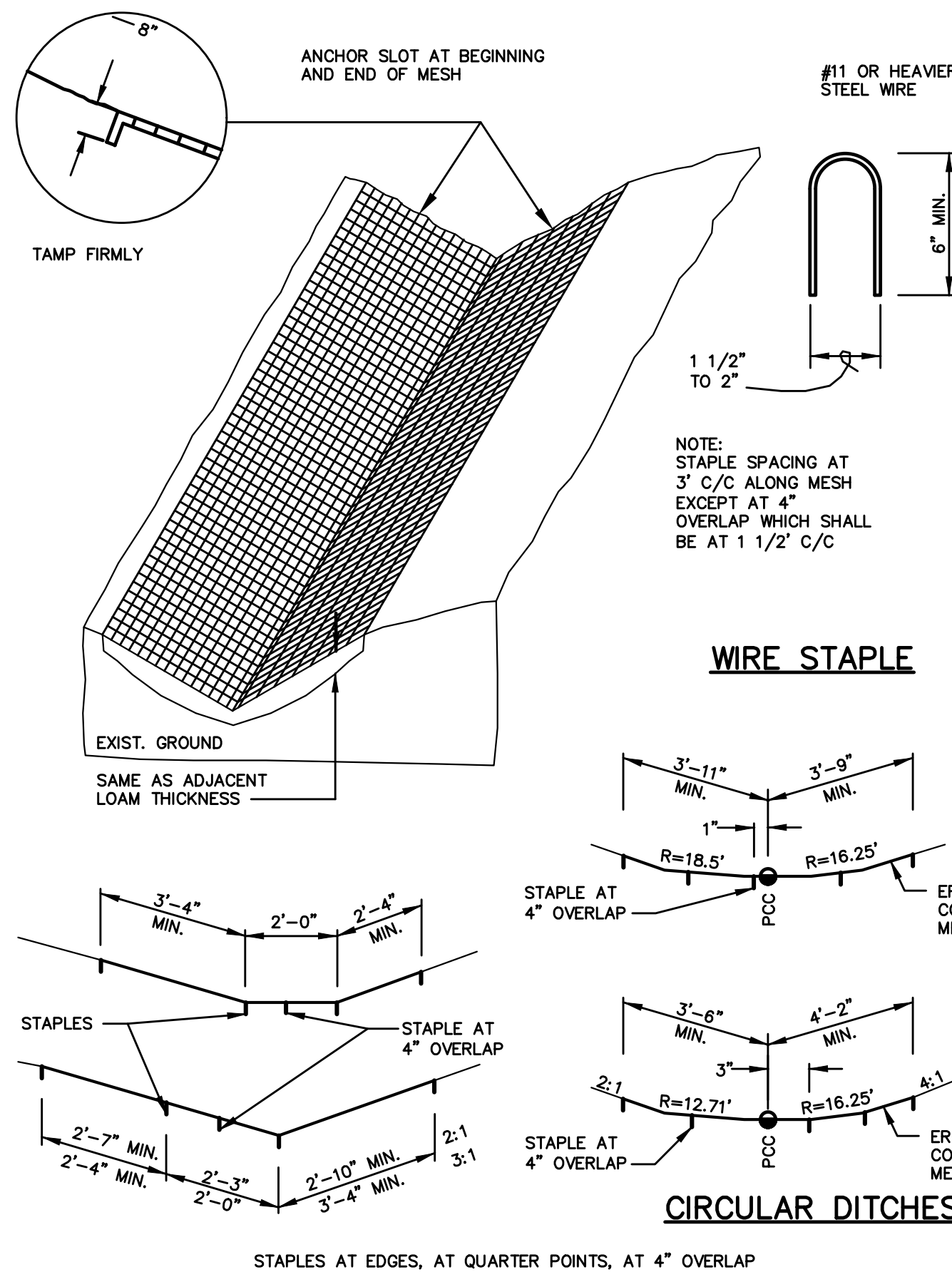
**PERPENDICULAR ADA RAMP LAYOUT FOR NARROW SIDEWALK WITH ESPLANADE**  
NOT TO SCALE



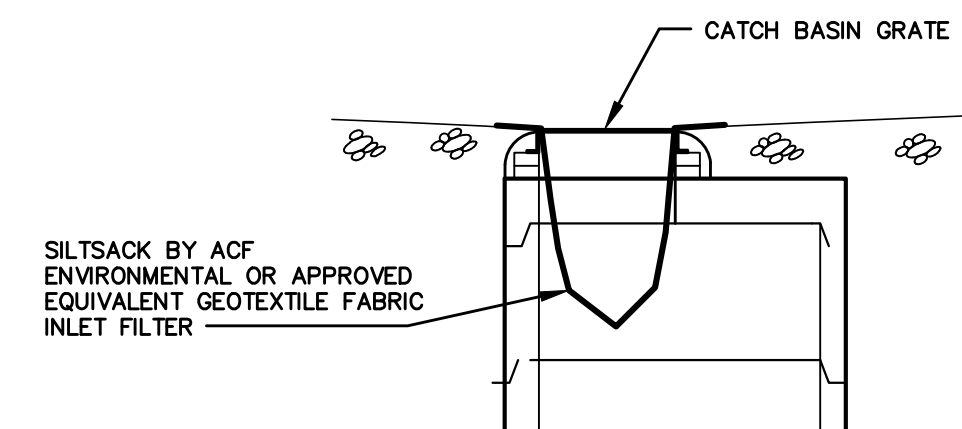
**SPACING BETWEEN CHECK DAMS**

| S <sub>0</sub><br>(FT./FT.) | (FT.) |
|-----------------------------|-------|
| 0.020                       | 75    |
| 0.030                       | 50    |
| 0.040                       | 40    |
| 0.050                       | 30    |
| 0.080                       | 20    |
| 0.100                       | 10    |

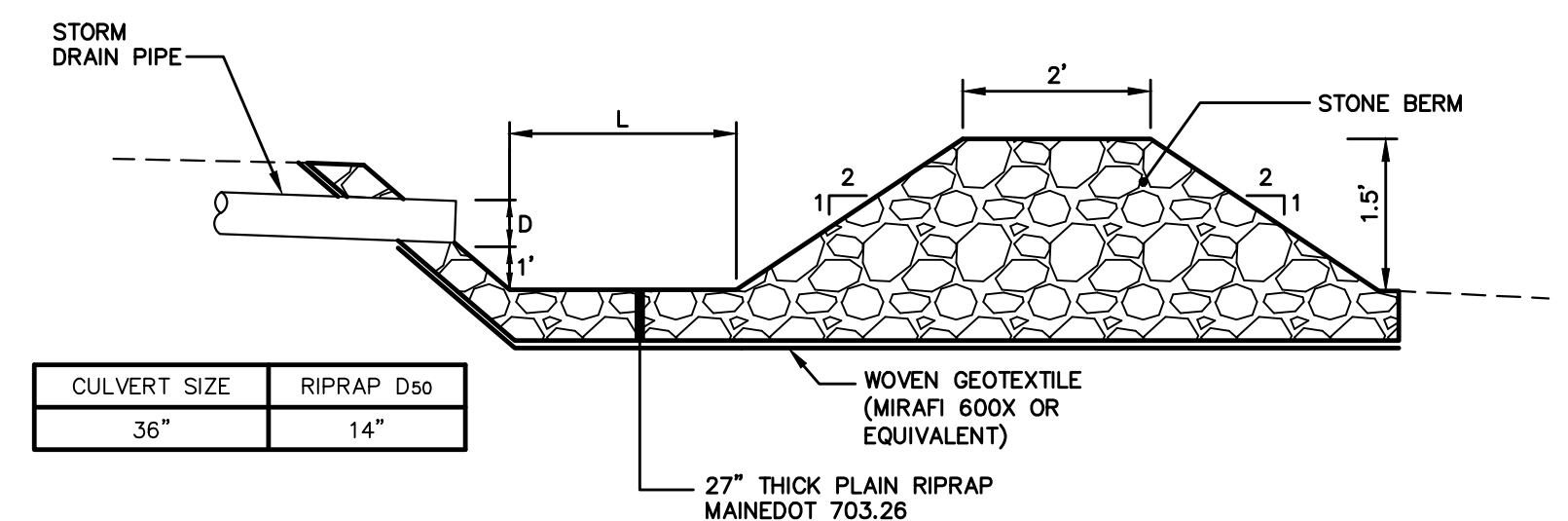
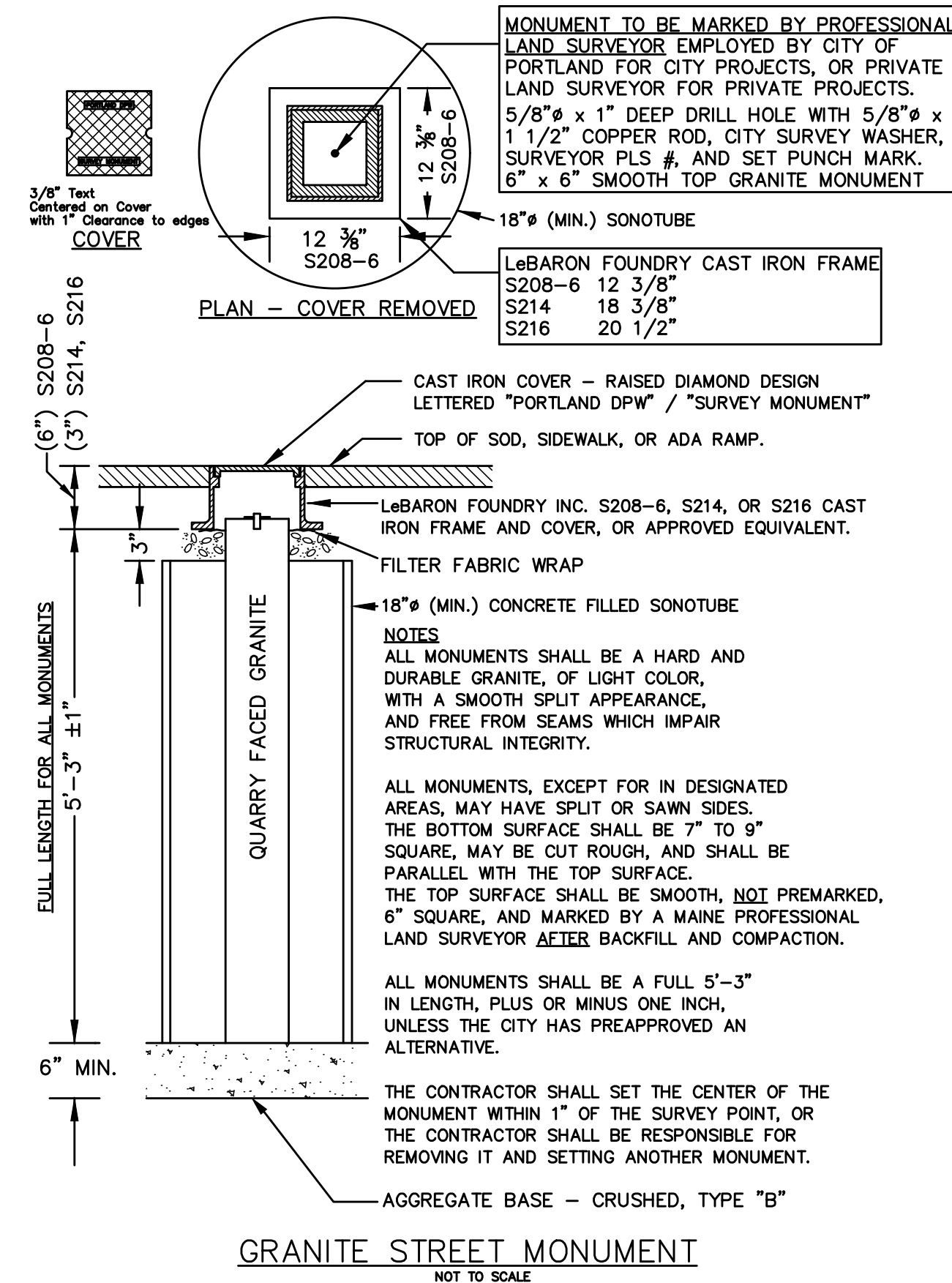
**STONE CHECK DAM**  
NOT TO SCALE



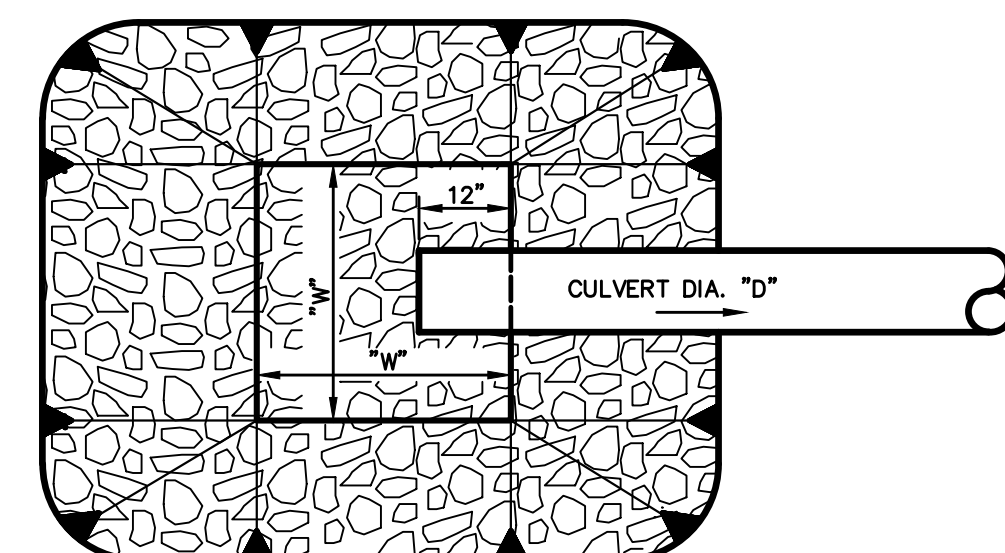
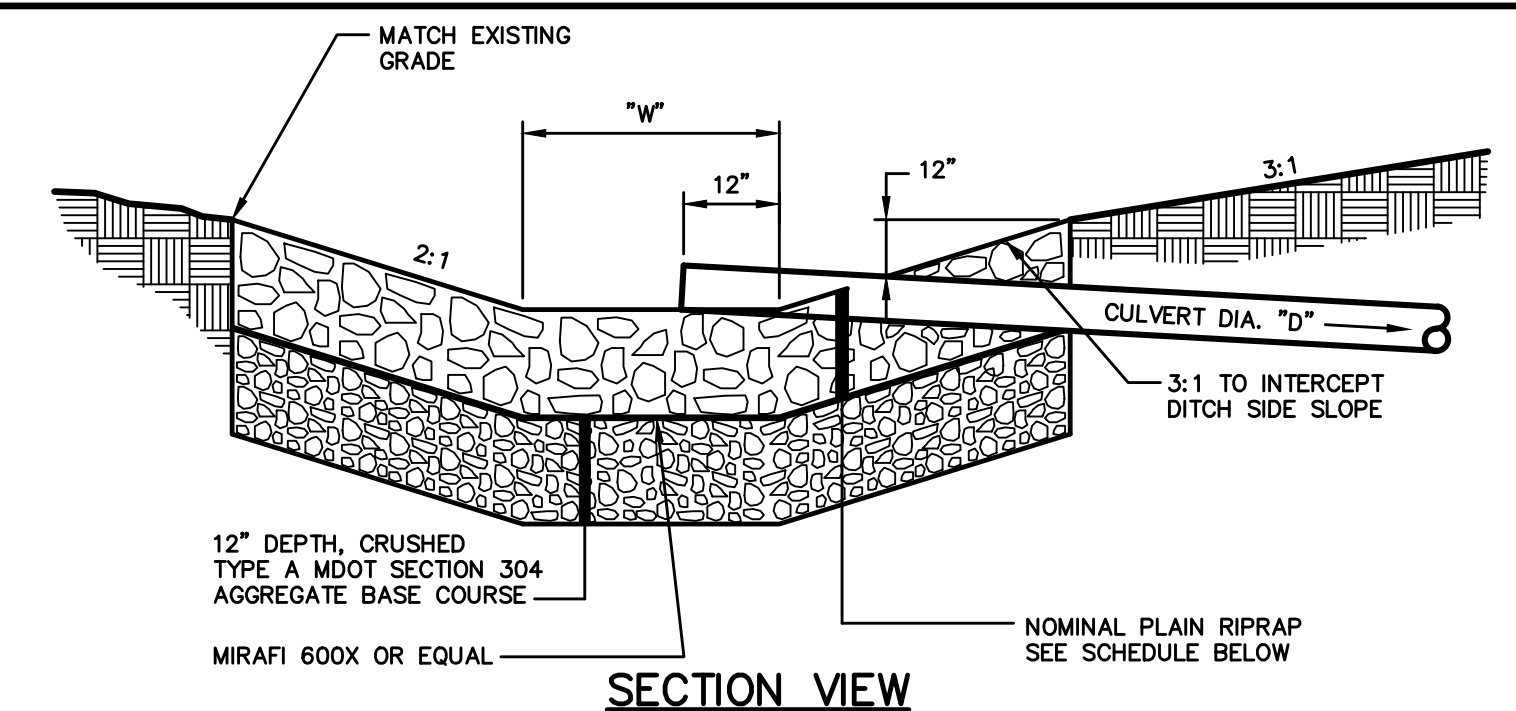
**EROSION CONTROL MESH**  
NOT TO SCALE



**CATCH BASIN INLET FILTER**  
NOT TO SCALE

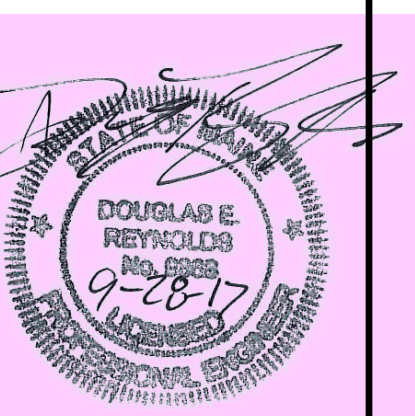


**PLUNGE POOL**  
NOT TO SCALE



**CULVERT INLET APRON**  
NOT TO SCALE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



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| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
|-----------------------------------|---------|-----|
| MDP STORMWATER PRE APP            | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |            |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG  | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: NTS | Job No.: 98089-08 |
| File Name: 98089-08-DETAILS.dwg                                                                                                                                                             |            |                   |
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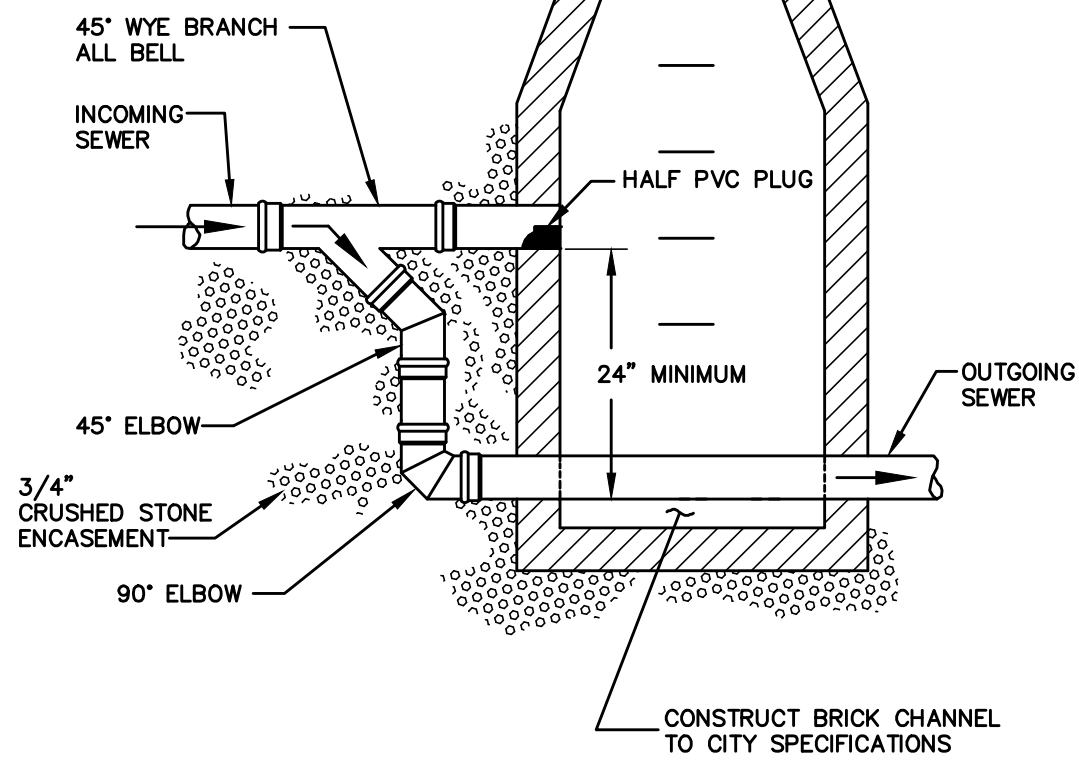
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Site, Utility, and Erosion Control Details     |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

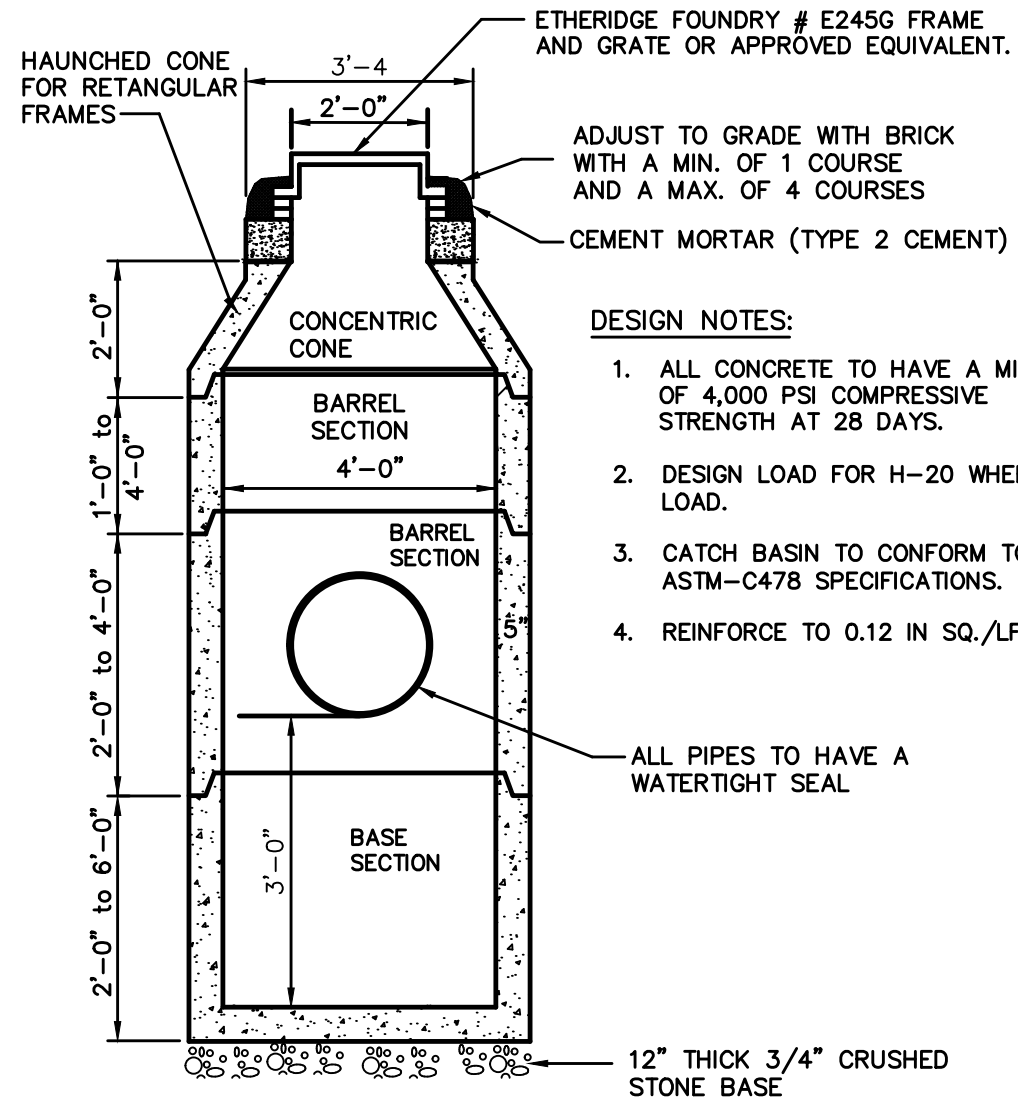
Drawing No.  
**C402**



NOTE:  
DROP MANHOLES ARE NOT REQUIRED  
FOR STORMWATER SYSTEMS.

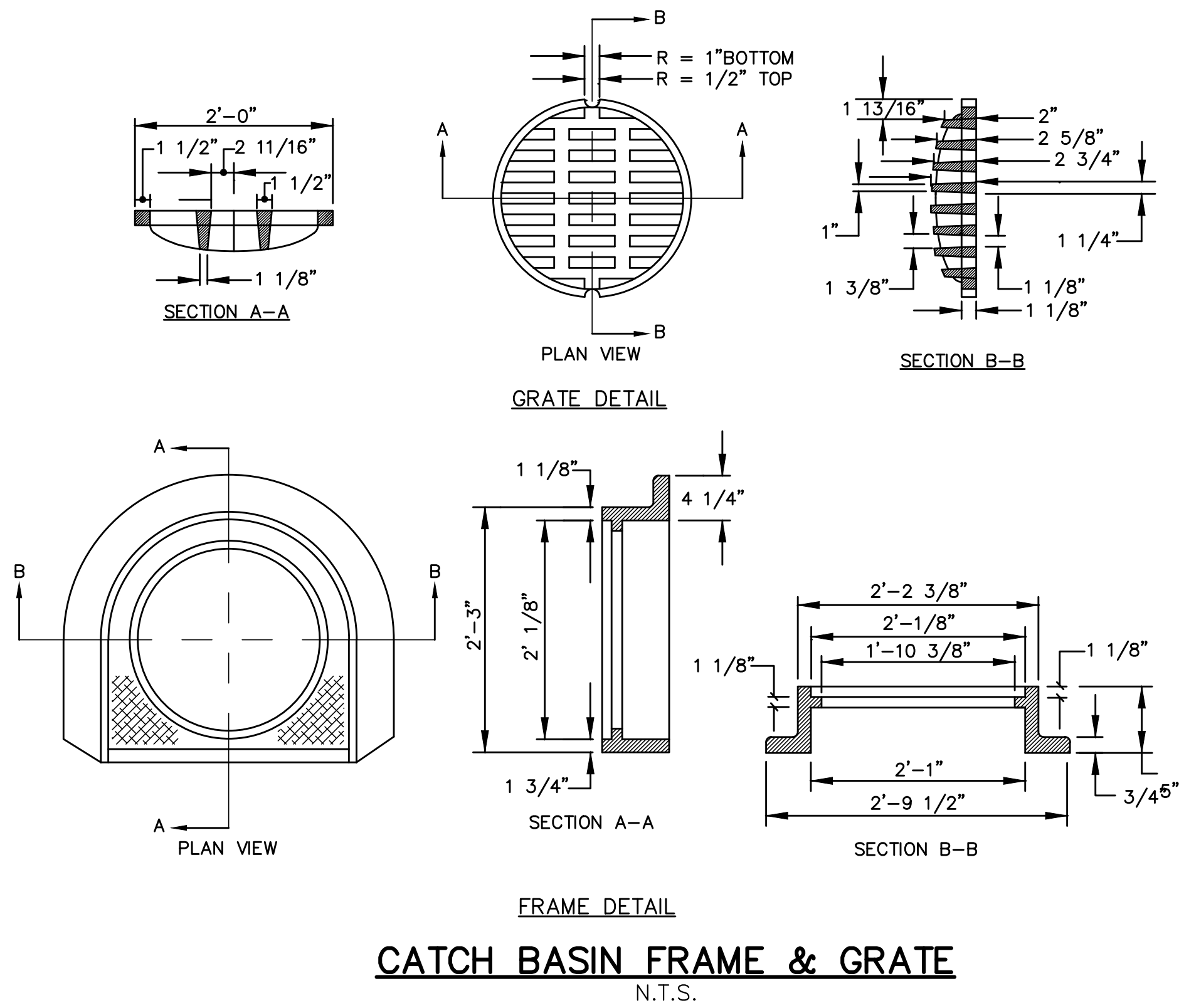


**TYPICAL OUTSIDE DROP MANHOLE**  
N.T.S.

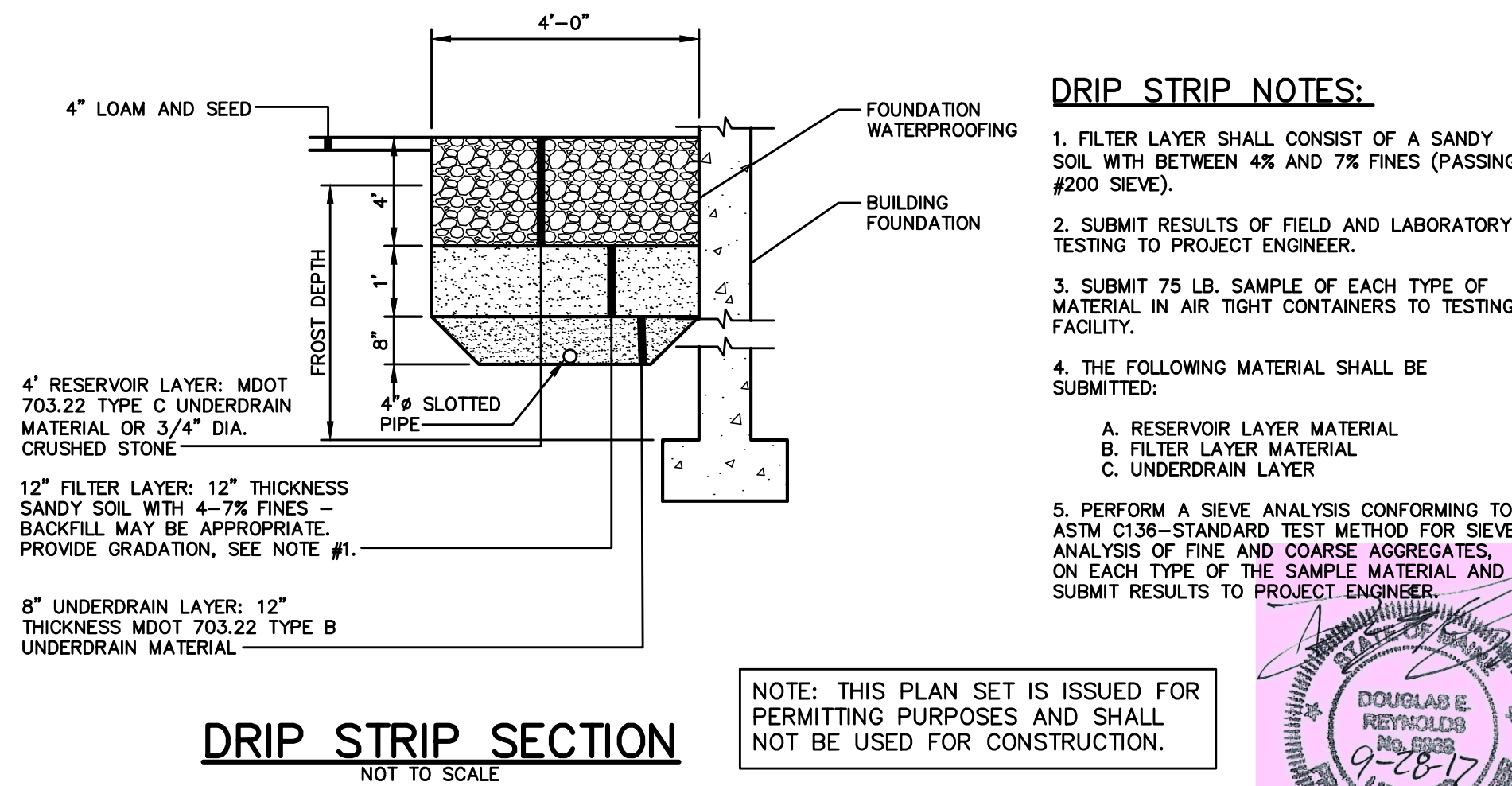
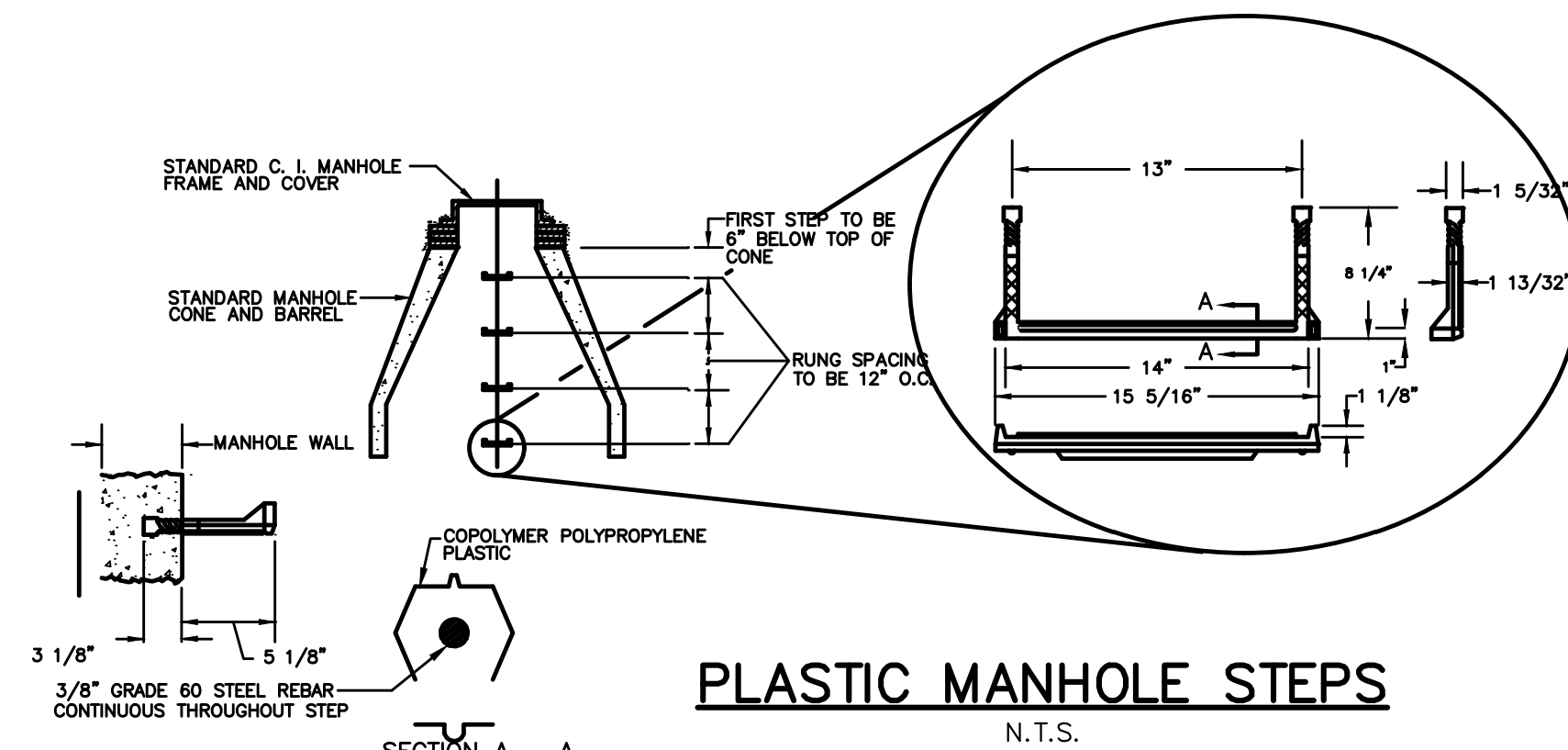
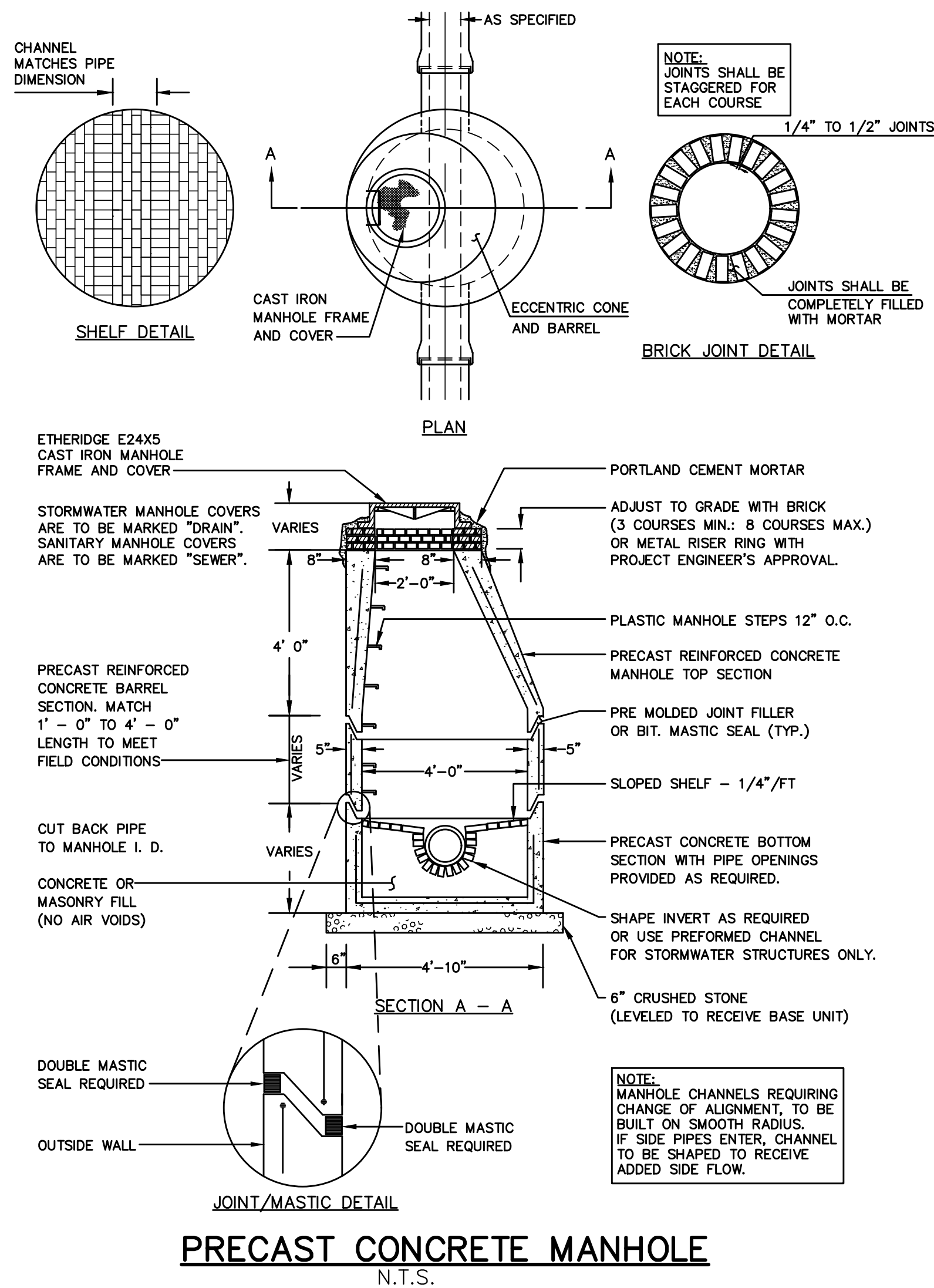
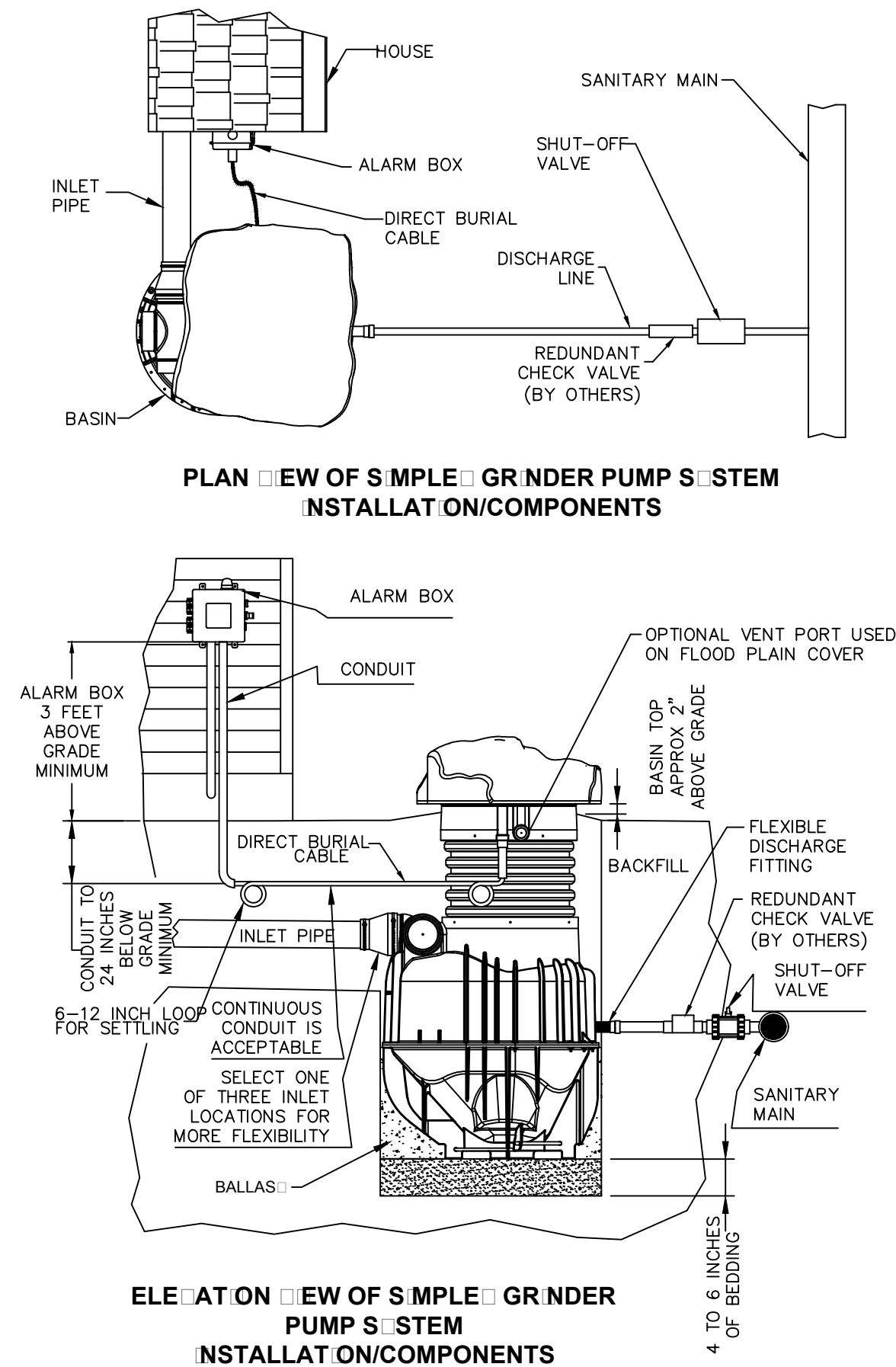
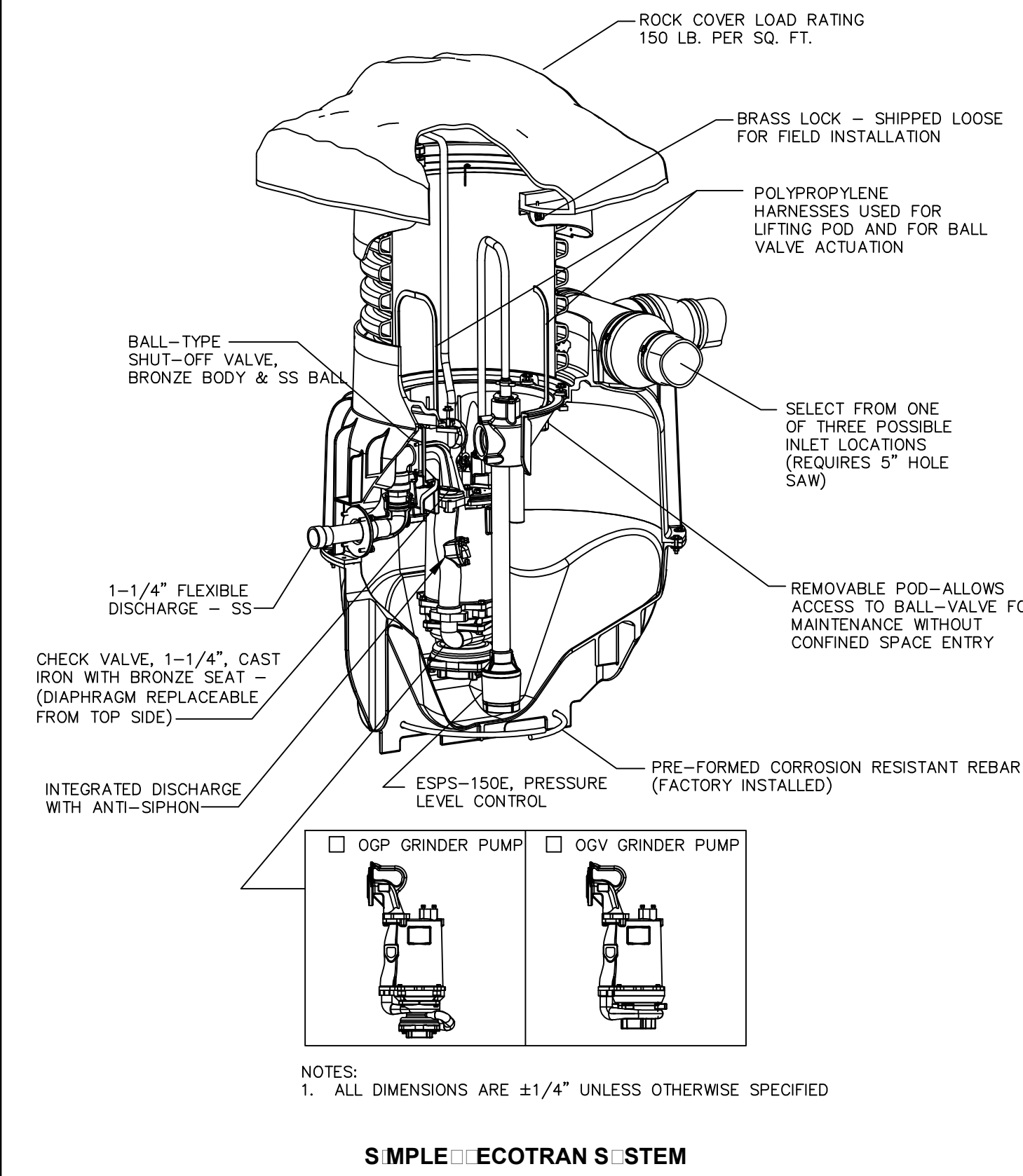
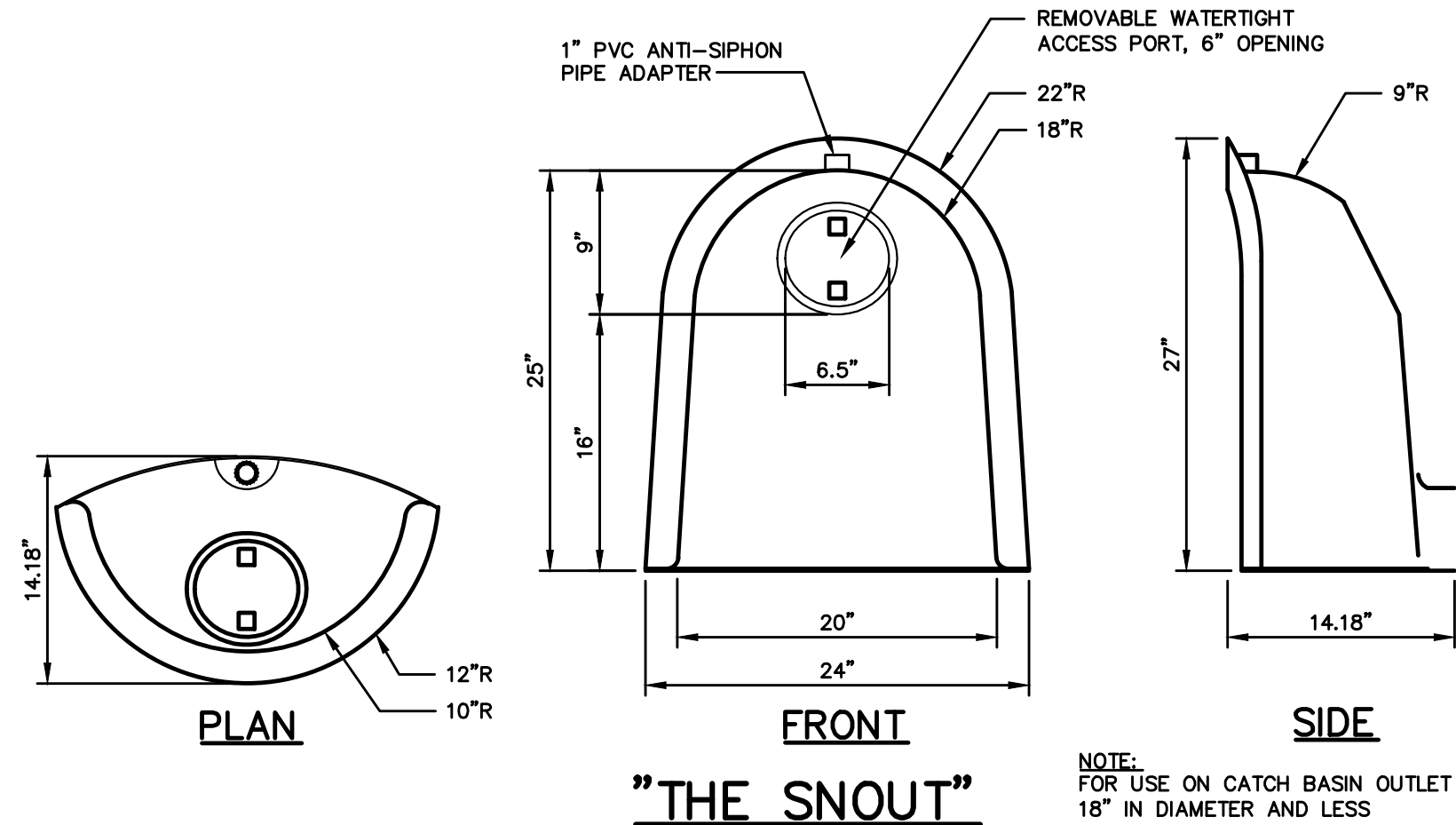


NOTE:  
1. "THE SNOOT" SHALL BE PROVIDED  
ON CATCH BASIN PIPES 18" OR  
LESS  
2. FRAME AND GRATE SHALL HAVE  
24" MIN. CLEAR OPENING.

**4'-0" PRECAST CATCH BASIN**  
N.T.S.



- GENERAL NOTES FOR MANHOLES AND CATCH BASINS**
- ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
  - MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
  - PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
  - ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE LOCATED 8" FROM THE CENTER OF THE COVER.
  - ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
  - ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR APPROVED EQUAL.
  - SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.
  - ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
  - CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE ETHERIDGE DR5A OR APPROVED EQUAL.
  - CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.
  - EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
  - ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CASCO TRAP. SEE FIGURE II-09.



- DRIP STRIP NOTES:**
- FILTER LAYER SHALL CONSIST OF A SANDY SOIL WITH BETWEEN 4% AND 7% FINES (PASSING #200 SIEVE).
  - SUBMIT RESULTS OF FIELD AND LABORATORY TESTING TO PROJECT ENGINEER.
  - SUBMIT 75 LB. SAMPLE OF EACH TYPE OF MATERIAL IN AIR TIGHT CONTAINERS TO TESTING FACILITY.
  - THE FOLLOWING MATERIAL SHALL BE SUBMITTED:  
A. RESERVOIR LAYER MATERIAL  
B. FILTER LAYER MATERIAL  
C. UNDERDRAIN LAYER
  - PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C138-STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES, ON EACH TYPE OF THE SAMPLE MATERIAL AND SUBMIT RESULTS TO PROJECT ENGINEER.

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| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |            |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG  | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: NTS | Job No.: 98089.08 |
| File Name: 98089-08-DETAILS.dwg                                                                                                                                                             |            |                   |
| This plan shall not be modified without written permission from Gorrell Palmer(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP. |            |                   |



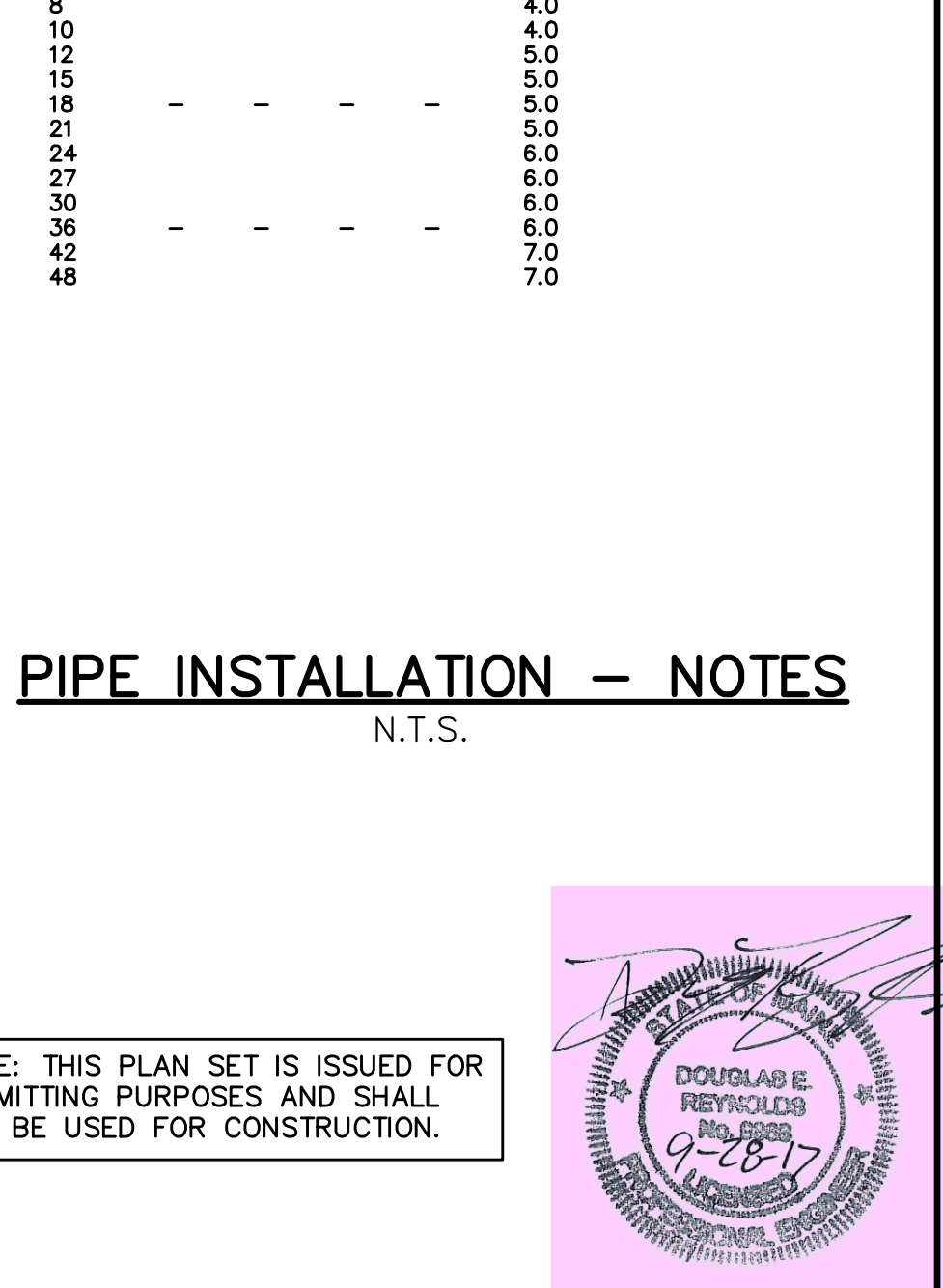
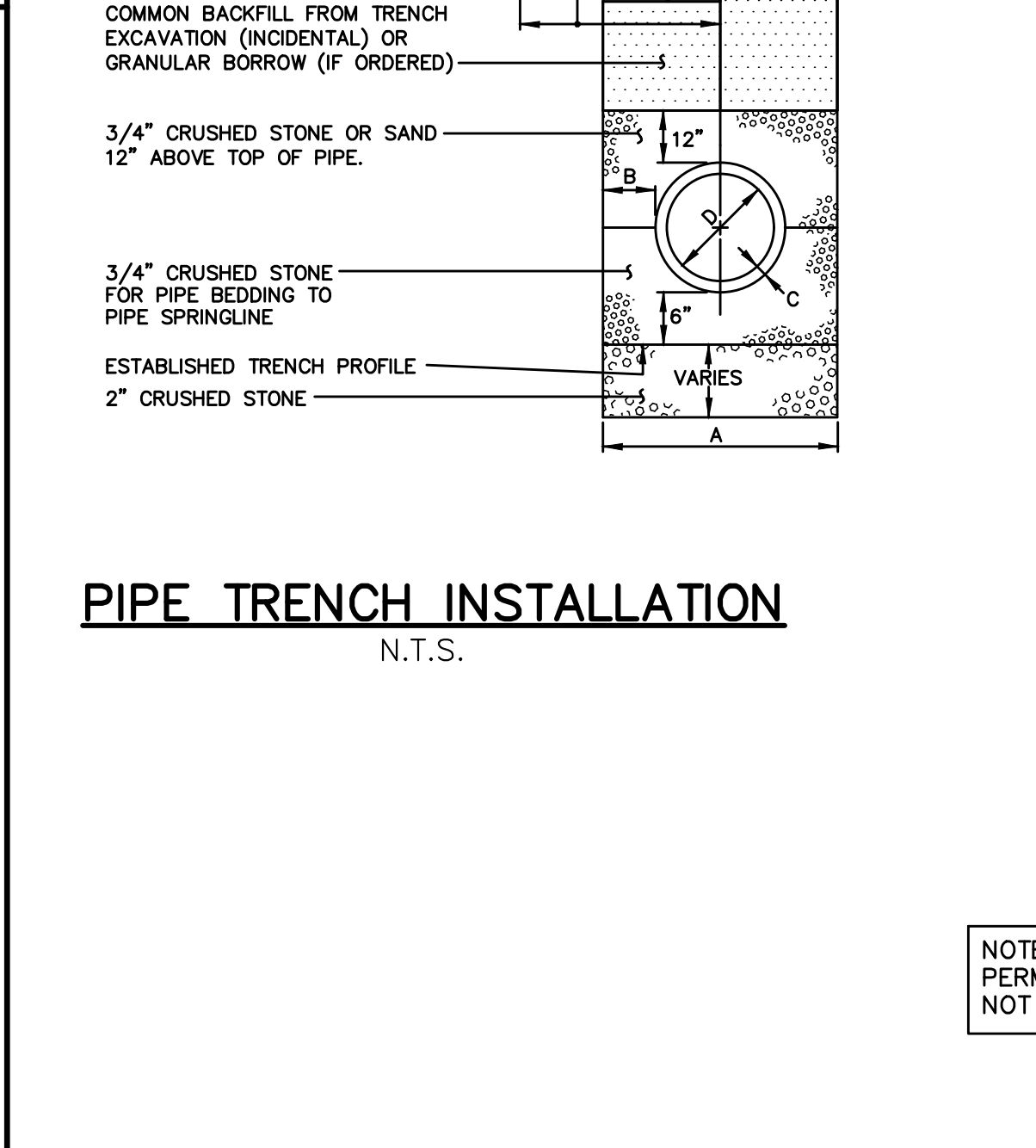
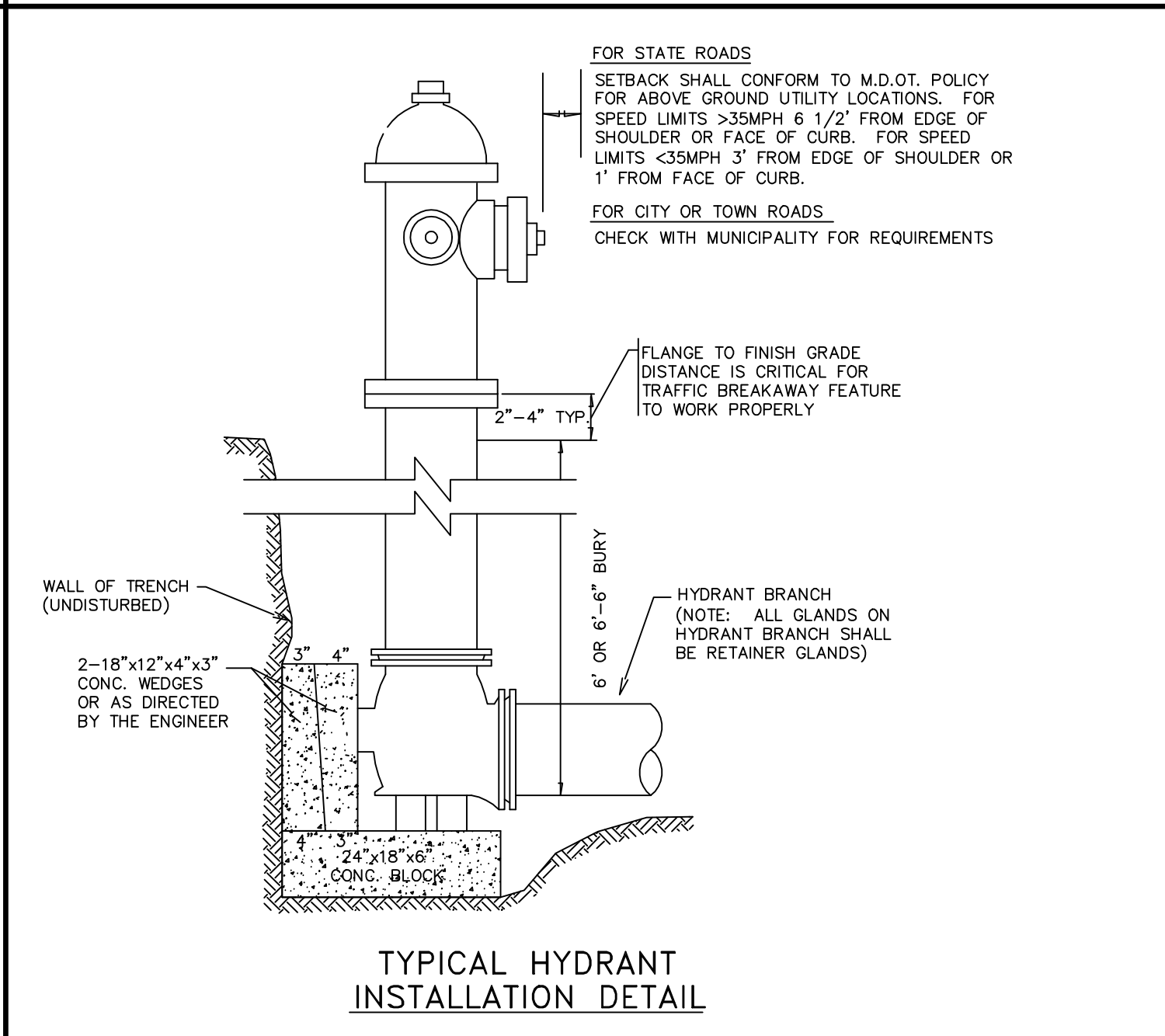
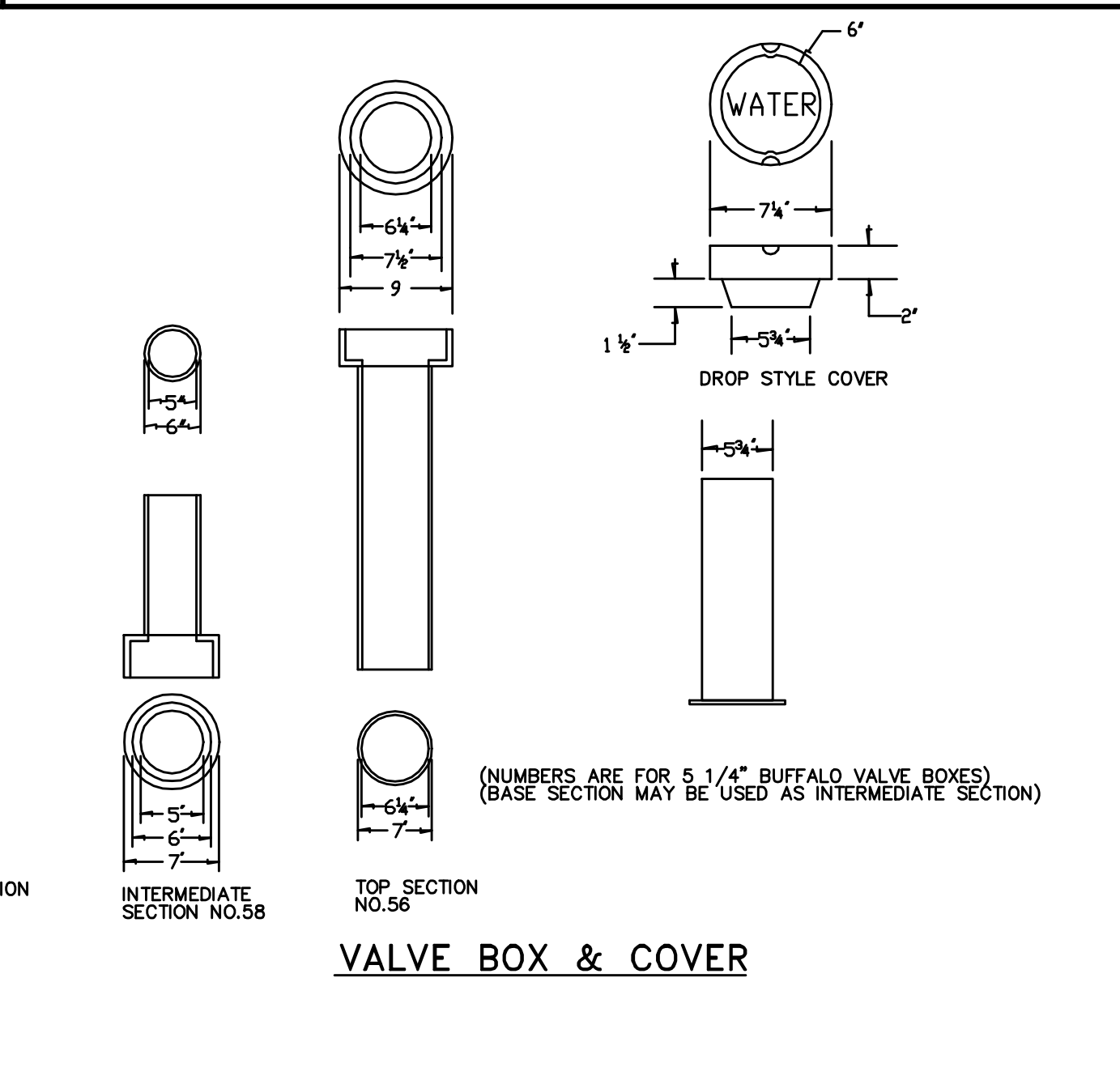
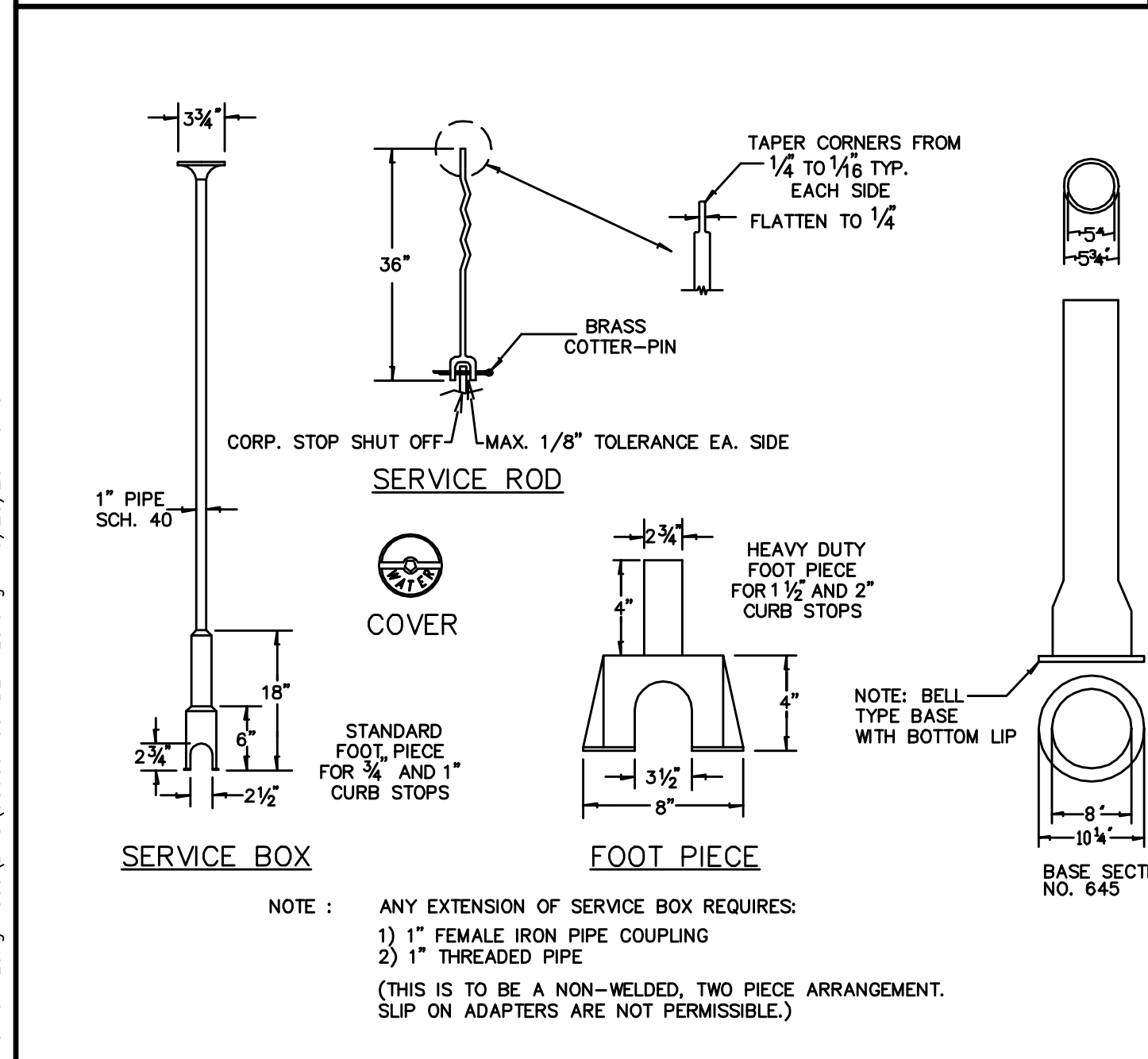
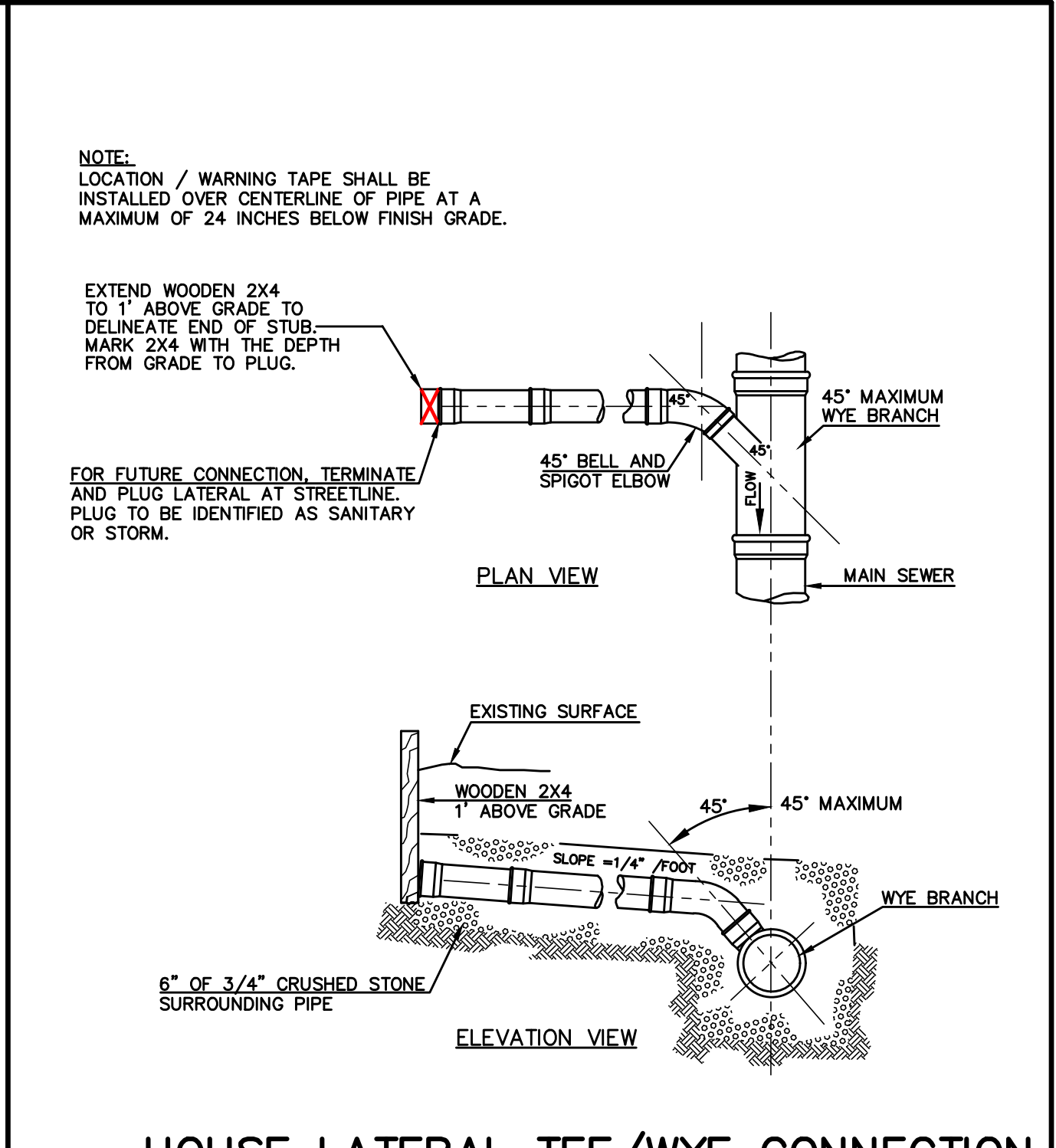
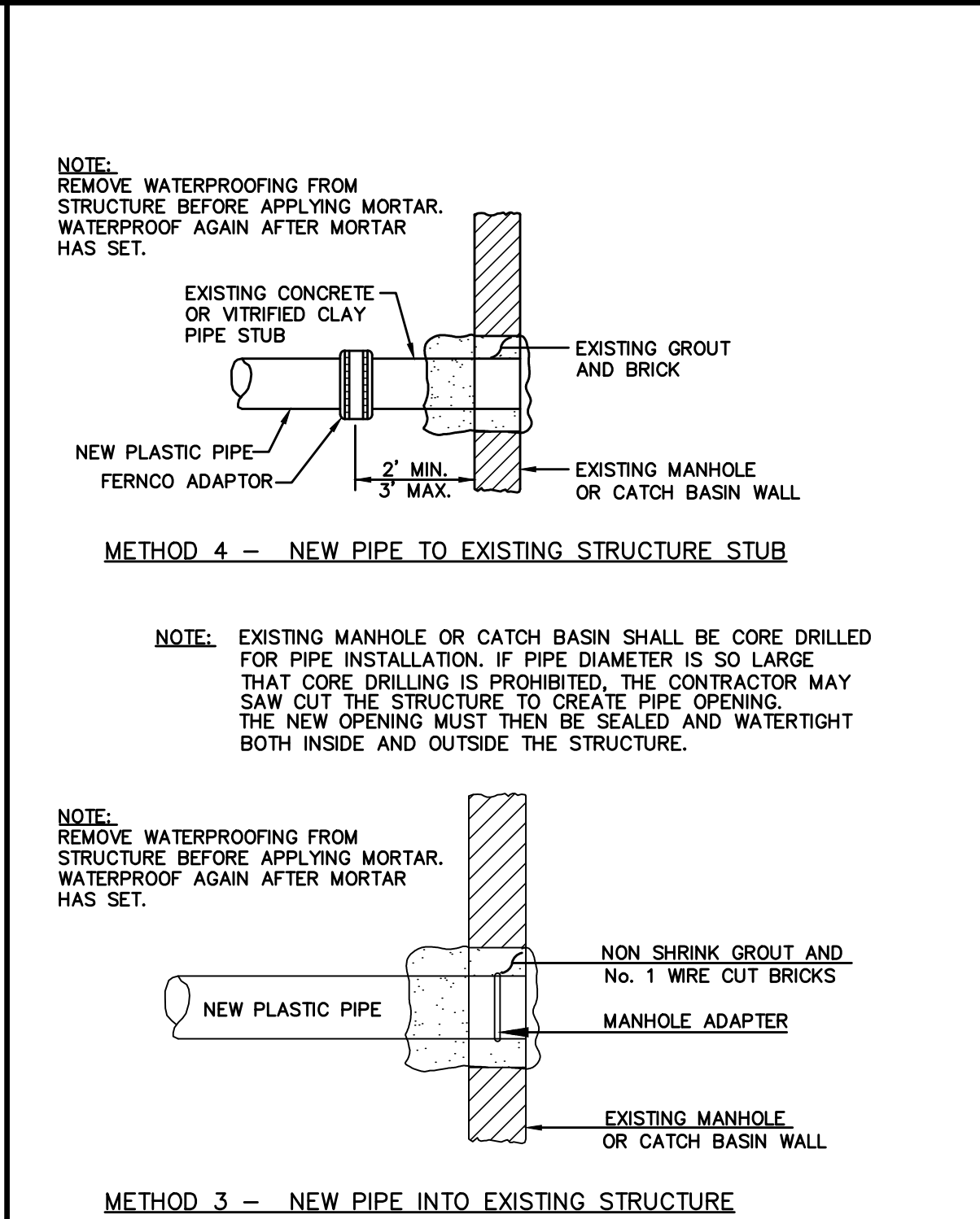
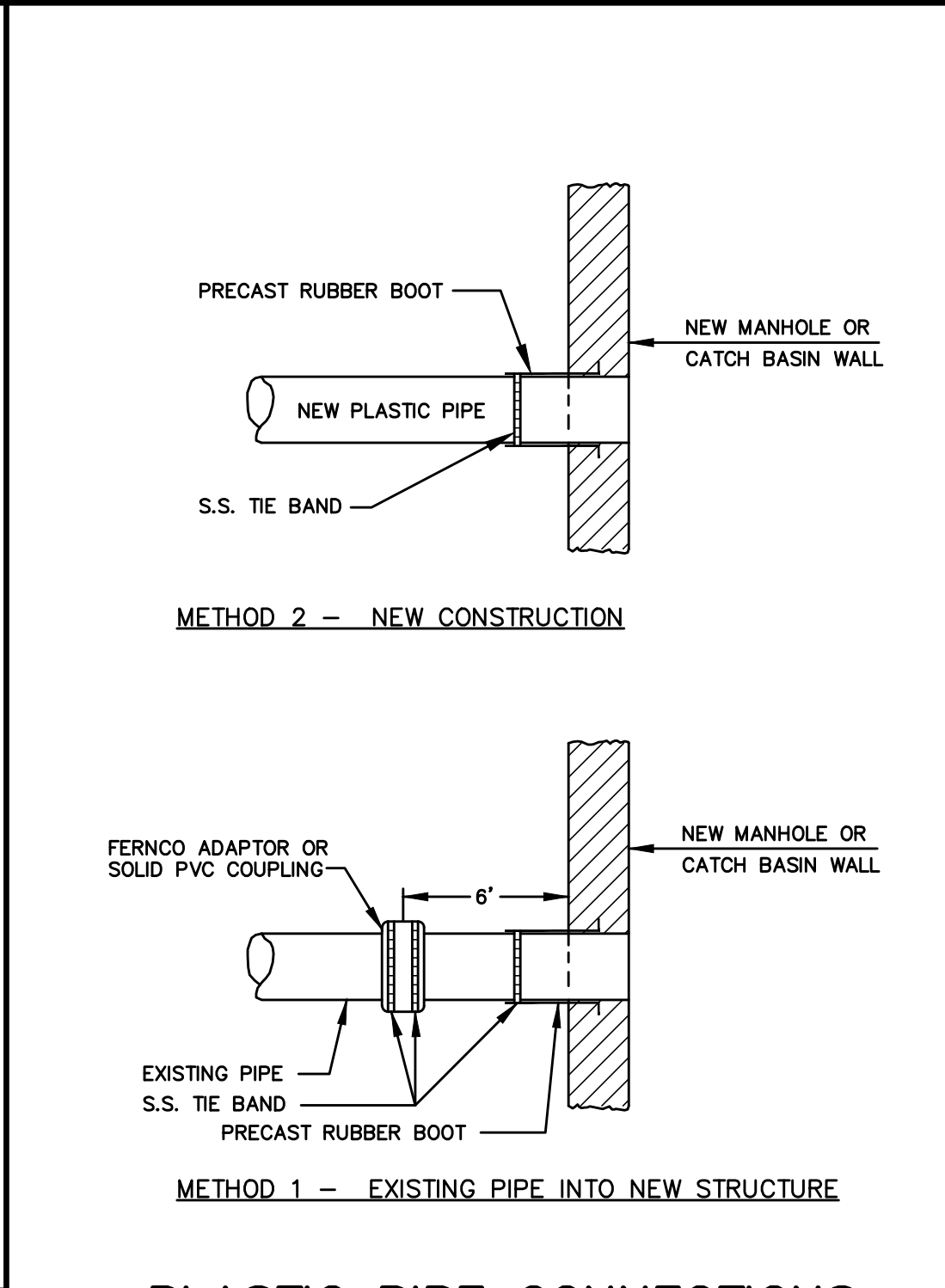
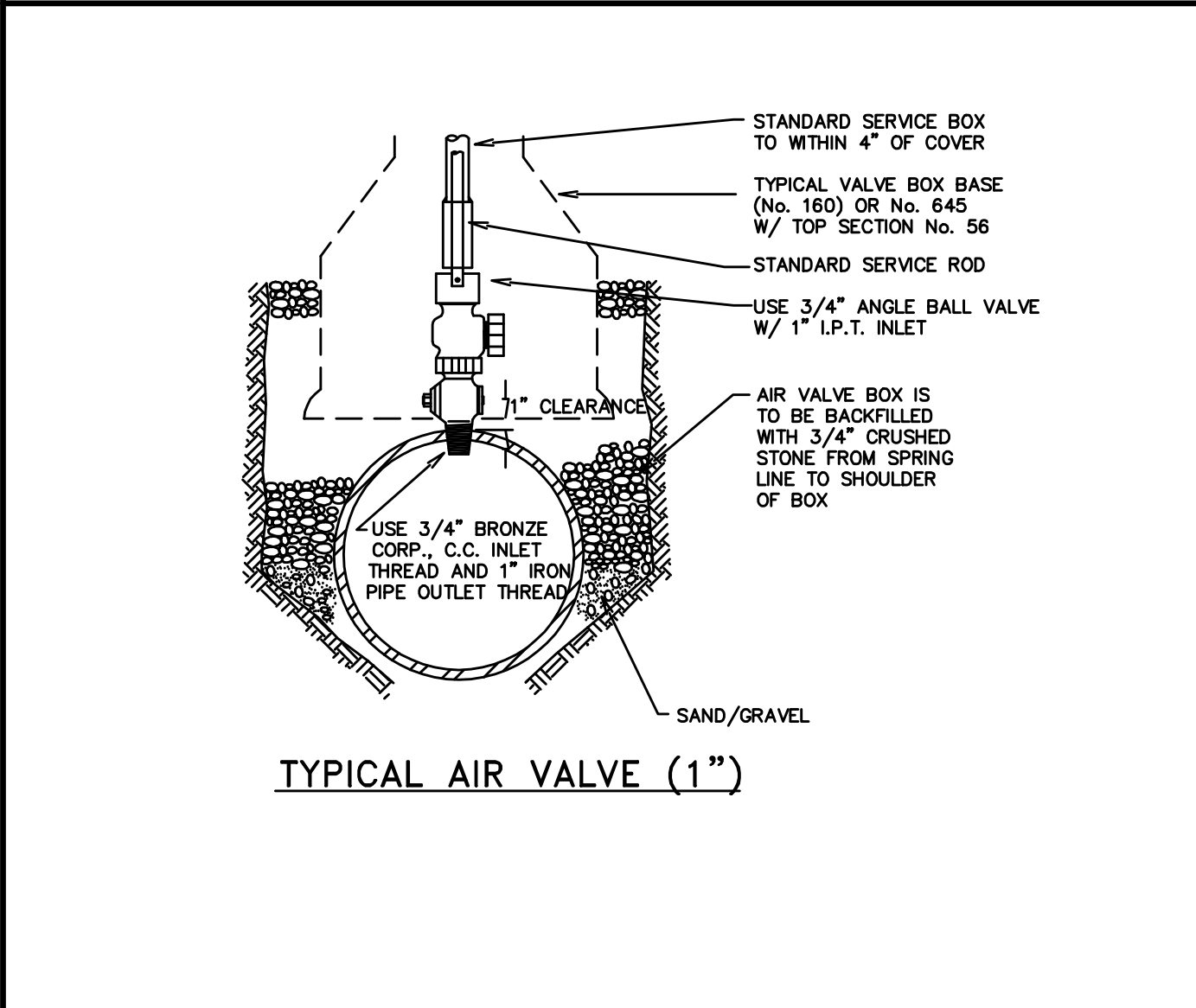
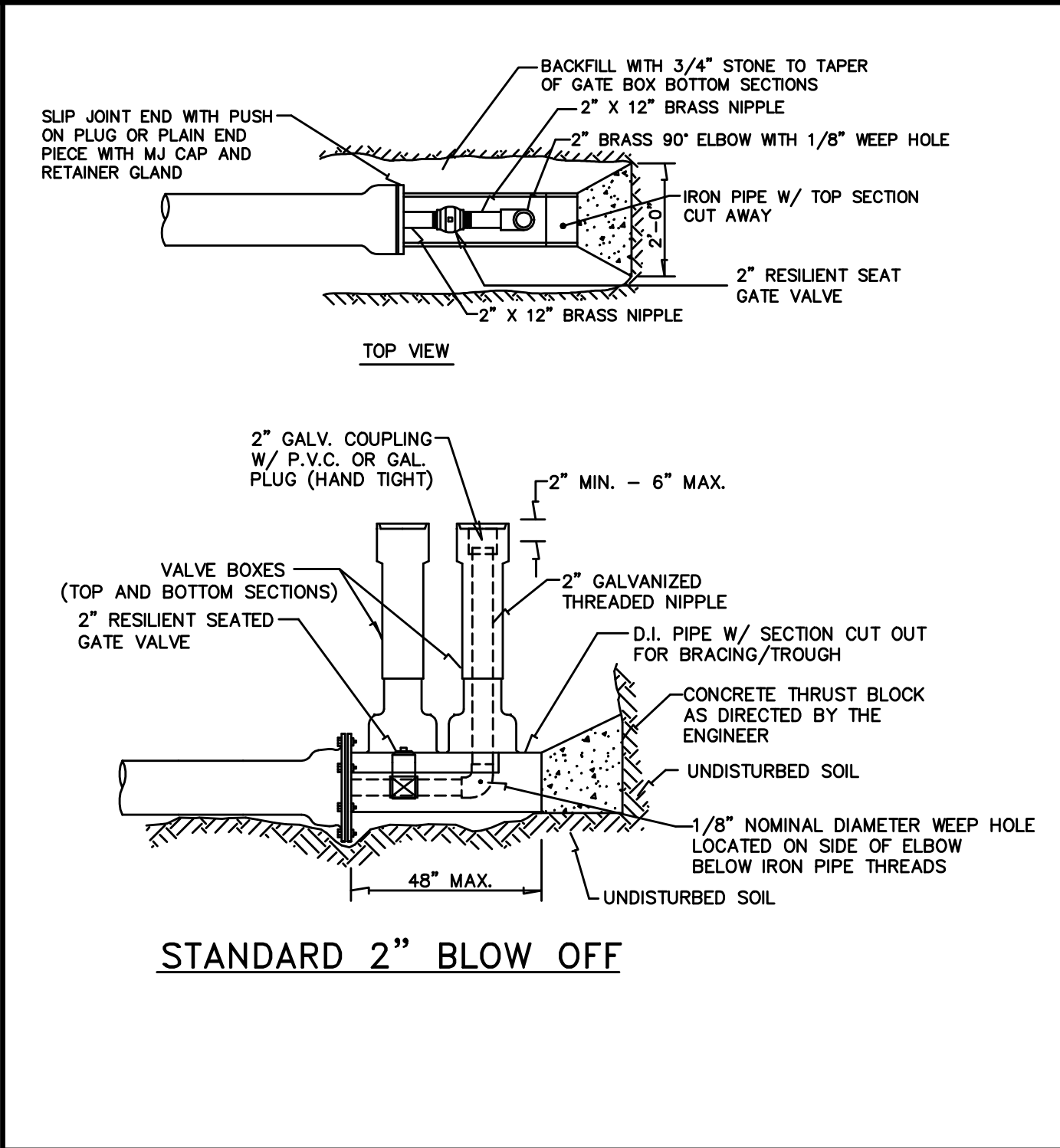
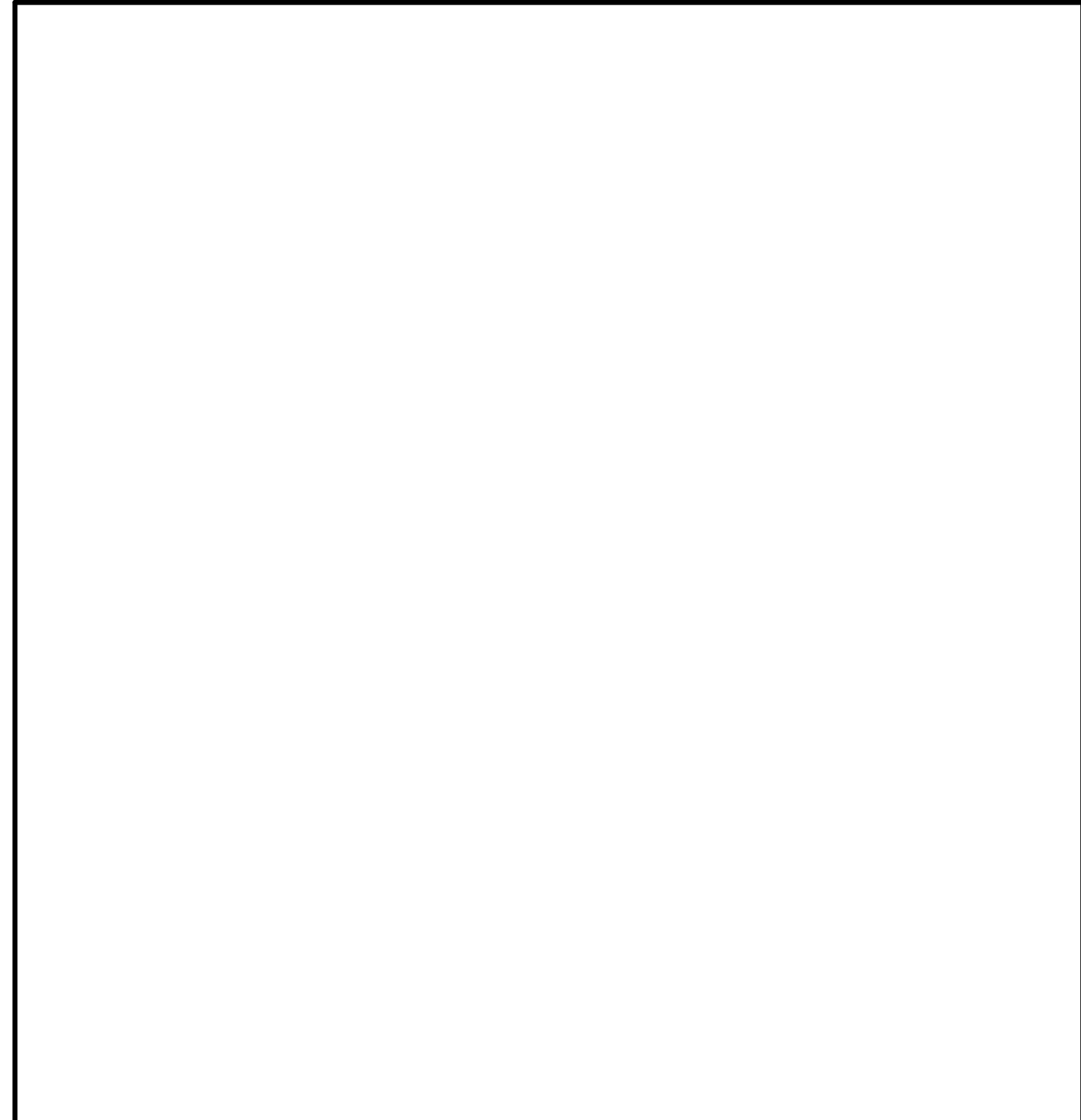
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207.772.2515

|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Drainage and Utility Details                   |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

|             |      |
|-------------|------|
| Drawing No. | C403 |
|-------------|------|



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| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
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|                                                                                                                                                                                             |            |                   |
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| Design: BMG                                                                                                                                                                                 | Draft: CG  | Date: MAY 2017    |
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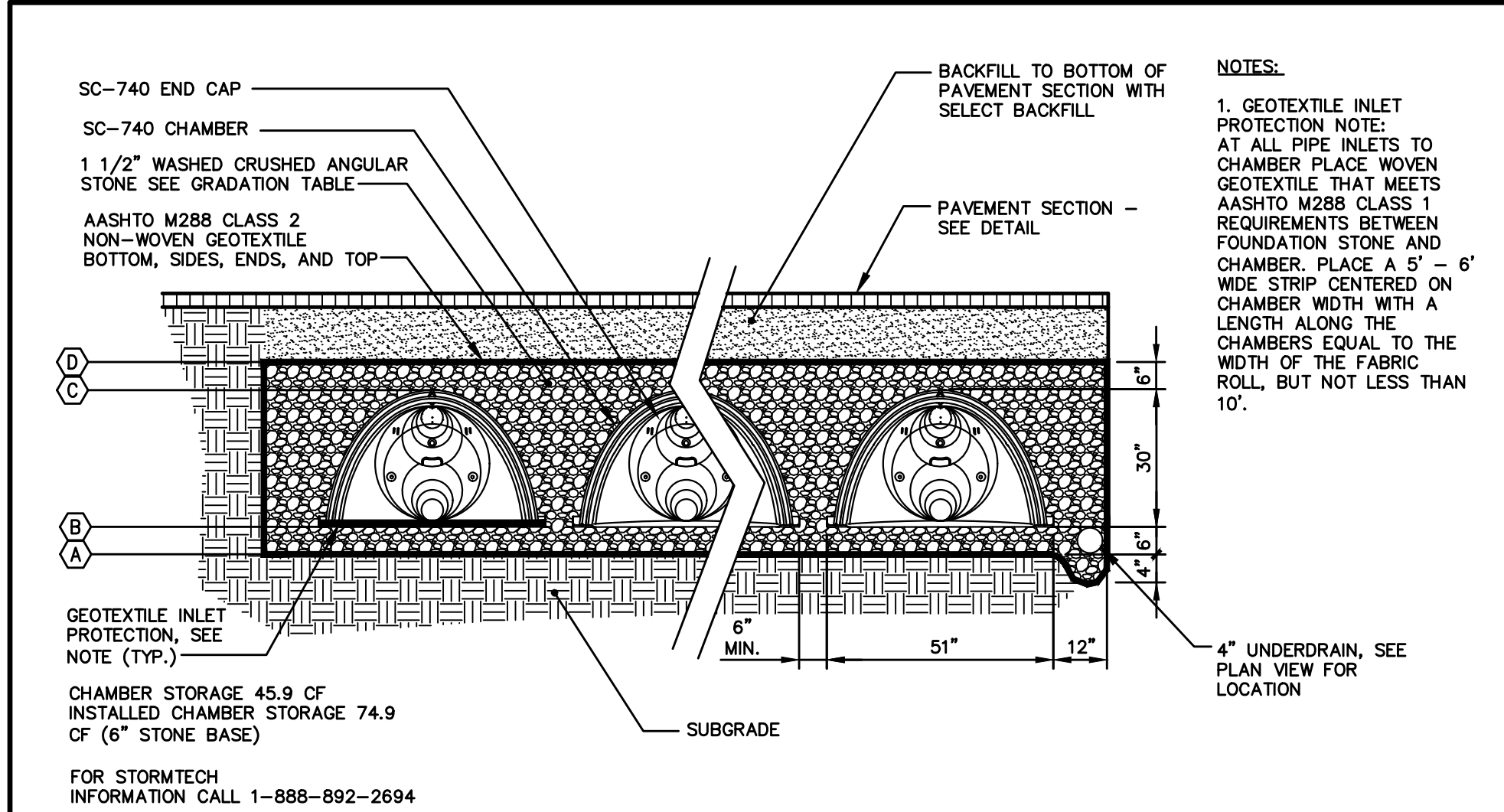
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Sewer and Water Details                        |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

|             |      |
|-------------|------|
| Drawing No. | C404 |
|-------------|------|





| Chambers  |           |       |       |       |
|-----------|-----------|-------|-------|-------|
| Structure | ELEVATION |       |       |       |
| POND      | A         | B     | C     | D     |
| 1         | 79.69     | 80.19 | 82.69 | 83.19 |
| 2         | 73.26     | 73.76 | 76.26 | 76.76 |
| 3         | 73.26     | 73.76 | 76.26 | 76.76 |

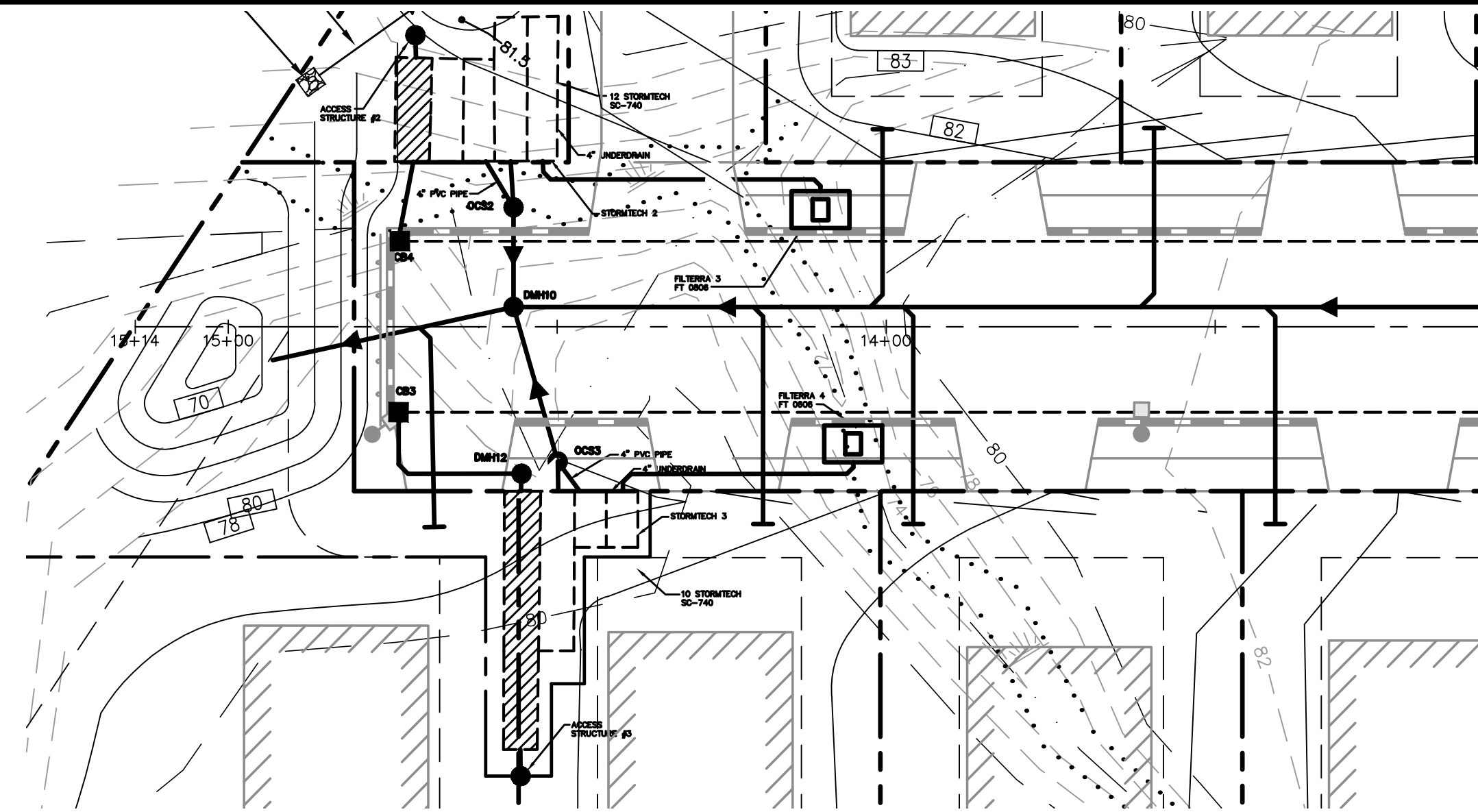
FOR STORMTECH INFORMATION CALL 1-888-892-2694  
CHAMBER STORAGE 31 CF

GEOTEXTILE LINEAR NOTE:  
THE SUBSURFACE DETENTION POND SHALL BE WRAPPED IN LINEAR LOW DENSITY POLYETHYLENE LINER, MIN. 20 MIL THICKNESS IF HIGH WATER MARK

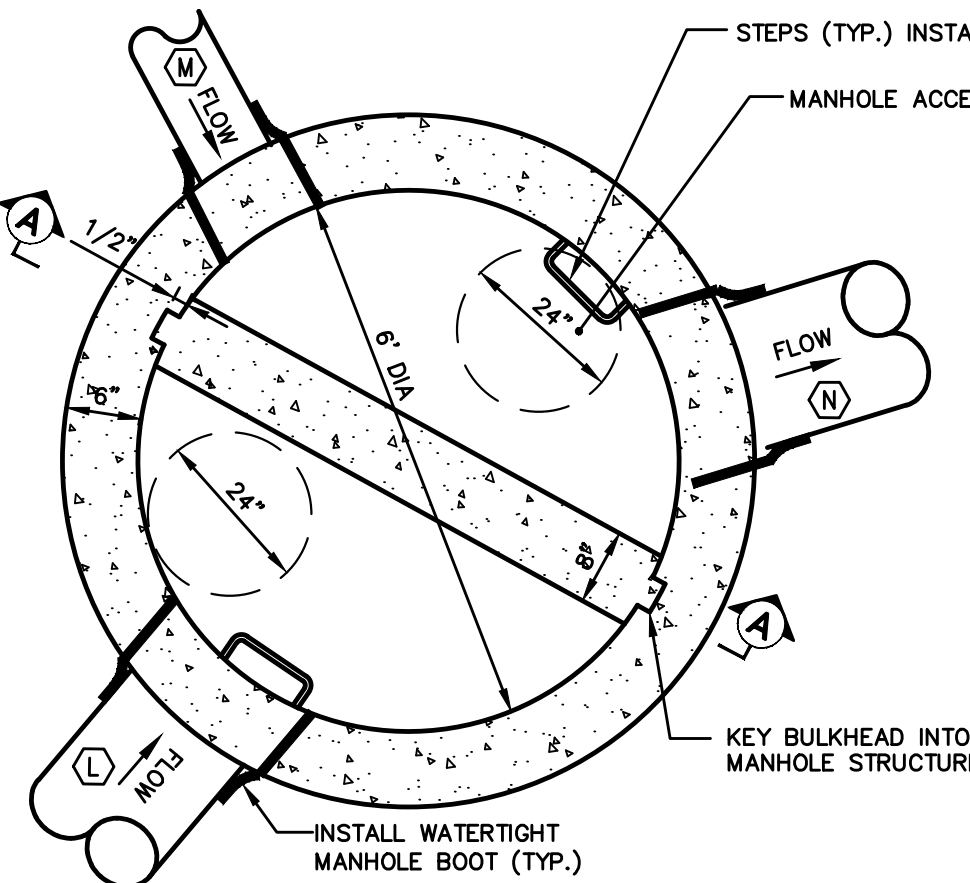
GEOTEXTILE INLET PROTECTION NOTE:  
AT ALL PIPE INLETS TO CHAMBER PLACE WOVEN GEOTEXTILE THAT MEETS AASHTO M288 CLASS 1 REQUIREMENTS BETWEEN FOUNDATION STONE AND CHAMBER. PLACE A 5' - 6' WIDE STRIP CENTERED ON CHAMBER WIDTH WITH A LENGTH ALONG THE CHAMBERS EQUAL TO THE WIDTH OF THE FABRIC ROLL, BUT NOT LESS THAN 10'.

## STORMTECH PRODUCT SPECIFICATIONS

- GENERAL
- STORMTECH CHAMBERS ARE DESIGNED TO CONTROL STORMWATER RUNOFF AS A SUBSURFACE RETENTION SYSTEM. STORMTECH CHAMBERS RETAIN AND ALLOW EFFECTIVE INFILTRATION OF WATER INTO THE SOIL. AS A SUBSURFACE DETENTION SYSTEM, STORMTECH CHAMBERS DETAIN AND ALLOW FOR THE METERED FLOW OF WATER TO AN OUTFALL.
- CHAMBER PARAMETERS
- THE CHAMBER SHALL BE INJECTION MOLDED OF POLYPROPYLENE RESIN TO BE INHERENTLY RESISTANT TO ENVIRONMENTAL STRESS CRACKING (ESCR), AND TO MAINTAIN ADEQUATE STIFFNESS THROUGH HIGHER TEMPERATURES EXPERIENCED DURING INSTALLATION AND SERVICE.
- THE NOMINAL CHAMBER DIMENSIONS OF THE STORMTECH SC-740 SHALL BE 30.0 INCHES TALL, 51.0 INCHES WIDE AND 90.7 INCHES LONG. THE NOMINAL CHAMBER DIMENSIONS OF THE STORMTECH SC-310 SHALL BE 16.0 INCHES TALL, 34.0 INCHES WIDE AND 90.7 INCHES LONG. THE INSTALLED LENGTH OF A JOINED CHAMBER SHALL BE 85.4 INCHES.
- THE CHAMBER SHALL HAVE A CONTINUOUSLY CURVED SECTION PROFILE.
- THE CHAMBER SHALL BE OPEN-BOTTOMED.
- THE CHAMBER SHALL INCORPORATE AN OVERLAPPING CORRUGATION JOINT SYSTEM TO ALLOW CHAMBER ROWS OF ALMOST ANY LENGTH TO BE CREATED. THE OVERLAPPING CORRUGATION JOINT SYSTEM SHALL BE EFFECTIVE WHILE ALLOWING A CHAMBER TO BE TRIMMED TO SHORTEN ITS OVERALL LENGTH.
- THE NOMINAL STORAGE VOLUME OF A JOINED STORMTECH SC-740 CHAMBER SHALL BE 74.9 CUBIC FEET PER CHAMBER WHEN INSTALLED PER STORMTECH'S TYPICAL DETAILS (INCLUDES THE VOLUME OF CRUSHED ANGULAR STONE WITH AN ASSUMED 40% POROSITY). THIS EQUATES TO 2.2 CUBIC FEET OF STORAGE/SQUARE FOOT OF BED. THE NOMINAL STORAGE VOLUME OF AN INSTALLED STORMTECH SC-310 CHAMBER SHALL BE 31.0 CUBIC FEET PER CHAMBER WHEN INSTALLED PER STORMTECH'S TYPICAL DETAILS (INCLUDES THE VOLUME OF CRUSHED ANGULAR STONE WITH AN ASSUMED 40% POROSITY). THIS EQUATES TO 1.3 CUBIC FEET OF STORAGE/SQUARE FOOT OF BED.
- THE CHAMBER SHALL HAVE FORTY-EIGHT ORIFICES PENETRATING THE SIDEWALLS TO ALLOW FOR LATERAL CONVEYANCE OF WATER.
- THE CHAMBER SHALL HAVE TWO ORIFICES NEAR ITS TOP TO ALLOW FOR EQUALIZATION OF AIR PRESSURE BETWEEN ITS INTERIOR AND EXTERIOR.
- THE CHAMBER SHALL HAVE BOTH OF ITS ENDS OPEN TO ALLOW FOR UNIMPEDED HYDRAULIC FLOWS AND VISUAL INSPECTIONS DOWN A ROW'S ENTIRE LENGTH.
- THE CHAMBER SHALL HAVE 14 CORRUGATIONS.
- THE CHAMBER SHALL HAVE A CIRCULAR, INDENTED, FLAT SURFACE ON THE TOP OF THE CHAMBER FOR AN OPTIONAL 4-INCH INSPECTION PORT OR CLEAN-OUT.
- THE CHAMBER SHALL BE ANALYZED AND DESIGNED USING AASHTO METHODS FOR THERMOPLASTIC CULVERTS CONTAINED IN THE LRFD BRIDGE DESIGN SPECIFICATIONS, 2ND EDITION, INCLUDING INTERIM SPECIFICATIONS THROUGH 2001. DESIGN LIVE LOAD SHALL BE THE AASHTO HS20 TRUCK. DESIGN SHALL CONSIDER EARTH AND LIVE LOADS AS APPROPRIATE FOR THE MINIMUM TO MAXIMUM SPECIFIED DEPTH OF FILL.
- THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2000 CERTIFIED FACILITY.
- END CAP PARAMETERS
- THE END CAP SHALL BE INJECTION MOLDED OF POLYPROPYLENE RESIN TO BE INHERENTLY RESISTANT TO ENVIRONMENTAL STRESS CRACKING, AND TO MAINTAIN ADEQUATE STIFFNESS THROUGH HIGHER TEMPERATURES EXPERIENCED DURING INSTALLATION AND SERVICE.
- THE END CAP SHALL BE DESIGNED TO FIT INTO ANY CORRUGATION OF A CHAMBER, WHICH ALLOWS: CAPPING A CHAMBER THAT HAS ITS LENGTH TRIMMED; SEGMENTING ROWS INTO STORAGE BASINS OF VARIOUS LENGTHS.
- THE END CAP SHALL HAVE SAW GUIDES TO ALLOW EASY CUTTING FOR VARIOUS DIAMETERS OF PIPE THAT MAY BE USED TO INLET THE SYSTEM.
- THE END CAP SHALL HAVE EXCESS STRUCTURAL ADEQUACIES TO ALLOW CUTTING AN ORIFICE OF ANY SIZE AT ANY INVERT ELEVATION.
- THE PRIMARY FACE OF AN END CAP SHALL BE CURVED OUTWARD TO RESIST HORIZONTAL LOADS GENERATED NEAR THE EDGES OF BEDS.
- THE END CAP SHALL BE MANUFACTURED IN AN ISO 9001:2000 CERTIFIED FACILITY.



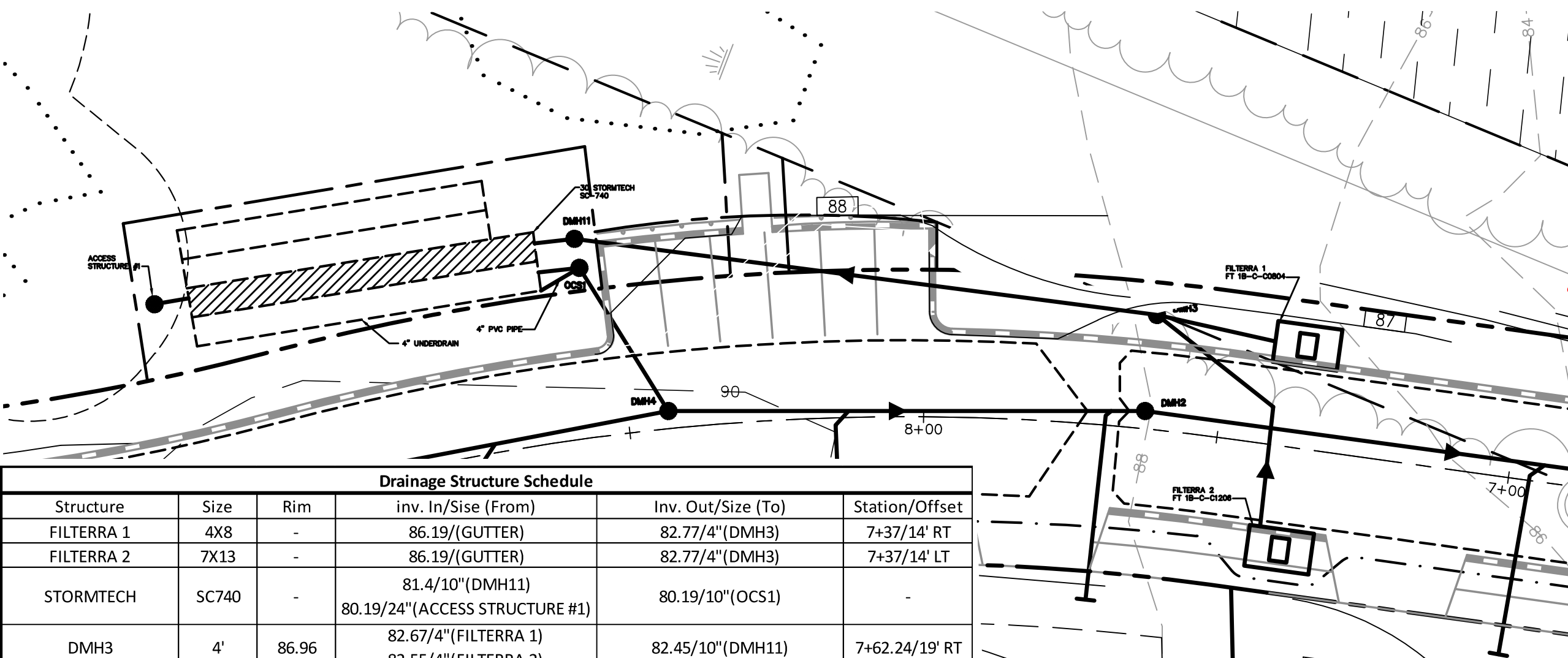
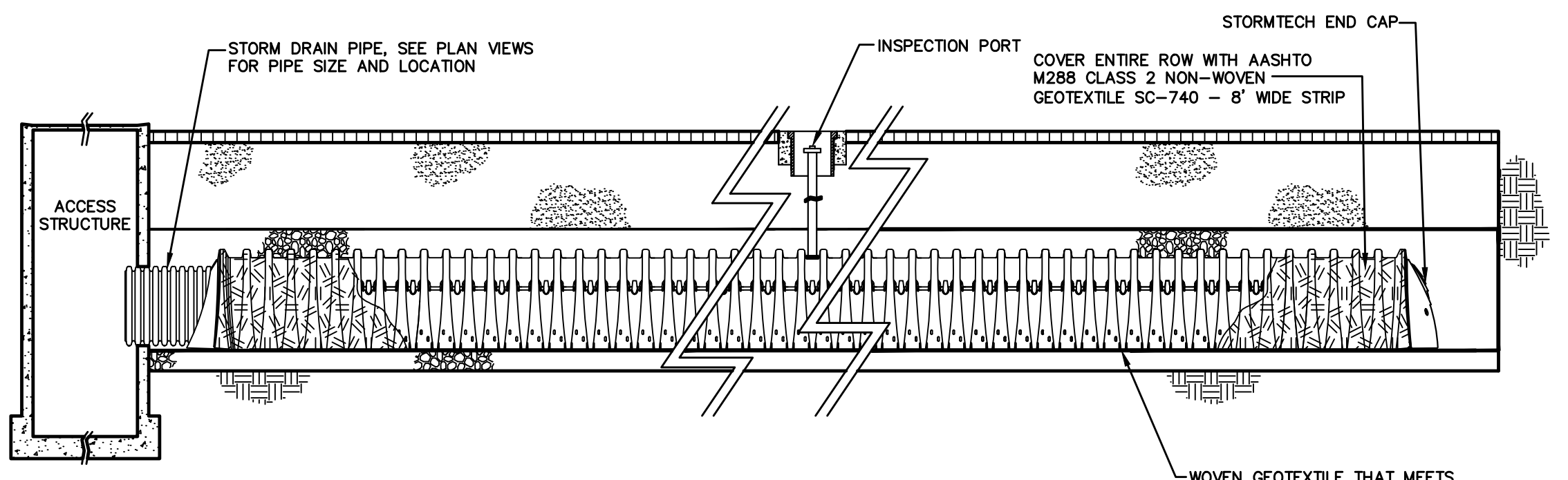
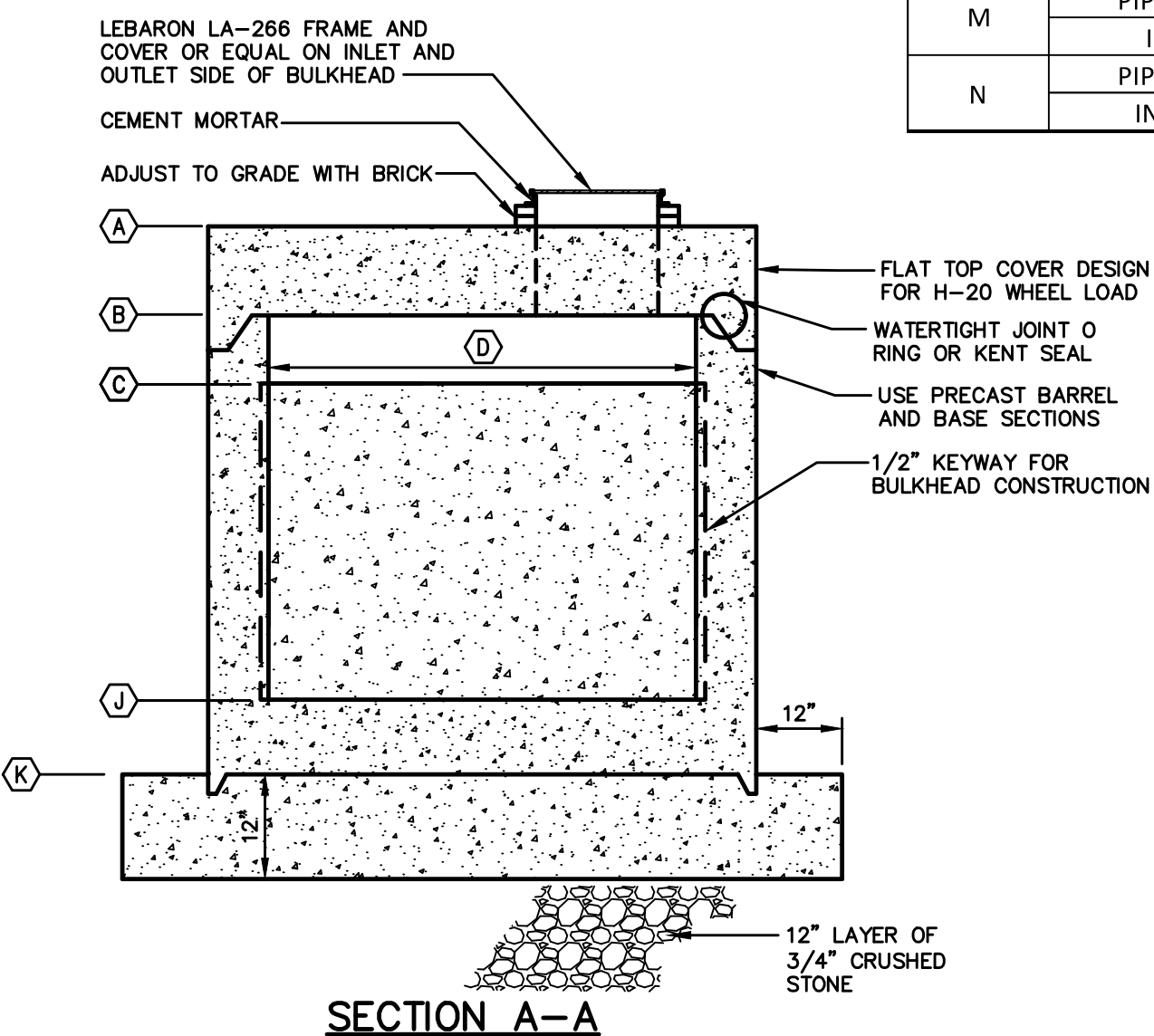
| Drainage Structure Schedule |       |       |                                                                      |                         |                 |
|-----------------------------|-------|-------|----------------------------------------------------------------------|-------------------------|-----------------|
| Structure                   | Size  | Rim   | Inv. In/Size (From)                                                  | Inv. Out/Size (To)      | Station/Offset  |
| DMH10                       | 4'    | 78.07 | 71.75/18"(DMH9)<br>72.96/12"(OCS2)<br>72.89/12"(OCS3)                | 70.18/18"(OUTFALL)      | 14+56.64/3' RT  |
| DMH12                       | 4'    |       | 73.96/12"(CB3)                                                       | 73.86/24"(STORMTECH LT) |                 |
| CB3                         | 4'    | 77.26 | 73.96/6"(UNDERDRAIN)                                                 | 73.96/12"(STORMTECH LT) | 14+73.94/13' RT |
| CB4                         | 4'    | 77.26 | 73.96/6"(UNDERDRAIN)                                                 | 73.96/12"(STORMTECH RT) | 14+73.94/13' LT |
| OCS2                        | 6'    | 81.16 | 73.71/10"(STORMTECH RT)<br>73.21/4"(UNDERDRAIN)                      | 73.11/12"(DMH10)        |                 |
| OCS3                        | 6'    | 81.72 | 73.71/10"(STORMTECH LT)<br>73.21/4"(UNDERDRAIN)                      | 73.11/12"(DMH10)        |                 |
| FILTERRA 3                  | 6X10  | -     | 79.85/(GUTTER)                                                       | 76.85/6"(STORMTECH RT)  | 14+10/14' RT    |
| FILTERRA 4                  | 6X8   | -     | 80.46/(GUTTER)                                                       | 77.46/6"(STORMTECH LT)  | 14+05/14' LT    |
| STORMTECH (RT)              | SC740 | -     | 75.3/6"(FILTERRA3)<br>73.86/12"(CB3)<br>73.76/24"(ACCESS STRUCTURE2) | 73.82/10"(OCS2)         | -               |
| STORMTECH (LT)              | SC740 | -     | 75.3/6"(FILTERRA4)<br>73.76/24"(ACCESS STRUCTURE3)<br>73.86/12"(CB4) | 73.82/10"(OCS3)         | -               |
| ACCESS STRUCTURE2           | 4'    |       | -                                                                    | 73.76/24"(STORMTECH RT) |                 |
| ACCESS STRUCTURE3           | 4'    |       | -                                                                    | 73.76/24"(STORMTECH LT) |                 |



| Schedule C              |           |       |       |  |
|-------------------------|-----------|-------|-------|--|
| Item Description        | Elevation |       |       |  |
|                         | OCS 1     | OCS 2 | OCS 3 |  |
| A TOP OF STRUCTURE      | 90.87     | 78.67 | 78.73 |  |
| B UNDERSIDE TOP SLAB    | 90.26     | 78.06 | 78.12 |  |
| C TOP CONCRETE BULKHEAD | 83.19     | 76.76 | 76.76 |  |
| D WEIR LENGTH           | 6'        | 6'    | 6'    |  |
| J MONHOLE INVERT        | 79.54     | 73.11 | 73.11 |  |
| K BOTTOM OF STRUCTURE   | 78.54     | 72.11 | 72.11 |  |
| L PIPE DIAMETER         | 10"       | 10"   | 10"   |  |
| M INVERT IN             | 80.14     | 73.71 | 73.71 |  |
| N PIPE DIAMETER         | 4"        | 4"    | 4"    |  |
| O INVERT IN             | 79.64     | 73.21 | 73.21 |  |
| P PIPE DIAMETER         | 12"       | 12"   | 12"   |  |
| Q INVERT OUT            | 79.54     | 73.11 | 73.11 |  |

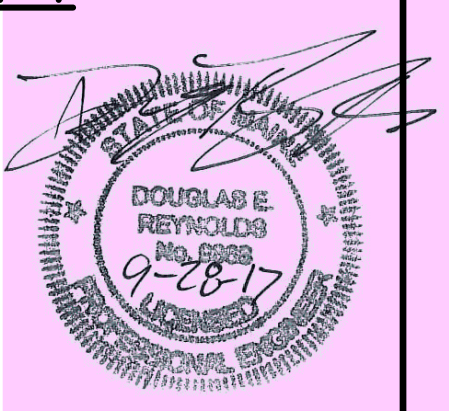
## STORMTECH GENERAL NOTES

- STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
- OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S SPEAK TO A TECHNICAL 1-888-892-2694 CONSTRUCTION. CALL TO WWW.STORMTECH.COM SERVICE REPRESENTATIVE OR VISIT RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
- STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96 INCHES INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 96 INCHES.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
- AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
- STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
- THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
- STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL 1-888-892-2694 STORMTECH OR VISIT WWW.STORMTECH.COM.



| Drainage Structure Schedule |       |       |                                                   |                      |                |
|-----------------------------|-------|-------|---------------------------------------------------|----------------------|----------------|
| Structure                   | Size  | Rim   | Inv. In/Size (From)                               | Inv. Out/Size (To)   | Station/Offset |
| FILTERRA 1                  | 4X8   | -     | 86.19/(GUTTER)                                    | 82.77/4"(DMH3)       | 7+37/14' RT    |
| FILTERRA 2                  | 7X13  | -     | 86.19/(GUTTER)                                    | 82.77/4"(DMH3)       | 7+37/14' LT    |
| STORMTECH                   | SC740 | -     | 81.4/10"(DMH11)<br>80.19/24"(ACCESS STRUCTURE #1) | 80.19/10"(OCS1)      | -              |
| DMH3                        | 4'    | 86.96 | 82.67/4"(FILTERRA 1)<br>82.55/4"(FILTERRA 2)      | 82.45/10"(DMH11)     | 7+62.24/19' RT |
| DMH4                        | 4'    | 87.79 | 79.42/12"(DMH5)<br>79.42/12"(OCS1)                | 79.32/12"(DMH2)      | 8+43.13/3' RT  |
| DMH11                       | 4'    |       | 81.57/10"(DMH3)                                   | 81.47/10"(STORMTECH) |                |
| OCS1                        | 6'    | 90.87 | 80.14/10"(STORMTECH)<br>79.69/4"(UNDERDRAIN)      | 79.59/12"(DMH4)      | 8+41.56/19' RT |
| ACCESS STRUCTURE1           | 4'    | 90.87 | -                                                 | 80.24/24"(STORMTECH) | 8+41.56/23' RT |

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



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| Design: BMG                                                                                                                                                                                | Draft: CG  | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                               | Scale: NTS | Job No.: 98089.08 |
| File Name: 98089-08-DETAILS.dwg                                                                                                                                                            |            |                   |
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Drainage Details                               |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

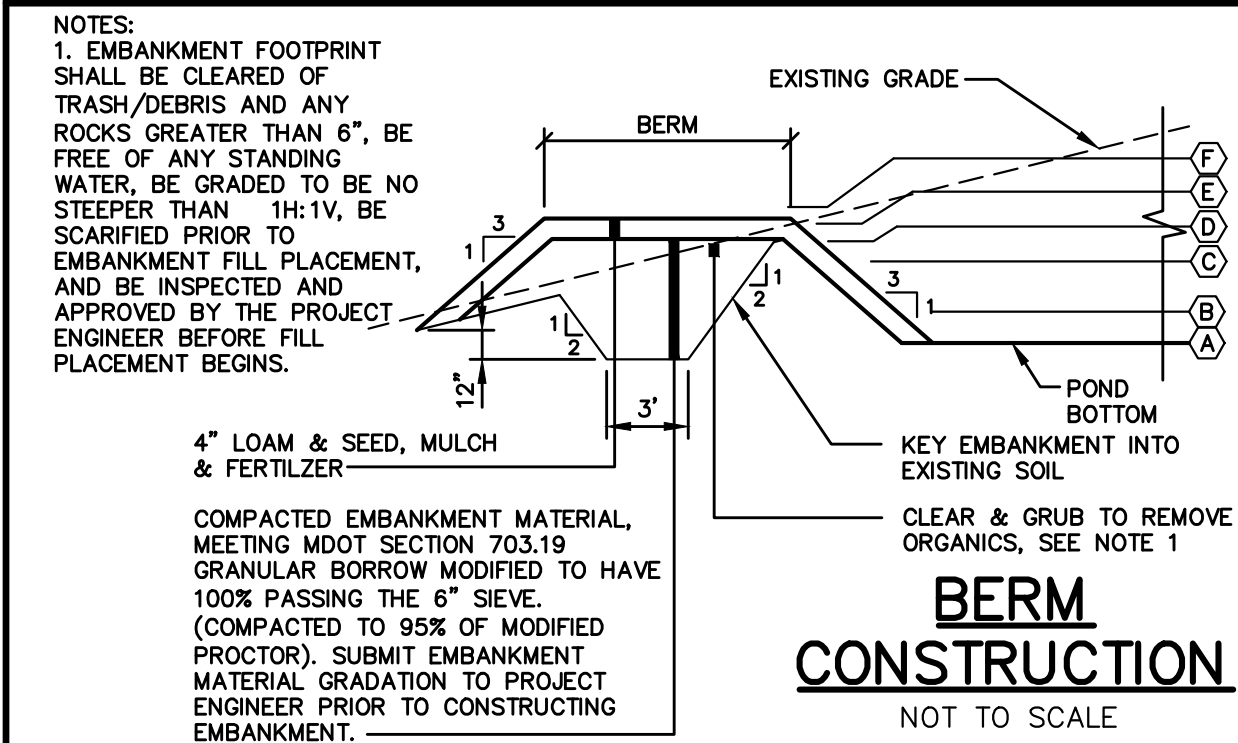
Drawing No.

C405



### CONSTRUCTION OVERSIGHT

- INSPECTION OF THE FILTER BASIN SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE DEP. AT A MINIMUM, INSPECTIONS WILL OCCUR:
- AFTER PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED.
  - AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA.
  - AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED.
  - AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS.
  - ALL MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN WILL BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.
- NOTE: CONTRACTOR SHALL NOTIFY PROJECT ENGINEER 48 HOURS PRIOR TO THE MILESTONES LISTED ABOVE TO ALLOW FOR INSPECTION.



| SCHEDULE B - EMBANKMENT SCHEDULE               |                     |       |       |       |       |
|------------------------------------------------|---------------------|-------|-------|-------|-------|
| ITEM DESCRIPTION                               | DIMENSION/ELEVATION |       |       |       |       |
|                                                | 1                   | 2     | 3     | 4     | 5     |
| (A) POND BASE ELEVATION                        | 86.00               | 87.00 | 79.00 | 79.00 | 80.00 |
| (B) PEAK ELEVATION - CHANNEL PROTECTION VOLUME | 87.00               | 88.00 | 84.00 | 80.00 | 81.00 |
| (C) PEAK ELEVATION - 2 YEAR STORM              | 87.26               | 88.26 | 84.26 | 80.26 | 81.26 |
| (D) PEAK ELEVATION - 10 YEAR STORM             | 87.38               | 88.38 | 84.38 | 80.38 | 81.38 |
| (E) PEAK ELEVATION - 25 YEAR STORM             | 87.48               | 88.48 | 84.48 | 80.48 | 81.48 |
| (F) TOP OF BERM                                | 88.48               | 89.48 | 85.48 | 81.48 | 82.48 |

### TYPICAL POND CROSS SECTION

NOT TO SCALE

### GRASSED UNDERDRAINED SOIL FILTER NOTES:

#### SOIL SPECIFICATIONS:

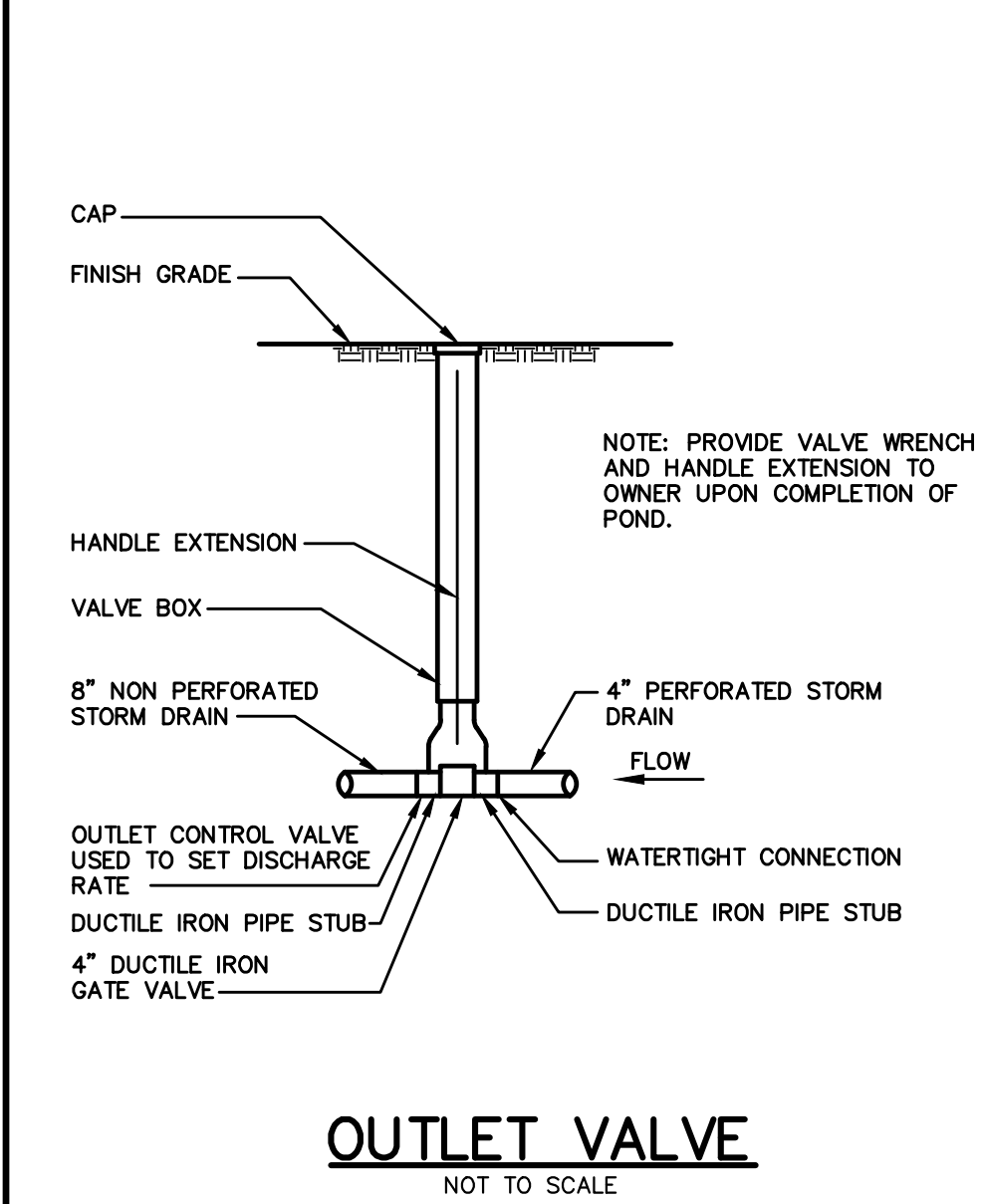
- THE SOIL FILTER MEDIA SHALL BE A LAYERED SYSTEM CONSISTING OF THE FOLLOWING FROM THE BOTTOM:
  - 12" OF LOAMY COARSE SAND, SEE TABLE 1.
  - 2" LAYER OF TOPSOIL (SEE "C" BELOW) ROTOTILLED INTO THE LOAMY COARSE SAND LAYER.
  - 6" OF NON-CLAYEY, LOAMY TOPSOIL SUCH AS USDA SANDY LOAM TOPSOIL WITH 5-8% HUMIFIED ORGANIC MATTER. SUPERHUMUS OR EQUIVALENT MAY BE ADDED TO THE TOPSOIL TO INCREASE ORGANIC CONTENT, SEE TABLE 3.
- SOIL FILTER MEDIA MIXTURE SHALL HAVE A PERMEABILITY OF 2.4 IN./HR. TO 4 IN./HR UPON COMPACTION BETWEEN 90% AND 92% STANDARD PROCTOR (ASTM D698).

#### SUBMITTALS:

- SUBMIT RESULTS OF FIELD AND LABORATORY TESTING TO PROJECT ENGINEER.
- SUBMIT 75 lb. SAMPLE OF EACH TYPE OF MATERIAL: SUBMIT IN AIR TIGHT CONTAINERS TO PROJECT ENGINEER.
- THE FOLLOWING MATERIAL SHALL BE SUBMITTED:
  - SAND.
  - UNDERDRAIN BEDDING MATERIAL.
- PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 - STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES; 1996a ON EACH TYPE OF THE SAMPLE MATERIAL AND SUBMIT RESULTS TO PROJECT ENGINEER.
- PERFORM A PERMEABILITY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90% TO 92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698. SUBMIT RESULTS TO THE PROJECT ENGINEER.
- PERFORM ONE COMPACTION DENSITY TEST ON THE IN PLACE SOIL FILTER FOR EVERY 2,000 SQUARE FEET OF FILTER SURFACE AREA. TEST SHALL CONFORM TO ASTM D 2922 - STANDARD TEST METHODS FOR DENSITY OF SOIL AND SOIL-AGGREGATE IN PLACE BY NUCLEAR METHODS (SHALLOW DEPTH); 1996. SUBMIT RESULTS TO THE PROJECT ENGINEER.

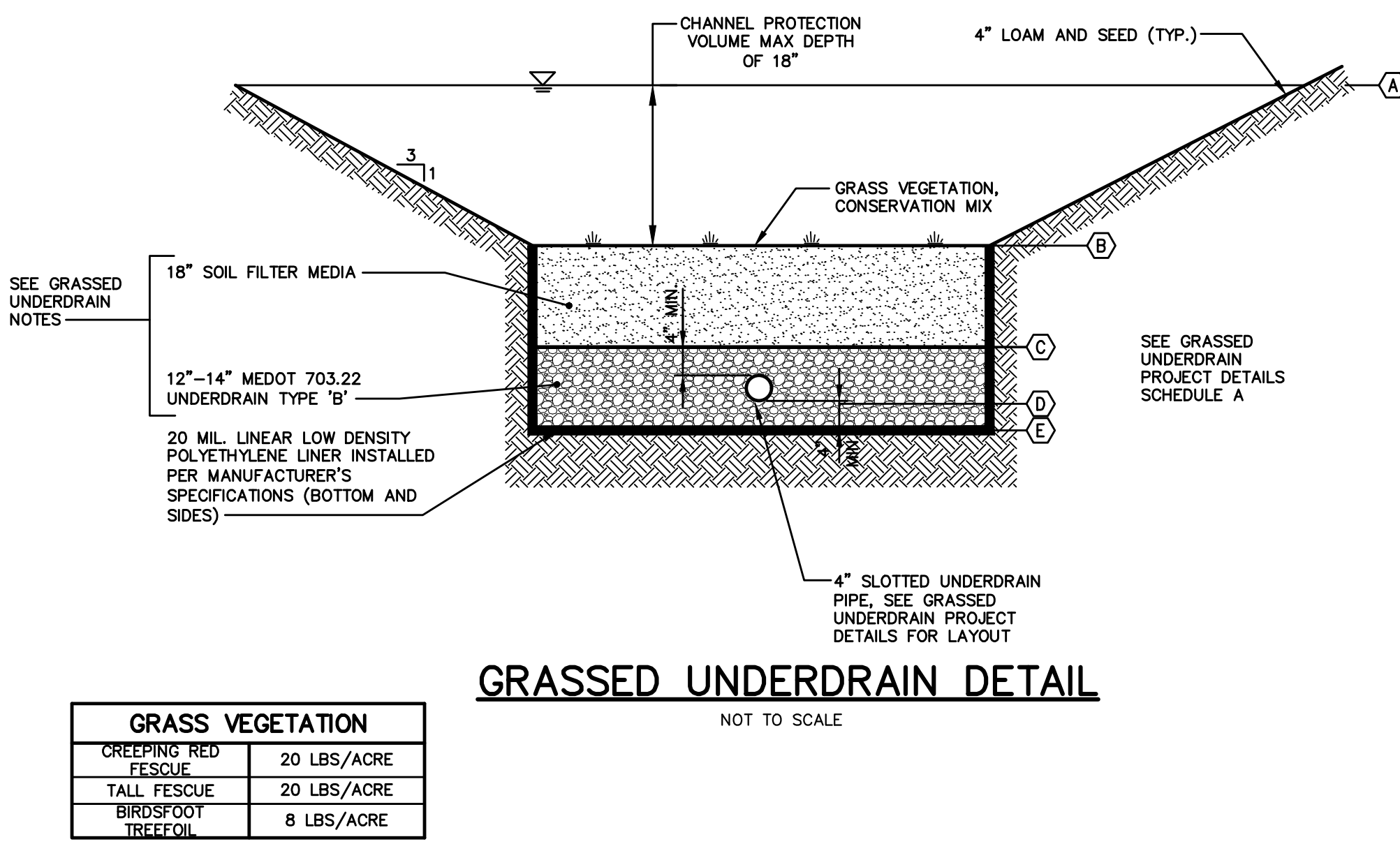
#### CONSTRUCTION:

- SOIL FILTER MEDIA AND UNDERDRAIN BEDDING MATERIAL SHALL BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR.
- PERFORATED UNDERDRAIN PIPE SHALL BE 4" PIPE. SPACED 15 FEET ON CENTER MAXIMUM.
- TRIBUTARY AREAS SHALL BE STABILIZED PRIOR TO INSTALLATION OF THE SOIL FILTER MEDIA MIXTURE AND UNDERDRAIN. STABILIZED IS DEFINED AS PAVED IF IN A PARKING AREA OR ROADWAY, AND 90% GRASS CATCH IF IN A VEGETATED AREA.
- OUTFLOW OF THE VEGETATED UNDERDRAIN SHALL BE CONTROLLED BY A 4" DUCTILE IRON GATE VALVE WITH VALVE WRENCH AND EXTENSION (AVAILABLE FROM E.J. PRESCOTT OR EQUIVALENT). A THREE PIECE VALVE BOX (AVAILABLE FROM E.J. PRESCOTT OR EQUIVALENT) SHALL BE INSTALLED OVER THE VALVE.
- ALL EQUIPMENT USED WITHIN THE LIMITS OF THE VEGETATED UNDERDRAIN SHALL BE LOW GROUND PRESSURE VEHICLES (LESS THAN 2.0 PS) WHEN FULLY LOADED.
- UPON COMPLETION OF THE INSTALLATION OF THE SOIL FILTER MEDIA AND THE ESTABLISHMENT OF A 90% CATCH OF GRASS OVER THE FILTER MEDIA, THE CONTRACTOR SHALL FLOOD THE VEGETATED UNDERDRAIN TO THE DESIGN ELEVATION WITH CLEAN WATER AND ADJUST THE VALVE TO OBTAIN A 24 HOUR TO 32 HOUR RELEASE TIME.



### OUTLET VALVE

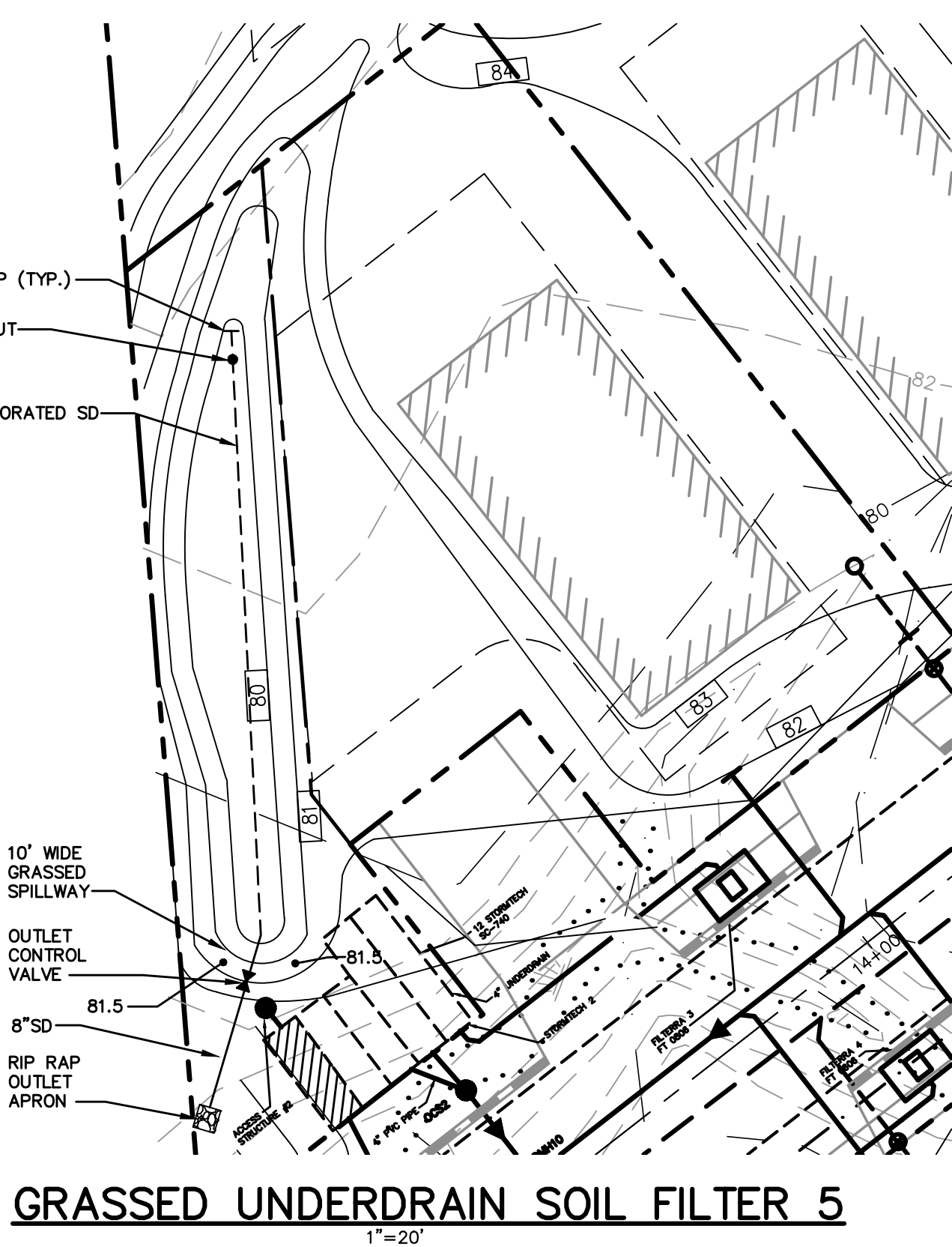
NOT TO SCALE



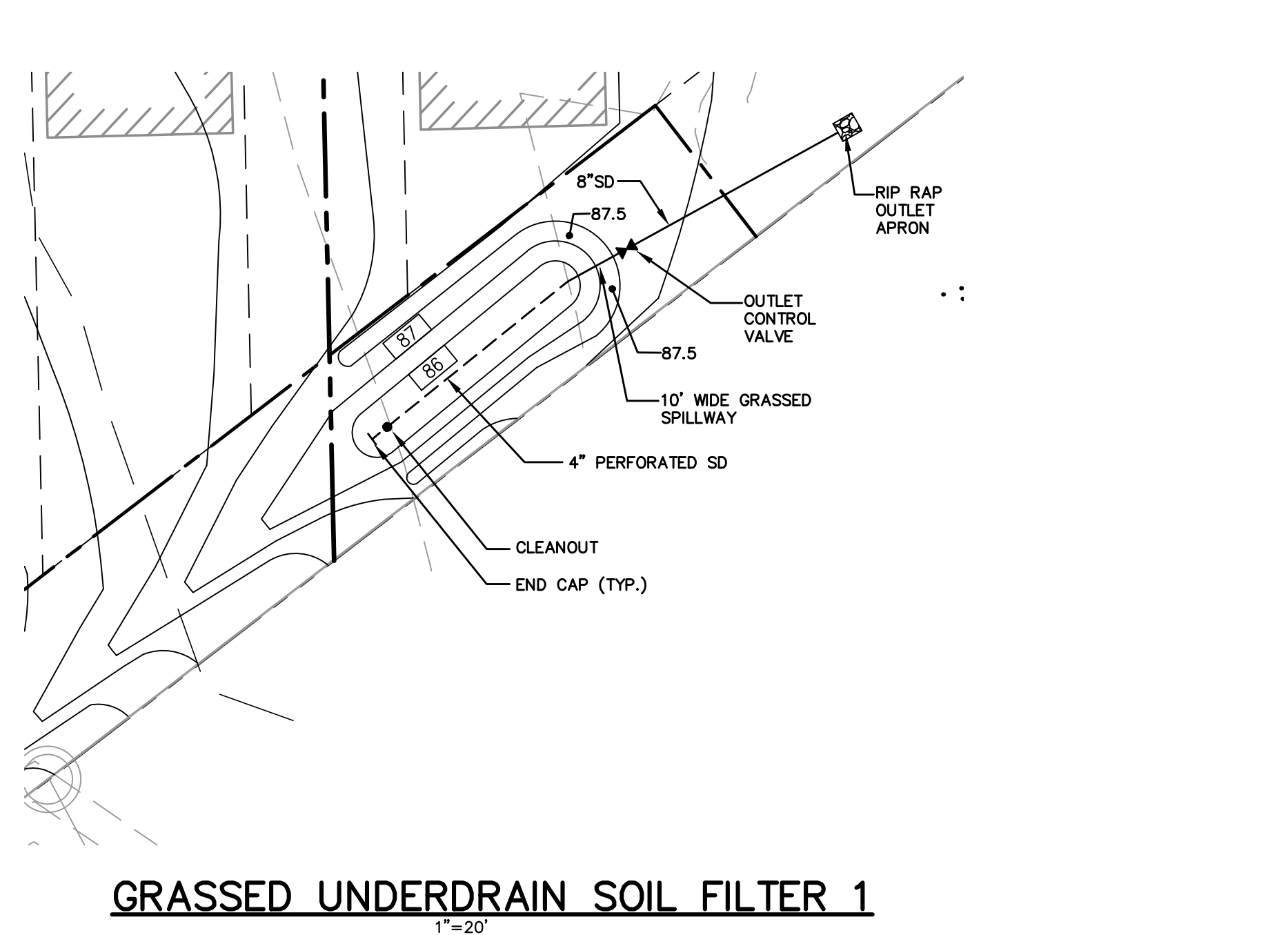
### GRASSED UNDERDRAIN DETAIL

NOT TO SCALE

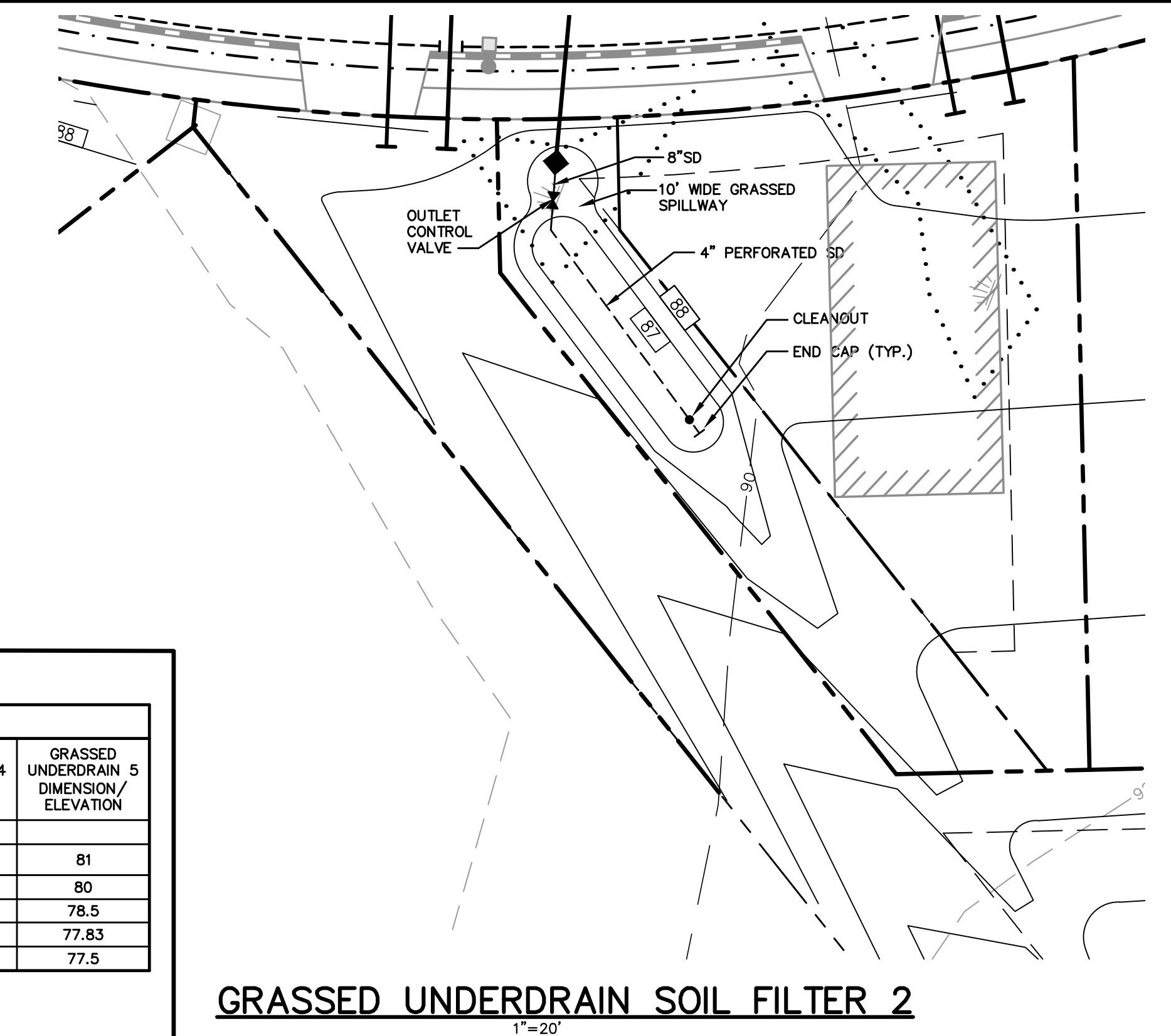
| GRASS VEGETATION    |             |
|---------------------|-------------|
| CREeping RED FESCUE | 20 LBS/ACRE |
| TALL FESCUE         | 20 LBS/ACRE |
| BIRD'SFOOT TREFOIL  | 8 LBS/ACRE  |



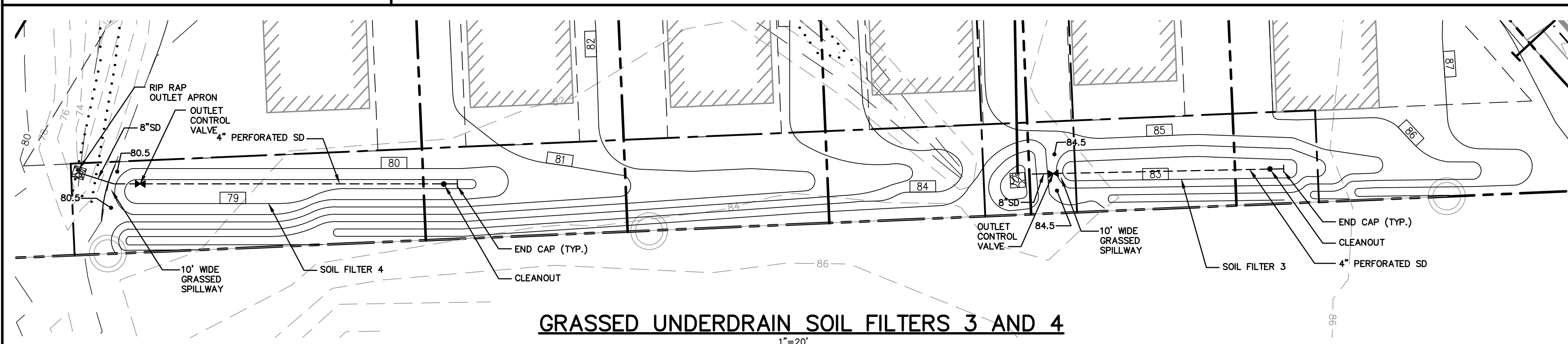
### GRASSED UNDERDRAIN SOIL FILTER 5



### GRASSED UNDERDRAIN SOIL FILTER 1



### GRASSED UNDERDRAIN SOIL FILTER 2



### GRASSED UNDERDRAIN SOIL FILTERS 3 AND 4

Table 1  
Loamy Coarse Sand

| SIEVE SIZE     | % PASSING BY WEIGHT |
|----------------|---------------------|
| #10            | 85-100              |
| #20            | 70-100              |
| #60            | 15-40               |
| #200           | 8-15                |
| #200 CLAY SIZE | <2.0                |

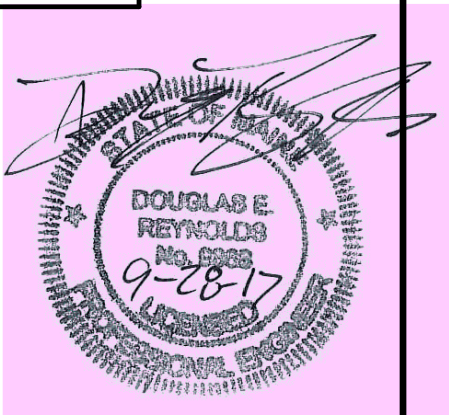
Table 3  
Sandy Loam Topsoil

| SIEVE SIZE     | % PASSING BY WEIGHT |
|----------------|---------------------|
| #4             | 75-95               |
| #10            | 60-90               |
| #40            | 35-85               |
| #200           | 20-70               |
| #200 CLAY SIZE | <2.0                |

Table 2 MEDOT  
Specifications for  
Underdrain Type B (MEDOT  
#703.22)

| SIEVE SIZE | % PASSING BY WEIGHT |
|------------|---------------------|
| 1"         | 90-100              |
| 1/2"       | 75-100              |
| #4         | 50-100              |
| #20        | 15-80               |
| #50        | 0-15                |
| #200       | 0-5                 |

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
|-----------------------------------|---------|-----|
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |            |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------|
| Design: BMG                                                                                                                                                                                 | Draft: CG  | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: NTS | Job No.: 98089.08 |
| File Name: 98089-08-DETAILS.dwg                                                                                                                                                             |            |                   |
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| Drawing Name:                |                                                |
|------------------------------|------------------------------------------------|
| Soil Filter Plan and Details |                                                |
| Project:                     | Brandy Lane<br>Portland, Maine                 |
| Client:                      | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

C406



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|      |          |                                  |
|------|----------|----------------------------------|
| Rev. | Date     | Revision                         |
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
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|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

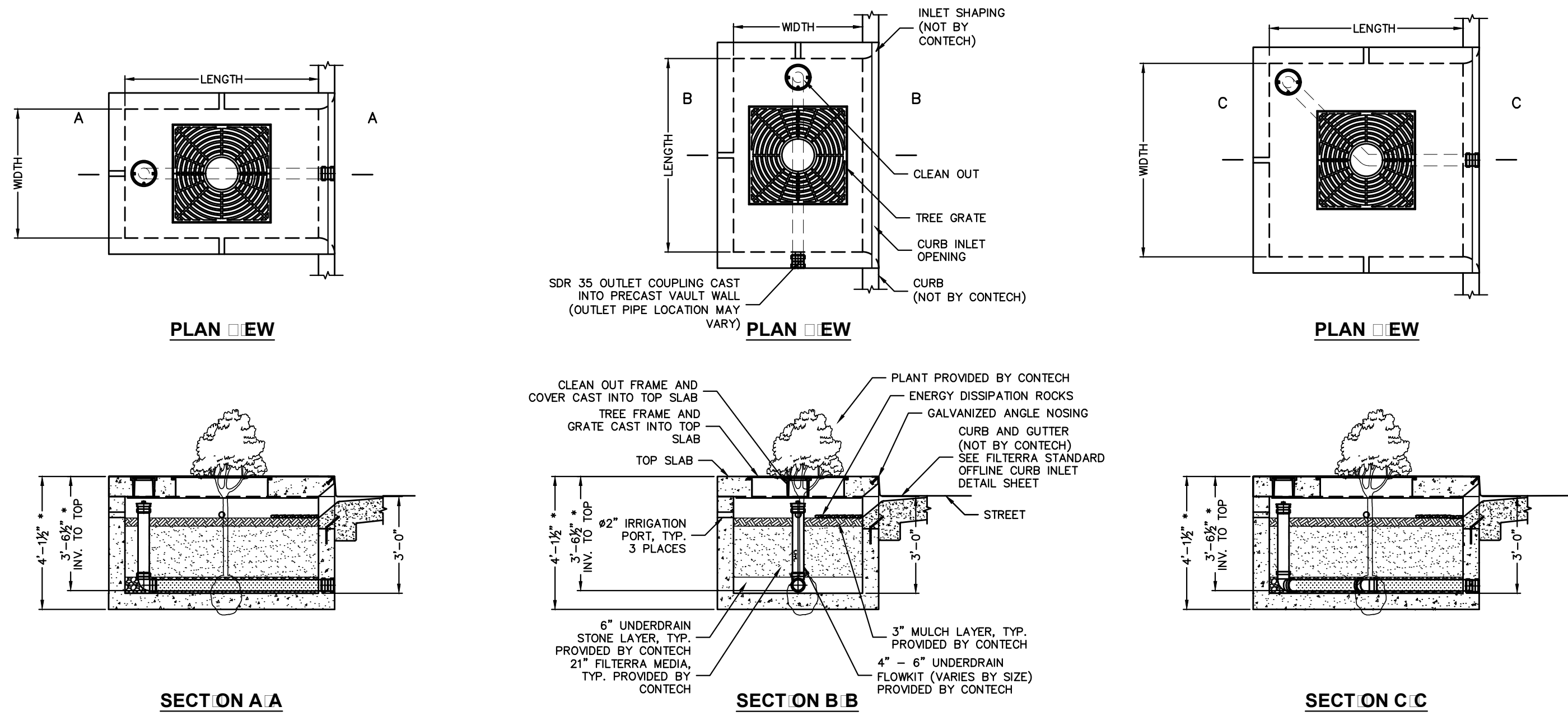
|                                                                                                                                                                                             |            |                   |
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| Design: BMG                                                                                                                                                                                 | Draft: CG  | Date: MAY 2017    |
| Checked: DER                                                                                                                                                                                | Scale: NTS | Job No.: 98089.08 |
| File Name: 98089-08-DETAILS.dwg                                                                                                                                                             |            |                   |
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Filterra Details                               |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

|             |
|-------------|
| Drawing No. |
| C407        |



| SHORT SIDE INLET CONFIGURATION |        |        |       |             |                        |
|--------------------------------|--------|--------|-------|-------------|------------------------|
| DESIGNATION                    | SIZE   | LENGTH | WIDTH | OUTLET PIPE | TREE GRATE QTY. & SIZE |
| FT0406                         | 4 x 6  | 6'-0"  | 4'-0" | 4" SDR 35   | (1) 3' x 3'            |
| FT0408                         | 4 x 8  | 8'-0"  | 4'-0" | 4" SDR 35   | (1) 3' x 3'            |
| FT0412                         | 4 x 12 | 12'-0" | 4'-0" | 4" SDR 35   | (2) 3' x 3'            |
| FT0608                         | 6 x 8  | 8'-0"  | 6'-0" | 4" SDR 35   | (1) 4' x 4'            |
| FT0610                         | 6 x 10 | 10'-0" | 6'-0" | 6" SDR 35   | (1) 4' x 4'            |
| FT0612                         | 6 x 12 | 12'-0" | 6'-0" | 6" SDR 35   | (2) 4' x 4'            |
| FT0713                         | 7 x 13 | 13'-0" | 7'-0" | 6" SDR 35   | (2) 4' x 4'            |

INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING UPON OUTLET LOCATION

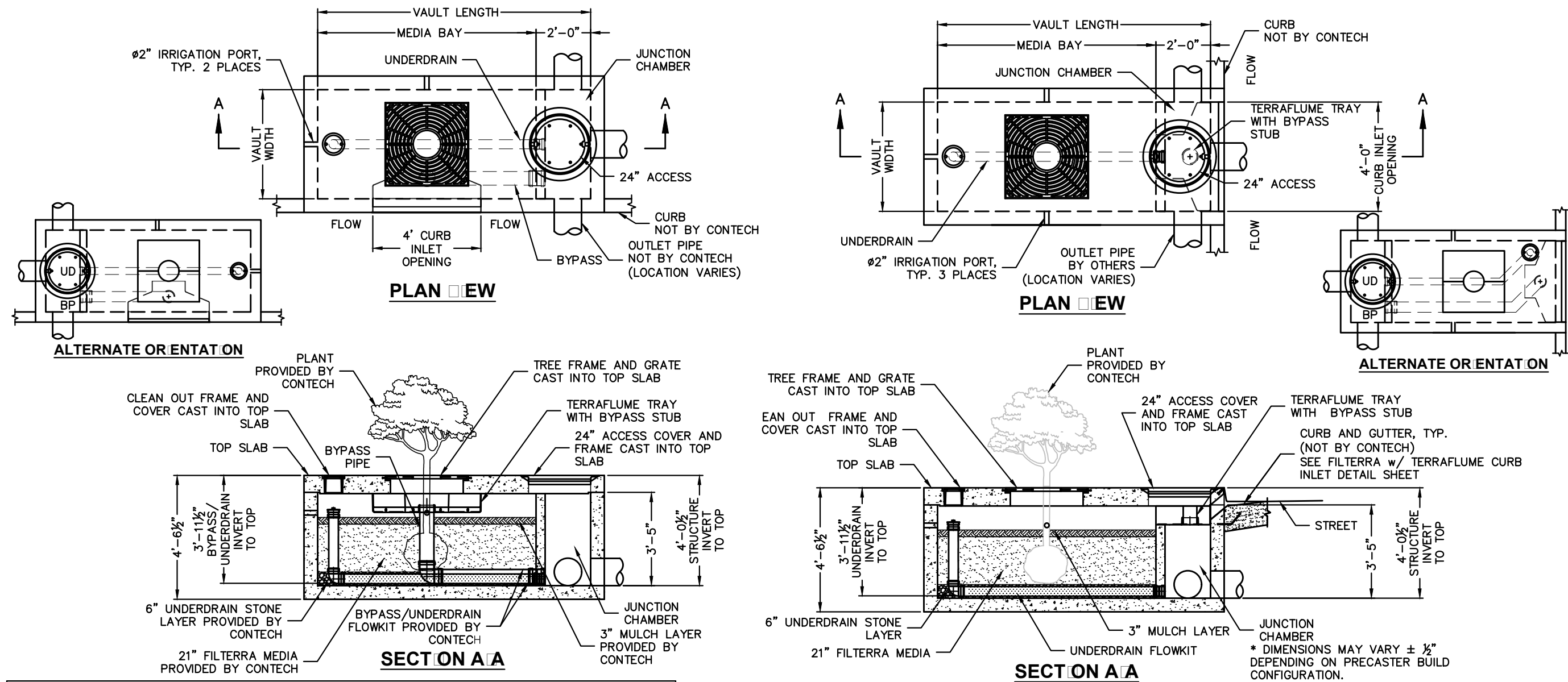
| LONG SIDE INLET CONFIGURATION |        |        |       |             |                        |
|-------------------------------|--------|--------|-------|-------------|------------------------|
| DESIGNATION                   | SIZE   | LENGTH | WIDTH | OUTLET PIPE | TREE GRATE QTY. & SIZE |
| FT0604                        | 6 x 4  | 6'-0"  | 4'-0" | 4" SDR 35   | (1) 3' x 3'            |
| FT0604                        | 8 x 4  | 8'-0"  | 4'-0" | 4" SDR 35   | (1) 3' x 3'            |
| FT0606                        | 8 x 6  | 8'-0"  | 6'-0" | 4" SDR 35   | (1) 4' x 4'            |
| FT1006                        | 10 x 6 | 10'-0" | 6'-0" | 6" SDR 35   | (1) 4' x 4'            |
| FT1204                        | 12 x 4 | 12'-0" | 4'-0" | 4" SDR 35   | (2) 3' x 3'            |
| FT1206                        | 12 x 6 | 12'-0" | 6'-0" | 6" SDR 35   | (2) 4' x 4'            |
| FT1307                        | 13 x 7 | 13'-0" | 7'-0" | 6" SDR 35   | (2) 4' x 4'            |

INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING UPON OUTLET LOCATION

\* DIMENSION MAY VARY ± 1/2" DEPENDING ON PRECASTER BUILD CONFIGURATION.

## FILTERRA STANDARD OFFLINE

N.T.S.



| FTBC LONG SIDE CURB INLET |                  |              |             |                       |                        |                              |                        |
|---------------------------|------------------|--------------|-------------|-----------------------|------------------------|------------------------------|------------------------|
| DESIGNATION (LONG SIDE)   | SIZE (MEDIA BAY) | VAULT LENGTH | VAULT WIDTH | MAX. BYPASS PIPE SIZE | MAX. BYPASS FLOW (CFS) | UNDERDRAIN PIPE DIA. (PERF.) | TREE GRATE QTY. & SIZE |
| FTBC-C0404 LS             | 4' x 4'          | 6'-0"        | 4'-0"       | 6" SDR 35             | 1.42                   | 4" SDR 35                    | (1) 3' x 3'            |
| FTBC-C0604                | 6' x 4'          | 8'-0"        | 4'-0"       | 8" SDR 35             | 1.89                   | 4" SDR 35                    | (1) 3' x 3'            |
| FTBC-C0606 LS             | 6' x 6'          | 8'-0"        | 6'-0"       | 10" SDR 35            | 2.37                   | 4" SDR 35                    | (1) 3' x 3'            |
| FTBC-C0804                | 8' x 4'          | 10'-0"       | 4'-0"       | 8" SDR 35             | 1.89                   | 4" SDR 35                    | (1) 3' x 3'            |
| FTBC-C0806                | 8' x 6'          | 10'-0"       | 6'-0"       | 10" SDR 35            | 2.37                   | 4" SDR 35                    | (1) 4' x 4'            |
| FTBC-C1006                | 10' x 6'         | 12'-0"       | 6'-0"       | 10" SDR 35            | 2.37                   | 6" SDR 35                    | (1) 4' x 4'            |
| FTBC-C1204                | 12' x 4'         | 14'-0"       | 4'-0"       | 8" SDR 35             | 1.89                   | 4" SDR 35                    | (2) 3' x 3'            |
| FTBC-C1206                | 12' x 6'         | 14'-0"       | 6'-0"       | 10" SDR 35            | 2.37                   | 6" SDR 35                    | (2) 4' x 4'            |
| FTBC-C1307                | 13' x 7'         | 15'-0"       | 7'-0"       | 10" SDR 35            | 2.37                   | 6" SDR 35                    | (2) 4' x 4'            |

INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING ON VAULT SIZE

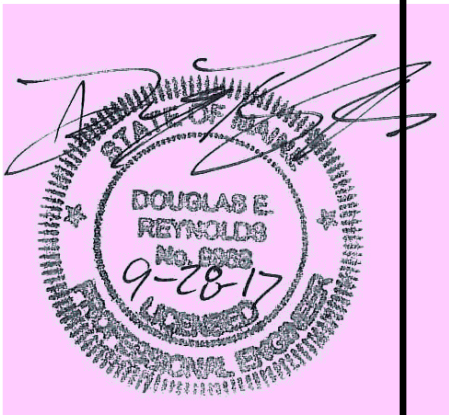
| FTBC SHORT SIDE CURB INLET |                  |              |             |                       |                        |                              |                        |
|----------------------------|------------------|--------------|-------------|-----------------------|------------------------|------------------------------|------------------------|
| DESIGNATION (SHORT SIDE)   | SIZE (MEDIA BAY) | VAULT LENGTH | VAULT WIDTH | MAX. BYPASS PIPE SIZE | MAX. BYPASS FLOW (CFS) | UNDERDRAIN PIPE DIA. (PERF.) | TREE GRATE QTY. & SIZE |
| FTBC-C0404 SS              | 4' x 4'          | 6'-0"        | 4'-0"       | 6" SDR 35             | 1.42                   | 4" SDR 35                    | (1) 3' x 3'            |
| FTBC-C0406                 | 4' x 6'          | 8'-0"        | 4'-0"       | 8" SDR 35             | 1.89                   | 4" SDR 35                    | (1) 3' x 3'            |
| FTBC-C0408                 | 4' x 8'          | 10'-0"       | 4'-0"       | 8" SDR 35             | 1.89                   | 4" SDR 35                    | (1) 3' x 3'            |
| FTBC-C0412                 | 4' x 12'         | 14'-0"       | 4'-0"       | 8" SDR 35             | 1.89                   | 4" SDR 35                    | (2) 3' x 3'            |
| FTBC-C0606 SS              | 6' x 6'          | 8'-0"        | 6'-0"       | 10" SDR 35            | 2.37                   | 4" SDR 35                    | (1) 3' x 3'            |
| FTBC-C0608                 | 6' x 8'          | 10'-0"       | 6'-0"       | 10" SDR 35            | 2.37                   | 4" SDR 35                    | (1) 4' x 4'            |
| FTBC-C0610                 | 6' x 10'         | 12'-0"       | 6'-0"       | 10" SDR 35            | 2.37                   | 6" SDR 35                    | (1) 4' x 4'            |
| FTBC-C0612                 | 6' x 12'         | 14'-0"       | 6'-0"       | 10" SDR 35            | 2.37                   | 6" SDR 35                    | (2) 4' x 4'            |
| FTBC-C0713                 | 7' x 13'         | 15'-0"       | 7'-0"       | 10" SDR 35            | 2.37                   | 6" SDR 35                    | (2) 4' x 4'            |

INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING ON VAULT SIZE

## FILTERRA INTERNAL BYPASS CURB INLET AND CHAMBER

N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.





## EROSION AND SEDIMENTATION CONTROL BASIC STANDARDS

### 1.3.5 EROSION CONTROL MEASURES AND SITE STABILIZATION

THE PRIMARY EMPHASIS OF THE EROSION/SEDIMENTATION CONTROL PLAN, WHICH WILL BE IMPLEMENTED FOR THIS PROJECT, IS AS FOLLOWS:

- DEVELOPMENT OF A CAREFUL CONSTRUCTION SEQUENCE.
- RAPID REVEGETATION OF DENIED AREAS TO MINIMIZE THE PERIOD OF SOIL EXPOSURE.
- RAPID STABILIZATION OF DRAINAGE PATHS TO AVOID RILL AND GULLY EROSION.
- THE USE OF ON-SITE MEASURES TO CAPTURE SEDIMENT (HAY BALES/ STONE CHECK DAMS/SILT FENCE, ETC.)

THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL DEVICES WILL BE IMPLEMENTED AS PART OF THE SITE DEVELOPMENT. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED WITHIN THIS REPORT. FOR FURTHER REFERENCE, SEE THE LATEST EDITION OF THE MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS.

#### A. Dewatering

WATER FROM CONSTRUCTION TRENCH DEWATERING OR POND CONSTRUCTION SHALL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE LEED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, ICING, AND SEDIMENT DISCHARGES TO DOWNSTREAM. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 50 FEET OF A PROTECTED NATURAL RESOURCE.

#### B. INSPECTION AND MONITORING

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL IN THE SPRING INSPECT AND REPAIR ANY DAMAGES AND/OR UNSTABILIZED SPOTS. ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 80% OF AREAS VEGETATED WITH WOODED GROWTH.

#### C. TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING MEASURES ARE PLANNED AS TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION:

1. CRUSHED STONE-STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE ENTRANCE OFF HOPE AVENUE.
2. SILTATION FENCE OR WOOD WASTE COMPOST BERMS SHALL BE INSTALLED DOWNSTREAM OF ANY DISTURBED AREAS TO TRAP RUNOFF-BORNE SEDIMENTS UNTIL FENCE AND/OR WOOD WASTE COMPOST BERMS SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THIS PACKAGE AND INSPECTED AT LEAST ONCE A WEEK AND BEFORE AND IMMEDIATELY AFTER A STORM EVENT OF 0.3 INCHES OR GREATER, AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE OR BERM LINE. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPROVING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM. WOOD WASTE COMPOST BERMS ARE NOT TO BE USED ON WETLANDS OR AREAS THAT ARE NOT TO BE DISTURBED.
3. STRAW OR HAY MULCH INCLUDING HYDROSEEDING IS INTENDED TO PROVIDE COVER FOR DENIED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND OCTOBER 15TH ON SLOPES OF LESS THAN 15 PERCENT SHALL BE ANCHORED BY APPLYING WATER. MULCH PLACED ON SLOPES OF EQUAL TO OR STEEPER THAN 15 PERCENT SHALL BE COVERED BY A FABRIC NETTING AND ANCHORED WITH STAPLES. THE MANUFACTURER'S RECOMMENDATION REGARDING THE TYPE OF NETTING AND STAPLES TO BE USED ON DISTURBED AREAS WITHIN 50' OF LAKES, STREAMS, AND WETLANDS REGARDLESS OF THE UPSTREAM SLOPE. MULCH PLACED BETWEEN OCTOBER 15TH AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT SHALL BE COVERED WITH A FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SLOPES STEEPER THAN 3:1 AND EQUAL TO FLATTER THAN 2:1, WHICH ARE NOT TO BE REVEGETATED, SHALL RECEIVE CURLEX BLANKETS BY AMERICAN EXCELOR OR EQUAL. SLOPES STEEPER THAN 2:1 SHALL RECEIVE RIPRAP AS NOTED ON THE PLANS. MULCH APPLICATION RATE FOR BOTH TEMPORARY AND PERMANENT SEEDING IS 75 LBS PER 1000 SF AS IDENTIFIED IN ATTACHMENT A OF THIS SECTION. MULCH SHALL NOT BE PLACED OVER SNOW.
4. TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION WILL BE PROTECTED AS FOLLOWS:
  - a) TEMPORARY STOCKPILES SHALL NOT BE LOCATED WITHIN 100 FEET OF ANY WETLANDS WHICH WILL NOT BE DISTURBED AND SHALL BE LOCATED AWAY FROM DRAINAGE SWALES.
  - b) STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS BY EITHER TEMPORARILY SEEDING THE STOCKPILE BY A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH, SUCH AS HAY, STRAW, OR EROSION CONTROL MIX.
  - c) STOCKPILES SHALL BE SURROUNDED BY SEDIMENTATION BARRIER AT THE TIME OF FORMATION.
5. ALL DENIED AREAS THAT ARE WITHIN 100 FEET OF AN UNDISTURBED WETLAND, WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN THE ROADWAY SUBGRADE AREA, SHALL RECEIVE MULCH OR EROSION CONTROL MESH FABRIC WITHIN 48 HOURS OF INITIAL DISTURBANCE OF SOIL. ALL AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW. IN OTHER AREAS, THE TIME PERIOD MAY BE EXTENDED TO 7 DAYS.
6. FOR WORK, WHICH IS CONDUCTED BETWEEN OCTOBER 15TH AND APRIL 15TH OF ANY CALENDAR YEAR, ALL DENIED AREAS, SHALL BE COVERED WITH HAY MULCH OR EROSION CONTROL MIX, APPLIED AT TWICE THE NORMAL APPLICATION RATE AND ANCHORED WITH A FABRIC NETTING. THE TIME PERIOD FOR APPLYING MULCH SHALL BE LIMITED TO 2 DAYS FOR ALL AREAS.
7. HOPE AVENUE SHALL BE SWEEP TO CONTROL MUD AND DUST AS NECESSARY. ADDITIONAL STONE SHALL BE ADDED TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.
8. DURING GRUBBING OPERATIONS STONE CHECK DAMS SHALL BE INSTALLED AT ANY EVENT CONCENTRATED FLOW DISCHARGE POINTS AND AS DIRECTED ON THE EROSION CONTROL PLANS.
9. SILT FENCING WITH A MINIMUM STAKE SPACING OF 8 FEET SHALL BE USED, UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT OF MINIMUM 14 GAUGE AND WITH A MAXIMUM MESH SPACING OF 6 INCHES, IN WHICH CASE STAKES MAY BE SPACED A MAXIMUM OF 10 FEET APART. THE BOTTOM OF THE FENCE SHALL BE ANCHORED.
10. WOOD WASTE COMPOST/BARK BERMS MAY BE USED IN LIEU OF SILTATION FENCING. BERMS SHALL BE REMOVED AND SPREAD IN A LAYER NOT TO EXCEED 3" THICK ONCE UPSTREAM AREAS ARE COMPLETED AND A BOX CATCH OF VEGETATION IS ATTAINED.
11. WATER AND/OR CALCIUM CHLORIDE SHALL BE FURNISHED AND APPLIED IN ACCORDANCE WITH MDOT SPECIFICATIONS - SECTION 637 - DUST CONTROL.
12. LOAM AND SEED IS INTENDED TO SERVE, AS THE PRIMARY PERMANENT REVEGETATIVE MEASURE FOR ALL DENIED AREAS NOT PROVIDED WITH OTHER EROSION CONTROL MEASURES, SUCH AS RIPRAP. APPLICATION RATES ARE PROVIDED IN ATTACHMENT A OF THIS SECTION. SEEDING SHALL NOT OCCUR OVER SNOW.

#### D. PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION CONTROL PLAN:

1. ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.) WILL BE LOAMED, LIMED, FERTILIZED, MULCHED, AND SEEDED. FABRIC NETTING, ANCHORED WITH STAPLES, SHALL BE PLACED OVER THE MULCH IN AREAS AS NOTED IN TEMPORARY EROSION CONTROL MEASURES PARAGRAPH C OF THIS REPORT. ALL AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.
2. ALL STORM DRAIN PIPE OUTLETS SHALL HAVE RIPRAP APRONS AT THEIR OUTLET TO PROTECT THE OUTLET AND RECEIVING CHANNEL FROM SCOUR AND DETEIORATION. INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE APRONS SHALL BE INSTALLED AND STABILIZED TO THE EXTENT PRACTICABLE PRIOR TO DIRECTING RUNOFF TO THE TRIBUTARY PIPE OR CULVERT.

### 1.4 IMPLEMENTATION SCHEDULE

THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE REQUIRED TO INSURE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE OPTIMIZED:

IT IS ANTICIPATED THAT CONSTRUCTION OF THE SUBDIVISION AND RELATED INFRASTRUCTURE WILL COMMENCE IN SPRING OF 2018 AND BE COMPLETED BY WINTER OF 2018. SURFACE COURSE PAVING SHALL BE COMPLETED AFTER THE BASE COURSE PAVEMENT HAS GONE THROUGH ONE COMPLETE WINTER SEASON AND IS REQUIRED BY THE CITY OF PORTLAND.

NOTE: FOR ALL GRADING ACTIVITIES, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO OVEREXPOSE THE SITE, THIS SHALL BE ACCOMPLISHED BY LIMITING THE DISTURBED AREA.

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AT THE INTERSECTION OF THE ACCESS DRIVE AND HOPE AVENUE.
2. INSTALL PERIMETER SILT FENCE AND/OR WOOD WASTE BERMS PRIOR TO GRUBBING RESPECTIVE AREAS.
3. CLEAR AND GRUB FOR ROADWAY CONSTRUCTION. INSTALL STONE CHECK DAMS AT ANY EVENT CONCENTRATED FLOW DISCHARGE POINTS.
4. COMMENCE EARTHWORK AND GRADING TO SUBGRADE.
5. COMMENCE INSTALLATION OF DRAINAGE APPURTENANCES.
6. COMMENCE GRASSED UNDERDRAINED SOIL FILTER CONSTRUCTION.
7. COMMENCE INSTALLATION OF WATER AND SEWER LINES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF UNDERGROUND UTILITIES TO 5' BEYOND RIGHT-OF-WAY.
10. INSTALL SUB-BASE AND BASE GRAVEL WITHIN ROADWAY AND DRIVEWAY APRONS.
11. INSTALL BASE COURSE PAVING FOR ROADWAY AND DRIVEWAY APRONS.
12. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS.
13. ONCE THE SITE IS STABILIZED AND A BOX CATCH OF VEGETATION HAS BEEN OBTAINED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
14. TOUCH UP LOAM AND SEED.
15. INSTALL SURFACE COURSE PAVING AFTER THE BASE COURSE PAVING HAS GONE THROUGH ONE COMPLETE WINTER SEASON.
16. TOUCH UP LOAM AND SEED.

NOTE: ALL DENIED AREAS NOT SUBJECT TO FINAL PAVING, RIPRAP, OR GRAVEL SHALL BE REVEGETATED.

PRIOR TO CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE FOR THE COMPLETION OF THE WORK, WHICH WILL SATISFY THE FOLLOWING CRITERIA:

1. THE ABOVE CONSTRUCTION SEQUENCE SHOULD GENERALLY BE COMPLETED IN THE SPECIFIED ORDER; HOWEVER, SEVERAL SEPARATE ITEMS MAY BE CONSTRUCTED SIMULTANEOUSLY. WORK MUST ALSO BE SCHEDULED OR PHASED TO REDUCE THE EXTENT OF THE EXPOSED AREAS AS SHOWN BELOW. THE INTENT OF THIS SEQUENCE IS TO PROVIDE COVER FOR EROSION CONTROL AND TO HAVE STRUCTURAL MEASURES SUCH AS SILT FENCE AND CONSTRUCTION ENTRANCES IN PLACE BEFORE LARGE AREAS OF LAND ARE DENIED.
2. THE WORK SHALL BE CONDUCTED IN SECTIONS WHICH SHALL:
  - a) LIMIT THE AMOUNT OF EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE PROCEEDING 30 DAYS.
  - b) REVEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT; OR TEMPORARILY STABILIZED WITHIN 48 HOURS OF INITIAL DISTURBANCE OF SOIL FOR AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND AND 7 DAYS FOR ALL OTHER AREAS. AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW.
  - c) INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEM AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE. THE DITCHES SHALL BE IMMEDIATELY LINED OR REVEGETATED AS SOON AS THEIR INSTALLATION IS COMPLETE.

### 1.5 EROSION, SEDIMENTATION AND STABILIZATION CONTROL PLAN

THE EROSION CONTROL PLAN IS INCLUDED IN THE PLAN SET.

### 1.6 DETAILS AND SPECIFICATIONS

THE EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

### 1.7 WINTER STABILIZATION PLAN

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD.

WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT ANY AREA LEFT EXPOSED CAN BE CONTROLLED BY THE CONTRACTOR. LIME THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.

ALL AREAS SHALL BE CONSIDERED TO BE DENURED UNTIL THE SUBGRADE GRAVEL IS INSTALLED IN ROADWAY/PARKING AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS./1,000 S.F. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED.

THE CONTRACTOR SHALL INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

1. **SOIL STOCKPILES**  
STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS./1,000 S.F. (3 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOODWASTE EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE SHALL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

2. **NATURAL RESOURCE PROTECTION**  
ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH EROSION CONTROL MATS. DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) SHALL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

3. **SEDIMENT BARRIERS**  
DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF WOODWASTE FIBER BERMS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

4. **MULCHING**  
AN AREA SHALL BE CONSIDERED DENURED UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75-LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED FROM THE BOTTOM OF THE MULCHING AREA THAT ARE NOT TO BE DISTURBED. MULCH 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 WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1,000 SQUARE FEET (3 TONS/ACRE) AND ADEQUATELY ANCHORED THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH WHEN COVER IS SUFFICIENT.

BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY PEG LINE MULCH NETTING, ASPHALT EMULSION CHEMICAL, OR WOOD CELLULOSE FIBER, WHEN GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH THEN COVER IS SUFFICIENT. AFTER NOVEMBER 15, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

5. **MULCHING ON SLOPES AND DITCHES**  
SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS. MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS./1,000 S.F. ON ALL SLOPES GREATER THAN 8%.

MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%. EROSION CONTROL BLANKETS SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN 8%. EROSION CONTROL MIX CAN BE USED TO SUBSTITUTE EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES.

6. **SEEDING**  
BETWEEN THE DATES OF OCTOBER 15 AND APRIL 15, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 15TH AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING MAY BE SELECTED TO BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND FABRIC NETTING ANCHORED WITH STAPLES. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS./1,000 S.F. ALL AREAS REEDED SHOULD BE REIMPROVED IN THE SPRING FOR ADEQUATE CATCH. IF AREAS INCORRECTLY REVEGETATED ARE NOT REVEGETATED WITHIN 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.

### STANDARDS FOR TIMELY STABILIZATION OF CONSTRUCTION SITES DURING WINTER

1. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS --- THE APPLICANT SHALL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY NOVEMBER 15. THE APPLICANT SHALL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 1. IF THE APPLICANT FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 1, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.

INSTALL A SOIL LINING IN THE DITCH --- THE APPLICANT SHALL LINE THE DITCH WITH PROPERLY INSTALLED SOO BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOO ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOO TO GUARANTEE CONTACT BETWEEN THE SOO AND UNDERLYING SOIL, WATERING THE SOO TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOO WITH JUTE OR PLASTIC MESH TO PREVENT THE SOO STRIPS FROM SLIDING DURING FLOW CONDITIONS.

INSTALL A STONE LINING IN THE DITCH --- THE APPLICANT SHALL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15. THE APPLICANT SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE APPLICANT SHALL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES --- THE APPLICANT SHALL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. PRIOR TO PLACING THE STONE COVER, THE APPLICANT SHALL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF THE APPLICANT FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 1, THEN THE APPLICANT SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS --- BY SEPTEMBER 1 THE APPLICANT SHALL SEED THE DISTURBED AREAS WITH WINTER RYE AT A RATE OF 3 TONS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SOIL. THE APPLICANT SHALL 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 SHALL MULCH THE SLOPE WITH A LAYER OF WOODWASTE COMPOST AS DESCRIBED IN ITEM # 6 OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM # 4 OF THIS STANDARD.

STABILIZE THE SLOPE WITH SOO --- THE APPLICANT SHALL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOO BY SEPTEMBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOO ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOO TO GUARANTEE CONTACT BETWEEN THE SOO AND UNDERLYING SOIL, AND WATERING THE SOO TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE APPLICANT SHALL NOT USE LATE-SEASON SOO INSTALLATION LATER THAN 12:00 PM ON OCTOBER 15.

STABILIZE THE SLOPE WITH WOODWASTE COMPOST --- THE APPLICANT SHALL PLACE A SIX-INCH LAYER OF WOODWASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOODWASTE COMPOST, THE APPLICANT SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT SHALL NOT USE WOODWASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

STABILIZE THE SLOPE WITH STONE RIPRAP --- THE APPLICANT SHALL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT SHALL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

3. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS --- BY SEPTEMBER 15 THE APPLICANT SHALL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 10%. IF THE APPLICANT FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE APPLICANT SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

STABILIZE THE SOIL WITH TEMPORARY VEGETATION --- BY SEPTEMBER 1 THE APPLICANT SHALL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 TONS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SOIL. THE APPLICANT SHALL 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 1, THEN THE APPLICANT SHALL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW.

STABILIZE THE SOIL WITH SOO --- THE APPLICANT SHALL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOO BY SEPTEMBER 15. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOO ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOO TO GUARANTEE CONTACT BETWEEN THE SOO AND UNDERLYING SOIL, AND WATERING THE SOO TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

STABILIZE THE SOIL WITH MULCH --- BY NOVEMBER 15 THE APPLICANT SHALL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

### 1.8 MAINTENANCE OF FACILITIES

THE STORMWATER FACILITIES WILL BE MAINTAINED BY THE APPLICANT, LBW, LLC, OR THEIR ASSIGNED HEIRS. THE CONTRACT DOCUMENTS WILL REQUIRE THE CONTRACTOR TO DESIGNATE A PERSON RESPONSIBLE FOR MAINTENANCE OF THE SEDIMENTATION CONTROL FEATURES DURING CONSTRUCTION AS REQUIRED BY THE EROSION CONTROL REPORT. LONG-TERM OPERATION/MAINTENANCE RECOMMENDED FOR THE STORMWATER FACILITIES IS PRESENTED BELOW.

THE RESPONSIBLE PARTY MAY CONTRACT WITH SUCH PROFESSIONALS, AS MAY BE NECESSARY IN ORDER TO COMPLY WITH THIS PROVISION AND MAY RELY ON THE ADVICE OF SUCH PROFESSIONALS IN CARRYING OUT ITS DUTY HEREUNDER, PROVIDED, THAT THE FOLLOWING OPERATION AND MAINTENANCE PROCEDURES ARE HEREBY ESTABLISHED AS A MINIMUM FOR COMPLIANCE WITH THIS SECTION. A MAINTENANCE LOG OF THE INSPECTIONS SHALL BE KEPT BY THE RESPONSIBLE PARTY.

A TYPICAL MAINTENANCE LOG FOR THE SUBDIVISION IS INCLUDED IN ATTACHMENT C.

INSPECTION AND MAINTENANCE FREQUENCY AND CORRECTIVE MEASURES:  
THE FOLLOWING AREAS, FACILITIES, AND MEASURES WILL BE INSPECTED AND THE IDENTIFIED DEFICIENCIES WILL BE CORRECTED. CLEAN-OUT MUST INCLUDE THE REMOVAL AND LEGAL DISPOSAL OF ANY ACCUMULATED SEDIMENTS AND DEBRIS.

#### CULVERTS:

INSPECT CULVERTS 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE CULVERTS ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW, REMOVE ACCUMULATED SEDIMENTS AND DEBRIS AT THE INLET, AT THE OUTLET, AND WITHIN THE CONDUIT AND REPAIR ANY EROSION DAMAGE AT THE CULVERT'S INLET AND OUTLET.

#### STORMDRAIN OUTLETS:

INSPECT OUTLETS 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE OUTLETS ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW, REMOVE ACCUMULATED SEDIMENTS AND DEBRIS AT THE OUTLET AND WITHIN THE CONDUIT REPAIR ANY EROSION DAMAGE AT THE STORMDRAIN OUTLET.

#### CATCH BASINS:

INSPECT CATCH BASINS 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE CATCH BASINS ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. CLEAN STRUCTURES WHEN SEDIMENT DEPTHS REACH 12 INCHES FROM INVERT OF OUTLET. IF THE BASIN OUTLET IS DESIGNED WITH A HOOD TO TRAP FLOATABLE MATERIALS (E.G. SKUNK), CHECK TO ENSURE WATERTIGHT SEAL IS WORKING. AT A MINIMUM, REMOVE FLOATING DEBRIS AT THE TIME OF THE INSPECTION.

#### INLET/OUTLET CONTROL STRUCTURES:

INSPECT STRUCTURES AND PIPING 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE STRUCTURES ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW, REMOVE ACCUMULATED SEDIMENTS AND DEBRIS WITHIN THE STRUCTURE.

#### SOIL FILTER --- GRASSED UNDERDRAINED SOIL FILTER:

INSPECT ALL UPSTREAM PRE-TREATMENT MEASURES 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) FOR SEDIMENT AND FLOATABLES ACCUMULATION. REMOVE AND DISPOSE OF ANY SEDIMENTS OR DEBRIS.

#### SURFACE (UNDERDRAIN POND, SWALE OR BIO-FILTER):

THE SOIL FILTER WILL BE INSPECTED WITHIN THE FIRST THREE MONTHS AFTER CONSTRUCTION; THEREAFTER THE FILTER WILL BE INSPECTED 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE FILTER IS DRAINING WITHIN 24 TO 48 HOURS OF A RAIN EVENT EQUIVALENT TO 1" OR MORE. ADJUSTMENTS WILL BE MADE TO THE OUTLET VALVE TO ENSURE THAT THE GRASSED UNDERDRAINED SOIL FILTER DRAINS WITHIN 24 TO 48 HOURS. FAILURE TO DRAIN IN 72 HOURS WILL REQUIRE PART OR ALL OF THE SOIL FILTER MEDIA TO BE REMOVED AND REPLACED WITH NEW MATERIAL MEETING THE SOIL FILTER GRADATION. THE FACILITIES WILL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES WILL BE CORRECTED. INSPECT FOR UNWANTED OR INVASIVE PLANTS AND REMOVE AS NECESSARY. REMOVE DEBRIS FROM THE SURFACE SINCE THE ROOFLINE DRIP EDGE IS A PART OF THE APPROVED STORMWATER MANAGEMENT PLAN, IT CANNOT BE PAVED OVER OR ALTERED IN ANY WAY. GUTTERS SHALL NOT BE INSTALLED ALONG THE ROOFLINE.

#### SURFACE DETENTION CHAMBERS:

INSPECT CHAMBERS PER MANUFACTURER'S RECOMMENDATION. AT A MINIMUM INSPECT CHAMBERS 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE STRUCTURES ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. REMOVE SEDIMENT FROM ISOLATOR ROW WHEN DEPTH OF SEDIMENT REACHES 3 INCHES.

#### ROOFLINE DRIP STRIP:

THE DRIP STRIP WILL BE INSPECTED WITHIN THE FIRST THREE MONTHS AFTER CONSTRUCTION; THEREAFTER THE FILTER WILL BE INSPECTED 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE FILTER IS DRAINING WITHIN 24 TO 48 HOURS OF A RAIN EVENT EQUIVALENT TO 1" OR MORE. ADJUSTMENTS WILL BE MADE TO THE OUTLET VALVE TO ENSURE THAT THE DRIP STRIP DRAINS WITHIN 24 TO 48 HOURS. FAILURE TO DRAIN IN 72 HOURS WILL REQUIRE PART OR ALL OF THE SOIL FILTER MEDIA TO BE REMOVED AND REPLACED WITH NEW MATERIAL MEETING THE SOIL FILTER GRADATION. THE FACILITIES WILL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES WILL BE CORRECTED. INSPECT FOR UNWANTED OR INVASIVE PLANTS AND REMOVE AS NECESSARY. REMOVE DEBRIS FROM THE SURFACE SINCE THE ROOFLINE DRIP EDGE IS A PART OF THE APPROVED STORMWATER MANAGEMENT PLAN, IT CANNOT BE PAVED OVER OR ALTERED IN ANY WAY. GUTTERS SHALL NOT BE INSTALLED ALONG THE ROOFLINE.

#### VEGETATED AREAS:

INSPECT SLOPES AND EMBANKMENTS EARLY IN THE GROWING SEASON 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 GROOVE FLOWS TO ON-SITE AREAS ABLE TO WITHSTAND THE CONCENTRATED FLOWS. THE FACILITIES WILL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES WILL BE CORRECTED.

#### DITCHES, SWALES AND OTHER OPEN STORMWATER CHANNELS:

INSPECT 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THEY ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF SEDIMENT AND DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW, INCLUDING ACCUMULATED SEDIMENTS AND DEBRIS AND VEGETATED GROWTH. REPAIR ANY EROSION OF THE DITCH LINING. VEGETATED DITCHES WILL 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. IF THE DITCH HAS A RIPRAP LINING, REPLACE RIPRAP ON AREAS WHERE ANY UNDERLYING FIBRIC OR UNDERDRAIN GRAVEL IS SHOWING THROUGH THE STONE OR WHERE STONES HAVE DISLOADED. CORRECT ANY EROSION OF THE CHANNEL'S BOTTOM OR SIDE SLOPES. THE FACILITIES SHALL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES SHALL BE CORRECTED.

ROADWAYS: CLEAR ACCUMULATIONS OF WINTER SAND IN PARKING LOTS AND ALONG ROADWAYS AT LEAST ONCE A YEAR, PREFERABLY IN THE SPRING. ACCUMULATIONS OF 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. REPAIR POTHOLES AND OTHER ROADWAY OBSTRUCTIONS AND HAZARDS. PLOWING AND SANDING OF PAVED AREAS SHALL BE PERFORMED AS NECESSARY TO MAINTAIN VEHICULAR TRAFFIC SAFETY.

#### FILTER AREA UNITS:

THE DRIP STRIP OF MAINTENANCE SHALL BE PERFORMED BY THE SUPPLIER OR A SUPPLIER APPROVED CONTRACTOR. SUBSEQUENT MAINTENANCE SHALL BE PERFORMED AT LEAST 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL). AT A MINIMUM, THE MAINTENANCE SHALL CONSIST OF THE FOLLOWING:

1. FILTER AREA UNIT INSPECTION
2. FOREIGN DEBRIS, SILT, MULCH & TRASH REMOVAL
3. FILTER MEDIA EVALUATION AND RECHARGE AS NECESSARY
4. PLANT HEALTH EVALUATION AND PRUNING OR REPLACEMENT AS NECESSARY
5. REPLACEMENT OF MULCH
6. DISPOSAL OF ALL MAINTENANCE REFUSE ITEMS

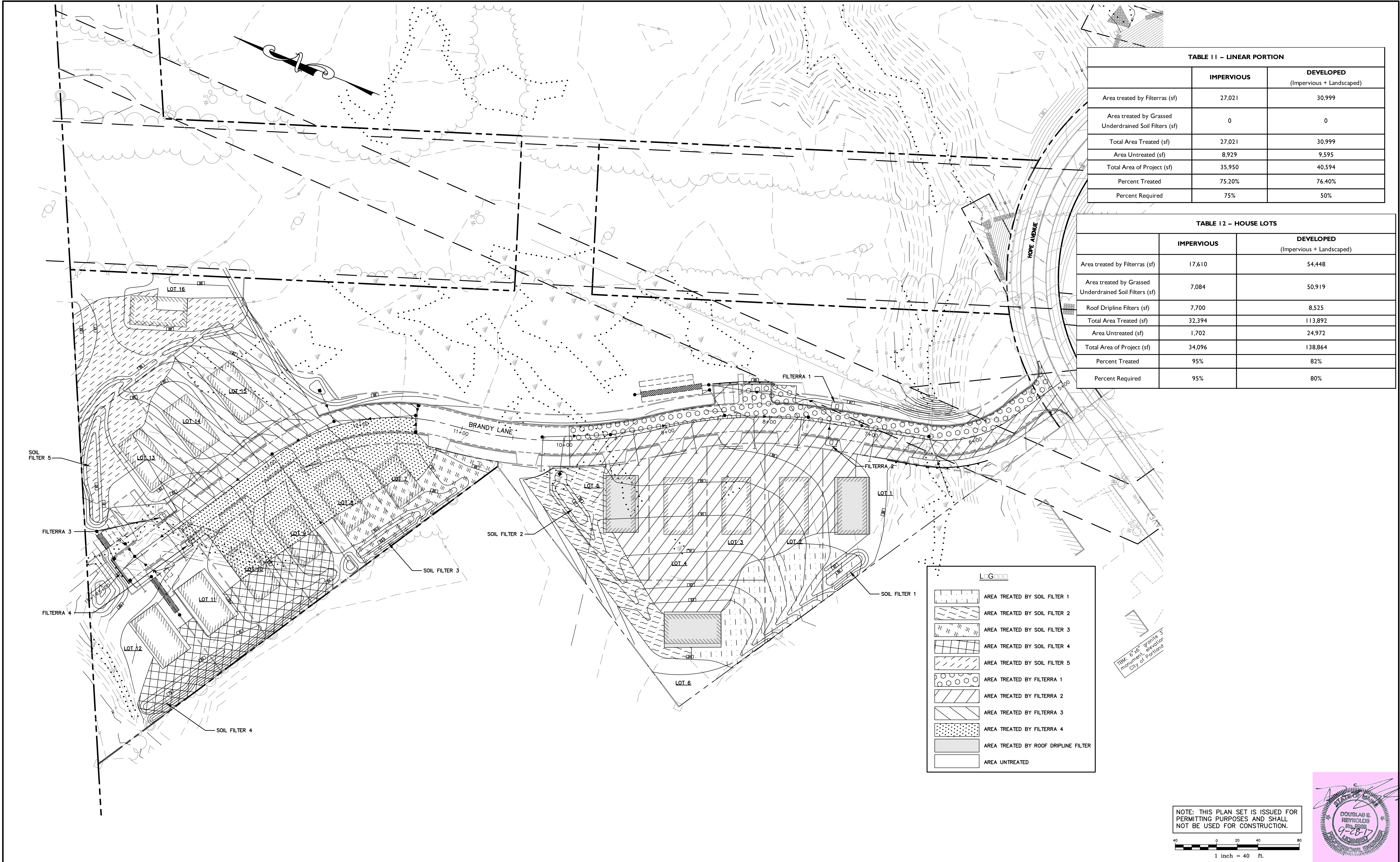
### POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

AS PART OF THE STORMWATER PERMIT, THE APPLICANT IS REQUIRED TO MEET THE STANDARDS IN SECTION 5 OF THE CITY OF PORTLAND TECHNICAL MANUAL FOR STORMWATER MANAGEMENT. THE GENERAL STANDARD IN ITEM IV. SUBMISSION REQUIREMENTS STATES THAT A PROJECT MUST SUBMIT A POST-CONSTRUCTION STORMWATER INSPECTION & MAINTENANCE PLAN PER MAINE DEP CHAPTER 500 APPENDIX B WITH REPORTING REQUIREMENTS PER CHAPTER 500 OF THE CITY OF PORTLAND CODE OF ORDINANCES, AND A STORMWATER MAINTENANCE AGREEMENT. THE MANAGEMENT PLAN SHALL COMPLY TO CHAPTER 32 OF THE CITY OF PORTLAND CODE OF ORDINANCES AS FOLLOWS:

- (a) THE OWNER OR OPERATOR OF A BMP SHALL HIRE A QUALIFIED POST-CONSTRUCTION STORMWATER INSPECTOR TO AT LEAST ANNUALLY, INSPECT THE BMP'S, INCLUDING BUT NOT LIMITED TO ANY PARKING AREAS, CATCH BASINS, DRAINAGE SWALES, DETENTION BASINS AND PIPES, PONES AND RELATED STRUCTURES, IN ACCORDANCE WITH ALL MUNICIPAL AND STATE INSPECTION, CLEANING AND MAINTENANCE REQUIREMENTS OF THE APPROVED POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN.
- (b) IF THE BMP REQUIRES MAINTENANCE, REPAIR OR REPLACEMENT TO FUNCTION AS INTENDED BY THE APPROVED POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN, THE OWNER OR OPERATOR OF THE BMP SHALL TAKE CORRECTIVE ACTION(S) TO ADDRESS THE DEFICIENCY OR DEFICIENCIES AS



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| TABLE 11 - LINEAR PORTION                              |            |                                        |
|--------------------------------------------------------|------------|----------------------------------------|
|                                                        | IMPERVIOUS | DEVELOPED<br>(Impervious + Landscaped) |
| Area treated by Terras (sf)                            | 27,021     | 30,999                                 |
| Area treated by Grassed Underdrained Soil Filters (sf) | 0          | 0                                      |
| Total Area Treated (sf)                                | 27,021     | 30,999                                 |
| Area Untreated (sf)                                    | 8,929      | 9,595                                  |
| Total Area of Project (sf)                             | 35,950     | 40,594                                 |
| Percent Treated                                        | 75.20%     | 76.40%                                 |
| Percent Required                                       | 75%        | 50%                                    |

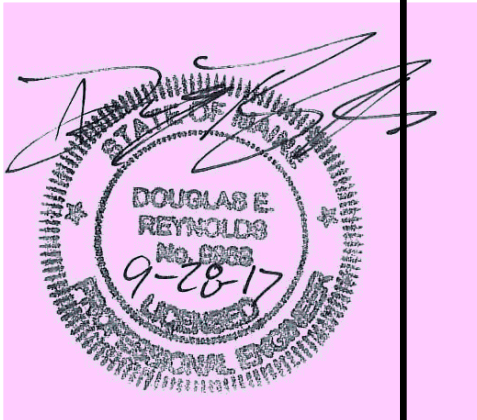
| TABLE 12 - HOUSE LOTS                                  |            |                                        |
|--------------------------------------------------------|------------|----------------------------------------|
|                                                        | IMPERVIOUS | DEVELOPED<br>(Impervious + Landscaped) |
| Area treated by Terras (sf)                            | 17,610     | 54,448                                 |
| Area treated by Grassed Underdrained Soil Filters (sf) | 7,084      | 50,919                                 |
| Roof Dripline Filters (sf)                             | 7,700      | 8,525                                  |
| Total Area Treated (sf)                                | 32,394     | 113,892                                |
| Area Untreated (sf)                                    | 1,702      | 24,972                                 |
| Total Area of Project (sf)                             | 34,096     | 138,864                                |
| Percent Treated                                        | 95%        | 82%                                    |
| Percent Required                                       | 95%        | 80%                                    |

| LEGEND |                                      |
|--------|--------------------------------------|
|        | AREA TREATED BY SOIL FILTER 1        |
|        | AREA TREATED BY SOIL FILTER 2        |
|        | AREA TREATED BY SOIL FILTER 3        |
|        | AREA TREATED BY SOIL FILTER 4        |
|        | AREA TREATED BY SOIL FILTER 5        |
|        | AREA TREATED BY TERRAS 1             |
|        | AREA TREATED BY TERRAS 2             |
|        | AREA TREATED BY TERRAS 3             |
|        | AREA TREATED BY TERRAS 4             |
|        | AREA TREATED BY ROOF DRIPLINE FILTER |
|        | AREA UNTREATED                       |

NOTE: 6" x 6" granite 3" minimum elevation City of Portland

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

40 0 20 40 80  
1 inch = 40 ft.



| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

| Design:                                                                                                                                                                                     | Draft:        | Date:             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| AMP                                                                                                                                                                                         | CG            | SEPT 2014         |
| Checked: AMP                                                                                                                                                                                | Scale: 1"=40' | Job No.: 98089.08 |
| File Name: 98089-08-WQ.dwg                                                                                                                                                                  |               |                   |
| This plan shall not be modified without written permission from Gorrill Palmer(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP. |               |                   |
| LEVEL III SUBDIVISION APPLICATION                                                                                                                                                           | 5/12/17       | DER               |
| MDEP STORMWATER PRE APP                                                                                                                                                                     | 1/23/17       | AMP               |
| PRICING                                                                                                                                                                                     | 9/16/16       | AMP               |
| PRE-APPLICATION MEETING WITH CITY                                                                                                                                                           | 6/24/16       | AMP               |
| Issued For                                                                                                                                                                                  |               | By                |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: AMP                                                                                                                                                                                 | Draft: CG     | Date: SEPT 2014   |
| Checked: AMP                                                                                                                                                                                | Scale: 1"=40' | Job No.: 98089.08 |
| File Name: 98089-08-WQ.dwg                                                                                                                                                                  |               |                   |
| This plan shall not be modified without written permission from Gorrill Palmer(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP. |               |                   |
| LEVEL III SUBDIVISION APPLICATION                                                                                                                                                           | 5/12/17       | DER               |
| MDEP STORMWATER PRE APP                                                                                                                                                                     | 1/23/17       | AMP               |
| PRICING                                                                                                                                                                                     | 9/16/16       | AMP               |
| PRE-APPLICATION MEETING WITH CITY                                                                                                                                                           | 6/24/16       | AMP               |
| Issued For                                                                                                                                                                                  |               | By                |



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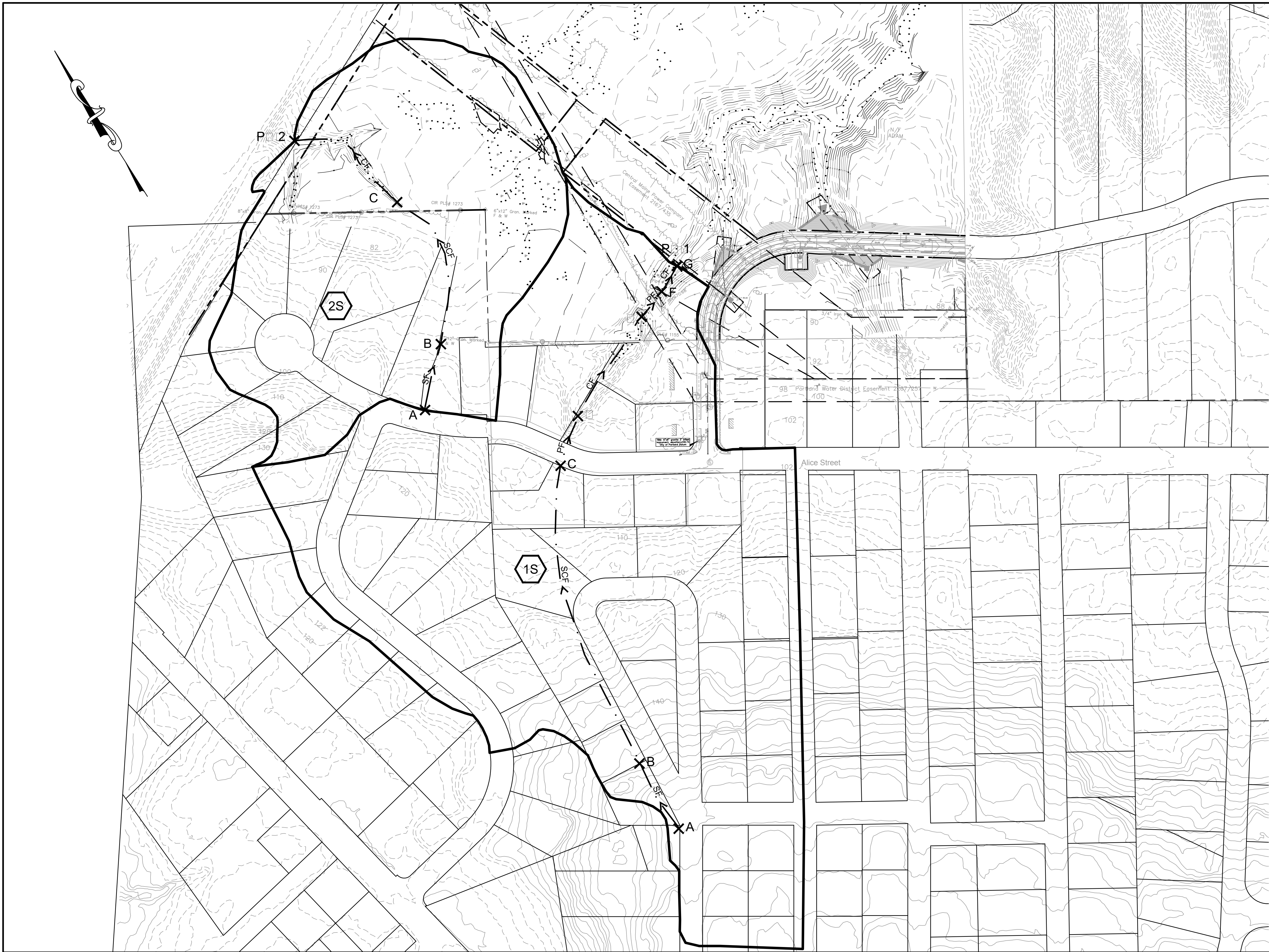
|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Water Quality Plan                             |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

WQ



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LEGEND

1

TIME OF CONCENTRATION FLOW PATH

WATERSHED BOUNDARY

WETLAND BOUNDARY

SF

SHEET FLOW

PF

PIPE FLOW

SCF

SHALLOW CONCENTRATED FLOW

CF

CHANNEL FLOW

P

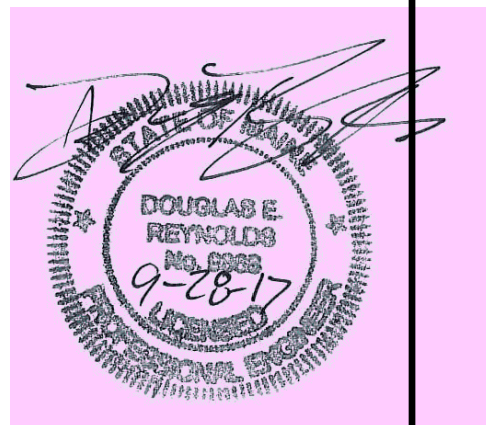
POINT OF INTEREST

1

REACH

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

100 0 50 100 200  
1 inch = 100 ft.



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|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                            |                |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------|
| Design: DER                                                                                                                                                                                | Draft: CG      | Date: FEB 2017    |
| Checked: AMP                                                                                                                                                                               | Scale: 1"=100' | Job No.: 98089-08 |
| File Name: 98089-08-WS-PRE.dwg                                                                                                                                                             |                |                   |
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | Pre Development Watershed Map                  |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

W1



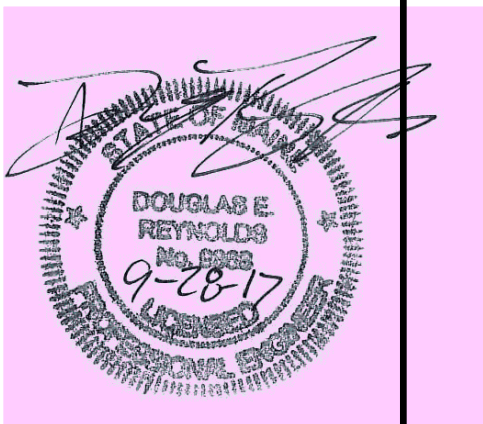
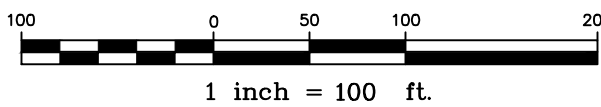
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# LEGEND

- 1 SUBCATCHMENT AREA
- A TIME OF CONCENTRATION FLOW PATH
- WATERSHED BOUNDARY
- WETLAND BOUNDARY
- SF SHEET FLOW
- PF PIPE FLOW
- SCF SHALLOW CONCENTRATED FLOW
- CF CHANNEL FLOW
- P POINT OF INTEREST
- 1 REACH

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



| Rev. | Date     | Revision                         |
|------|----------|----------------------------------|
| 2    | 9/28/17  | REVISED PER CITY COMMENTS        |
| 1    | 12/21/16 | REVISED LAYOUT PER CITY COMMENTS |

|                                   |         |     |
|-----------------------------------|---------|-----|
| LEVEL III SUBDIVISION APPLICATION | 5/12/17 | DER |
| MDEP STORMWATER PRE APP           | 1/23/17 | AMP |
| PRICING                           | 9/16/16 | AMP |
| PRE-APPLICATION MEETING WITH CITY | 6/24/16 | AMP |
| Issued For                        | Date    | By  |

|                                                                                                                                                                                             |               |                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------|
| Design: AMP                                                                                                                                                                                 | Draft: CG     | Date: SEPT 2014   |
| Checked: AMP                                                                                                                                                                                | Scale: 1"=40' | Job No.: 98089.08 |
| File Name: 98089-08-WS-POST.dwg                                                                                                                                                             |               |                   |
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|               |                                                |
|---------------|------------------------------------------------|
| Drawing Name: | POST DEVELOPMENT WATERSHED MAP                 |
| Project:      | Brandy Lane<br>Portland, Maine                 |
| Client:       | LBW, LLC<br>PO Box 1382, Portland, Maine 04104 |

Drawing No.

W2





# Memorandum

## Planning and Urban Development Department

### Planning Division

---

**To:** Chair Boepple and Members of the Portland Planning Board

**From:** Jean Fraser, Planner

**Date:** October 6, 2017

**Re:** **October 10<sup>th</sup> 2017 Planning Board Workshop**  
Level III Zoning Map Amendment Ilb to B1b  
233 Anderson Street

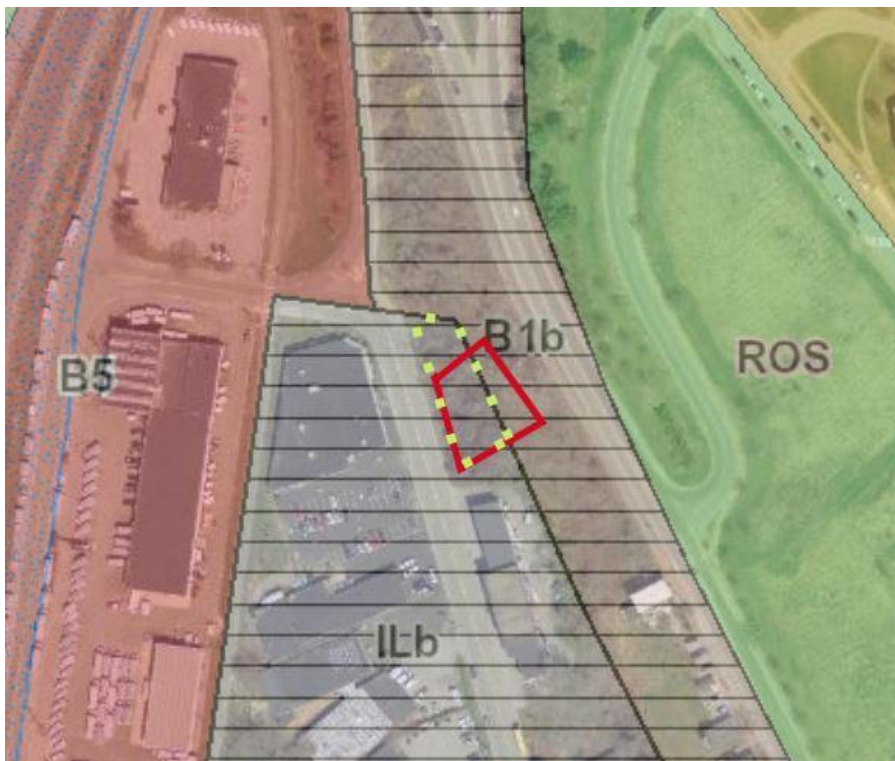
CBL: 010 A040001  
Project #: 2017-170  
2 Walnut LLC, Applicant

---

#### **I. INTRODUCTION**

The applicant 2 Walnut LLC has requested map amendment for an approximately 10,000 sq ft property at 233 Anderson Street that is located immediately to the north of the site of the concurrent housing proposal for 218 Washington. The map amendment parcel is shown in red outline below.

The applicants have a Purchase and Sale Agreement for this parcel (Attachment B). The parcel is partly in the B1b zone and partly in the Ilb zone, and the proposed map amendment relates to the area outlined in yellow dots to change from Ilb to B1b zone. The area within the dots but outside the parcel (approximately 3000 sq ft) is understood to belong to the city and the applicant has suggested the map amendment could extend to include that in addition to the parcel of interest.



The submitted narrative (Attachment D) indicates that the objective is to allow for the development of a mixed use development comprising commercial uses on the lowest floor and 12 residential units above this, as the Ilb zone does not allow residential uses.. The rezoning to the B1b zone would allow this development but would also allow a wide range of uses not allowed in the Ilb zone such as retail, restaurants, neighborhood center and general business and professional offices. The

applicant's narrative analyzes the site and zoning and concludes that the size and topography of the site would limit industrial uses and it is more suitable for a mixed use development that includes residential.

A legal ad for the Board workshop was posted on the city's web page and appeared in the *Portland Press Herald* on October 2<sup>nd</sup> and 3<sup>rd</sup>, 2017. Notices were also sent to 118 property owners within 1000 feet of the site and to the interested citizen list.

## **II. EXISTING CONDITONS**

The parcel has a frontage along Anderson Street of 114 feet and averages 100 feet in depth. The site is vacant and vegetated, with a steep uphill slope. A section of the property line at the back south side abuts the property known as 218 Washington (subject of current site plan for 45 condo units). The rear and north property lines abut the vacant/vegetated MDOT land associated with I295.

Industrial development abuts the parcel to the south and the west.



## **III. PROPOSED MAP AMENDMENT**

|                         |                                                                            |
|-------------------------|----------------------------------------------------------------------------|
| <b>Current Zoning:</b>  | Approximately 2/3 Ilb and 1/3 B1b                                          |
| <b>Proposed Zoning:</b> | Entire parcel (and possibly area outside to north) to B1b                  |
| <b>Current Uses:</b>    | Vacant                                                                     |
| <b>Proposed Uses:</b>   | As allowed in B1b; narrative suggests with mixed use including residential |
| <b>Parcel Area:</b>     | approx. 10,000 SF                                                          |

## **IV. ZONING CONTEXT**

The applicant has set out the arguments in support of the extension of the B1b zone into the rest of the parcel fronting onto Anderson Street in the attached narrative ([Attachment D and discussed below](#)). The Ilb zone is designed to be adjacent to residential zones, so the other option for this parcel would be to extend the Ilb zone (already over the majority of the parcel) into the B1b part of the zone.

The parcel abuts developed industrial uses on two sides, which are part of this East Bayside industrial area that is increasingly providing sites for breweries and other artisan uses that are allowed in the Ilb zone but not in the B1b zone.

### ***Purpose Statements***

The purpose statements for both zones are included in the table below. The Ilb aims to provide for low impact industrial and similar but neighborhood-friendly uses, while the B1b is more focused on the integration of small scale commercial uses with residential.

**Table 1: Purpose Statements**

| <b>Ilb</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>B-1b</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The low impact industrial zone is intended to provide areas in which low impact industrial uses and limited other uses serving employees and residents of the surrounding neighborhood will be compatible with adjacent residential uses, will provide a buffer between residential neighborhoods and the I-M or I-H industrial zones, or will stand alone as a smaller scale industrial district.</p> <p>The I-L zone is located adjacent to residential neighborhoods, business uses and other industrial uses where the low intensity nature of the uses, as well as their strict performance standards, will ensure compatibility of the uses with other adjacent industrial and nonindustrial uses.</p> <p>Performance standards for uses in the I-L zone are designed to maintain compatibility between low impact industrial uses and neighboring nonindustrial and industrial uses. Performance standards include full enclosure of uses and requirements for buffers and screening from adjacent properties.</p> | <p>To provide appropriate opportunities for the establishment of small-scale ground floor commercial uses in existing buildings, serving a local market, while preserving residential uses and character above the ground floor of structures. The zone also provides the opportunity for mixed use and high residential density in on-peninsula locations. Building additions are encouraged but not required to meet the maximum setbacks of 14-165(c)(3).</p> <p>Suitable locations for this zone may include street intersections, arterial streets, and sites with existing r traditional neighborhood retail and service uses.</p> |

### ***Permitted Uses & Potential Impacts***

Attachment 1 includes information showing the permitted uses in the B1b and Ilb zones for comparison. The applicant's narrative also compares the permitted uses (Attachment D).

The existing Ilb zone emphasizes, in addition for employment-creating industrial uses, a wide range of uses that are largely small scale (with some exceptions such as indoor amusement and recreation centers, plant and tree nurseries, marinas and lumber yards). It also includes uses that support the surrounding neighborhood such as day care facilities, makers markets, artists studios, and neighborhood centers. This zone does not allow residential or retail uses.

The proposed B-1b zoning designation allows a range of residential on the upper floors (including bed and breakfast and hostels), and permits – on the ground floor only – restaurants, day care facilities, neighborhood centers and a wide range of commercial and institutional uses, including retail establishments, offices, personal services, business services, places of assembly, clinics, municipal uses, and schools.

Both zones allow day care facilities, neighborhood centers, and studios for artists, photographers and craftspeople.

## **V. POLICY ANALYSIS OF PROPOSED MAP AMENDMENT**

Staff agree that to encourage development the parcel should be rezoned to entirely Ilb or entirely B1b.

The applicant has indicated that the B1b zone is more appropriate for the entirety of this parcel for the following reasons:



- Topography: Steep slopes inhibit Ilb uses and would support residential by offering views
- Pavement setback of 15 ft is required in the Ilb zone and not in the B1b zone, thus the B1b zone would make development more viable
- Relatively small size of the parcel limits Ilb uses
- Comprehensive Plan: B1b allows development in line with the stated objectives of the Comprehensive Plan eg mixed use with residential on the upper floors

Staff consider that the size of the site and its slope present similar constraints for development under both zones. The Board may wish to request further information as to how these factors particularly impact potential Ilb uses, as many of the Ilb uses could be more than one story and take advantage of the views.

Staff suggest that there are several other factors that are relevant to a map amendment for this parcel:

- Comprehensive Plan: The Comprehensive Plan includes policies that support both of the options for a map amendment. Those relevant to the B1b zone are cited by the applicant. The retention of the existing pattern of industrially-zoned land is also a Comprehensive Plan objective.
- Loss of Ilb zoned land: While the residential development of the parcel that abuts a section of one property line suggests that housing is appropriate, another viewpoint is that it is a good location for Ilb industrial uses that have low impacts eg breweries, distilleries, repair services. This is because of its location at this end of Anderson Street where it is buffered along most of the property boundaries by other industrial uses and MDOT land associated with I-295.
- B1b zone is extensive: the existing B1b zone along Washington Avenue offers many opportunities for mixed use development that includes residential. For example, the Board has sought a non-residential ground floor use for the project at 218 Washington.
- Traffic generation: Typically the consideration of a map amendment involves the assessment of the traffic generation of the most intensive uses in the zone being suggested. The City's consultant Traffic Engineer has commented (Attachment 2):

*I have reviewed the proposed zone amendment and I would suggest that the applicant provide a trip generation comparison between the current and proposed zones. The trip generation estimate should be conducted for the most intensive traffic generating use for each zone. I would note that given the relatively small size of the subject area - that comprises of the zone change - I do not expect a significant increase in traffic generation changing the existing IL-b zone to B-1b.*

## VI. PUBLIC COMMENT

At the time this report was prepared the Planning Division had not received any public comment.

## VII. NEXT STEPS

- The Planning Board to indicate whether additional information is needed to assess the proposal
- The Planning Board to indicate whether they support the map amendment of 2/3 of the parcel to B1b (from Ilb)
- If the B1b map amendment is supported for the parcel being purchased, the Planning Board to indicate whether the map amendment should be extended to the Ilb parcel to the north

## **VIII. ATTACHMENTS**

### **PLANNING BOARD MEMO ATTACHMENTS**

1. Information Ilb and B1b zone permitted uses
2. Traffic Engineer review (Tom Errico)

### **APPLICANT'S SUBMITTALS**

- A. Application
- B. Right, title and Interest (P&S Agreement)
- C. Survey
- D. Narrative and analysis'

### **PUBLIC COMMENT**

(none received to date)

## Permitted Uses Ilb and B1b Zones- Extract from Land Use Code

(Note: this does not include conditional uses- wind anemometers are conditional uses in both zones; emergency shelters are a conditional use in the Ilb zone.)

| Ilb Zone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | B1b Zone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Sec. 14-232. Permitted uses.</b></p> <p>The following uses are permitted whether provided by private or public entities in the low impact industrial zone and the I-Lb zone:</p> <ul style="list-style-type: none"> <li>(a) Low impact industrial uses, including, but not limited to, bakeries, breweries, bottling, printing and publishing, pharmaceuticals, machine shops, musical instruments, precision instruments, watchmakers, toys and sporting goods, wood products, jewelry, assembly of electrical components, tool and die shops and the packaging of food.</li> <li>(b) Research and development.</li> <li>(c) Indoor amusement and recreation centers.</li> <li>(d) Plant and tree nurseries, including associated recycling activities.</li> <li>(e) Lumber yards.</li> <li>(f) Commercial kitchens or other food preparation, provided that the food is not prepared for service on the premises.</li> <li>(g) Building contractors and outside storage of related construction equipment, provided that there shall be no outside storage of materials and supplies.</li> <li>(h) Repair services, including all types of automotive repair.</li> <li>(i) Day care facilities, provided that: <ul style="list-style-type: none"> <li>1. Proof of licensing with the Maine Department of Human Services is submitted to the city prior to issuance of a certificate of occupancy;</li> <li>2. Off-street parking: off-street parking is required as provided in division 20 of this article;</li> <li>3. Off-street loading shall be located in a safe location;</li> <li>4. There shall be an on-site outdoor play area with</li> </ul> </li> </ul> | <p><b>Sec. 14-162. Permitted uses.</b></p> <p>(a) The following uses are permitted in the B-1 zone and on the ground floor level of buildings in the B-1b zone. For permitted uses in the upper stories of buildings in the B-1b zone, refer to subsection (5) below: in existence on November 15, 1993:</p> <ul style="list-style-type: none"> <li>1. <i>Residential</i> <ul style="list-style-type: none"> <li>a. Any residential use permitted in the residential zone abutting the lot is permitted. If there is no abutting residential zone, any residential use permitted in the nearest residential zone to the lot is permitted. In the case of two (2) or more abutting residential zones, any residential use permitted in the most restrictive such zone is permitted.</li> <li>b. In any structure with commercial use on the first floor, multifamily dwellings are permitted above the first floor.</li> <li>c. Combined living/working spaces including, but not limited to, artist residences with studio space.</li> </ul> </li> <li>2. <i>Business:</i> Business uses listed below are permitted, provided that such use which generates in excess of a ratio of 100 peak hour vehicle trips per 2000 sq.ft. of space, and generates in excess of 100 peak hour vehicle trips is prohibited. As set forth in the City of Portland Technical Manual, section I, the city traffic engineer shall require a traffic study when it calculates the proposed use will generate in excess of a total of 50 peak hour vehicle trips. <ul style="list-style-type: none"> <li>a. Professional, business, and general offices , but excluding veterinarians.</li> <li>b. Business services, as defined in section 14-47, but excluding beverage container redemption centers.</li> <li>c. Personal services, as defined in section 14-47.</li> <li>d. Offices of building tradesmen, provided there is no exterior storage of building materials.</li> </ul> </li> </ul> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <p>seventy-five (75) feet of land area per child; and</p> <p>5. The outdoor play area shall be fenced and screened with a landscaped buffer.</p> <p>(j) Dairies.</p> <p>(k) Dog training services, including but not limited to obedience, guide, and service training, but not including boarding or kennel services.</p> <p>(l) Intermodal transportation facilities.</p> <p>(m) Utility substations.</p> <p>(n) Marinas.</p> <p>(o) Distribution centers, warehouses and wholesale businesses under ten thousand (10,000) square feet in total building area, with no outside storage permitted.</p> <p>(p) Back office uses.</p> <p>(q) Accessory uses.</p> <p>1. Incidental accessory uses.</p> <p>2. In the IIb zone, the following additional accessory uses shall also be permitted:</p> <p>a. Makers' markets, including periodic, seasonal, or temporary sales of handcrafted and limited production products for final consumption, which may include prepared or raw foods, provided that:</p> <p>i. Such sales are located within a lawfully conforming principal permitted use;</p> <p>ii. Such sales occupy an area no larger than 45% of the floor area devoted to the principal use;</p> <p>iii. Such sales by any single vendor or</p> | <p>e. Retail establishments, provided such do not include drive-through sales or services and do not operate between the hours of eleven (11) p.m. and six (6) a.m. and do not accept deliveries or services between the hours of ten (10) p.m. to seven (7) a.m.</p> <p>f. Beverage dealers (as defined in 32 M.R.S.A. 1862) provided they meet the following requirements:</p> <p>i. Maximum total floor area for beverage container redemptions, including the storage of spent beverage containers, shall be no greater than five hundred (500) sq. ft. or ten (10) percent of the total floor area of the facility, whichever is less;</p> <p>ii. Beverage container redemption is an accessory use to a principal retail use that includes beverage sales. Local beverage container redemption centers as defined in 32 M.R.S.A. 1867, as may be amended, are not allowed as a principal use.</p> <p>iii. Storage of all beverage containers shall be contained entirely within the building providing retail sales.</p> <p>g. Studios for artists, photographers and craftspeople including, but not limited to painters, sculptors, dancers, graphic artists and musicians.</p> <p>h. Restaurants are permitted in the B-1 zone and on the ground floor level of buildings in the B-1b zone provided they meet the following additional requirements in addition to the vehicle trips standards of in Sec. 14-162.a.2:</p> <p>a. As set forth in the City of Portland Technical Manual, section I, the city traffic engineer shall require a traffic study when it calculates the proposed use will generate in excess of a total of 50 peak hour vehicle trips.</p> <p>b. Maximum total floor area for use of the public shall be two thousand (2,000) square feet.</p> |
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| <p>group of vendors shall occur for no more than a total of 28 hours a week collectively;</p> <p>iv. Such products are produced or permitted to be produced in the IL zone; and</p> <p>v. Such products are sold by the producer of the product or their designee.</p> <p>Such sales shall be subject to any other applicable city ordinances. Food trucks are exempt from the limitations contained in this provision, but are subject to Chapter 19 of the City Code and any regulations promulgated pursuant thereto.</p> <p>b. Temporary events associated with a principal use, such as concerts, lectures, exhibitions of the local production of handcrafted and limited production products, fundraisers, and other similar gatherings, provided that they occur no more than a total of 16 hours a week, subject to the performance standards of this zone and any other applicable city ordinances.</p> <p>(r) Registered medical marijuana cultivation facilities.</p> <p>(s) Neighborhood centers.</p> <p>(t) Places of religious assembly, limited to facilities of 10,000 square feet or less.</p> <p>(u) Wind energy systems, as defined and allowed in Article X, Alternative Energy.</p> <p>(v) Street vendors licensed pursuant to Chapter 19.</p> <p>(w) Studios for artists, photographers, and craftspeople, including but not limited to painters, sculptors, dancers, graphic artists, and musicians.</p> | <p>c. The hours of operation shall be limited to between 6:00 a.m. and 11:00 p.m. each day.</p> <p>d. Food service and consumption are the primary function of the restaurant.</p> <p>3. <i>Institutional:</i></p> <p>a. Places of religious assembly;</p> <p>b. Municipal offices;</p> <p>c. Elementary, middle and secondary schools;</p> <p>d. Nursery schools and kindergarten;</p> <p>e. Clinics of less than three thousand (3,000) square feet of total floor space.</p> <p>4. <i>Other:</i></p> <p>a. Lodging houses;</p> <p>b. Utility substations, as defined in section 14-47, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding;</p> <p>c. Day care facilities or babysitting services;</p> <p>d. Accessory uses as provided in section 14-404;</p> <p>e. Bed and breakfast, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding.</p> <p>f. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:</p> <p>i. No more than twenty (20) overnight transient guests shall be permitted in the facility at any one time.</p> <p>ii. All applicable provisions of Article V of this</p> |
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|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>chapter shall be met.</p> <ul style="list-style-type: none"> <li>iii. Parking shall be provided in compliance with Division 20 of this Article.</li> <li>iv. No unaccompanied minors under the age of eighteen (18) shall be permitted in the facility.</li> <li>v. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.</li> <li>vi. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.</li> </ul> <p>g. Neighborhood center.</p> <p>5. Uses permitted above the ground floor level of buildings in the B-1b zone:</p> <ul style="list-style-type: none"> <li>a. Any residential use set forth in section 14-162(a);</li> <li>b. Bed and breakfast, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding.</li> <li>c. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions: <ul style="list-style-type: none"> <li>i. No more than twenty (20) overnight transient guests shall be permitted in the facility at any one time.</li> <li>ii. All applicable provisions of Article V of this chapter shall be met.</li> <li>iii. Parking shall be provided in compliance with Division 20 of this Article.</li> <li>iv. No unaccompanied minors under the age of eighteen (18) shall be permitted in the facility.</li> </ul> </li> </ul> |
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|  | <p>v. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.</p> <p>vi. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.</p> <p>6. Wind energy systems, as defined and allowed in Article X, Alternative Energy.</p> |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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## 233 Anderson Street Map Amendment - Traffic Comments

1 message

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**Tom Errico** <thomas.errico@tylin.com>

Thu, Oct 5, 2017 at 2:09 PM

To: Jean Fraser <jf@portlandmaine.gov>

Cc: Keith Gray <kgray@portlandmaine.gov>, Katherine Earley <kas@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>, Lauren Swett <lszett@woodardcurran.com>

Hi Jean – I have reviewed the proposed zone amendment and I would suggest that the applicant provide a trip generation comparison between the current and proposed zones. The trip generation estimate should be conducted for the most intensive traffic generating use for each zone. I would note that given the relatively small size of the subject area - that comprises of the zone change - I do not expect a significant increase in traffic generation changing the existing IL-b zone to B-1b.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE

Senior Associate

Traffic Engineering Director

**TYLIN** INTERNATIONAL

12 Northbrook Drive

Falmouth, ME 04105

+1.207.781.4721 main

+1.207.347.4354 direct

+1.207.400.0719 mobile

+1.207.781.4753 fax

thomas.errico@tylin.com

Visit us online at [www.tylin.com](http://www.tylin.com)

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"One Vision, One Company"



## **Zoning Map, Text Amendment, Contract or Conditional Rezoning Application Portland, Maine**

Planning and Urban Development Department  
Planning Division

Portland's Planning and Urban Development Department coordinates the review of requests for zoning map amendments, zoning text amendments and contract or conditional re-zoning. The Division also coordinates site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Zoning Map, Text Amendment or Contract/Conditional Rezonings.

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14), Design Manual and Technical Manual.

**Planning Division**

Fourth Floor, City Hall

389 Congress Street

(207) 874-8719

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

**Office Hours**

Monday thru Friday

8:00 a.m. – 4:30 p.m.

**I. Project Information (Please enter n/a on those fields that are not applicable)**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Project Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 233 Anderson Street                   |
| Proposed Development Address:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 233 Anderson Street Portland ME 04101 |
| Project Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 16 unit mixed use building            |
| Chart/Block/Lot:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 01-A-013                              |
| Right, Title or Interest ( <i>Please identify the status of the applicant's right, title, or interest in the subject property – for example a deed, option or contract to purchase or lease the subject property</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Purchaser                             |
| Existing Use ( <i>Describe the existing use of the subject property</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | raw land                              |
| Current Zoning Designation:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | B1b and IIb                           |
| Proposed Use of the Property ( <i>Please describe the proposed use of the subject property. If construction or development is proposed, please describe any changes to the physical condition of the property</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 16 unit mixed use building            |
| Vicinity Map ( <i>Attach a map showing the subject parcel and abutting parcels, labeled as to ownership and/or current use</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                       |
| Site Plan ( <i>On a separate sheet, please provide a site plan of the property showing existing and proposed improvements, including such features as buildings, parking, driveways, walkways, landscape and property boundaries. This may be a professionally drawn plan, or a carefully drawn plan – to scale – by the applicant. (Scale to suit, range from 1' = 10' to 1' = 50'.) Contract and conditional rezoning applications may require additional site plans and written material that address physical development and operation of the property to ensure that the rezoning and subsequent development are consistent with the comprehensive plan, meet applicable land use regulations, and compatible with the surrounding neighborhood</i> ) |                                       |

**II. Contact Information (Please enter n/a on those fields that are not applicable)**

**APPLICANT**

|                |                     |
|----------------|---------------------|
| Name:          | Glenn Morse         |
| Business Name: | 2 Walnut LLC        |
| Address:       | 218 Washington Rd   |
| City/State:    | Portland ME         |
| Zip Code:      | 04101               |
| Work #:        | 207.590.3877        |
| Home #:        |                     |
| Cell #:        | 207.590.3877        |
| Fax #:         |                     |
| E-mail:        | gmorse444@gmail.com |



**OWNER**

|             |                              |
|-------------|------------------------------|
| Name:       | Pine State Elevator          |
| Address:    | 230 Anderson Street          |
| City/State: | Portland ME                  |
| Zip Code:   | 04101                        |
| Work #:     |                              |
| Home #:     |                              |
| Cell #:     |                              |
| Fax #:      |                              |
| E-mail:     | travis@pinestateelevator.com |

**AGENT/REPRESENTATIVE**

|             |                     |
|-------------|---------------------|
| Name:       | Areta Snow          |
| Address:    | 218 Washington Ave  |
| City/State: | Portland ME         |
| Zip Code:   | 04101               |
| Work #:     |                     |
| Home #:     |                     |
| Cell #:     | 603.235.1257        |
| Fax #:      |                     |
| E-mail:     | gmorse444@gmail.com |

**BILLING (to whom invoices will be forwarded to)**

|             |                     |
|-------------|---------------------|
| Name:       | 2 Walnut LLC        |
| Address:    | 218 Washington Ave  |
| City/State: | Portland ME         |
| Zip Code:   | 04101               |
| Work #:     |                     |
| Home #:     |                     |
| Cell #:     | 603.235.1257        |
| Fax #:      |                     |
| E-mail:     | gmorse444@gmail.com |

**ENGINEER**

|             |  |
|-------------|--|
| Name:       |  |
| Address:    |  |
| City/State: |  |
| Zip Code:   |  |
| Work #:     |  |
| Home #:     |  |
| Cell #:     |  |
| Fax #:      |  |
| E-mail:     |  |

**SURVEYOR**

|             |                             |
|-------------|-----------------------------|
| Name:       | Sebago Technics             |
| Address:    | 75 John Roberts Rd Suite 1A |
| City/State: | South Portland ME           |
| Zip Code:   | 04106                       |
| Work #:     | 207.200.2100                |
| Home #:     |                             |
| Cell #:     |                             |
| Fax #:      |                             |
| E-mail:     | sfrank@sebagotechnics.com   |

**ARCHITECT**

|             |                        |
|-------------|------------------------|
| Name:       | Carol Morrisette       |
| Address:    | 21 Chestnut #506       |
| City/State: | Portland ME            |
| Zip Code:   | 04101                  |
| Work #:     | 207.699.4184           |
| Home #:     |                        |
| Cell #:     | 207.6717965            |
| Fax #:      |                        |
| E-mail:     | carol@resdesstudio.com |

**ATTORNEY**

|             |                             |
|-------------|-----------------------------|
| Name:       | Tom Jewell                  |
| Address:    | 577 Congress St             |
| City/State: | Portland ME                 |
| Zip Code:   | 04101                       |
| Work #:     | 207.774.6665                |
| Home #:     |                             |
| Cell #:     |                             |
| Fax #:      |                             |
| E-mail:     | tjewell@jewellandbulger.com |

**DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN**

|         |                     |
|---------|---------------------|
| Name:   | Areta Snow          |
| E-mail: | gmorse444@gmail.com |
| Name:   |                     |
| E-mail: |                     |
| Name:   |                     |
| E-mail: |                     |

### III. APPLICATION FEES (check applicable review)

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |            |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <input checked="" type="checkbox"/> | <b>Zoning Map Amendment</b><br>from ( ILb ) zone to ( B1b ) zone                                                                                                                                                                                                                                                                                                                                                                                                                                  | \$3,000.00 |
| <input type="checkbox"/>            | <b>Zoning Text Amendment</b><br>to Section 14- (     )<br>(For a zoning text amendment, attach on a separate sheet the exact language being proposed, including existing relevant text, in which language to be deleted is depicted as crossed out (example).                                                                                                                                                                                                                                     | \$3,000.00 |
| <input type="checkbox"/>            | <b>Combination Zoning Text Amendment and Zoning Map Amendment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                 | \$4,000.00 |
| <input type="checkbox"/>            | <b>Conditional or Contract Zone</b><br>(A conditional or contract rezoning may be requested by an applicant in cases where limitations, conditions, or special assurance related to the physical development and operation of the property are needed to ensure that the rezoning and subsequent development are consistent with the comprehensive plan, meet applicable land use regulations, and compatible with the surrounding neighborhood. Please refer to Division 1.5, Section 14-60-62.) | \$5,000.00 |

### IV. FEES ASSESSED AND INVOICED SEPARATELY

- Notices to abutters (receipt of application, workshop and public hearing meetings) (\$.75 each)
- Legal Ad in the Newspaper (% of total ad)
- Planning Review (\$52.00 hour)
- Legal Review (\$75.00 hour)
- Third Party Review (all outside reviews or analysis, eg. Traffic/Peer Engineer, are the responsibility of the applicant and will be assessed and billed separately)

## VI. 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 Map Amendment, Text Amendment, Conditional or Contract Rezoning 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: | Glenn Morse |
| Date:                   | 8/2/17      |

PURCHASE AND SALE AGREEMENT  
[218-220 Washington Ave, Portland, Maine]

This Agreement made between **GLENN A. MORSE**, a resident of Portland, Maine and **2 Walnut LLC**, a Maine limited liability company, of Portland, Maine (collectively "the Buyer"), and **Pine State Elevator Co.** of 230 Anderson Street, Portland, Maine ("the Seller").

Seller hereby agrees to sell and the Buyer hereby agrees to purchase the Property hereinafter specified in accordance with and subject to the following terms and conditions:

**1. The Property.** The property to be sold consists of:

A. **Real Property.** The parcels of property known as 233 Anderson Street, Portland, Maine collectively containing approximately 11,326 square feet of land, being the same Real Property described as Map and lot 10-A-40 recorded in the Cumberland County Accessors Office (collectively "the Property").

**2. Price and Payment Terms.** The Purchase Price for the Property is [REDACTED] all of which shall be payable in cash or certified check on or before June 1, 2018 May 15, 2018 as follows:

~~The purchase price to be financed by Seller through a note secured by a second mortgage on the Property (the "Second Mortgage Note"). The Second Mortgage Note and accompanying second mortgage shall provide for a 30 day written notice and cure period for defaults and shall be subordinate in collateral and payment priority to Buyer's acquisition/construction financing on such further terms and conditions as Buyer's lender may require and to the Condominium provisions of Section 13 below. The primary principal(s) of Buyer shall personally guaranty the Second Mortgage Note.~~

**3.2. Closing.** The Closing shall occur on the mutually agreed upon closing date, time and place to be determined after Buyer has obtained all applicable land use, zoning and construction permits, approvals for a residential condominium project containing a minimum of 16 dwelling units and has fully completed and constructed said condominium project in its entirety, and the expiration of any applicable appeal periods, but not earlier than May 15, 2018 and not later than June 1, 2018 May 15, 2018 one (1) year from the date of this Agreement unless otherwise agreed. Buyer agrees to pursue such approvals with due diligence. Provided however that if Buyer is continuing to pursue such approvals in good faith and with due diligence and if such approvals have not been obtained and become final prior to Closing within said one year period notwithstanding Buyer's efforts, then the time for closing shall be extended for an additional six (6) months as may be required to obtain them with due diligence and continuity of effort. In the event that the contract is extended beyond one year, the Price

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set forth in Section 2 herein shall increase to [REDACTED]

[REDACTED] and Buyer agrees to deliver a deposit in the amount of [REDACTED] deposit, to be applied to purchase price prior to closing, of which will become nonrefundable and will be paid over to Seller or financed monthly in three equal installments payable on the first of each month. It is agreed that time is of the essence of this Agreement.

The place of closing shall be at a mutually agreeable location. Buyer shall have the right to extend the Closing for an additional 5 business days by written notice to Seller at least 5 business days prior to the Closing.

**4.3. Conveyance.** The Real Property is to be conveyed to the Buyer (or to the nominee designated by the Buyer upon written notice to the Seller given at least 10 days before the Closing Time) at the Closing Time by a good and sufficient Quit Claim with Covenant deed of the Seller conveying a good and clear record and marketable title to the same, free from all liens and encumbrances except as expressly identified above and if requested by Buyer utilizing a legal description provided at Buyer's expense, however that Buyer/Purchaser may elect to accept such title as Seller can deliver at Buyer/Purchaser's option.

At the Closing, and in addition to any other documents referred to in this Agreement to be delivered to Buyer, Seller shall execute, acknowledge as necessary and deliver the following documents and such other documents as Buyer's attorneys may reasonably require to complete the transaction contemplated herein:

- (i) **Transfer Documents.** The deed and a Maine Real Estate Transfer Tax Declaration of Value;
- (ii) **Title Affidavits.** Such customary certificates, affidavits or indemnity agreements may be typically required to obtain a title insurance policy;
- (iii) **Non-foreign Person Affidavit.** If applicable, such affidavits and certificates as Buyer shall deem necessary to relieve Buyer of any obligation to deduct and withhold any portion of the purchase price pursuant to §1445 of the Internal Revenue Code;
- (iv) **Maine Resident Affidavit.** If applicable, such affidavits and certificates as Buyer shall deem necessary to relieve Buyer of any obligation to deduct and withhold any portion of the purchase price pursuant to 36 M.R.S.A. §5250-A;
- (v) **Underground Oil Storage Tank Certification.** A written notice certifying either (i) that there is no underground oil storage facility located on the Real Property to the best of Seller's knowledge, or (ii) pursuant to 38 M.R.S.A. §563(6), if there is such a facility on the Real Property, that the facility exists and shall disclose its registration number or numbers, the exact location of the facility,

whether or not it has been abandoned in place, and that the facility is subject to regulation by the Maine Board of Environmental Protection; and

(vi) Authority/Other Documents. Such other documents as are customarily delivered by Sellers to Buyers of real property in the State of Maine, including without limitation evidence of good standing and limited liability company authority, together with a legal opinion of Seller's counsel satisfactory to Buyer regarding the limited liability company's existence, good standing and authority to perform all transactions contemplated by this Agreement.

**5.4. Title.** Within one hundred twenty (120) days of the Effective Date of this Agreement, Buyer shall notify Seller of any then existing defects in title with respect to the Real Property would reveal that would make Seller unable to deliver title to or convey the Real Property as specified herein and of any matter that an inspection and survey would reveal (the "Defects") that would make Seller unable to convey the Real Property as specified herein. Any then existing Defects outstanding at the expiration of such time period which are not specified in such notice shall be waived, excepting for title defects and such matters subsequently arising after such date. Seller shall be obligated to proceed in good faith to cure any objected to such Defects, provided that Seller shall not be obligated to relocate any structures or utilities. If an objected Defect specified in such notice is not cured within sixty (60) days, then Buyer may elect, by written notice to Seller, to either (i) to accept a conveyance of Real Property subject to such Defects, without deduction and, in such case, Seller may elect to convey the Real Property without warranties as to such Defects, or (ii) to terminate this Agreement, the obligations of all parties hereunder shall cease, and neither party shall have any claim against the other by reason of this Agreement. Notwithstanding the foregoing Seller shall be obligated to obtain a discharge of any outstanding mortgage and to pay any outstanding real estate taxes until the Closing, but Buyer shall not convey, encumber, grant any easements or otherwise impair title pending closing.

If at Closing Seller shall be unable to give title or to make conveyance, or to deliver possession of the Real Property, all as herein stipulated, except as to Defects not objected to or waived as set forth in the initial paragraph of this Section, then Seller shall use commercially reasonable efforts to remove any such Defects in good faith with due diligence, or to deliver possession as provided herein, or to make the Real Property conform to the terms and conditions hereof, as the case may be; for a period of up to 60 days, or such longer period as shall be agreed to by Seller and Buyer. If at the expiration of such extended time Seller shall have failed to remove any defects in title, deliver possession, or make the Real Property conform, as the case may be, all as herein agreed, except as to defects and matters not objected to or waived as set forth in the initial paragraph of this Section, then, at Buyer's option, the cost to cure such defects will be deducted from sales price prior to closing, or Buyer may elect to have deposit returned and all other obligations of the parties hereto shall cease and this Agreement shall be void without recourse of the parties hereto.

To enable Seller to make conveyance as herein provided, Seller may use the purchase money or any portion thereof, other than any required tax withholding, at

JM

Closing to clear the title of any or all encumbrances or interests, provided that all instruments so procured are recorded simultaneously with the deed or binding payoff letters are obtained and the amounts specified are paid at closing.

**6.5. Conditions.** Buyer's obligations hereunder are conditioned upon compliance with the following:

- (i) Any inspection of the Property reasonably satisfactory to Buyer within 30 days.
- (ii) Written commitment by Lender to extend mortgage financing to Buyer with conditions reasonably satisfactory to Buyer in the amount needed to finance Buyer's acquisition and construction of a residential condominium on the Real Property containing not less than 16 units. Buyer agrees to pursue such financing in good faith with due diligence.
- (iii) Receipt of final land use, zoning and construction approvals for a residential condominium project containing a minimum of 16 condominium dwelling units in a six story building with parking underneath (the "Approvals").

Buyer shall have the right, at its option, to terminate this Agreement, by written notice to Seller ~~no later than 30 days on or~~ on or before Closing, if any of the foregoing conditions are not reasonably satisfied.

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**11. Seller's Warranties and Representations.** Except as otherwise set forth in this Agreement, Seller makes no representations or warranties either expressed or implied as the condition of the premises, including, without limitation, compliance with any laws, rules or regulations pertaining to building codes, zoning, environmental or hazardous waste. Buyer takes the premises **AS IS, WHERE IS, WITH ALL FAULTS** and without recourse. Seller has made no verbal representations concerning the condition of the premises and if any such statements have been made either before or after the date of this contract they are not intended to be relied upon by Buyer. No agent of Seller is authorized to make any representations concerning the condition of the premises. Buyer, or his agents, have made, or will make, a physical examination of the premises and personal property and agree to accept same in the conditions they are in as of that time.

Provided however that notwithstanding the foregoing, Seller warrants and represents as of the date of execution by Seller of this Agreement and as of each date through and including the Closing that:

- (a) There are no material litigation, liens, judgments, violations, or proceedings pending or to the best of Seller's knowledge threatened against or relating to the Real Property;
- (b) There is no pending, or to the best of Seller's knowledge, threatened material action or proceeding (including, but not limited to, any condemnation or eminent

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domain action or proceeding) before any court, governmental agency or arbitrator relating to or arising out of the ownership of the Real Property or any portion thereof, or which may adversely affect Seller's ability to perform this Agreement;

(c) No work has been performed or is in progress at, and no materials have been furnished to, the Real Property or any portion thereof which may give rise to mechanic's, materialmen's or other liens against the Real Property or any portion thereof which have not been paid or will not be paid by Seller when due post Closing, excluding work initiated or authorized by Buyer or required to be performed by Buyer under this Agreement; and

(d) Pine State Elevator Co. is a Maine company duly organized and existing under the laws of the State of Maine, with full capacity, power and authority to enter into this Agreement and to fully perform the transactions contemplated hereby; and

(e) During its ownership of the Real Property, Seller has not deposited any hazardous or toxic wastes, substances, matters or materials, including but not limited to any material defined as hazardous or toxic from time to time by applicable state, local and federal law, either on the Real Property or any adjacent property in violation of law nor is Seller aware of any claims by any governmental agencies that it has done so.

In the event that material changes occur as to any warranties and representations set forth in this Agreement of which Seller has knowledge, Seller will promptly disclose same to Buyer within three (3) business days.

~~12. **Condominium Project.** Buyer agrees to construct and legally establish a residential condominium project on the Real Estate in accordance with the Approvals, the Maine Condominium Act and applicable secondary mortgage market documentation requirements (the "Condominium") as established by Buyer.~~

**14.12. Closing Warranties.** All obligations of the Buyer under this Agreement are (without limitation) conditioned upon Seller's warranties and representations hereunder being materially true, accurate and complete at Closing, with the same force and effect as though such representations and warranties had been made on and as of the Closing. Each such warranty and representation shall survive the closing for the benefit of Buyer.

**15.13. Brokers.** Seller and Buyer each represent and warrant to the other that no brokers, agents or consultants have been employed with respect to this transaction by either of them and Seller and Buyer agree to indemnify and hold the other harmless from any claim by any broker or agent claiming compensation in respect of this transaction, alleging an agreement with Seller or Buyer, as the case may be.

~~16.14. **General.**~~

(a) This Agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, successors and assigns of the parties.

(b) Any notice relating in any way to this Agreement (except the extension notice referred to in Section 6(b) shall be in writing and shall be sent by (i) registered or certified mail, return receipt requested, (ii) overnight delivery by a nationally recognized courier, or (iii) hand delivery obtaining a receipt therefor, addressed as follows:

To Buyer: 2 Walnut LLC  
218 Washington Avenue  
Apartment #3  
Portland, ME 04101

with a copy to: Buyers Attorney

To Seller: Pine Street Elevator  
230 Anderson Street  
Portland, ME

with a copy to: Sellers Attorney

and such notice shall be deemed delivered three days after when so posted by certified mail, the next business day in the case of notice by overnight courier and the business day when delivered in the case of notice by hand delivery. Either party may, by such manner of notice, substitute persons or addresses for notice other than those listed above.

(c) All headings in this Agreement are for convenience of reference only and are of no independent legal significance.

(d) This Agreement may not be modified, waived or amended except in a writing signed by the parties hereto. No waiver of any breach or term hereof shall be effective unless made in writing signed by the party having the right to enforce such a breach, and no such waiver shall be construed as a waiver of any subsequent breach. No course of dealing or delay or omission on the part of any party in exercising any right or remedy shall operate as a waiver thereof or otherwise be prejudicial thereto.

(e) Any and all prior and contemporaneous discussions, undertakings, agreements (including without limitation any prior Agreements previously executed by the parties hereto) and understandings of the parties are superseded by and merged in this Agreement, which alone fully and completely expresses their entire agreement.



(f) This Agreement may be simultaneously executed in any number of counterparts, each of which when so executed and delivered shall be an original, but such counterparts shall constitute one and the same instrument. This Agreement may be transmitted between the parties by facsimile machine and signatures appearing on faxed or emailed instruments shall be treated as original signatures. Both a faxed or emailed Agreement containing either original or faxed or emailed signatures of all parties, and multiple counterparts of the same Agreement each containing separate original or faxed or emailed signatures of the parties, shall be binding on them.

(g) If any term or provision of this Agreement or the application thereof to any person or circumstances shall, at any time or to any extent, be invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to persons or circumstances other than those as to which this Agreement is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

(h) It is expressly understood and agreed that time is of the essence in respect of this Agreement.

(i) This Agreement shall be governed by and construed and enforced in accordance with the laws in effect in the State of Maine.

~~(j) At the request of Buyer, Seller agrees to execute a short form memorandum of purchase and sale in a form in accordance with Maine practice or to execute a junior mortgage to Buyer securing Seller's performance of this Agreement suitable for recording in the Cumberland County Registry of Deeds and in addition, at or prior thereto to transfer title to the personally owned Real Estate into 2 Walnut Street, LLC, which real estate shall remain the only activity conducted by 2 Walnut Street LLC.~~

~~(j) Buyer agrees to promptly forward to seller, for seller's information, any documentation, permits, geotechnical reports or architectural plans (anything pertinent to the property), when received.~~

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The effective date of this Agreement is when the Agreement has been signed by the Buyer and Seller as evidenced by their signature and notice of such acceptance has been communicated to the parties.

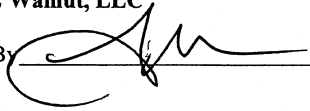
Effective Date: May \_\_\_\_\_, 2017.

Buyer:

date of Seller's acceptance: May \_\_\_, 2017

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GLENN A. MORSE (Member)  
2 Walnut, LLC

By  president 5/25/17

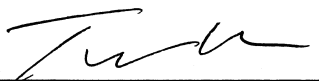
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its: \_\_\_\_\_

Seller:  
**PINE STATE ELEVATOR, CO.**

*date of Buyer's acceptance: May \_\_, 2017*

By its: \_\_\_\_\_

 *U.P. 5/25/17*

Seller's Principals (as to personal guaranty)

**WAIVER OF LIEN**  
(UNCONDITIONAL)

**TO WHOM IT MAY CONCERN:**

PROJECT NAME: **443 Congress Housing Renovation**

PROJECT ADDRESS ("Premises"): **443 Congress Street, Portland, ME 04101**

OWNER: **JJR 443 Congress, LLC**

CONSTRUCTION MANAGER: **Northland Management Corp**

SUBCONTRACTOR/SUPPLIER: **Morse Builders Inc.**

LENDER: **Saco and Biddeford Savings Institution**

The undersigned, in consideration of the sum of **\$33,820.00**, receipt of which is hereby acknowledged, does hereby WAIVE and RELEASE any and all lien, right of lien or claim of whatsoever kind or character under all pertinent statutes or common law of the State of Maine on said described building(s) and Premises, on account of all labor, services and/or material or both, furnished for or incorporated into said building(s) and premises by the undersigned up to and including **August 31, 2017**, except for retainage (if any) due and not included in the above amount.

Further, the undersigned hereby COVENANTS and REPRESENTS that all of the subcontractors, suppliers, and laborers engaged by the undersigned have been or will be paid in full, for all work done and/or all materials furnished to said Premises through the date shown herein. The undersigned hereby AGREES to INDEMNIFY, DEFEND and HOLD HARMLESS the owner and lender from any and all claims by any party whatsoever based on work done and/or material furnished in connection with the construction by the undersigned and/or its subcontractors or suppliers through the date shown herein.

DATED: 9/22, 2017

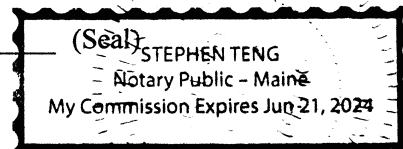
Sworn and subscribed before me this 22nd day

Name of Company: **More Builders Inc.**

of September, 2017

By: [Signature]  
Signature  
Its: President  
Title

[Signature]  
Notary Public



**CERTIFICATE OF FINAL PAYMENT (upon final payment):**

The undersigned certifies that all work to be performed by the undersigned on the Premises has been completed, and that there is no more work or materials to be supplied to the Premises under terms of agreement for work. The payment received herewith constitutes payment in full for all work done and materials supplied to the Premises, and this lien waiver covers all work and materials contracted for by the undersigned.

Name of Company: \_\_\_\_\_

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

Signature

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

Title

Is the business incorporated? ☐ Yes ☐ No

Tax ID# or SS#: \_\_\_\_\_

**FINAL WAIVER OF LIEN**  
**(UNCONDITIONAL)**

**TO WHOM IT MAY CONCERN:**

**PROJECT NAME: Robert W. Baird & Co., Inc. "Fit-Up"**

**PROJECT ADDRESS: 129 Middle Street #200, Portland, ME 04101**

**OWNER: Robert W. Baird & Co., Inc.**

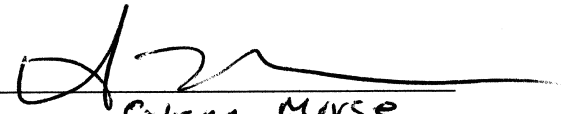
**GENERAL CONTRACTOR: Portland Builders, Inc.**

The undersigned, in consideration of the sum of **Six Thousand Four Hundred Dollars and 00/100 (\$6,400.00)**, receipt of which is hereby acknowledged, does hereby **WAIVE and RELEASE** any and all lien, right of lien or claim of whatsoever kind or character on said described building(s) and premises, on account of all labor, services and/or material or both, furnished for or incorporated into said building(s) and premises by the undersigned up to and including **August 31, 2017**.

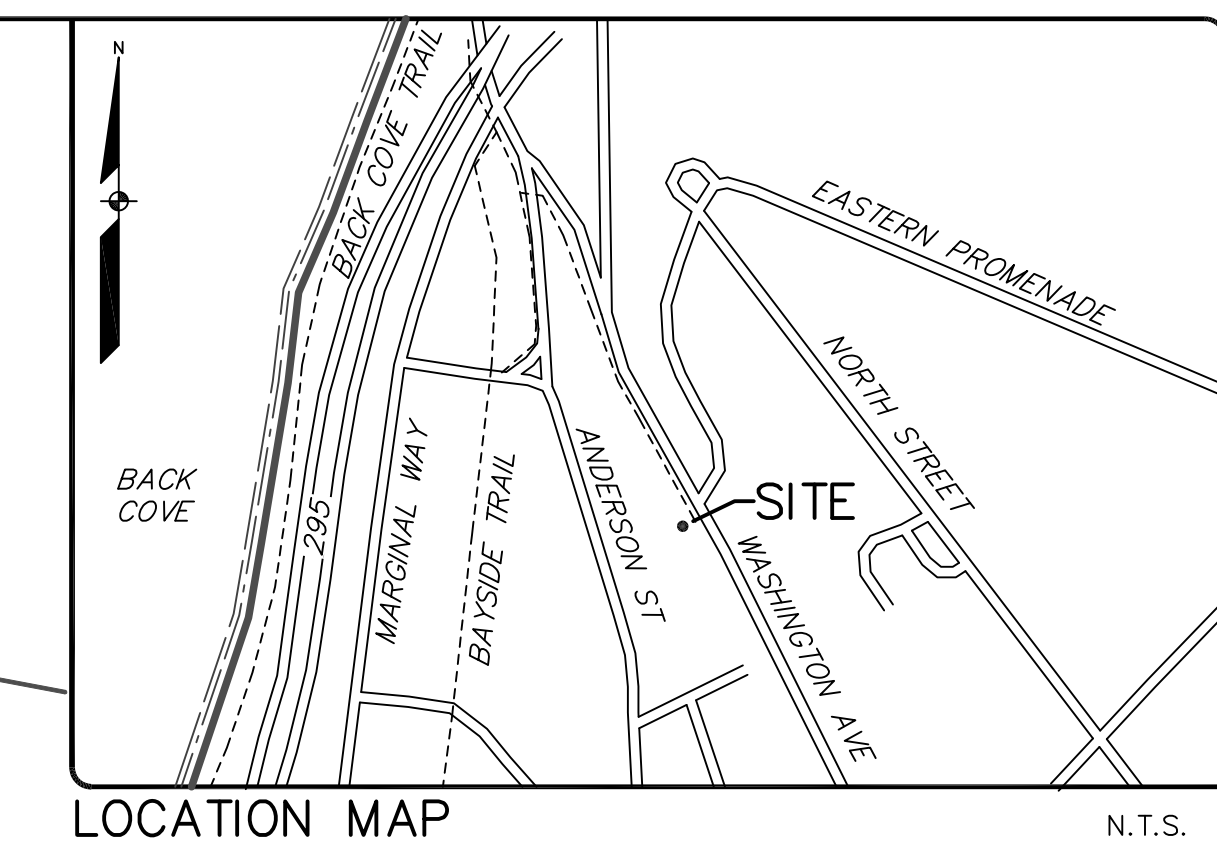
Further, the undersigned hereby **COVENANTS and REPRESENTS** that all of the subcontractors, suppliers, mechanics, and laborers engaged by the undersigned have been paid in full, or shall be paid from the proceeds of this payment for all work done and/or all materials furnished to said property through the date shown herein. The undersigned hereby **AGREES** to **INDEMNIFY and HOLD HARMLESS** the owner and all from any and all claims by any party whatsoever based on work done and/or material furnished in connection with the construction by the undersigned and his subcontractors or suppliers through the date shown herein.

DATED Sept. 21, 2017

WITNESS Aleta Snow

SIGNED:   
Glenn Morse  
Morse Builders Inc  
Morse Builders, Inc.





# GENERAL NOTES:

1. 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)
2. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND SURVEY BY QUINN SEGAO TECHINCS, INC. WITH SUPPLEMENTAL TOPOGRAPHY OBTAINED FROM LIDAR INFORMATION.
3. 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 RETACEMENT AND EXISTING MONUMENTATION PLAN, ANDERSON STREET, FOX STREET, GORHAM STREET & FLOWMAN 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.  
4. 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.  
5. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD TOGETHER WITH PLANS PROVIDED BY THE CITY. UNDERGROUND UTILITIES WITHIN WASHINGTON AVENUE ARE APPROXIMATE AND MAY NOT HAVE BEEN FIELD VERIFIED. DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIS-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.  
6. PROPOSED PROPERTY LINES AND EASEMENT SHOWN HEREON ARE BASED UPON THIS BOUNDARY SURVEY AND THE CONTRACT FOR THE SALE OF REAL ESTATE DATED OCTOBER 19, 2016.

| DESIGNED                                                                                                                                                                                                        |     | CHECKED  |                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|---------------------------------------------|
|                                                                                                                                                                                                                 | MWE |          | CDM                                         |
| B                                                                                                                                                                                                               | WTC | 2/6/17   | REVISED PROPOSED PROPERTY LINES PER NOTE 6. |
| A                                                                                                                                                                                                               | WTC | 12/15/16 | CITY SUBMITTAL NO. 1                        |
| REV:                                                                                                                                                                                                            | BY: | DATE:    | STATUS:                                     |
| THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHINCS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHINCS, INC. |     |          |                                             |

**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 04240  
Tel. 207-783-5656

EXISTING CONDITIONS PLAN

OF:  
218-220 WASHINGTON AVENUE  
218 WASHINGTON AVENUE  
PORTLAND, MAINE

FOR:  
218-220 WASHINGTON AVENUE LLC  
199 ELDERBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

|             |          |
|-------------|----------|
| PROJECT NO. | SCALE    |
| 06172       | 1" = 20' |

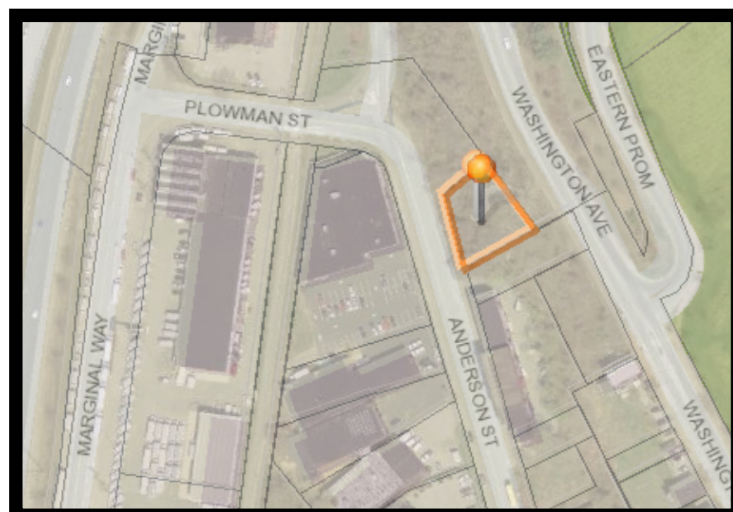
SHEET 2 OF 23

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The vacant parcel at 233 Anderson is currently located in *both* the IL-b and B1-b zones. We are requesting a Zone Map Amendment in order to bring our entire site into the B1-b Zone. In keeping with the Planning Board's thoughtful approach of evaluating surrounding parcels when considering any zone change, we have graphically included the adjacent, City-owned parcel located to the northwest of 233 Andersen Street in our proposal. By including the adjacent parcel, a cleaner, more regular IL-b and B1-b delineation is achieved.

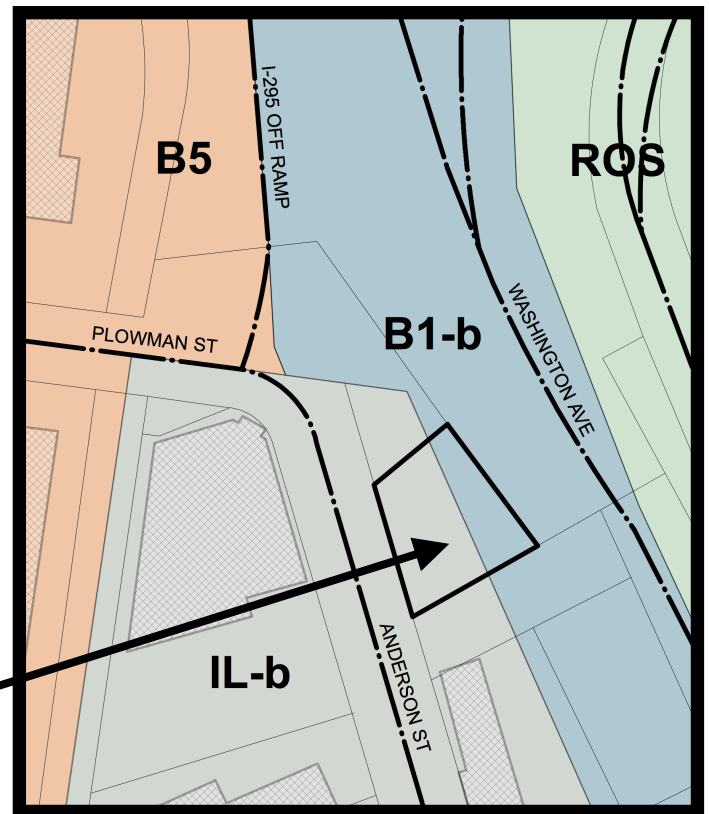
233 Anderson Street is noted in the graphic below with an orange pin. The orange outline represents the 233 Anderson Street parcel, CBL #10-A-40. The lot is near the corner of Anderson and Plowman Streets, just south of the foot of the Southbound I-295 off-ramp at Exit 8, and "below" Washington Avenue.



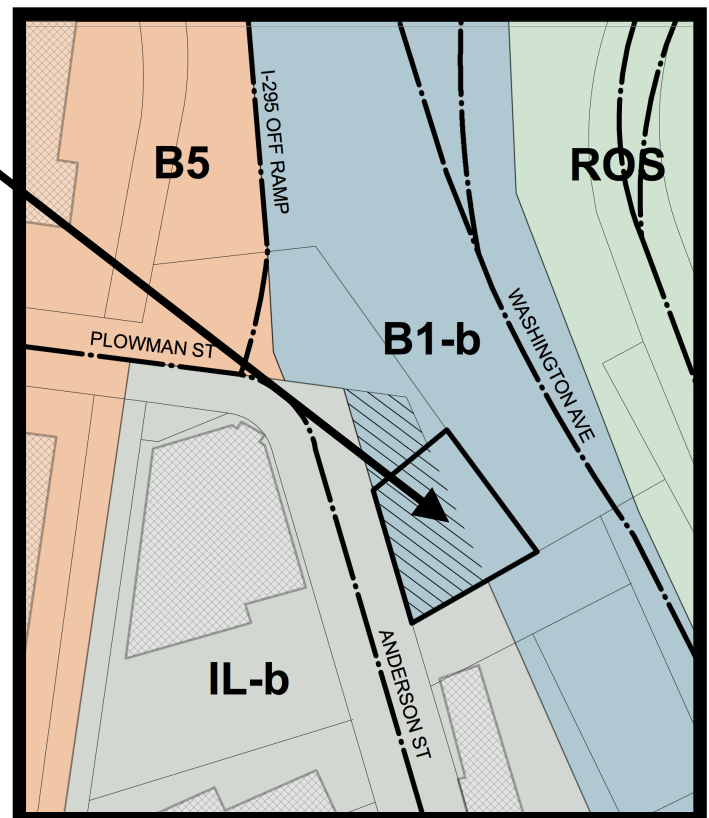
This area of East Bayside is at the confluence of the IL-b, B1-b, and B5 zones, adjacent to the ROS. While the entire area of Bayside is ripe for a thorough zoning review, the parcel at 233 Andersen Street is a bit more straightforward in its logical zoning solution.

The line of demarcation between the two zones on the parcel (IL-b and B1-b) runs parallel to Washington Avenue, with the IL-b zone extending along Anderson Avenue for only an additional 81'+/- (over City-owned property) before transitioning to the adjacent B5 zone. The B5 zone is within 125' of the parcel, which allows mixed commercial use, including multi-family residential. The B1-b zone allows mixed commercial use, including multi-family residential. A chart of allowed uses is included on the following page.

**EXISTING ZONE MAP  
Split IL-b & B1-b Zones**

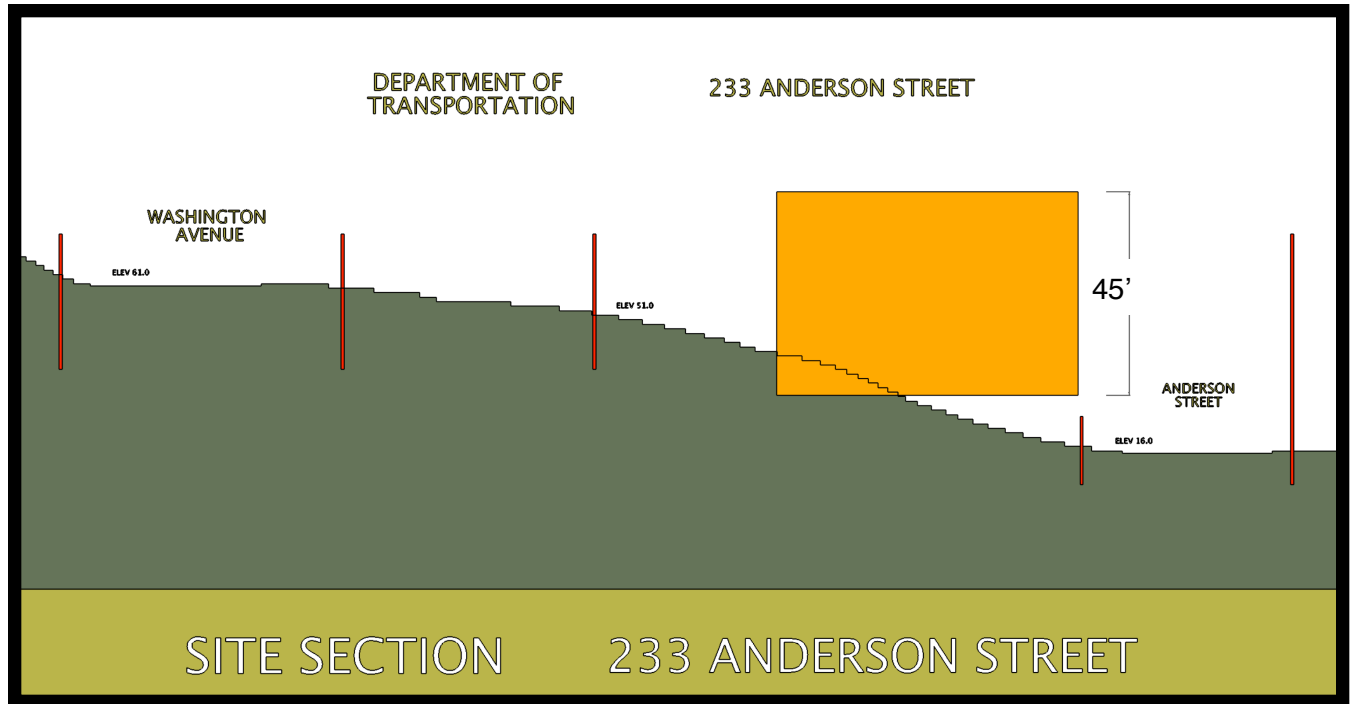


**PROPOSED ZONE MAP  
Change to Single B1-b Zone**



The hatched light blue area is the proposed zone map change for the parcel at 233 Andersen Street and the adjacent City-owned parcel. Of course, we are only proposing the map amendment for the parcel of which we have right, title, or interest, but felt it prudent to illustrate the potential area that the Planning Board is likely to consider, particularly because it is City-owned land.

233 Anderson Street has a relatively imposing slope over the entire length of the parcel that significantly limits the ability of the site to be developed as currently zoned, particularly with a grade difference in excess of 35' in the downhill, IL-b zone. The elevation at the property line along Anderson Street is approximately 16' and steadily climbs up to 58' at the rear property line. For reference, a 45' building height is shown for scale in the graphic of a typical section through the site, below.



The specific purpose of the IL-b Zone, as stated in the Ordinance is “to provide areas in which low impact industrial uses and limited other uses serving employees and residents of the surrounding neighborhood will be compatible with adjacent residential uses, will provide a buffer between residential neighborhoods and the I-M or I-H industrial zones, or will stand alone as a smaller scale industrial district”. Although we concur that the purpose of IL-b zone is laudable, its application on this specific site is incongruous with its intent, particularly as it relates to the dimensional requirements as stated in Section 14-234.

The dimensional standards of the IL-b zone are most problematic as they relate to pavement setback from the lot boundaries, as it pushes the required site circulation deeper into the site, and deeper into the hill. The site currently zoned IL-b averages approximately 60' deep; a 15' pavement setback from the lot boundary restricts vehicular circulation dramatically, while limiting the (likely single story) building footprint even more so. These dimensional restrictions simply prohibit the development intent of the IL-b zone on this site.

The dimensional standards vary little between the B1-b and IL-b zones, with the important exception of the pavement setback:

| Applicable Dimensional Standards   | B1-b       | IL-b       |
|------------------------------------|------------|------------|
| Maximum Impervious Surface Ratio   | 90%        | 100%       |
| <b>Maximum Building Height</b>     | <b>45'</b> | <b>45'</b> |
| Minimum Side Yard                  | None       | None       |
| Rear Yard                          | None       | None       |
| Front Yard                         | None       | None       |
| Maximum Front Yard                 | 10'        | n/a        |
| Pavement Setback                   | n/a        | 15'        |
| Minimum Lot Area per Dwelling Unit | 435 sf     | n/a        |

The proposed map amendment from IL-b to B1-b for the lower portion of the site along Anderson Street has little impact on the likely allowable uses of the site, with the obvious exception of residential use—which is already allowed on the rear portion of the site. The following chart compares allowable uses between the IL-b and the B1-b, with restrictions or conditions noted with an asterisk and specifically prohibited uses in the IL-b Zone noted in red.

Given the size and slope of the site at 233 Anderson Street, many of the permitted uses in the IL-b Zone would not be feasible. Below is the same chart of uses, simplified to illustrate the *most likely uses* for the parcel, with the proposed map amendment.

### MOST PROBABLE USES Due to Site Constraints, Slope, & Location

| Permitted Uses                                                         | B1-b | IL-b |
|------------------------------------------------------------------------|------|------|
| <b>Multifamily housing</b>                                             | ✓    | ☐    |
| Live/work spaces                                                       | ✓    | ☐    |
| General business & professional offices*                               | ✓    | ☐    |
| Personal Services (per 14-47)                                          | ✓    | ☐    |
| Offices of building tradesmen                                          | ✓    | ✓    |
| General retail establishments*                                         | ✓    | ☐    |
| Beverage dealers*                                                      | ✓    | ☐    |
| Artists' Studios                                                       | ✓    | ✓    |
| Restaurants on ground floor*                                           | ✓    | ☐    |
| Accessory uses                                                         | ☐    | ✓    |
| Bakeries, breweries, distilleries, commercial kitchens w/ minor retail | ☐    | ✓    |
| Research and development                                               | ☐    | ✓    |
| <b>Uses prohibited in IL-b are noted in Red.</b>                       |      |      |
| * with restrictions or conditions                                      |      |      |

| Permitted Uses                                                             | B1-b | IL-b |
|----------------------------------------------------------------------------|------|------|
| <b>1- and 2-family homes</b>                                               | ✓    | ☐    |
| <b>Multifamily housing</b>                                                 | ✓    | ☐    |
| Live/work spaces                                                           | ✓    | ☐    |
| General business & professional offices*                                   | ✓    | ☐    |
| Personal Services (per 14-47)                                              | ✓    | ☐    |
| Offices of building tradesmen                                              | ✓    | ✓    |
| General retail establishments*                                             | ✓    | ☐    |
| Beverage dealers*                                                          | ✓    | ☐    |
| Artists' Studios                                                           | ✓    | ✓    |
| Restaurants on ground floor*                                               | ✓    | ☐    |
| Lodging Houses                                                             | ✓    | ☐    |
| Utility Substations                                                        | ✓    | ✓    |
| Day Care facilities                                                        | ✓    | ✓    |
| Accessory uses (per 14-404)                                                | ✓    | ☐    |
| Accessory uses                                                             | ☐    | ✓    |
| Municipal Offices                                                          | ✓    | ☐    |
| Bed & Breakfasts*                                                          | ✓    | ☐    |
| Hostels                                                                    | ✓    | ☐    |
| Places of religious assembly <10,000 sf                                    | ✓    | ✓    |
| Institutional: Schools (pre-k - 12)                                        | ✓    | ☐    |
| Neighborhood Center                                                        | ✓    | ☐    |
| Clinic < 3,000 sf                                                          | ✓    | ☐    |
| Wind energy systems                                                        | ✓    | ✓    |
| Bakeries, breweries, distilleries, commercial kitchens w/ minor retail     | ☐    | ✓    |
| Research and development                                                   | ☐    | ✓    |
| Indoor amusement and recreation centers                                    | ☐    | ✓    |
| Plant & Tree Nurseries, including recycling                                | ☐    | ✓    |
| Lumber Yards                                                               | ☐    | ✓    |
| Repair Services, excluding motor vehicle repair                            | ☐    | ✓    |
| Dairies                                                                    | ☐    | ✓    |
| Dog Training                                                               | ☐    | ✓    |
| Intermodal transportation facilities                                       | ☐    | ✓    |
| Marinas                                                                    | ☐    | ✓    |
| Distribution centers, warehouses, & wholesale businesses <10,000 sf        | ☐    | ✓    |
| Back Office uses                                                           | ☐    | ✓    |
| Registered medical marijuana cultivation facility                          | ☐    | ✓    |
| Neighborhood Center                                                        | ☐    | ✓    |
| Street vendors (food trucks)*                                              | ☐    | ✓    |
| <b>Concert Hall</b>                                                        | ☐    | ☐    |
| <b>Banquet Facility</b>                                                    | ☐    | ☐    |
| <b>Office Uses (other than back offices or accessory to permitted use)</b> | ☐    | ☐    |
| <b>Intense Industrial Use</b>                                              | ☐    | ☐    |
| <b>Uses prohibited in IL-b are noted in Red.</b>                           |      |      |
| * with restrictions or conditions                                          |      |      |



In closing, the proposed map amendment from a split B1-b/IL-b to a single, B1-b site allows the property to be appropriately developed in concert with the stated objectives of the newly adopted Comprehensive Plan. Our goal is to provide an active commercial use in the base of the building with 12 residential units above. The exact use and size of the commercial spaces is yet to be determined, as is the precise number of live/work units and apartments in the above residential use. The overarching goal is to provide generously sized two-bedroom units, live/work units, and on-site parking, all within the confines of the B1-b Zone dimensional standards and a powerful design worthy of this newly enlivened neighborhood. We firmly believe that the proposed map amendment is in keeping with Portland's Comprehensive Plan and takes great steps in moving us toward the livable City we envision for 2030.

The following are some highlights relating to Portland's Plan:



### Equitable

This proposal is reasonable and **equitable** because the map change does not try to maximize the build ability of the site by requesting the nearby B-5 Zone—it simply brings a physically challenging site completely under one zone and maintains and supports the fabric of the existing East Bayside Neighborhood.



### Sustainable

The proposed building, when reviewed during Site Plan Review, will demonstrate our commitment to planning for sea level rise and smart growth. Zone changes of this type are **sustainable** and logical, enabling our City to grow wisely, properly developing vacant land that has environmental challenges.



### Dynamic

While the site is not in an Historic District, it does have a significant visual presence at the base of Munjoy Hill. We hope to present an interesting architectural design during Site Plan Review that becomes a **dynamic** part of the lively neighborhood, with nearby access to the Portland Trails System.



### Secure

Views of Back Cove will be shared by the proposed residential units, as well as the commercial space(s) at the base of the building. Along with long water and mountain views will come views of the developing Bayside Area. The vibrancy of the area will be visible from the security of well-appointed apartments, at over 1,000 square feet per unit, providing much-needed larger-format housing on the peninsula.

The livability and walkability of the area cannot be overstated. An engaged community of active residents and commercial users provides a **secure** neighborhood unparalleled in its activity and safety.



### Authentic

**Authentic** materials will be used in the building, with particular consideration given to the expression of the materials throughout the facades.

With nearly direct access to I-295, steps from Metro and Breez, and the upcoming bike shares, this site is inextricably **connected** to the City of Portland and specifically, to the East Bayside Neighborhood.



### Connected

**Community Engagement** - On August 22, 2017, we met with the East Bayside Neighborhood Association to ask what the neighborhood would like to see developed. Now, we look forward to discussing this you.



# PLANNING BOARD REPORT PORTLAND, MAINE

Forty-five unit residential Condominium Building  
218 Washington Avenue  
Subdivision, Level III Site Plan  
and Conditional Use Inclusionary Zoning

218-220 Washington Avenue LLC, Applicant

Project #2016-280 (Subdivision & Site Plan)  
Project #2016-281 (Conditional Use Inclusionary Zoning)  
CBL: 010 A015001

|                                                                                               |                                                                           |
|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Submitted to: Portland Planning Board<br>Public Hearing Date: October 10 <sup>th</sup> , 2017 | Prepared by: Jean Fraser, Planner<br>Date: October 5 <sup>th</sup> , 2017 |
|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|

## I. INTRODUCTION

The applicant has requested a hearing on their project for a 4 story building of 45 condominium dwelling units on Washington Avenue at 218 Washington Avenue on the west side of Washington Avenue near the slip road onto I-295. The mix of dwelling units will be 21 one-bedroom units and 24 two-bedroom units, slightly changed from the original proposal for 22 one-bedroom units and 23 two-bedroom units. The project is located in the B1b zone on a steeply sloping site that overlooks Back Cove; it is within 100 feet of the Eastern Promenade Historic Landscape District.

The proposal is also subject to the Inclusionary Zoning (IZ) ordinance and the initial proposal was to provide on site workforce housing units ( [Attachment W](#)). The applicant has since decided to make a fee-in-lieu payment into the Housing Fund as confirmed in an email dated 10.6.17 (also in [Attachment W](#)).

The proposals were originally submitted in December 2016. Following the resolution of right, title and interest questions, the Planning Board held two Workshops in May and July, 2017 where the Board raised concerns about the buffering of the retaining wall; the roof design, and the appearance when viewed from above.

This Hearing was noticed to 94 neighbors and interested parties, and the public notice appeared in the *Portland Press-Herald* on October 2<sup>nd</sup> and 3<sup>rd</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 Workshops the Planning Division received three letters of objection from the attorney acting for the abutter at 202 Washington ([PC 1](#), [2](#) and [5](#)); a comment (PC3) raising concerns about the design and scale of the building; and a comment (PC4) suggesting a different approach to the shared bike/pedestrian path along the frontage. No additional public comments have been received.



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:

| <b>Applicant's Proposal</b>                                                                                                                                                                                                                                                                                                                  | <b>Applicable Standards</b>                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| New structure of 45 dwelling units                                                                                                                                                                                                                                                                                                           | Subdivision Review                                                                                                                                                                                                                                                                                                                                                                                                 |
| Multifamily building of 69,459 sq ft                                                                                                                                                                                                                                                                                                         | Level III Site Plan Review and B-1b Design Review                                                                                                                                                                                                                                                                                                                                                                  |
| New structure of 45 dwelling units                                                                                                                                                                                                                                                                                                           | Inclusionary Zoning Section 14-484                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Waiver Requests</b>                                                                                                                                                                                                                                                                                                                       | <b>Applicable Standards</b>                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Location and spacing of driveways-</b> To allow driveway spacing to be 145 ft from the Eastern Promenade intersection and 45 feet from the adjacent parcel's driveway.<br><br><b>Staff Comments:</b> Staff supports both waivers as the proposed driveway is as far as possible from the Eastern Promenade intersection ( <u>Att. 2</u> ) | Technical Manual Section 1.7.2.7 Location and spacing of driveways <i>shall be determined as follows: Along arterial, collector and local streets, minimum acceptable spacing between double or multiple driveways for driveways on adjacent lots or on the same parcel shall meet the criteria of 100 feet, and corner clearance to a nearby intersection (arterial or collector streets) should be 150 feet.</i> |

## 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 2-family 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>           |                                                                                                                                                                                                                                                                                                  |
| -One-Bedroom Units                    | 21 One-Bedroom Units                                                                                                                                                                                                                                                                             |
| -Two-Bedroom Units                    | 24 Two-Bedroom Units                                                                                                                                                                                                                                                                             |
| -Three-Bedroom Units                  | 0 Three-Bedroom Units                                                                                                                                                                                                                                                                            |
|                                       | (Located as follows:                                                                                                                                                                                                                                                                             |
|                                       | <ul style="list-style-type: none"> <li>• 1st floor- 12 units; 7 one-bedroom; 5 two-bedrooms</li> <li>• 2nd floor- 12 units; 6 one-bedroom; 6 two-bedrooms</li> <li>• 3rd floor- 12 units; 6 one-bedroom; 6 two-bedrooms</li> <li>• 4th floor- 9 units; 2 one-bedroom; 7 two-bedrooms)</li> </ul> |
|                                       | Total units- 45 units                                                                                                                                                                                                                                                                            |
|                                       | Total bedrooms: 69 bedrooms                                                                                                                                                                                                                                                                      |
| <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 two 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 I-295 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 two 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.

### IV PLANNING BOARD WORKSHOP DISCUSSION AND PUBLIC COMMENT

There have been two Planning Board Workshops on this project. At the first meeting in May the Board expressed concern about:

- the need to buffer the high retaining walls from nearby residents;
- whether the first floor could have some other use to better activate the street;
- incorporation of a unbroken flat roof; and
- potential prominence of the mechanicals on the roof.

At the July Workshop the applicant presented revised the proposals to address these comments and the Board generally considered that the “scenic beauty” subdivision standard had been met but concerned about the roof design and requested the applicant to reconsider the way the doghouses on the roof were integrated. The Board

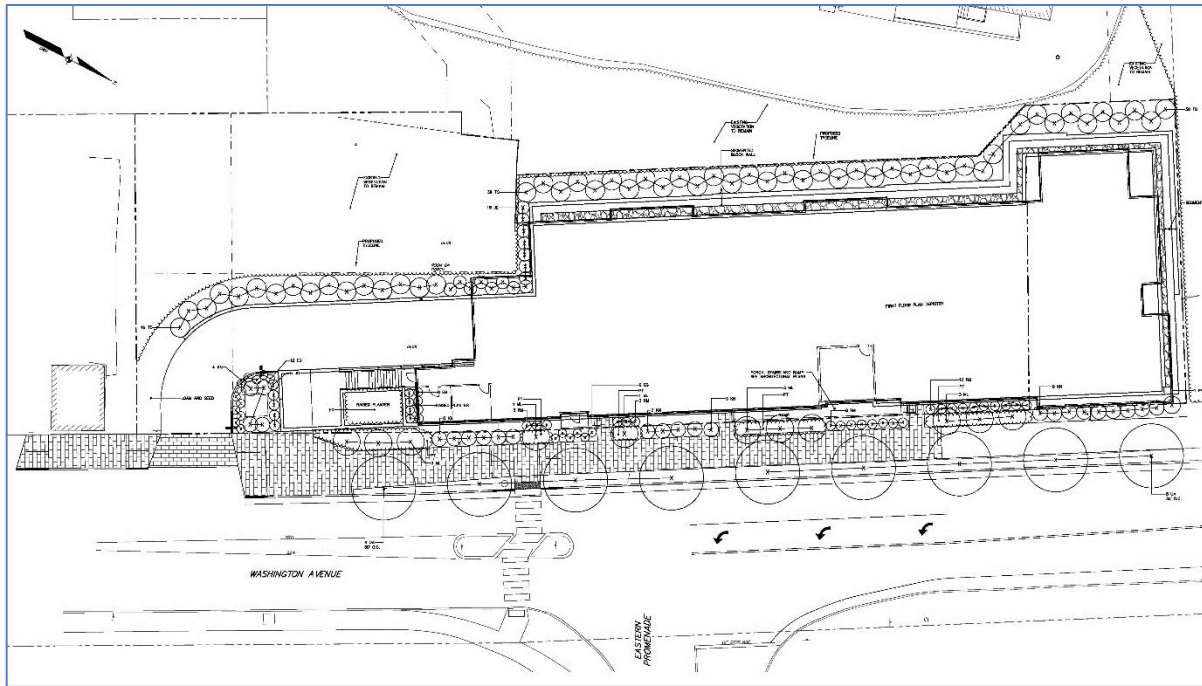


also identified the need for the condominium documents to control the use/appearance of roof top decks as they were so prominent.

The public comments included one comment (PC3) that also raised concerns about the scale and design of the proposed building. Three of the five public comments were from the neighbor's attorney regarding the question of right, title and interest and that question is discussed below in Section VI a. The other public comment (PC4) suggested an approach to the sidewalk and bicycle path along the frontage that was supported by staff and now incorporated into the final proposals.

## V. PROPOSED DEVELOPMENT

The proposals, including elevations and perspectives, are shown in the Plan set and described in the applicant's submittal. This extract (Plan P9) shows the building footprint and landscaping:



The final proposals include:

- 45 condo units (one and two bedroom);
- Main access from Washington Avenue;
- Lower level parking for 45 vehicles accessed from drive off of Washington Avenue;
- High retaining wall ranging from about 8 to 23 feet in height;
- Planting along the Washington Avenue frontage along with 9 street trees with sylva cells;
- Planting buffers for all of the retaining wall facing west
- An unimproved ("preserved") area of grass and low vegetation below the retaining wall towards the south and west;
- Restriping of Washington Avenue to create a left-turn lane for vehicles coming up from I-295 and turning into the Eastern Promenade;
- Bike path and sidewalk along the frontage, and bike access ramp within the sidewalk on the other side of Washington to create an access to the bike path for cyclists travelling northbound.

The final proposals have relocated 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.

The elevations and the treatment of the roofline (as viewed from the west) has developed over the course of the review as shown below:





*As presented to May 9 PB Workshop*



*Submitted for July 11 PB Workshop*



*Submitted for October 10 PB Hearing*

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 (Plans P16 and P17).

## **VI STAFF REVIEW**

### **A. RIGHT, TITLE AND INTEREST**

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 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 Corporation Counsel and determined to meet the site plan requirement for evidence of “Right, Title and Interest” and suggested that in view of the questions that had been raised by the neighbor (three letters of objection from the attorney representing the neighbor at 202 Washington Avenue (PC 1, 2 and 5)) that a suggested condition of approval clarify that the Planning Board review does not include a determination on this matter. The applicant’s attorney submitted their opinion in Attachment B.

Below is a summary of the boundary agreement limitations:

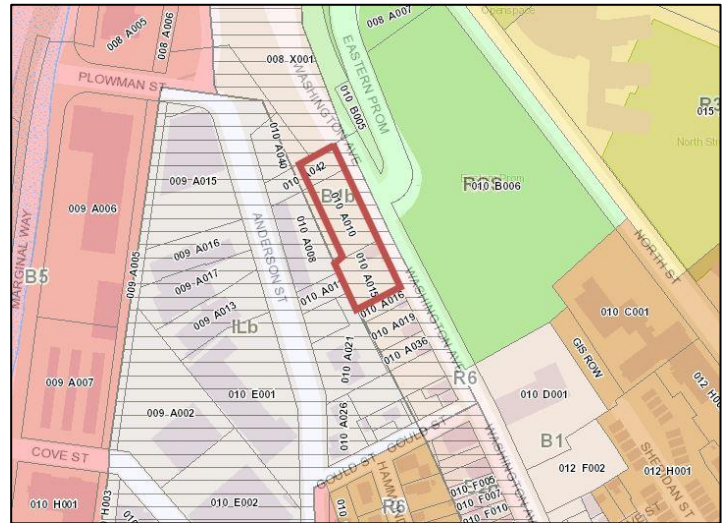
- Perpetual maintenance easement 30 feet in width along the common boundary, which allows for an access drive to be constructed (not a building) and requires a maintenance access along the boundary. The proposed drive access is at grade near Washington Avenue;
- “Negative Easement” that prohibits buildings 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; the proposed building is 45 feet as from the average grade. It appears to be about slightly less than 45 feet high as measured from the level of Washington Avenue (see P14).

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.*” (Attachment 7) Therefore under the zoning the proposed all-residential development is in compliance.



The applicant previously showed 45 parking spaces in the parking level underneath the residential units which met the zoning requirement of one space per unit (45 spaces). The final Site Plans (Plan P5) show a total of 43 parking spaces, including one compact space and 2 handicapped spaces. The previous plan had included tandem spaces which was questioned by the Traffic Engineering reviewer and have now been omitted. However, the parking provision does not meet the zoning requirement and a suggested condition of approval requests that the parking layout be revised to show 45 parking spaces or otherwise meet the B1b parking standards that would allow for other ways to address the parking space shortfall.

## C. SUBDIVISION STANDARDS

14-496. Subdivision Plat Requirements: The applicant has submitted a draft plat (Plan P3) which is generally acceptable but needs to add references related to the suggested conditions of approval.

14-497. General Requirements (a) Review Criteria

### **Water, Air Pollution and Soil Erosion**

The applicant has submitted the capacity letter from the Portland Water District (Attachment N.). The applicant revised the stormwater management system to address previous comments concerning the depth of the system, and further revisions are specified in a suggested condition to ensure that the stormwater system can be connected to the City’s system in Anderson Street (Attachment 3).

### **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 and requested a revised lane layout (for a left turn lane) that has been incorporated into the proposals and a suggested

condition requests final details and confirms that the applicant is responsible for the costs of implementing the new lane layout. ([Attachment 2](#)).

### ***Parking***

As noted above, the parking layout does not provide enough parking spaces to meet the zoning requirement and will need to be revised. The Traffic Engineer considers the general layout to be acceptable based on additional information regarding how all of the internal vehicle movements can occur without any need for vehicles to back out of the site ([Attachment 2](#)).

### ***Sanitary Sewer/Soils***

The application has been reviewed by the Peer Engineering Reviewer ([Attachment 3](#)) and is generally acceptable, and the wastewater capacity letter has been received ([Attachment N](#)).

### ***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 except that the applicant has not finalized the proposals for overcoming some of the challenges in connecting into the City's system in Anderson Street ([Attachment 3](#)). Discussions between the applicant's engineers and the City's Department of Public Works are taking place and the suggested condition allows for this to be finalized.

### ***Scenic Beauty***

At the July PB Workshop this standard was discussed and the Board indicated that it had been addressed in principle but raised several design questions that needed further consideration, including concerns about the appearance of the rooftop mechanicals since they would be viewed from above. The applicant has addressed this question to some extent and a detailed discussion is included under the Site Plan Design review. A suggested condition relates to the mitigation of the rooftop mechanical equipment.

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 to the right which is from a point near North Street. This section of open space is not within the designated Historic Landscape.



### ***Comprehensive Plan***

The project is consistent with the Housing Goals and Policies of the Comprehensive Plan.

## **D. SITE PLAN STANDARDS - [14-526 Site Plan Standards](#)**

### **1. Transportation 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 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 supports waivers that reflect the existing condition and that the access drive has been located as far away as possible from the corner. ([Att. 2](#)).



### ***Sidewalks***

The final proposals incorporate the treatment of the ROW along Washington Avenue that staff had suggested which integrates a wide sidewalk, a wide bike path, 9 street trees and streetlighting. The applicant has also provided a way for cyclists heading northwest to transition from Washington Avenue to the bike path along the frontage of the site via a new ramp in the opposite sidewalk and this is welcomed. This is a particularly complex design and the final proposals are broadly acceptable subject to revision of details as outlined in the Transportation Program Managers comments ([Attachment 6](#)) as referenced in a suggested condition of approval.

### ***Construction Management Plan***

A Construction Management Plan has been updated to address the City's CMP template ([Attachment I](#)), but several reviewers have concerns regarding the safety of pedestrian and bicycle movements; the management of truck deliveries and contractor parking; impact on existing lights and signage; and the final details for the construction of the retaining walls on such a steeply sloping site ([Attachments 2,3 and 6](#)).

A suggested condition of approval requests that the applicant revise the Construction Management Plan to address all of these review comments.

### ***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. The proposed work to improve the cycling infrastructure at this location may be considered as a substitute improvement.

***Parking:*** The proposed parking provision is discussed under Sections VI B *Zoning* and C *Subdivision Standards*.

### ***Snow Storage***

This may apply to the garage access drive and should be addressed in the Condominium Documents.

***Transportation Demand Management:*** The project is not subject to these ordinance provisions.

## **2. Environmental Quality Standards**

### ***Landscape Preservation / Site Landscaping and Screening***

During the review the applicant addressed previous concerns regarding the buffering of the high retaining walls; this is generally acceptable though the City Arborist has made several minor suggestions that are incorporated in the motion for the Board to consider ([Attachment 4](#)).

The City Arborist particularly identified a key requirement, relating to the area within the negative easement, to prevent the encroachment of invasive plants. A suggested condition of approval requires the development of a plan (for the control of invasive species) for review and approval prior to the issuance of a building permit that would also be referenced in the condominium Documents.

### ***Street Trees***

The applicant has proposed 9 street trees (based on the Landscape Plan in [Plan P9](#)) and requested to make a contribution in respect of 23 street trees. Staff consider that the contribution should cover 36 street trees and this would be a contribution of \$14,400. The applicant has proposed sylvia cells for the nine proposed street trees, and per the Technical Standards the cost of the sylvia cells can be put toward the street tree contribution. A suggested condition of approval sets out this arrangement for meeting the street tree requirement.

***Water quality, Stormwater Management and Erosion Control*** - see above under VI C *Subdivision Standards*.

## **3. Public Infrastructure and Community Safety 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 include a lighting plan that covers the driveway but not the area near the garage door. Staff suggest that further lighting is required at that location and this is the subject of a suggested condition.

**Fire Prevention and Public Utilities:** The Fire Department has not identified any concerns regarding the final proposal.

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

**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 part is the “toe” on the far side of the intersection, and does not include the park area immediately opposite the site on Washington Avenue. 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 and a photometric for the site lighting and staff consider some revisions are necessary to meet 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, black). The comments from the Transportation Program Manager (Attachment 6) and the associated suggested condition confirm the requirement.

#### **Noise and Vibration**

The applicant has confirmed that the exact HVAC equipment has not been chosen at this time and requests that is 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 a suggested condition of approval requires the submission of a detailed plan showing what and where the HVAC will be located and how it will be screened.

### **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. 1). The Design comments include the following update regarding the applicant’s revisions to the roof design/doghouse and materials since the July Workshop:

- The applicant revised the elevations by varying the roofline and changing the cornice detail per Planning Board comment. In addition, the stair overruns were revised with glazing to minimize their visibility from views above and below. Staff finds these changes to have some mitigating impact but the overruns are still prevalent from long views. The roofline variation appears arbitrary except in the case of the central stair tower – staff supports raising the parapet walls to mask the rooftop appurtenance and to create a more consistent roofline.



- Planning Board members suggested incorporating more masonry into the design to ground the building and break up the use of fiber cement board. However, no significant changes to the materials are indicated in the revised drawings.

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 on the other side of Washington Avenue. There are longer distance views of the building from North Street and nearby parkland and from across Back Cove (illustrated in [Plan 17](#)) but there are no specific design standards that particularly apply to this issue (though the *Subdivision Standards* re Scenic Beauty does apply - see VI C 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 1](#)), 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: The final project includes balconies and the site is adjacent to the parkland between Washington Avenue and North Street. The negative easement prevents a specific open space area being created on the site.

*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 \$461,250 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 and has confirmed that this meets the minimum requirements of Section 14-487 (Attachment al number of bedrooms included in the project).

The applicant had recently confirmed (see Attachment W and floor plans) that they had chosen to meet the IZ requirement by providing 4 units on site. Just as this report was being finalized the applicant decided to make an in-lieu payment to the Housing Trust instead, and an e-mail confirmation of the \$461,250 payment is included in Attachment W. (Please note that the note on the floor plans regarding workforce housing has now been superseded).

The Housing Program Manager has reviewed the latest proposal and confirms that the proposal meets the requirements of Section 14-487 (Attachment 5).

### **VII STAFF RECOMMENDATION**

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board approve the proposed residential development at 218 Washington Avenue.

### **VIII PROPOSED MOTIONS**

#### **A. WAIVERS**

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on October 10, 2017 for application 2016-280 (218 Washington Avenue) relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board [**finds/does not find**], based upon the consulting traffic engineer's review (Attachment 2), that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual Section 1.7.2.7 *Location and spacing of driveways*. The Planning Board [**waives/does not waive**] the *Technical Manual* standard (Technical Manual Section 1.7.2.7) to allow the driveway serving the new development to be located as shown in the Site Plans in Plan P5 and as described in Attachment F.

## **B. INCLUSIONARY ZONING – CONDITIONAL USE**

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on October 10, 2017 for application 2016-281 (218 Washington Avenue) relevant to the Conditional Use as authorized by Division 30, Section 14-487 Ensuring Workforce Housing; and the testimony presented at the Planning Board hearing:

The Planning Board finds that the Conditional Use **is/is not** in conformance with the standards of the land use code and **approves/does not approve** the application, subject to the following conditions of approval:

- i. That the Applicant shall pay a fee of \$461,250 into the City's Housing Trust Fund prior to the issuance of a Certificate of Occupancy.

## **C. SUBDIVISION**

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on October 10, 2017 for application 2016-280 (218 Washington Avenue) relevant to the subdivision regulations; and the testimony presented at the Planning Board hearing:

The Planning Board finds that the plan **is/is not** in conformance with the subdivision standards of the land use code and **approves/does not approve** the application, subject to the following conditions of approval, which must be met prior to the signing of the plat unless stated otherwise:

- i. The applicant shall submit a final subdivision plat for review and approval by Corporation Counsel, the Department of Public Works, and the Planning Authority; and
- ii. That the applicant shall develop and submit, for review and approval by the City Arborist prior to signature of the plat, a plan for the ongoing and future control of the invasive species that are along the site boundary and likely to spread within the site if not controlled. The invasive species found at the site include "Multi-flora Rose" and "Japanese Knotweed", both of which are on the State of Maine Invasive Plant List and subject of recent State legislation to control. This plan, once approved, shall be referenced on the subdivision plat and in the condominium documents; and
- iii. The subdivision plat and Condominium Association documents shall include reference to the plan for the control of invasive species and clarify responsibilities for the future control of invasive species, use and appearance of the rooftop decks, snow storage, and maintenance of landscaping and sylvia cells in the ROW; and
- iv. The Condominium Association documents shall be finalized to the satisfaction of the Associate Corporation Counsel and Planning Authority.
- v. The applicant shall obtain licenses for the planted areas that encroach into the City's ROW prior to the issuance of a building permit.
- vi. That this decision represents a finding by the Planning Board that the application satisfies the requirements of the City Code. It is approved on the basis of the information provided by the applicant in the record regarding his/her ownership of the property. The applicant has the burden of ensuring that he/she has a legal right to use the property. This approval in no way relieves the applicant of this burden. Nor does this approval constitute a resolution in favor of the applicant on any issues regarding property boundaries, easement rights, ownership or other similar title issues. The applicant is advised to resolve such disputes before expending money in reliance on this approval.

#### **D. SITE PLAN**

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in Planning Board report for the public hearing on October 10, 2017 for application 2016-280 (218 Washington Avenue) relevant to the Site Plan Ordinance and other regulations and the testimony presented at the Planning Board hearing:

The Planning Board finds that the plan **is / is not** in conformance with the site plan standards of the land use code, subject to the following conditions:

- i. That the applicant shall submit, for review and approval by the Department of Public Works and the Planning Authority prior to the issuance of a building permit, a revised Utility Plan and Stormwater Management Plan that clarifies the way the stormwater from the development site will be managed in Anderson Street. The applicant has been advised during the review that the existing storm drain in Anderson Street does not have capacity to accept additional flows from the proposed project and that Anderson Street is a moratorium street with a recently installed gas main that will constrain the stormwater connections. The applicant shall be responsible for all work in Anderson Street required to provide an acceptable stormwater discharge system and for all associated moratorium street fees; and
- ii. That the applicant and all assigns shall comply with the conditions of Chapter 32 stormwater including Article III, post-construction storm water management, which specifies the annual inspections and reporting requirements. The developer/contractor/subcontractor must comply with conditions of the submitted construction stormwater management plan and sediment and erosion control plan prepared by Sebago Technics and dated June 2017 based on City standards and State guidelines. A Maintenance Agreement for the stormwater drainage system shall be approved by Corporation Counsel and the Department of Public Works, and submitted, signed and recorded prior to the issuance of a Certificate of Occupancy with a copy to the Department of Public Works; and
- iii. That the Construction Management Plan shall be revised for review and approval by the Department of Public Works and the Planning Authority prior to the issuance of a building permit, to address the comments from the Traffic Engineer dated 10.5.2017, the Peer Engineer comments dated 10.6.2017, and the Transportation Program Manager comments dated 10.6.2017; and
- iv. That the following plans shall be revised and submitted for review and approval by the Planning Authority prior to the issuance of a building permit:
  - a. Site Plan (Plan P5) to revise the parking space layout to show 45 parking spaces (or the applicant may submit proposals for meeting the B1b zone requirements in other ways as allowed in the land use ordinance, also for review and approval prior to the issuance of a building permit);
  - b. Detail Plans sheet 10 (Plan 8) and Landscaping Plan sheet 8 (Plan 9) to address the comments of the Transportation Program Manager dated 10.6.2017 and to show that the Street Lamps are Bayside medium in black and part of the projects cost and construction;
  - c. Landscaping Plan (Plan 9) to address the planting comments of the City Arborist dated 6.28.2017.
- v. That the lighting plan shall be revised for review and approval by the Planning Authority prior to the issuance of a building permit, to show adequate lighting in the vicinity of the parking garage entrance/door; and
- vi. That a plan showing the location and screening of all HVAC and other mechanical equipment on the roof shall be submitted for review and approval by the Planning Authority prior to ordering of the equipment; and

- vii. That the applicant has demonstrated that site constraints prevent the planting of all of the 45 required street trees (one per unit for multi-family development) in the right-of-way, and therefore the applicant shall contribute \$14400 for 36 street trees to Portland's tree fund. This figure will be reduced by the cost of the nine sylvia cells, subject to the applicant submitting evidence of the costs to the Planning Authority and City Arborist.

## **ATTACHMENTS:**

### **Attachments to Staff Report**

1. Design Review - Final comments
2. Traffic Engineering Preliminary Review comments
3. Peer Engineer final review comments
4. City Arborist comments
5. Housing Program Manager review of Conditional Use IZ
6. Transportation Program Manager
7. B1b Use requirements re ground floor

### **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  
PC4 C MilNeil  
PC5 Attorney Schofield on behalf 202 Washington 7.10.17

### **Applicant's Submittal**

- A. Application (Site Plan/subdivision)
- B. Right, title and Interest (updated for final)
- C. State & Federal Approvals
- D. Zoning analysis
- E. Easements
- F. Waiver requests (updated for final)
- G. Financial and Technical Capacity
- H. Boundary survey
- I. Construction management Plan (updated for final)
- J. Traffic Study
- K. Natural Features
- L. Stormwater Management Plan
- M. City Master plans
- N. Utilities (updated for final (docs)
- O. Solid Waste
- P. Fire
- Q. Design Review
- R. HVAC
- S. Lighting Specs (updated for final)
- T. Retaining Wall Specs (updated for final)
- U. Neighborhood Meeting
- V. Narrative re Multi-Family Design Standards
- W. Workforce Housing application and plans



Since July Workshop

- X. Parking access templates
- Y. Response to Comments
- Z. Condominium documents

**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 Landscaping Plan
- P10 Watershed Plans (2 sheets)
- P11 Site Context (2 sheets)
- P12 Site Section
- P13 Floor Plans
- P14 Elevations (2 sheets)
- P15 Context Aerials (2 sheets)
- P16 Renderings- Local Views (6 sheets)
- P17 Renderings- Distant Views (3 views)

## 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:** Monday, October 2 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 – No change**

*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* – **No change** - Project is multi-storied but **not mixed-use**.

*Standard (1) c. Building Entrances* – **No change** - Primary building entrance faces Washington Avenue and is emphasized with stoop, canopy, material differentiation.

*Standard (1) d. Windows* – **No change** - 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 change** - 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. **The applicant revised the elevations by varying the roofline and changing the cornice detail per Planning Board comment. In addition, the stair overruns were revised with glazing to minimize their visibility from views above and below. Staff finds these changes to have some mitigating impact but the overruns are still prevalent from long views. The roofline variation appears arbitrary except in the case of the central stair tower – staff supports raising the parapet walls to mask the rooftop appurtenance and to create a more consistent roofline.**

*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. **Planning Board members suggested incorporating more masonry into the design to**

**ground the building and break up the use of fiber cement board. However, no significant changes to the materials are indicated in the revised drawings.**

*Standard (1) h. Building Scale – No change* - 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 – No change* - Parking areas are screened from street with wall and landscaping.

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## 218 Washington Avenue - Final Traffic Comments

1 message

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**Tom Errico** <thomas.errico@tylin.com>

Thu, Oct 5, 2017 at 1:20 PM

To: Jean Fraser <jf@portlandmaine.gov>

Cc: Keith Gray <kgray@portlandmaine.gov>, Katherine Earley <kas@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>, Lauren Swett <lszett@woodardcurran.com>

Hi Jean – I have reviewed the revised application materials and offer the following final traffic comments as a status update of prior 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.

**Status: I have no further comment.**

- 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.

**Status: Given traffic volumes at the Eastern Promenade intersection versus traffic volumes generated by the abutting driveway (or a redeveloped site), the proposed driveway location maximizes separation from the intersection, which in my professional opinion is preferred. I support a waiver for driveway separation.**

- 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.

**Status: The applicant has located the driveway as far from the Eastern Promenade intersection as possible. Given low traffic volumes forecasted for the development and that the driveway is only 5-feet short of meeting the standard, I support 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.

**Status:** The applicant has submitted a revised construction management plan and the following guidelines shall be adhered to. The applicant will be required to submit a revised plan for review and approval by DPW, prior to the start of work.

- The 5-foot temporary walkway is not acceptable for accommodating bicycle activity. The plan should note how bicyclist will be routed from Washington Avenue to the Tukey's Bridge path. It appears that either the pathway be widened to 8 feet (thus meeting minimum width standards for a shared use facility) or bicyclists will be required to share the road with vehicles and thus appropriate signs and pavement markings be provided.
  - The plan should note that the temporary path does required paving of the grass esplanade and removal of existing light structure (with a regulatory speed limit sign). The existing Washington Avenue crosswalk flashing warning sign is located in the proposed temporary pathway. Removal of this sign is not acceptable.
  - Greater detail is required for truck deliveries, particularly how trucks will enter and exit the site. It is the City's assumption that trucks will not be permitted to park on Washington Avenue.
  - Contractor worker parking details shall be provided.
  - If utility work is expected in the travel area of Washington Avenue, a construction management plan for that condition shall be provided. This also applies for any work in Anderson Street.
- 
- 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.

**Status:** The plans no longer include these spaces. I have no further comment.

- The applicant should provide information on how the tandem parking spaces will be managed.



**Status: The applicant has noted that the parking lot does not include tandem parking spaces (only an area for storage). I have no further comment.**

- The applicant shall confirm that all internal vehicle movements can occur without having to back out of the site.

**Status: The applicant has provided a vehicle turning template that confirms backing maneuvers are not required to exit the site when the lot is full. I have no further comment.**

- 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.

**Status: The applicant has provided the requested lane layout. Specific dimensioning of the lanes shall be provided for review and approval, prior to construction. I would note that the applicant is responsible for all cost associated with implementation of the lane, which may include (but not limited to) signage, pavement markings, and removal of existing markings (method to be approved by the City).**

- 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.

**Status: The applicant has noted that the driveway will have a maximum cross slope of 2%. I have no further comment.**

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE

Senior Associate

Traffic Engineering Director

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## MEMORANDUM



**TO:** Jean Fraser, Planner  
**FROM:** Lauren Swett, PE  
**DATE:** October 6, 2017  
**RE:** 218 Washington Avenue, Level III Site Plan Response to Comments

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 July 7, 2017, prepared by Sebago Technics, Inc, on behalf of 218 – 220 Washington Avenue, LLC.
- Engineering Plans, Sheets 1 – 23, dated July 24, 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 of the increase is negligible.
- 2) Concerns regarding the proposed stormwater system remain:
  - The Department of Public Works has concerns with accepting flow from the site into the Anderson Street stormdrain which is already at capacity. Additional flow restriction will be necessary.
  - The depth of the existing gas utility in Anderson Street will make the connection of the project's stormwater piping in Anderson Street challenging.
  - Anderson Street will require moratorium repair.
  - It is our understanding that the Applicant is currently working with Public Works, and will be modifying their stormwater design to address capacity and installation concerns. We understand that the final stormwater design will be made a condition of approval, and we will review modified stormwater management and utility plans as they are available.
- 3) We have reviewed the construction management plan and have the following comments:
  - a) We recommend that the graphic plan be updated to show the complete limit of work, including clearing limits around the building, and the stormwater installation.



- b) The utility work in Anderson Street should specifically be addressed as part of the construction management plan.
- c) The construction management plan should also address the retaining wall construction. A typical detail has been provided for the wall as part of the plans, but final wall design will be required for construction. We recommend that this requirement for final wall plans be included as part of the construction management plan.

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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.



To: Jean Fraser Planner, Planning & Urban Development Department

From: Victoria Volent, Housing Program Manager, Housing & Community Development Division

Date: October 6, 2017

Subject: 218 Washington Avenue – Inclusionary Zoning Conditional Use

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All developments of ten (10) units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements set forth in Division 30, Section 14-487 of the Zoning Ordinance.

Division 30, Section 14-487, Ensuring Workforce Housing, requires at least ten percent (10%) of the dwelling units in the development shall meet the definition of Workforce Housing units for sale or for rent. The ordinance under Section 14-487 e 3 also requires the number of bedrooms in the Workforce units shall be at least 10% of the total number of bedrooms made available as part of the development.

As an alternative to providing workforce housing units, developers shall pay a fee-in-lieu of some or all of the units. 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. The calculation of dwelling units not provided will be calculated on a fractional value to one tenth. For example, if a developer prefers to pay a fee-in-lieu on a proposed 45 unit project, the developer would be required to pay 4.5 times the adjusted fee. The in-lieu fee shall be paid into the Housing Trust Fund as defined in Sec. 14-489, on or before the date upon which a certificate of occupancy is issued.

The project located at 218 Washington Avenue proposes the creation of 45 dwelling units of owner-occupied housing. The Applicant has chosen to fulfill the inclusionary zoning requirements by paying a fee-in-lieu. The proposed project would thus be required to pay a total fee of \$461,250 into the City's Housing Trust Fund in-lieu of the creation of actual housing units for workforce households. Should at a later date any change in total unit count be considered, a revised proportional fee-in-lieu payment will also be required. As such, the project has met the minimum requirements set forth in Sec. 14-487.

Staff recommends the Board Approve this Conditional Use provided the Applicant agrees to pay a fee-in-lieu of \$461,250 into the City's Housing Trust Fund before a Certificate of Occupancy may be issued. The Applicant and the City may enter into a written agreement to codify this requirement and a Certificate of Compliance may be issued by the Planning Authority at the Applicant's request once the full payment has been received by the City.

Sincerely,

Victoria Volent  
Housing Program Manager



---

**Fwd: PEZ 2016.280 Fwd: 218 Washington**

1 message

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**Jean Fraser** <jf@portlandmaine.gov>  
To: "Fraser, Jean" <jf@portlandmaine.gov>

Fri, Oct 6, 2017 at 1:44 PM

From: **Bruce Hyman** <bhyman@portlandmaine.gov>  
Date: Fri, Oct 6, 2017 at 12:15 PM  
Subject: Re: PEZ 2016.280 Fwd: 218 Washington  
To: Jean Fraser <jf@portlandmaine.gov>  
Cc: Keith Gray <kgray@portlandmaine.gov>, Tom Errico <thomas.errico@tylin.com>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>

Reviewing the latest plans provided by the applicant, the following comments are provided:

Civil Sheet 8:

- the applicant shall demonstrate for 1) the sidewalk area adjacent to the building (minimum 5'); 2) the connection from the sidewalk area to the pedestrian crossing of Washington Avenue and 3) the shared use pathway adjacent to the street, that no cross-slopes will exceed the the maximum allowed 2% cross-slope by ADA - the construction details for the sidewalk and shared use pathway shall indicate this maximum 2% cross-slope
- where the effective sidewalk width within the public ROW between the raised planters and/or the building is less than 5', the applicant shall provide an easement to the city for the additional sidewalk width for up to at least 5' where it is available
- the outside width dimension of the raised granite tree wells shall be no more than 4' - the use of silva cells should mitigate the slight reduction in dimension of the tree wells (usually a 4' internal dimension)
- the driveway and its detail sheet shall indicate for which portion it will maintain the maximum 2% cross-slope across the pedestrian access route along Washington Avenue - this dimension shall be no less than 5' across the driveway
- there seem to be stray lines on this sheet that may be 'legacy' lines of the existing esplanade - these should be cleaned up to avoid confusion
- the disposition of the existing street light (owned by MaineDOT?) adjacent to the pedestrian crossing should be noted on the plans (and within the construction mgt plan to establish the 5' pedestrian route during construction and how adequate lighting of the pedestrian crossing will be maintained)
- the final design detail of the raised granite tree wells will be coordinated with Jeff Tarling, City Arborist - it is suggested that the updated detail reflect rounded corners

(per most recent city detail) and have a sloped granite profile for the edge and corners adjacent to the shared use pathway to reduce potential conflict with passing bicyclists - as noted before, it should have an outside maximum width dimension of 4'

Civil Sheet 10 (I have only reviewed the items listed below on Sheet 10):

- the detail sheet shall be updated to show the use of cast iron detectable warning panels throughout the project, where detectable warning panels are to be constructed
- the detail sheet shall be updated to show a maximum 2% cross-slope for the entire width of the brick sidewalk
- the detail sheet shall be updated to show a maximum 2% cross-slope for a 5' minimum width (typically at the back of driveway) pedestrian access route across the brick driveway - the design can introduce a grade break to accomplish this
- the detail sheet shall be updated to show a maximum 2% cross-slope for the entire (9') width for what is currently labeled 'Bituminous Sidewalk' - the label should be updated to be 'Bituminous Shared Use Pathway'
- the detail sheet shall be updated to show the light pole bases for the street lighting (Bayside Medium, LED, 3000k, Black) along Washington Avenue to be 2"-3" above finish grade - a detail shall be added (where appropriate) illustrating the correct Bayside Medium assembly (I cannot find one in the current plan sets)
- the details for 'Installation of Curb' and 'Curb Replacement Detail' shows a fixed 7" curb reveal - the height should be assessed based upon maintaining the maximum shared use pathway and sidewalk cross-slopes as noted above - any deviation from the standard 7" shall be noted and approved by the DPW

#### Construction Mgt Plan

- the plan shall highlight how/if bicycle access will be maintained
- the plan shall highlight how a continuous pedestrian route along the frontage will be maintained (see comment above about existing street light that would block the 5' shown on the plan) and how lighting of the crossing will be maintained (via a temporary street light across the street?)

Please don't hesitate to contact me if you or the applicant have any questions on the above.

Bruce

--

*Jean Fraser, Planner  
City of Portland*

**B1b Allowed Uses****Sec. 14-162. Permitted uses.**

(a) The following uses are permitted in the B-1 zone and on the ground floor level of buildings in the B-1b zone. For permitted uses in the upper stories of buildings in the B-1b zone, refer to subsection (5) below: in existence on November 15, 1993:

1. *Residential*

- a. Any residential use permitted in the residential zone abutting the lot is permitted. If there is no abutting residential zone, any residential use permitted in the nearest residential zone to the lot is permitted. In the case of two (2) or more abutting residential zones, any residential use permitted in the most restrictive such zone is permitted.
- b. In any structure with commercial use on the first floor, multifamily dwellings are permitted above the first floor.
- c. Combined living/working spaces including, but not limited to, artist residences with studio space.

2. **Business:** Business uses listed below are permitted, provided that such use which generates in excess of a ratio of 100 peak hour vehicle trips per 2000 sq.ft. of space, and generates in excess of 100 peak hour vehicle trips is prohibited. As set forth in the City of Portland Technical Manual, section I, the city traffic engineer shall require a traffic study when it calculates the proposed use will generate in excess of a total of 50 peak hour vehicle trips.

- a. Professional, business, and general offices , but excluding veterinarians.
- b. Business services, as defined in section 14-47, but excluding beverage container redemption centers.
- c. Personal services, as defined in section 14-47.
- d. Offices of building tradesmen, provided there is no exterior storage of building materials.

- e. Retail establishments, provided such do not include drive-through sales or services and do not operate between the hours of eleven (11) p.m. and six (6) a.m. and do not accept deliveries or services between the hours of ten (10) p.m. to seven (7) a.m.
- f. Beverage dealers (as defined in 32 M.R.S.A. 1862) provided they meet the following requirements:
  - i. Maximum total floor area for beverage container redemptions, including the storage of spent beverage containers, shall be no greater than five hundred (500) sq. ft. or ten (10) percent of the total floor area of the facility, whichever is less;
  - ii. Beverage container redemption is an accessory use to a principal retail use that includes beverage sales. Local beverage container redemption centers as defined in 32 M.R.S.A. 1867, as may be amended, are not allowed as a principal use.
  - iii. Storage of all beverage containers shall be contained entirely within the building providing retail sales.
- g. Studios for artists, photographers and craftspeople including, but not limited to painters, sculptors, dancers, graphic artists and musicians.
- h. Restaurants are permitted in the B-1 zone and on the ground floor level of buildings in the B-1b zone provided they meet the following additional requirements in addition to the vehicle trips standards of in Sec. 14-162.a.2:
  - a. As set forth in the City of Portland Technical Manual, section I, the city traffic engineer shall require a traffic study when it calculates the proposed use will generate in excess of a total of 50 peak hour vehicle trips.
  - b. Maximum total floor area for use of the public

shall be two thousand (2,000) square feet.

c. The hours of operation shall be limited to between 6:00 a.m. and 11:00 p.m. each day.

d. Food service and consumption are the primary function of the restaurant.

3. *Institutional:*

a. Places of religious assembly;

b. Municipal offices;

c. Elementary, middle and secondary schools;

d. Nursery schools and kindergarten;

e. Clinics of less than three thousand (3,000) square feet of total floor space.

4. *Other:*

a. Lodging houses;

b. Utility substations, as defined in section 14-47, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding;

c. Day care facilities or babysitting services;

d. Accessory uses as provided in section 14-404;

e. Bed and breakfast, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding.

f. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:

i. No more than twenty (20) overnight transient guests shall be permitted in the facility at any one time.



- ii. All applicable provisions of Article V of this chapter shall be met.
  - iii. Parking shall be provided in compliance with Division 20 of this Article.
  - iv. No unaccompanied minors under the age of eighteen (18) shall be permitted in the facility.
  - v. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.
  - vi. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.
- g. Neighborhood center.
- 5. Uses permitted above the ground floor level of buildings in the B-1b zone:
  - a. Any residential use set forth in section 14-162(a);
  - b. Bed and breakfast, subject to the standards of article V (site plan), sections 14-522 and 14-523 notwithstanding.
  - c. Hostels, provided the applicant submits a site plan and operations plan demonstrating compliance with the following conditions:
    - i. No more than twenty (20) overnight transient guests shall be permitted in the facility at any one time.
    - ii. All applicable provisions of Article V of this chapter shall be met.
    - iii. Parking shall be provided in compliance with Division 20 of this Article.
    - iv. No unaccompanied minors under the age of

eighteen (18) shall be permitted in the facility.

- v. The length of stay for transient guests shall not exceed fifteen (15) days out of any sixty-day period.
- vi. The building shall meet the applicable occupant load requirements as defined by the International Building Code and the NFPA Life Safety Code, as such codes are amended or adopted by the city.

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

(Ord. No. 292-88, 4-4-88; Ord. No. 133-93, § 2, 11-15-93; Ord. No. 125-97, § 5, 3-3-97; Ord. No. 94-99, 11-15-99; Ord. No. 74-06/07, 12-4-06; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 278-09/10, 7-19-10, Ord. 10 10/11, 8-2-10; Ord. No. 279-09/10, 6-6-11; Ord. No. 33-11/12, 1-18-12; Ord. No. 162-12/13, 4-1-13; Ord. 90-14/15, 11-17-2014)

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**\*Editor's Note-** Pursuant to Ord. No. 74-06/07, enacted on 12-4-06 changes made in (2) *Business* are effective October 16, 2006.

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**Sec. 14-163. Conditional uses.**

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

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



## 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 buildingCHART/BLOCK/LOT: MAP 10/BLOCK A/LOT 10  
AND 15PRELIMINARY PLAN \_\_\_\_\_ (date)  
FINAL PLAN \_\_\_\_\_ (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>\$ 1625</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> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 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"

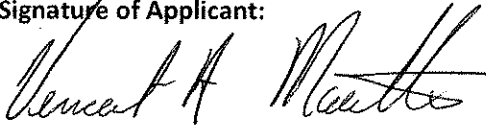
6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. As the process evolves you will be able to log in and see markups, comments and upload revisions as requested into these folders.

**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.

|                                                                                                                                                                                                                          |                           |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------|
| Total Area of Site                                                                                                                                                                                                       | 28,382                    | sq. ft. |
| Proposed Total Disturbed Area of the Site                                                                                                                                                                                | 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)                                                                                                                                                                                  | 21                        |         |
| # of Two-Bedroom Units (Total Proposed)                                                                                                                                                                                  | 24                        |         |
| # 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                        |         |
|                                                                                                                                                                                                                          |                           |         |
| Estimated Cost of Project                                                                                                                                                                                                | \$ 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.                                                                                                                  |



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

UND GRANITE MONUMENT 8"X8" WITH  
HILL HOLE, DISTURBED ACCORDING TO  
Y SURVEYORS ORIGINAL LOCATION HELD  
R 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 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 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: [Signature]  
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,

[Signature]  
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:

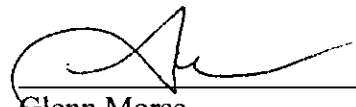
1. There is currently an existing sewer line located on Rockingham's property which serves the building on Morse's adjacent property. The approximate location of the sewer line is depicted on the attached Exhibit A. Rockingham hereby grants an underground Easement to Morse to maintain, improve and repair 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.

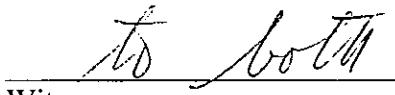
6. If any provision of this Easement is determined to be invalid or unenforceable, it shall not affect the validity or enforceability of the remaining provisions hereof.

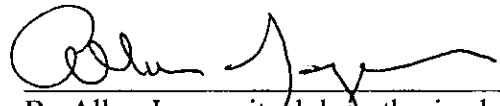
Dated at Portland, Maine this 27<sup>th</sup> day of April, 2012.

  
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.

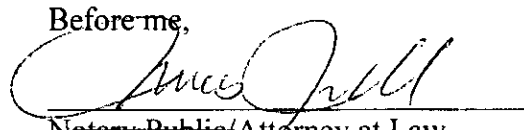
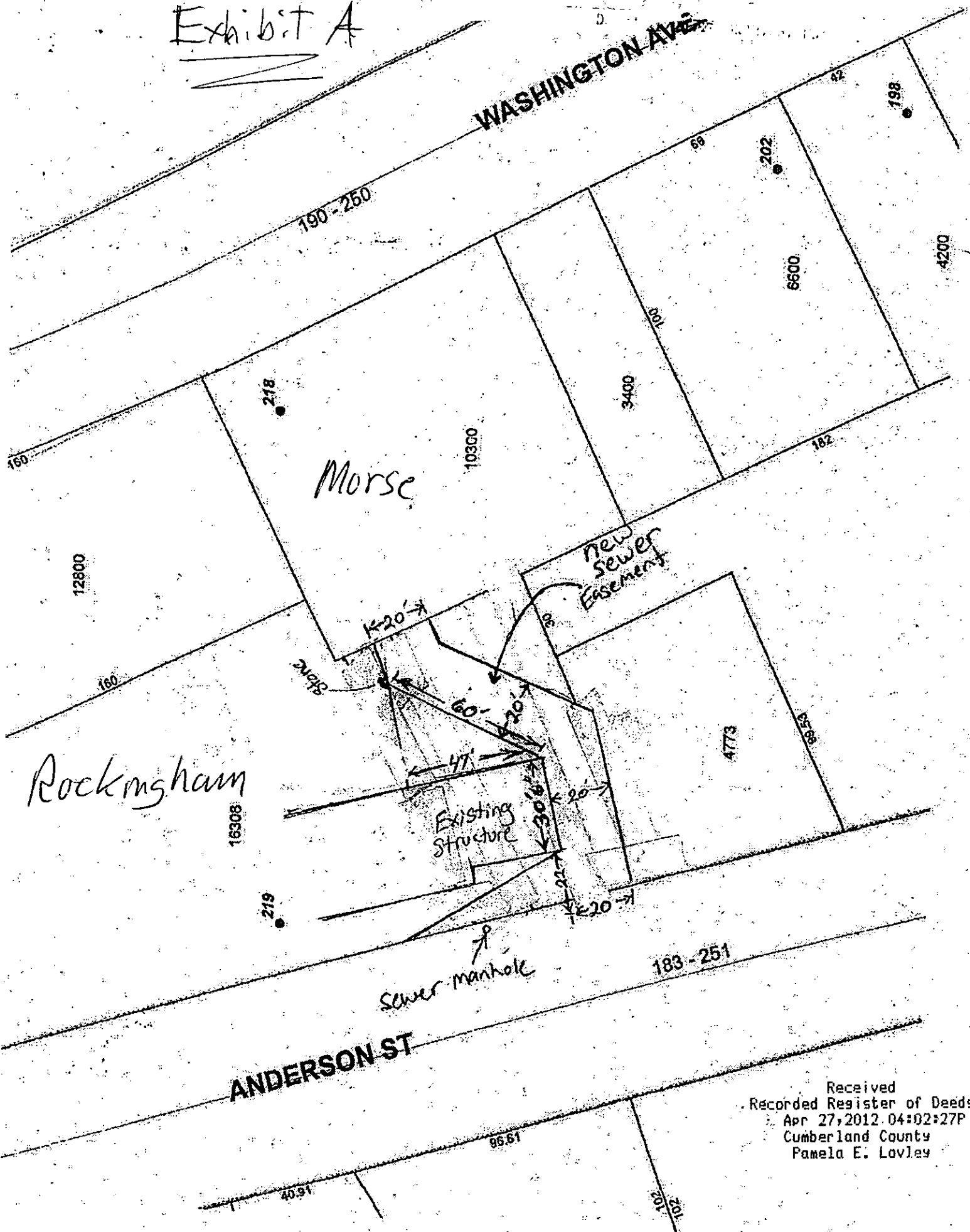
Before me,  
  
~~Notary Public~~ Attorney at Law  
Thomas Jewell



Exhibit A



**QUITCLAIM DEED WITH COVENANT  
KNOW ALL MEN BY THESE PRESENTS**

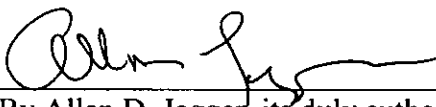
THAT, ROCKINGHAM, LLC, a Maine limited liability company, in consideration of one dollar and other valuable consideration paid, grants to MORGAN GAVIN, LLC, a Maine limited liability company, with a mailing address at P.O. Box 1466, Scarborough, Maine 04070, with quitclaim covenant, the land in the City 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

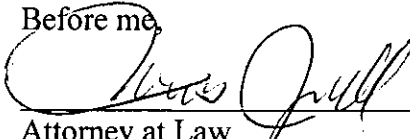
  
Witness

  
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:

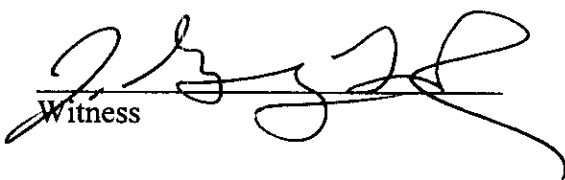
No buildings or improvements shall be constructed, located or maintained in any area of the Morse Parcel that is more than fifty (50) feet from the Morse Parcel's northeasterly boundary abutting Washington Avenue.

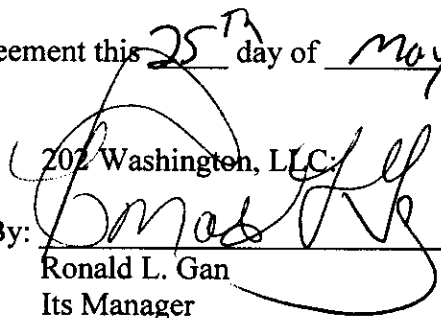


2. This Negative Easement burdens the Morse Parcel and benefits the 202 Washington Parcel. These easement covenants shall run with the land, provided, however, that this Negative Easement as set forth in this paragraph C of this Agreement shall immediately expire twenty-five (25) years from the recording 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

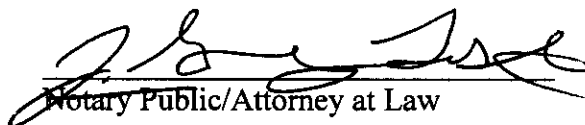
202 Washington, LLC  
By:   
Ronald L. Gan  
Its Manager

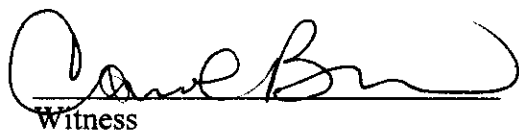
STATE OF MAINE

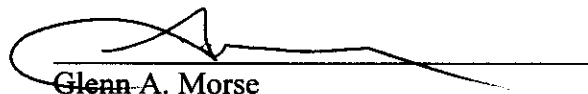
Cumberland, ss.

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

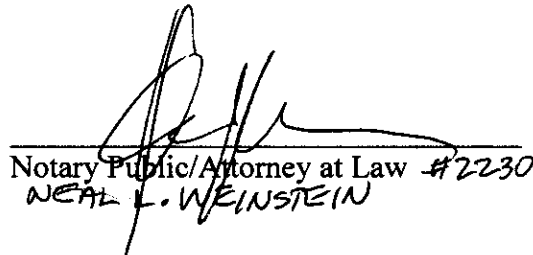
  
Glenn A. Morse

STATE OF MAINE

York, ss.

MAY 25, 2010

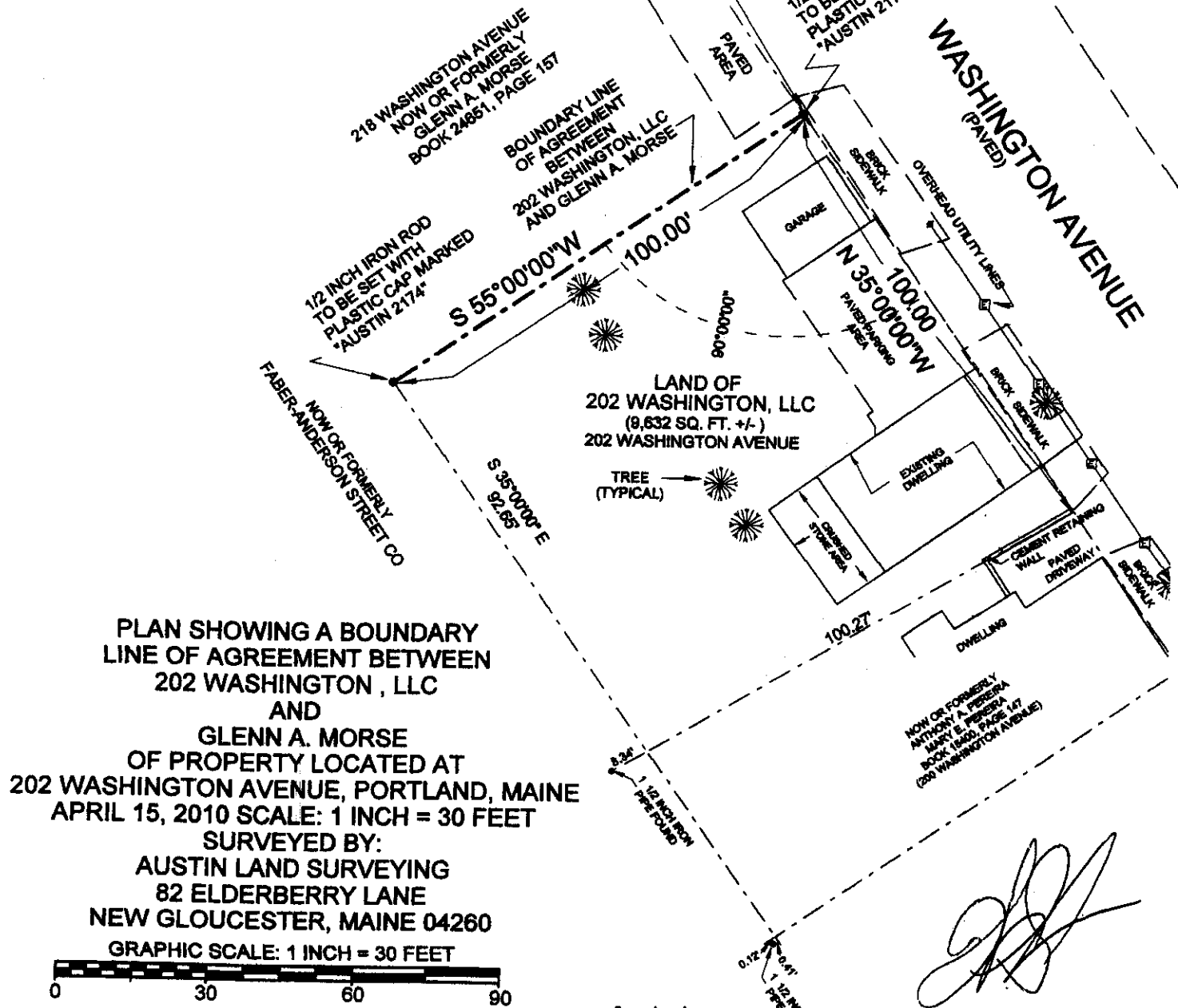
Then personally appeared before me the above-named Glenn A. Morse and acknowledged the foregoing instrument to be their free act and deed.

  
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

**JENSEN·BAIRD  
GARDNER·HENRY**

*Attorneys at Law*

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(207) 775-7271 (Phone)  
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KENNETH M. COLE III  
NICHOLAS S. NADZO  
FRANK H. FRYE  
MICHAEL A. NELSON  
OF COUNSEL

RAYMOND E. JENSEN  
(1908-2002)  
KENNETH BAIRD  
(1914-1987)  
M. DONALD GARDNER  
(1918-2003)

YORK COUNTY  
OFFICE

11 MAIN STREET, SUITE 4  
KENNEBUNK, MAINE 04043  
(207) 985-4676 (Phone)  
(207) 985-4932 (Fax)

DAVID J. JONES  
RICHARD H. SPENCER, JR.  
LAWRENCE R. CLOUGH  
RONALD A. EPSTEIN  
WILLIAM H. DALE  
F. BRUCE SLEEPER  
DEBORAH M. MANN  
LESLIE E. LOWRY III  
PATRICIA M. DUNN  
MICHAEL J. QUINLAN  
R. LEE IVY

NATALIE L. BURNS  
SALLY J. DAGGETT  
ROY T. PIERCE  
BRENDAN P. RIELLY  
NICHOLAS J. MORRILL  
MARK A. BOWER  
CHARLES M. KATZ-LEAVY  
ALYSSA C. TIBBETTS  
J. CASEY MCCORMACK  
TUDOR N. GOLDSMITH

August 31, 2017

CITY OF PORTLAND PLANNING BOARD  
c/o Jean Fraser, Planner  
City Hall, 389 Congress Street  
Portland, ME 04101

Re: 218-220 Washington Avenue (Tax Map 10-A-15, 10-A-10 and 10-A-42)

Dear Board Members:

This letter is submitted on behalf of the applicant, 218-220 Washington Avenue LLC, in order to address its “right, title and interest” in the property to be developed as affected by a Boundary Agreement entered into between the current owner (Glenn A. Morse) and the abutter (202 Washington LLC – of which Ron Gans is the principal) as recently amended.

As set forth in the discussion later on in this letter, the Planning Board’s responsibilities do not extend to the resolution of real estate disputes once the applicant has demonstrated that it has made a showing that it has “right, title and interest” in the property. Nonetheless we are providing some background so that the Board can move forward, even if that background is unnecessary.

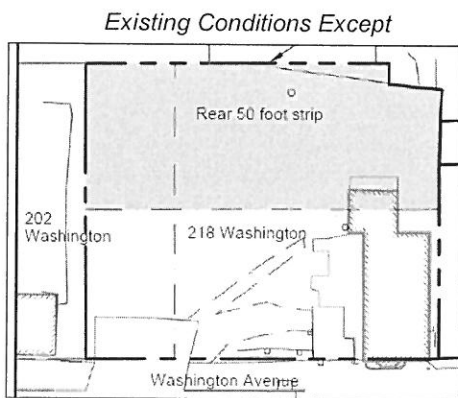
The Boundary Agreement as amended has two components, both of which affect only the southerly most of the three parcels (Tax Map Parcel 10-A-15), namely the one owned by Glenn Morse known as 218 Washington Avenue. It does not affect the other two parcels to the north which have different owners, namely Morgan Gavin LLC and Rockingham LLC. All three parcels are under contract to be sold to the applicant 218-220 Washington Avenue LLC.

**A. “Negative” Easement affecting the rear 50 foot portion of the #218 Washington Parcel.** As set forth in Paragraph “C” of the original 2010 Boundary Agreement (recorded copy attached), Glenn Morse, the owner of the parcel at 218

Washington Avenue, agreed as follows with 202 Washington LLC, the owner of the abutting property to the south:

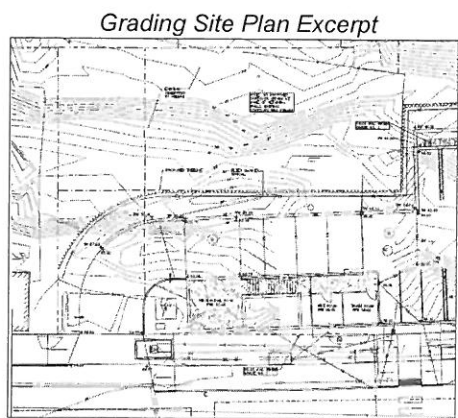
"1. Morse hereby grants to 202 Washington and its successors in title, and hereby subjects the Morse Parcel, to the following easement:

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."



The shaded area of the plan excerpt to the left prepared by Sebago Technics locates the 50 foot wide Negative Easement area (copy attached). Note that the existing building significantly encroaches into the Negative Easement area. While the text of the Negative Easement only restricts buildings and improvements and does not address vegetation, the Landscape portion of the Site Plan submitted to the Board notes that the existing vegetation in this area is not being altered.

While no action was been taken by 202 Washington to address this significant building encroachment, approval of the pending application will result in the demolition of this building and would bring the property into compliance with the text of the Negative Easement.

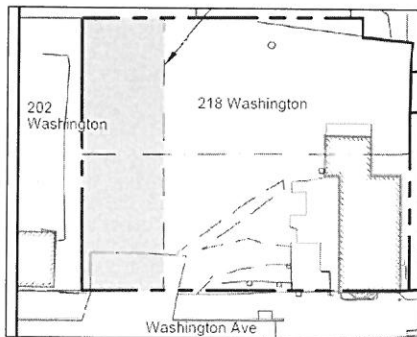


An excerpt from the Grading portion of Site Plan prepared by Sebago Technics is set forth to the left (reduced copy attached). The encroaching building is gone. A prior minor encroachment into the Negative Easement area of a proposed retaining wall for the new driveway in the original Site Plan submission has now been corrected.

As this plan and the numerous sheets found in the Site Plan application (not attached) demonstrate, none of the prohibited "buildings or improvements" are to be constructed in the Negative Easement area and the violation created by the existing building will

no longer exist once the building is demolished.

**B. “Maintenance” Easement over a 30’ wide strip of Tax Map Parcel 10-A-15 (#218 Washington).** Paragraph “B” of the original 2010 Boundary Agreement was amended this past spring (recorded copy attached) pursuant to which Glenn Morse agreed with 202 Washington LLC to amend the original Agreement with respect to a 30 foot wide



“Maintenance Easement” located on the Morse Parcel running along the edge of their common boundary which 202 Washington could use for access to its land as necessary in order to construct a retaining wall, building or other structures which might later be built on 202 Washington’s land.

This language affects the shaded area shown on plan excerpt inserted to the left (full size copy attached). The relevant text reads 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.

... 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.” *[underlining added]*

The original Boundary Agreement did not locate this “Maintenance” easement on the Glenn Morse parcel easement or provide much guidance as to its nature.

The revised easement precisely locates and confirms 202 Washington's rights to use this easement area "for ingress and egress . . . 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." While the easement's original label as a "Maintenance" easement was retained, it is really an access easement. It is distinct from the "Negative Easement" discussed above.

The text provides that no building may be built on the easement area, but it expressly provides that an "access drive may be constructed" by the applicant for the benefit of the 218 Washington parcel and abutting parcels which are also under contract. While it could have done so, the easement does not restrict the vegetation or other similar non-building improvements, which as the fee owner continues to have the rights to make including in particular the express right to construct an access drive. Given the significant slopes in this area (a 10 foot drop in 50 feet – see site plan), grade changes and a retaining wall are an inherent part of the construction of an access drive.

Again, the excerpt from the recently submitted revised Site Plan (excepted above) shows an access drive located on the 30 foot wide "Maintenance" easement, and that there is no building located in the 30 foot wide area. The proposed access drive will enhance the access by 202 Washington since the existing slopes are extreme. Indeed in part the purpose of the easement is so that the neighbor can construct its own retaining wall on its property.

It is also worthy of note that 202 Washington agreed that "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. *[underlining added]*. Everyone knew and agreed that an access drive would be built.

### **C. "Right Title and Interest."**

An applicant is required to demonstrate only that it has "right, title and interest" to the property to be developed. A purchase and sale contract establishes that.

As discussed informally last week with staff, the threshold for right, title, and interest is a low one. Quite frankly the detailed discussion found in this letter is unnecessary in terms of the pending application. It is worth emphasizing that the Planning Board is not intended to function as a land court to adjudicate real estate disputes.



During the Planning Board workshop on May 9, 2017, the then Associate Corporation Counsel confirmed that the applicant had established the requisite right, title, and interest by virtue of its Purchase and Sale Agreement with 202 Washington LLC.

Although there seems to be a perpetual dispute between my client and the abutter regarding their respective rights and obligations, that is a civil dispute which has nothing to do with the criteria to be considered by the Planning Board in its evaluation of my client's application. Simply stated, a dispute between neighbors over the scope of private contractual rights is outside of the Planning Board's purview and should not delay consideration of this application.

The Maine Supreme Court's decision in Southridge Corporation v. Board of Environmental Protection is the leading case on this issue. There applicant lacked any deed or other writing entitling it to use a septic system site located on a neighbor's land. The Law Court said that the applicant's mere assertion of an adverse possession claim unsupported by any court proceeding, let alone an easement, demonstrated that it had sufficient right title and interest. The resolution of the applicant's adverse possession claim was left for the court system, not the body reviewing land use compliance.

Here the parties agreed pursuant to the Settlement Agreement resolving the prior litigation that any dispute over the interpretation or violation of these easements would be resolved by arbitration before an independent arbitrator.

Arbitration was initiated before former Justice Crowley as provided in the Settlement Agreement. As a result of a telephone conference with Justice Crowley this past spring there was a minor adjustment to the plan, which resolved the only issue under the Amended Boundary Agreement where a part of the access drive retaining wall encroached into the Negative Easement area by a few inches. Neither 202 Washington nor my client have actively pursued the arbitration since then.

As set forth in detail in the discussion above, the proposed development does not violate either of the easements, although again that is a matter for the arbitrator and not the Planning Board. There have been no further arbitration proceedings.

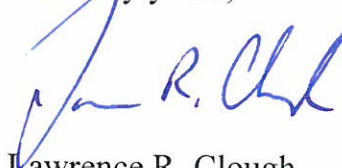
If my client is wrong in its interpretation of the Boundary Agreement, then ultimately the arbitrator and then the courts will address it. If the proposed development is found to violate the Agreement then simply stated my client will need to come back before the Planning Board with a revised plan.

Jensen Baird  
Gardner Henry

City of Portland Planning Board  
August 31, 2017  
Page 6

As set forth at length in the discussion above, we believe that such a negative outcome would be unfounded. The continuing perpetual dispute between neighbors being raised before the Planning Board (and not the arbitrator) should not delay the consideration and approval of this application in accordance with the well-established applicable legal standards.

Sincerely yours,



Lawrence R. Clough

cc Danielle West-Chuhta, Corporation Counsel

Enclosures:

Recorded Boundary Agreement with Amendment;  
Sebago Technics Existing Easement Plans dated 8/24/2017  
Reduced Copies of Grading Plan Sheet from Site Plan Submission  
Google Earth Photo of the Maintenance Easement Area

## **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;

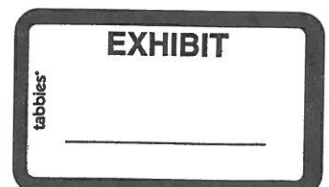
WHEREAS, Morse desires to grant certain easements and establish certain negative easements, as more particularly set forth herein;

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:

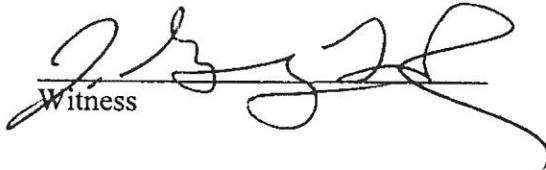
1. Morse hereby grants to 202 Washington and its successors in title, and hereby subjects the Morse Parcel, to the following easement:

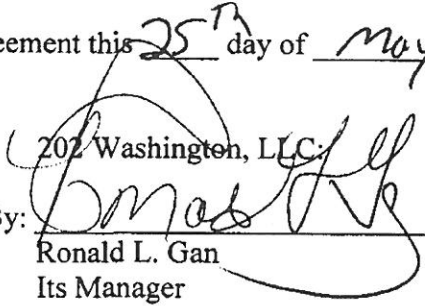
No buildings or improvements shall be constructed, located or maintained in any area of the Morse Parcel that is more than fifty (50) feet from the Morse Parcel's northeasterly boundary abutting Washington Avenue.

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

By:   
202 Washington, LLC  
Ronald L. Gan  
Its Manager

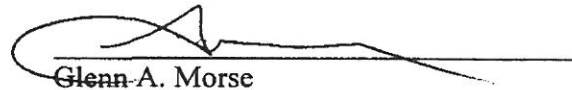
STATE OF MAINE  
Cumberland, ss.

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

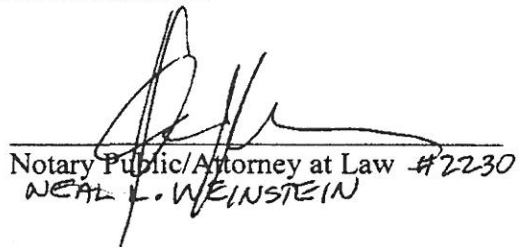
  
Witness

  
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.

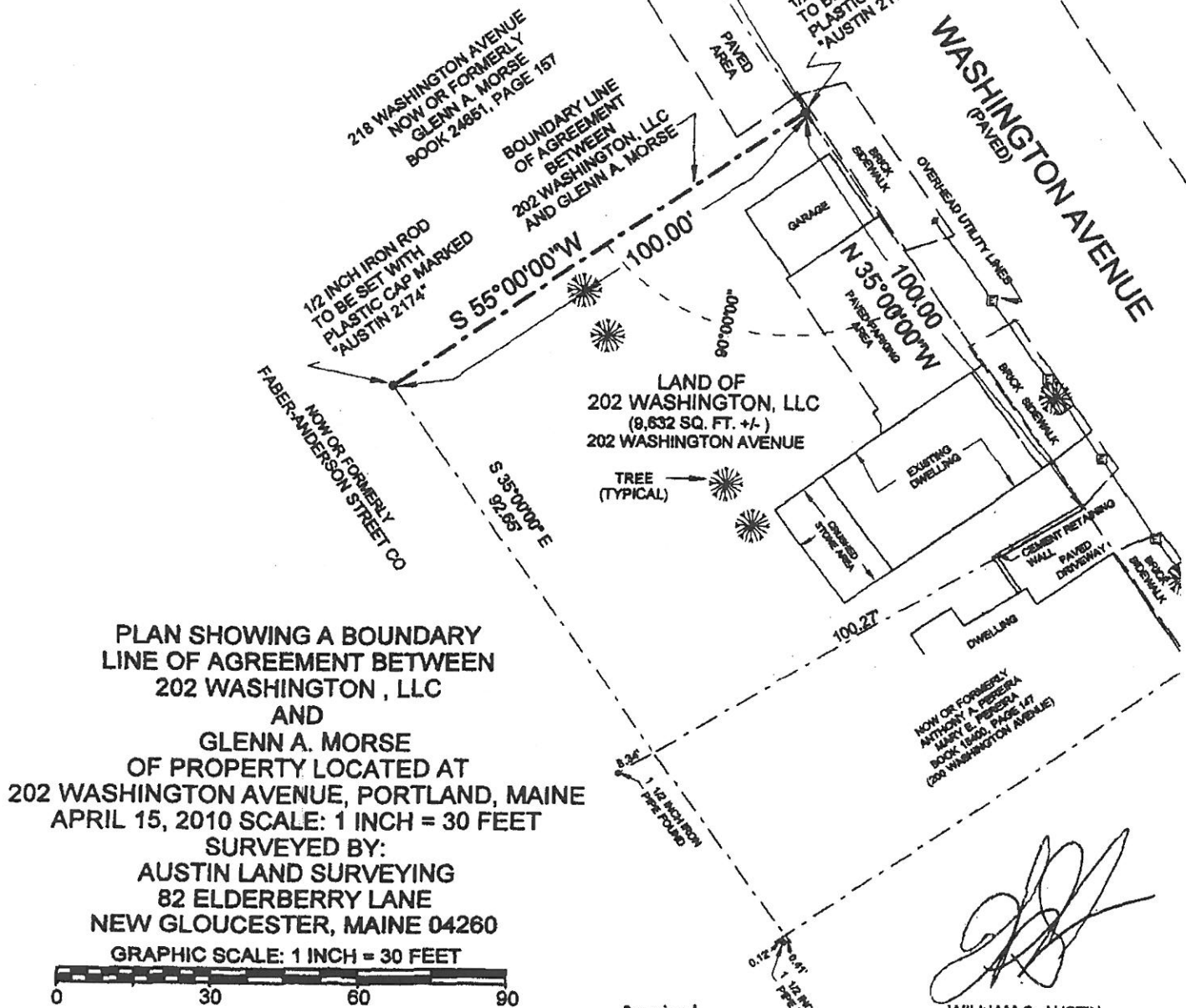
  
Notary Public/Attorney at Law #2230  
NEAL L. WEINSTEIN



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. Loyley

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");

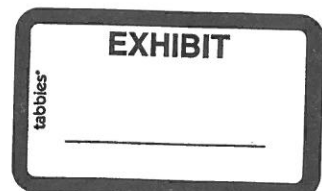
WHEREAS, the parties desire to amend and restate the "Maintenance Easement" portion of the Agreement in accordance with the terms set forth below;

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:

I. 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.

Maria 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.

Glenn A. Morse - ME BAR NO. 7541  
Notary Public/Maine Attorney at Law  
Name: \_\_\_\_\_  
My commission expires \_\_\_\_\_

Regan S. Tothaker  
Witness

202 Washington, LLC

By: Ronald L. Gan  
Ronald L. Gan, its Manager

STATE OF MAINE  
COUNTY OF CUMBERLAND

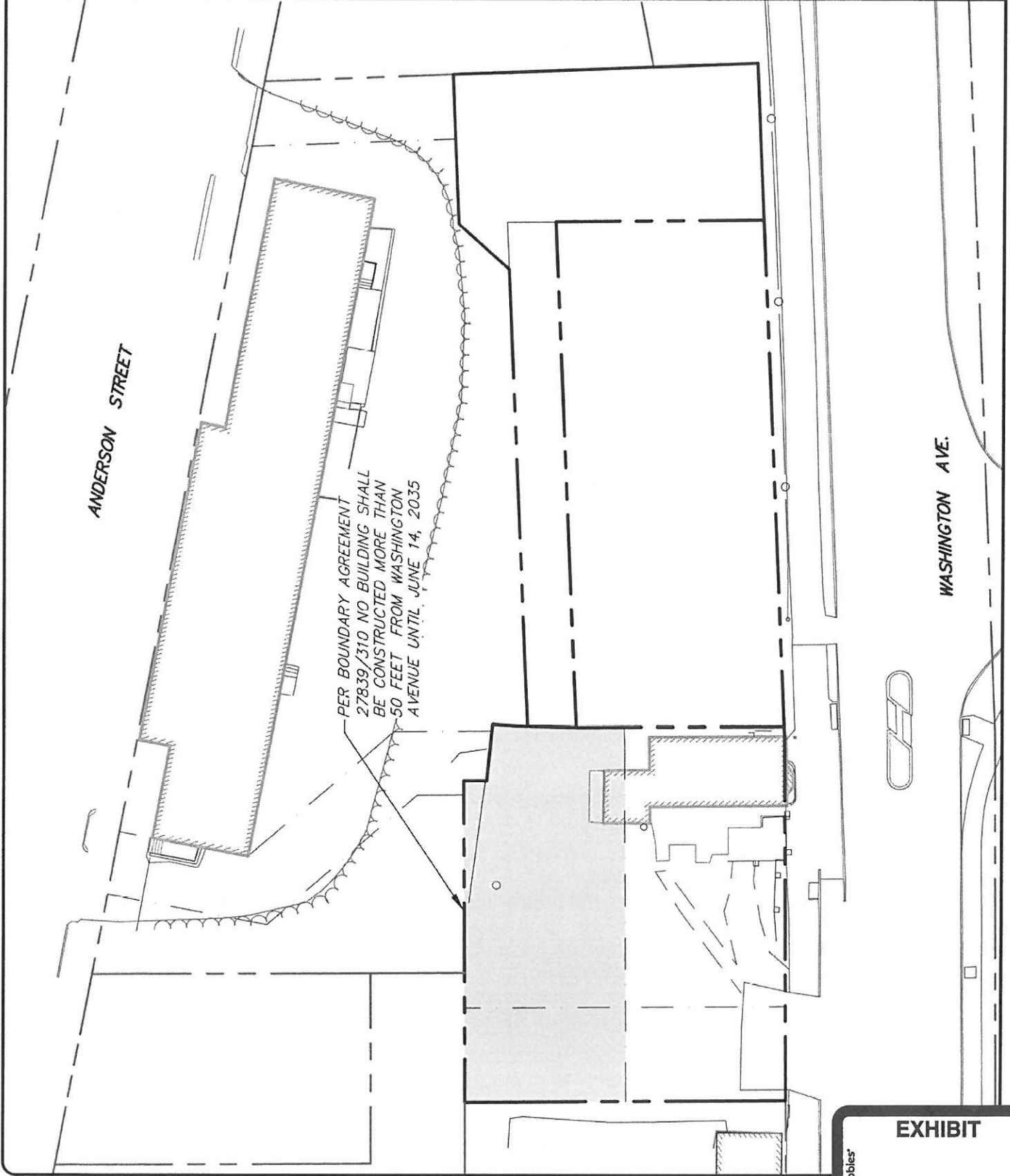
March 29, 2016

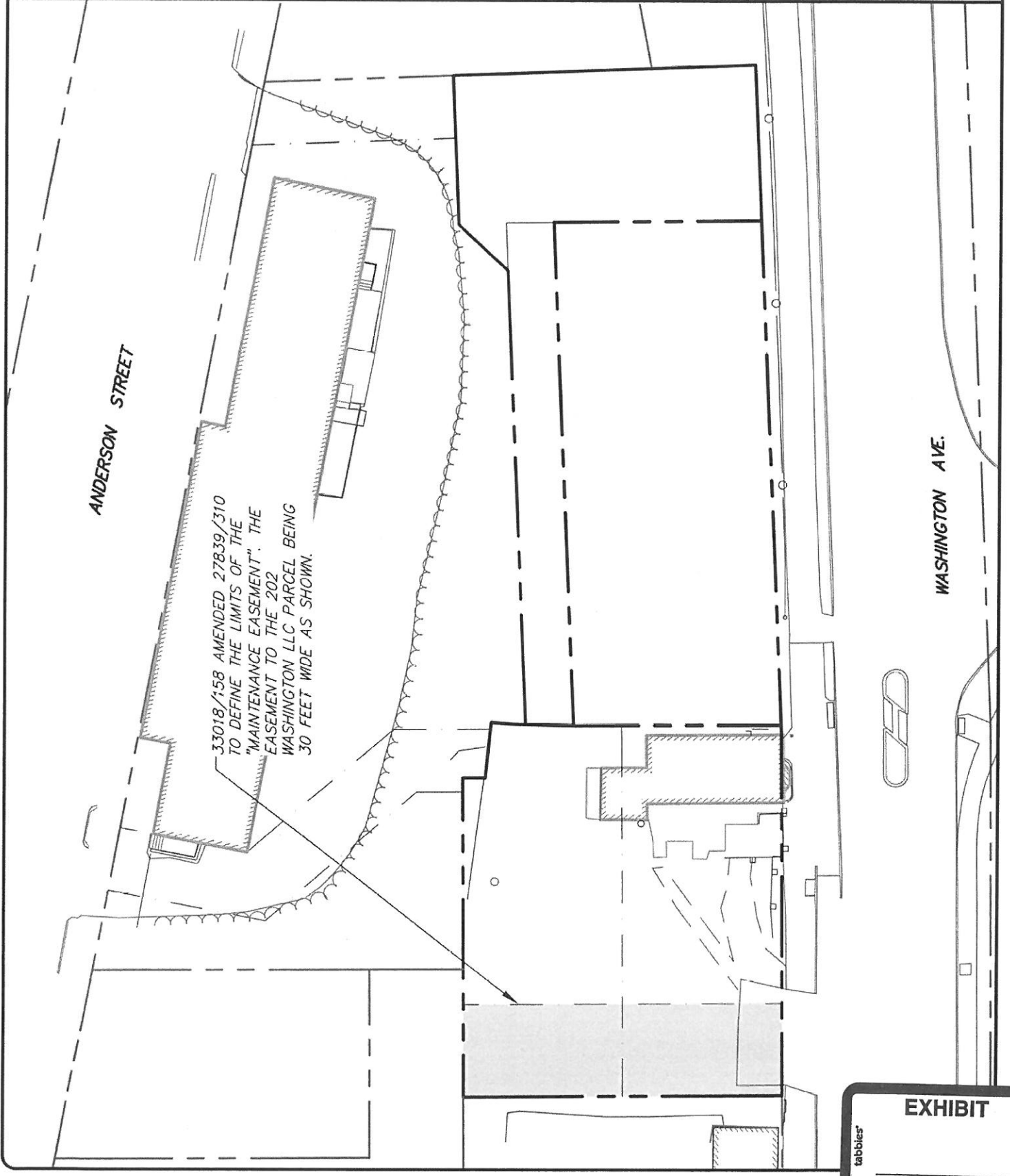
Then personally appeared the above named Ronald L. Gan in his said capacity and acknowledged the foregoing instrument to be his free act and deed, and the free act and deed of said limited liability company.

[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













View Looking Westerly over the  
202-218 Washington Avenue  
Common Boundary from  
Washington Ave.

Legend



Google Earth

© 2017 Europa Technologies  
© 2017 Google  
© USFWS

6.67 ft



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.

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION F - WAIVERS

1 . A WAIVER IS REQUESTED TO ALLOW A DRIVEWAY SEPARATION OF LESS THAN 100 FEET AT WASHINGTON AVENUE. THE SEPARATION BETWEEN THE PROPOSED SITE DRIVEWAY AND THE DRIVEWAY TO THE ABUTTING RESIDENCE TO THE SOUTH IS APPROXIMATELY 45 FEET. THE SITE DRIVEWAY IS SITUATED AS FAR AS POSSIBLE AWAY FROM THE WASHINGTON AVENUE / EASTERN PROMENADE INTERSECTION, AND THE CONFLICT BETWEEN THE PROPOSED AND EXISTING DRIVEWAYS WILL BE MINIMAL, DUE TO THE LOW USAGE OF THE EXISTING RESIDENTIAL HOME.

2. A WAIVER IS REQUESTED TO ALLOW FOR A SEPARATION OF LESS THAN 150 FEET OF THE WASHINGTON AVENUE / EASTERN PROMENADE INTERSECTION. THE PROPOSED SITE DRIVEWAY IS LOCATED AS FAR AS POSSIBLE AWAY FROM THE INTERSECTION, A DISTANCE OF APPROXIMATELY 145 FEET, MEASURED CENTERLINE TO CENTERLINE.





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,

A handwritten signature in dark ink, appearing to read 'James M. Whelan', is written over a horizontal line.

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.

## **Construction Management Plan 218 Washington Avenue**

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

The Construction Management Plan will be submitted as part of the Site Plan Review and it shall address the construction logistics for a project. The Construction Management Plan shall include the following submissions: 1) a construction management site plan, 2) a construction schedule (time frame); and 3) a written narrative addressing the categories below.

### **Construction Management Principles**

The following narrative provides an overview of the construction management principles that 218-220 Washington Avenue LLC has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

### **Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits**

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, 218-220 Washington Avenue LLC shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.
2. **Blasting:** Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

### **Construction Administration and Communication**

218 Washington Avenue LLC will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters,

businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The construction management plan provides for the following:

1. Contact Person is Patrick Tinsman, (207) 239-5500; ptinsman@maine.rr.com.
2. Construction Signage posted on the site with Contact Information for Contractor
3. Describe any additional communication strategies
4. All construction site signage is temporary and shall be removed at project completion.

### **Construction Schedule**

1. The anticipated construction start date is March 2018 with substantial completion in March 2019.
2. Hours of Construction. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit (Attachment 1) and Section 25-129. Noise, dust and debris (Attachment 2).
3. Extended Hours or Night Work: Pursuant to Section 17-18, this section not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
4. Material Deliveries: Schedule and designated location for delivery of materials and boxed goods.

### **Security & Public Safety**

1. The Construction Management Plan depicts all proposed fencing or other barriers and access gates (with Knox locking devices) with the intent of separating pedestrian and vehicle circulation from the construction site.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations*.
3. Fire Safety Program. An overall construction or demolition fire safety program shall be developed. Essential items to be emphasized include the following:
  - Good Housekeeping
  - On-site security
  - Installation of new fire protection systems as construction progresses
  - Preservation of existing systems during demolition
  - Organization and training of an on-site fire brigade
  - Development of a pre-fire plan with the local fire department
  - Rapid communication
  - Consideration of special hazards resulting from previous occupancies
  - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations
4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
5. Any proposed temporary security lighting shall be shown on CMP and all fixtures shall be full cutoffs.

## **Construction Permitting and Traffic Control Plans**

1. Construction Activity in Public Streets: Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.
2. Sewer and Stormwater: Sewer and stormwater water system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.
3. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. Projects that will occur along arterial and or collector streets are required to submit a satisfactory 'maintenance of traffic' (MOT) plan prior to any street opening permit approval. MOT plans may be required for projects that have impacts on local streets.

Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public through or along the construction work zone. The Construction Manager may be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

- Construction speed signing may be used as needed to slow traffic
- Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.
- In extreme situations, flaggers may be required.
- Police detail is required at lighted intersections and may be requested by the City's transportation engineer or his designee.

All existing modes of travel in work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.



- Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

### **Site Management and Controls**

The Construction Manager address maintaining the site in a safe condition and will include the following:

Regular trash and debris removal

Street cleaning and damage controls

Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).

Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris (Attachment 2).

Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.

Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.

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

### **Erosion Control and Preservation of Trees**

1. The Construction Manager shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.
2. The contractor shall maintain all tree and landscaping preservation measures as depicted on the landscaping plan within the area of construction.
3. The storage of materials shall be identified and avoid being located under/near trees.

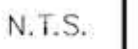
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1. The Construction Management Plan depicts the location of the material staging areas, the location on onsite temporary construction trailers, the location on onsite truck delivery holding areas, the general location of the construction security fence and the general location of temporary construction dumpsters. An open storage areas shall be shown on the plan.
2. Delivery Truck Holding Area On-Site: The delivery holding area shall be shown on the plan and shall not be blocked during construction. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of the trucks until they can be unloaded. Once at the site all vehicles well be brought within the fence line and will make every attempt to avoid queueing on public streets.

**Parking During Construction**

Construction Parking: Adequate parking for construction workers shall be provided at the garage level throughout the construction period.





NOT FOR CONSTRUCTION

**SEBAGO**  
T E C H N I C S

WWW.SEBAGOTECHNICS.COM

75 John Roberts Rd.  
Suite 1A  
South Portland, ME 04106

250 Goddard Rd.  
Suite B  
Lewiston, ME 04240

SHEET 1 OF 1

06172SB.dwg, TAB:SB



ATTEST \_\_\_\_\_ REGISTRAR

# 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        |
| u                 | STOCKADE FENCE          |
| ---               | RETAINING WALL          |
| ⊙                 | DECIDUOUS TREE          |
| ○                 | BOLLARD                 |
| — 0' — 0' —       | SIGN                    |
| G                 | GAS                     |
| ⊠                 | GAS GATE VALVE          |
| W                 | WATER                   |
| ⊙                 | WATER SHUT OFF          |
| S                 | SANITARY SEWER          |
| ⊙                 | SANITARY MANHOLE        |
| ⊙                 | SANITARY CLEAOUT        |
| SD                | STORM DRAIN             |
| ⊙                 | DRAINAGE MANHOLE        |
| ⊙                 | CATCH BASIN             |
| OHU               | OVERHEAD UTILITY        |
| UG                | UNDERGROUND UTILITY     |
| ⊠                 | TRANSFORMER PAD         |
| ⊙                 | TELEPHONE MANHOLE       |
| ⊙                 | LIGHT POLE              |
| ○                 | UTILITY POLE            |
| —                 | GUY WIRE                |





# Memorandum

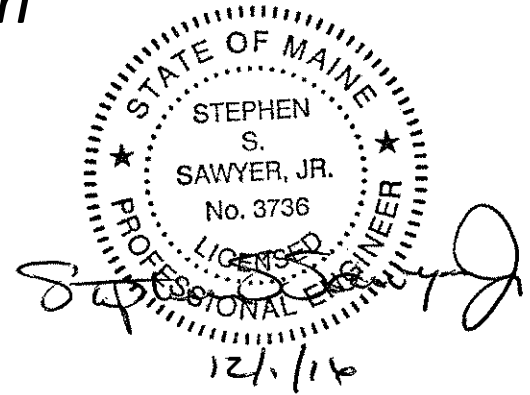
06172

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 .

## **Construction Management Plan 218 Washington Avenue**

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

The Construction Management Plan will be submitted as part of the Site Plan Review and it shall address the construction logistics for a project. The Construction Management Plan shall include the following submissions: 1) a construction management site plan, 2) a construction schedule (time frame); and 3) a written narrative addressing the categories below.

### **Construction Management Principles**

The following narrative provides an overview of the construction management principles that 218-220 Washington Avenue LLC has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

### **Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits**

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, 218-220 Washington Avenue LLC shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.
2. **Blasting:** Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

### **Construction Administration and Communication**

218 Washington Avenue LLC will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters,

businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The construction management plan provides for the following:

1. Contact Person is Patrick Tinsman, (207) 239-5500; ptinsman@maine.rr.com.
2. Construction Signage posted on the site with Contact Information for Contractor
3. Describe any additional communication strategies
4. All construction site signage is temporary and shall be removed at project completion.

### **Construction Schedule**

1. The anticipated construction start date is March 2018 with substantial completion in March 2019.
2. Hours of Construction. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit (Attachment 1) and Section 25-129. Noise, dust and debris (Attachment 2).
3. Extended Hours or Night Work: Pursuant to Section 17-18, this section not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
4. Material Deliveries: Schedule and designated location for delivery of materials and boxed goods.

### **Security & Public Safety**

1. The Construction Management Plan depicts all proposed fencing or other barriers and access gates (with Knox locking devices) with the intent of separating pedestrian and vehicle circulation from the construction site.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations*.
3. Fire Safety Program. An overall construction or demolition fire safety program shall be developed. Essential items to be emphasized include the following:
  - Good Housekeeping
  - On-site security
  - Installation of new fire protection systems as construction progresses
  - Preservation of existing systems during demolition
  - Organization and training of an on-site fire brigade
  - Development of a pre-fire plan with the local fire department
  - Rapid communication
  - Consideration of special hazards resulting from previous occupancies
  - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations
4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
5. Any proposed temporary security lighting shall be shown on CMP and all fixtures shall be full cutoffs.

## **Construction Permitting and Traffic Control Plans**

1. Construction Activity in Public Streets: Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.
2. Sewer and Stormwater: Sewer and stormwater water system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.
3. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. Projects that will occur along arterial and or collector streets are required to submit a satisfactory 'maintenance of traffic' (MOT) plan prior to any street opening permit approval. MOT plans may be required for projects that have impacts on local streets.

Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public through or along the construction work zone. The Construction Manager may be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

- Construction speed signing may be used as needed to slow traffic
- Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.
- In extreme situations, flaggers may be required.
- Police detail is required at lighted intersections and may be requested by the City's transportation engineer or his designee.

All existing modes of travel in work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

### **Site Management and Controls**

The Construction Manager address maintaining the site in a safe condition and will include the following:

Regular trash and debris removal

Street cleaning and damage controls

Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).

Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris (Attachment 2).

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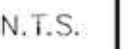
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NOT FOR CONSTRUCTION

**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. 207-202-2100

250 Goddard Rd.  
Suite B  
Lewiston, ME 04240  
Tel. 207-783-5656

06172SB.dwg, TAB:SB

ATTEST \_\_\_\_\_ REGISTRAR \_\_\_\_\_





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.



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.

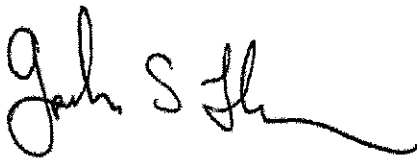
### Private Fire Protection Water Needs

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: 7/19/17

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

Site Address: 218 Washington Ave

Chart Block Lot Number: 10 A 10 & 15

Proposed Use: Residential

Previous Use: 11

Existing Sanitary Flows: 270 GPD

Existing Process Flows: 0 GPD

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

8" MAIN IN WASHINGTON AVE

Site Category  
Commercial (see part 4 below)  
Industrial (complete part 5 below)  
Governmental  
Residential  
Other (specify)

|   |
|---|
|   |
|   |
|   |
| X |
|   |

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

## 2. Please, Submit Contact Information.

City Planner's Name: Jean Fraser Phone: \_\_\_\_\_

Owner/Developer Name: 218 - 220 Washington Avenue LLC

Owner/Developer Address: 199 Elderberry Lane So Portland 04106

Phone: 749-0000 Fax: \_\_\_\_\_ E-mail: maietta@aol.com

Engineering Consultant Name: Sehago Technics Inc

Engineering Consultant Address: 75 John Roberts Rd So Portland 04106

Phone: 200-2055 Fax: \_\_\_\_\_ E-mail: wconuxy@sehago-technics.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: \_\_\_\_\_

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) X CITY METHOD

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) STUDIO OR ONE BEDROOM UNITS  $\times 120 = 2640$

(23) TWO BEDROOM UNITS  $\times 180 = 4140$

6780  
gpd



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

N/A

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

N/A

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.*



Date: October 4, 2017

Re: Wastewater Capacity Authorization

Address: 218 Washington Ave

Applicant: 218-220 Washington Ave LLC

Planner: Jean Fraser

Anticipated Wastewater Flow:

| Estimate of Anticipated Design Flows                                                       |           |                 |                          |                       |
|--------------------------------------------------------------------------------------------|-----------|-----------------|--------------------------|-----------------------|
| Development                                                                                | Unit Size | Number of Units | Gallons per Day per Unit | Total Gallons per Day |
| <b>Proposed flow</b>                                                                       |           |                 |                          |                       |
| Multiple Family Dwelling Units                                                             | 1-Bedroom | 22              | 120                      | 2640                  |
| Multiple Family Dwelling Units                                                             | 2-Bedroom | 23              | 180                      | 4140                  |
| <b>Net Change</b>                                                                          |           |                 |                          | <b>+ 6,780</b>        |
| *Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition |           |                 |                          |                       |

Comments:

The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

You are reminded that the sewer you are proposing to connect into convey both sanitary and stormwater (Combined Sewer) and therefore a backflow preventer is suggested.

If the City can be of further assistance, please contact me at all 874-8840 or [brad@portlandmaine.gov](mailto:brad@portlandmaine.gov)

Sincerely,

CITY OF PORTLAND

Bradley A. Roland, P.E.  
Senior Project Engineer

CC:

Jeffrey Levine, Director, Department of Planning and Urban Development, City of Portland

Stuart O'Brien, Planning Director, Department of Planning and Urban Development, City of Portland

Barbara Barhydt, Development Review Services Mgr., Dep't. of Planning and Urban Development, City of Portland

Kathi Earley, City Engineer/Engineering Manager, Portland Department of Public Works

Keith Gray, Senior Project Engineer, Portland Department of Public Works

Nancy Gallinaro, Water Resources Manager, Portland Department of Public Works  
Rachel Smith, Industrial Pretreatment Coordinator, Portland Department of Public Works  
John Emerson, Wastewater Coordinator, Portland Department of Public Works

Lauren Swett, Woodard & Curran, DPW Development Review  
Scott Firmin, Director of Wastewater, Portland Water District

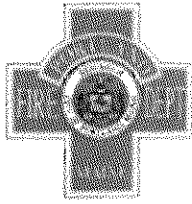
SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION O- SOLID WASTE

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 CityCode. (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. ALSO ATTACHED IS A PHOTOMETRIC PLAN IN THE AREA OF THESE 2 FIXTURES.

|                 |       |           |  |                               |
|-----------------|-------|-----------|--|-------------------------------|
| 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/>)

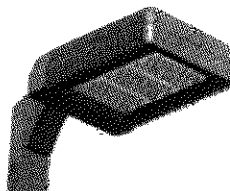
##### Listings:

- 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)



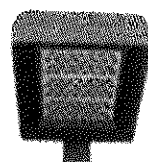
90 LED 3/4 VIEW



30 LED

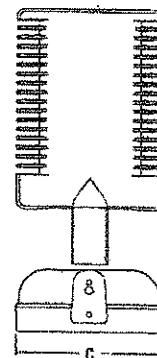
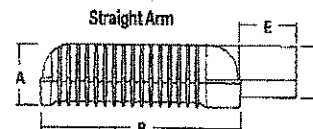
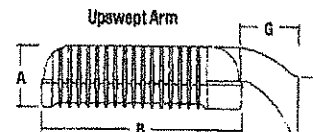


60 LED



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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Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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CL1LED-SPEC 4/14

# ORDERING INFORMATION ORDERING EXAMPLE: CL1-A-90LU-5K-3-DB-RPA3

| SERIES                                                                                               | NO. OF LEDS                                                                               | VOLTAGE                                                                                                                                                                                                                                                                                      | CCT                                                                                                                               | DRIVE CURRENT                                                                                                                                           | OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CL1 Clamaron LED                                                                                     | 90L 90 High brightness LEDs<br>60L 60 High brightness LEDs<br>30L 30 High brightness LEDs | U <sup>1</sup> Universal 120V-277V, 50/60 Hz<br>1 <sup>7</sup> 120V<br>2 <sup>7</sup> 208V<br>3 <sup>7</sup> 240V<br>4 <sup>7</sup> 277V<br>5 480V, 60 Hz<br>F 347V, 60 Hz<br>E <sup>8</sup> 220V, 50 Hz                                                                                     | 3K 3000K<br>4K 4200K<br>5K 5100K<br>AM <sup>6</sup> Amber (590 nm available for "Turtle Friendly" applications (consult factory)) | Leave blank for 700mA (standard)<br>035 350mA Amber CCT only<br>105 1050 mA (use with 90L only for higher lumen output)                                 | BC <sup>5</sup> Backlight control<br>BL <sup>1,2,3</sup> Bi-level control<br>CD <sup>2</sup> Continuous dimming<br>WB Wall bracket<br>RPA3 3" Round pole adapter<br>RPA4 4" Round pole adapter<br>RPA5 5" Round pole adapter<br>RPA6 6" Round pole adapter<br>F(X) <sup>4,5</sup> Fusing (replace X with voltage: 1-120V, 2-208V, 3-240V, 4-277V, 5-480V, 6-347V)<br>SSB Stainless steel LED bezel<br>VG Vandal guard<br>SCO Motion sensor On/Off control, No light output when no motion detected<br>SCP Programmable motion control, factory default is 50%<br>PR(X) <sup>5</sup> NEMA Photo cell receptacle (replace X with voltage: U=120-277, 5=480, 6=347)<br>WH <sup>7</sup> In-fixture wireless control module (120, 277, 347 & 480V) |
| MOUNTING                                                                                             |                                                                                           | DISTRIBUTION                                                                                                                                                                                                                                                                                 |                                                                                                                                   | COLOR                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| A Arm mount construction (6" straight rigid arm included & acceptable for 90° configurations)        |                                                                                           | 2 Type II<br>3 Type III<br>4 Type IV<br>5M Type V Medium<br>5S Type V Short<br>5W Type V Wide<br>2L Type II Rotated 90° left<br>3L Type III Rotated 90° left<br>4L Type IV Rotated 90° left<br>2R Type II Rotated 90° right<br>3R Type III Rotated 90° right<br>4R Type IV Rotated 90° right |                                                                                                                                   | DB Dark Bronze<br>BL Black<br>WH White<br>GR Gray<br>PS Platinum Silver<br>RD Red (premium color)<br>FG Forest Green (premium color)<br>CC Custom Color |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| AD Decorative arm mount const. (6" decorative upswept arm incl. & acceptable for 90° configurations) |                                                                                           |                                                                                                                                                                                                                                                                                              |                                                                                                                                   |                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| MAF Mast arm fitter for mounting to standard 2 3/8" mast arm bracket, includes 6" straight rigid arm |                                                                                           |                                                                                                                                                                                                                                                                                              |                                                                                                                                   |                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

Notes: 1- For BL option 90L and 60L: N/A 347V & 480V  
2 - BL & CD cannot be combined  
3 - Fuse option not available with universal voltage  
4 - Select FCS fusing option for 220V  
5 - Photocell receptacle not available with BL option  
6 - Not recommended for Type III and IV distributions only  
7 - Select only when using voltage specific options (e.g. WH)  
8 - Available in 350mA drive current only Type IV, 5M

## ENERGY SAVING DATA

| ENERGY DATA               |      | INPUT WATTS |           | LUMENS DELIVERED |        |        |         |         |         | DRIVERS  |
|---------------------------|------|-------------|-----------|------------------|--------|--------|---------|---------|---------|----------|
| Power Factor              | >.9  | 120V-277V   | 347V-480V | TYPE 2           | TYPE 3 | TYPE 4 | TYPE 5M | TYPE 5S | TYPE 5W | CURRENT  |
| Total Harmonic Distortion | <10% |             |           |                  |        |        |         |         |         |          |
| 30L-5K                    |      | 70          | 87        | 6384             | 6164   | 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       | 28974            | 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             | 4666   | 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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LIGHTING**

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CL1LED-SPEC 4/14





NOTES:  
 1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.  
 2) CALCULATIONS MAY SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.  
 3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES ON A FLAT SITE UNLESS OTHERWISE INDICATED.  
 4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE AND/OR SITE.  
 5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.  
 6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FUTURE ORIENTATION.  
 7) CHECK GRAPHIC SCALE. DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY OCCUR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.

| Calculation Summary |      |     |     |         |         |
|---------------------|------|-----|-----|---------|---------|
| Label               | Avg  | Max | Min | Avg/Min | Max/Min |
| OFF PROP            | 0.00 | 0.1 | 0.0 | N/A     | N/A     |
| prop line           | 0.02 | 0.1 | 0.0 | N/A     | N/A     |
| site                | 0.27 | 1.8 | 0.0 | N/A     | N/A     |

| Luminaire Schedule (note fixture catalogue numbers are not complete) |     |             |        |            |                |
|----------------------------------------------------------------------|-----|-------------|--------|------------|----------------|
| Type                                                                 | Qty | Lum. Lumens | L.F.   | Lum. Watts | Description    |
| S4                                                                   | 2   | 2115        | 10,900 | 33         | CLS-16L-3K-4BC |



HUBBELL CLS1

218-220 WASHINGTON AVE  
 PORTLAND, ME  
 SITE LIGHTING LAYOUT

SEABO TECH  
 SCALE NOT TO SCALE  
 PREP: SITE.MST



NOTES: THE DRAWING IS THE PROPERTY OF SWANEY LIGHTING ASSOCIATES, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF SWANEY LIGHTING ASSOCIATES, INC. THE RECIPIENT OF THIS DRAWING AGREES TO HOLD SWANEY LIGHTING ASSOCIATES, INC. HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES, THAT MAY BE ASSERTED AGAINST SWANEY LIGHTING ASSOCIATES, INC. BY ANY THIRD PARTY AS A RESULT OF THE RECIPIENT'S USE OF THIS DRAWING.



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.

POSITIVE CONNECTION SYSTEM WALLS

AASHTO LOAD RESISTANCE FACTOR DESIGN

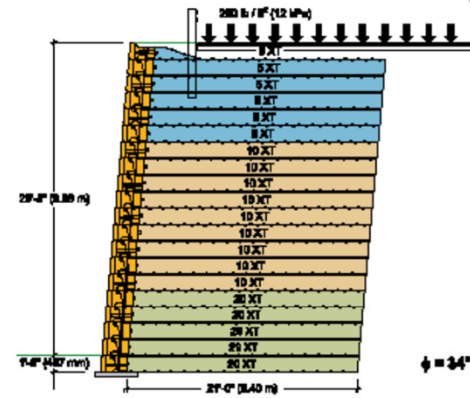
## Preliminary Reinforcement Schedule

$\phi = 34^\circ$  | DENSE WELL-GRADED SAND or SAND AND GRAVEL

LOAD CONDITION B | 200 lb/ft<sup>2</sup> (12 kPa) LIVE LOAD SURCHARGE, NO BACK SLOPE, NO TOE SLOPE

20 BLOCK SECTION \*  
(80) 20" (508 mm) Blocks

| Geogrid Rolls Required per Wall Length |                   |                  |
|----------------------------------------|-------------------|------------------|
| Type                                   | Rolls / Street ft | Rolls / Street m |
| EXT                                    | ± 0.30            | ± 1.26           |
| 10XT                                   | ± 0.30            | ± 1.26           |
| 20XT                                   | ± 0.30            | ± 1.26           |



### Legend:

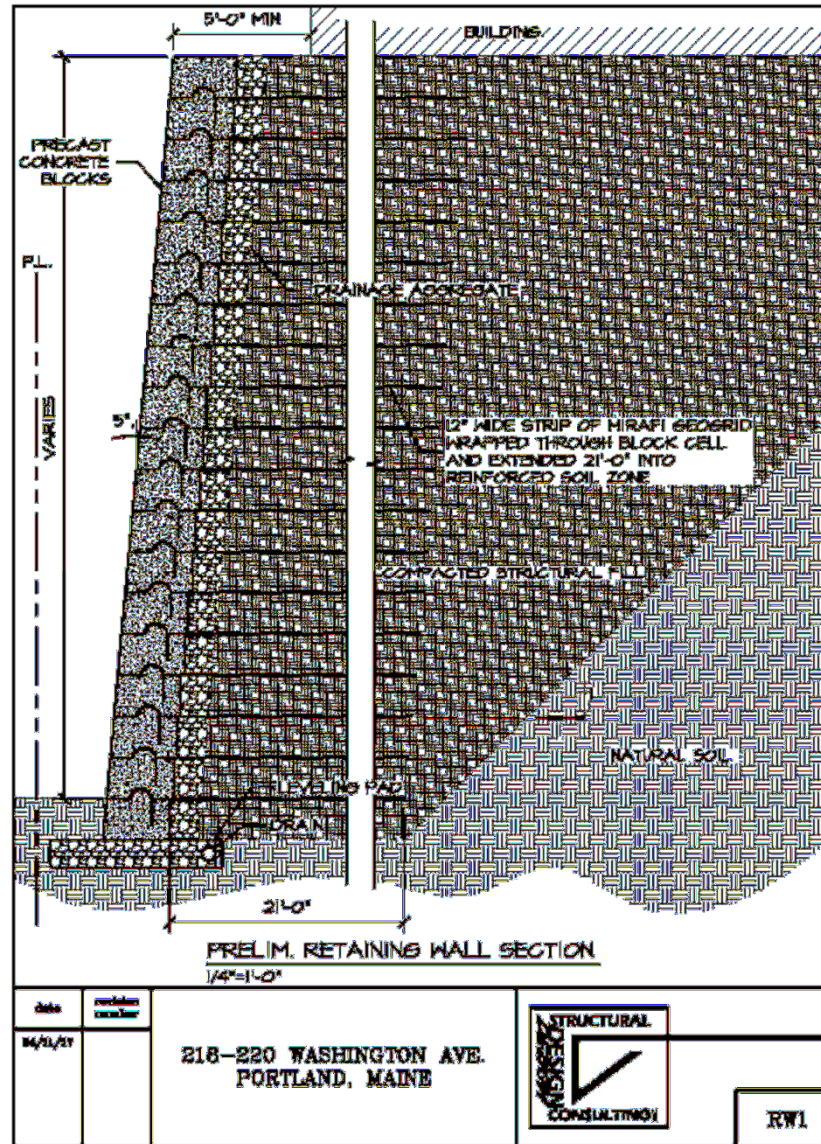
= 20" (508mm) BLOCK  
 = 4" (102mm) BLOCK

= GEOTEXTILE (Continuous Strip)  
Geogrid Cut Length = 2' x 1' = 2' (0.61 m)

Geogrid shall be 12" (305 mm) wide strip of Mirafi geogrid, type as noted. Geogrid shall be factory cut and certified for width and strength by Tensar Mirafi.

\* Not tall enough? You can build significantly taller walls with the Redi-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.

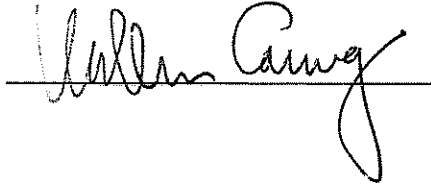


I, William Conway of Sebago Technics Inc., hereby certify that a neighborhood meeting was held on January 4, 2017 at 5:30 PM , at the Portland Public Library, Meeting Room No. 3 .

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 written in a cursive style with a large, stylized "W" and "C".

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.



Jennifer Munson &lt;jmy@portlandmaine.gov&gt;

---

**Fwd: 218 Washington IZ**

1 message

---

**Jean Fraser** <jf@portlandmaine.gov>  
To: Jennifer Munson <jmy@portlandmaine.gov>

Fri, Oct 6, 2017 at 3:53 PM

Jen

Could you put this at the front of the "applicants Submittal W" for 218 Washington please (leave the rest there although they are now superceded and if you have time you could mark them such- the e-mail is current)

Thanks  
Jean

----- Forwarded message -----

From: **Jean Fraser** <jf@portlandmaine.gov>  
Date: Fri, Oct 6, 2017 at 3:51 PM  
Subject: Fwd: 218 Washington IZ  
To: "Fraser, Jean" <jf@portlandmaine.gov>

----- Forwarded message -----

From: **Will Conway** <wconway@sebagotechnics.com>  
Date: Fri, Oct 6, 2017 at 12:38 PM  
Subject: RE: 218 Washington IZ  
To: Jean Fraser <jf@portlandmaine.gov>, Patrick Tinsman <ptinsman@maine.rr.com>, Vinny Maietta/Pat Tinsmann <maietta@aol.com>  
Cc: William Hopkins <hopkins@archetypepa.com>, Mike Coyne <coyne@archetypepa.com>, Jeff Levine <jlevine@portlandmaine.gov>, "Lawrence R. Clough" <lclough@jbgh.com>, Victoria Volent <vvolent@portlandmaine.gov>

Jean, please accept this email as the applicant' intent to comply with the Inclusionary Zoning for the project by paying the fee – in – lieu . A total fee of \$461, 250.00 will be paid prior to Certificate of Occupancy for the units.

Thank you,

Will

--  
*Jean Fraser, Planner*  
City of Portland  
874 8728



# **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: 218 - 220 Washington Avenue LLC<br>Business Name, if applicable:<br>Address: 199 Elderberry Road<br>City/State: So. Portland ME Zip Code: 04106 | <b>Applicant Contact Information</b><br>Work # —<br>Home# —<br>Cell # 207.749.0008 Fax#<br>e-mail: maietta@aol.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>Billing Information</b><br>Name: Sebago Technics<br>Address: 75 John Roberts Road<br>City/State: So. Portland, ME Zip Code: 04106                                                                       | <b>Billing Information</b><br>Work # Will Conway<br>Cell # 207.200.2055 Fax#<br>e-mail:                            |
| <b>Designated person/person(s) for uploading to e-Plan:</b><br>Name: WILL CONWAY<br>e-mail: wconway@sebago-technics.com<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               | 4 |
| On-Site IZ Units         | 4 |
| Off-Site IZ Units        | 0 |
| # IZ Homeownership Units |   |
| # IZ Rental Units        |   |
| # IZ Efficiencies        |   |
| # IZ 1-Beds              | 1 |
| # IZ 2-Beds              | 3 |
| # IZ 3-Beds              |   |
| IZ Fee In-Lieu           |   |

**APPLICATION FEES:**

|                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Conditional Use Review to Ensure Workforce Housing (\$100.00)<br><br>(Please submit a separate application for the applicable site plan review. Fees and charges are listed within the application) | <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

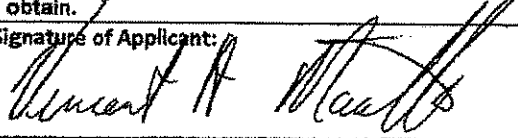
5. When ready, upload your files and documents into the following folders:  
 "Application Submittal - Drawings"  
 "Application Submittal - Documents"
6. Once a preliminary check has been made of the submittal documents and drawings, staff will move them to permanent folders labeled Drawings and Documents. 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. |

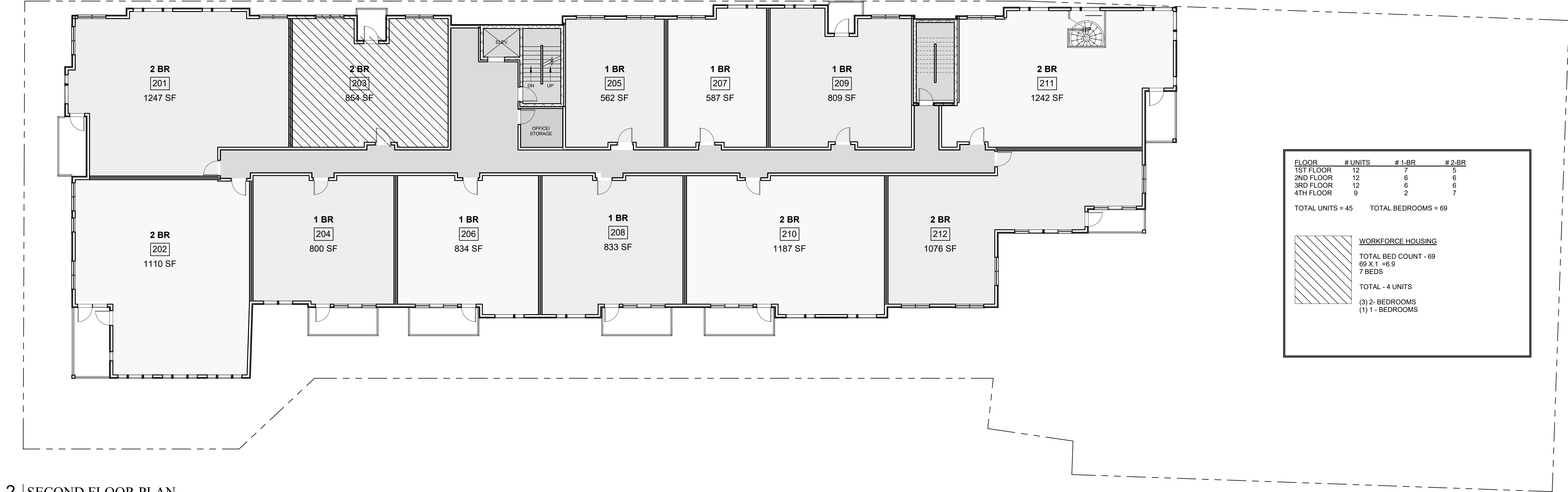
**APPLICANT SIGNATURE:**

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.

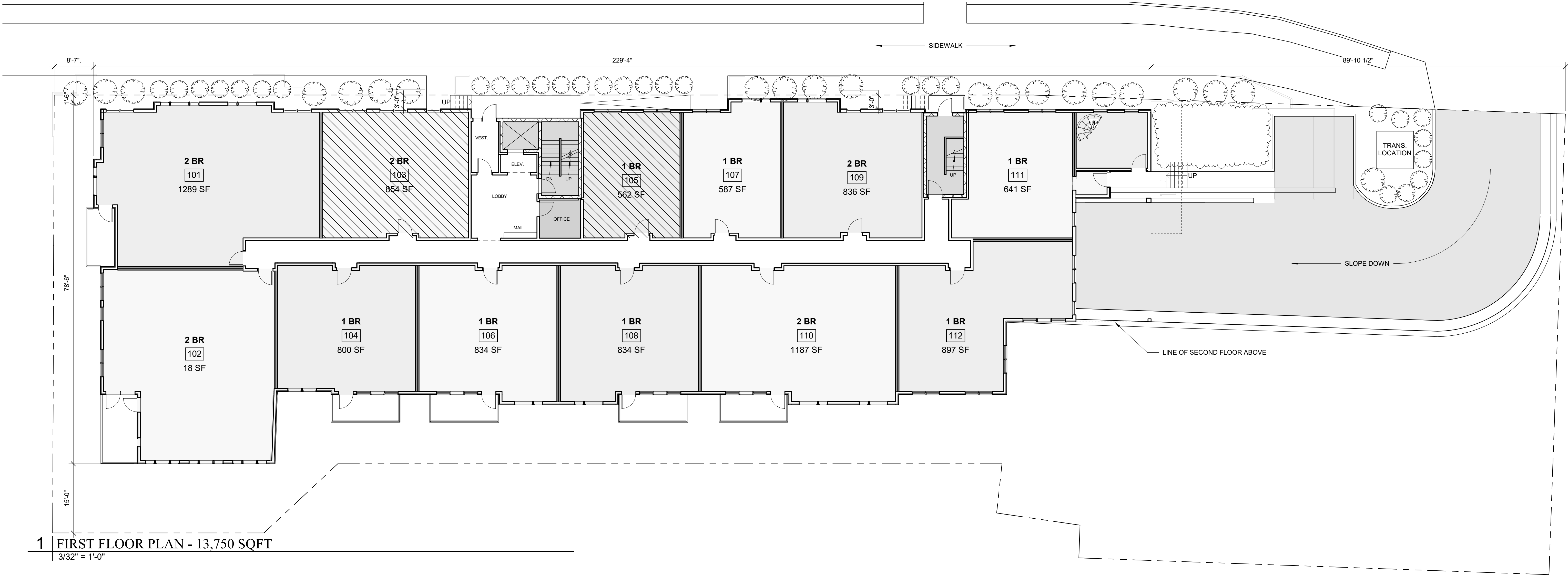
This application is for a Conditional Use IZ Review. It is not a permit to begin construction. An approved site plan, a Performance Guarantee, Inspection Fee, Building Permit, and associated fees will be required prior to construction. Other Federal, State or local permits may be required prior to construction,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

|                                                                                                              |                     |
|--------------------------------------------------------------------------------------------------------------|---------------------|
| Signature of Applicant:<br> | Date:<br><br>5/5/17 |
|--------------------------------------------------------------------------------------------------------------|---------------------|





2 SECOND FLOOR PLAN  
 3/32" = 1'-0"



1 FIRST FLOOR PLAN - 13,750 SQFT  
 3/32" = 1'-0"

Prepared For:

218 Washington  
 Avenue LLC

Consultant:

**ARCHETYPE**  
 architects  
 48 Union Wharf Portland, Maine 04101  
 (207) 772-0022 ARCHETYPE@ARCHETYPEPA.COM

Project:

218 WASHINGTON  
 AVE

218 WASHINGTON AVE  
 PORTLAND MAINE

Revisions:

Scale:

3/32" = 1'-0"

Date:

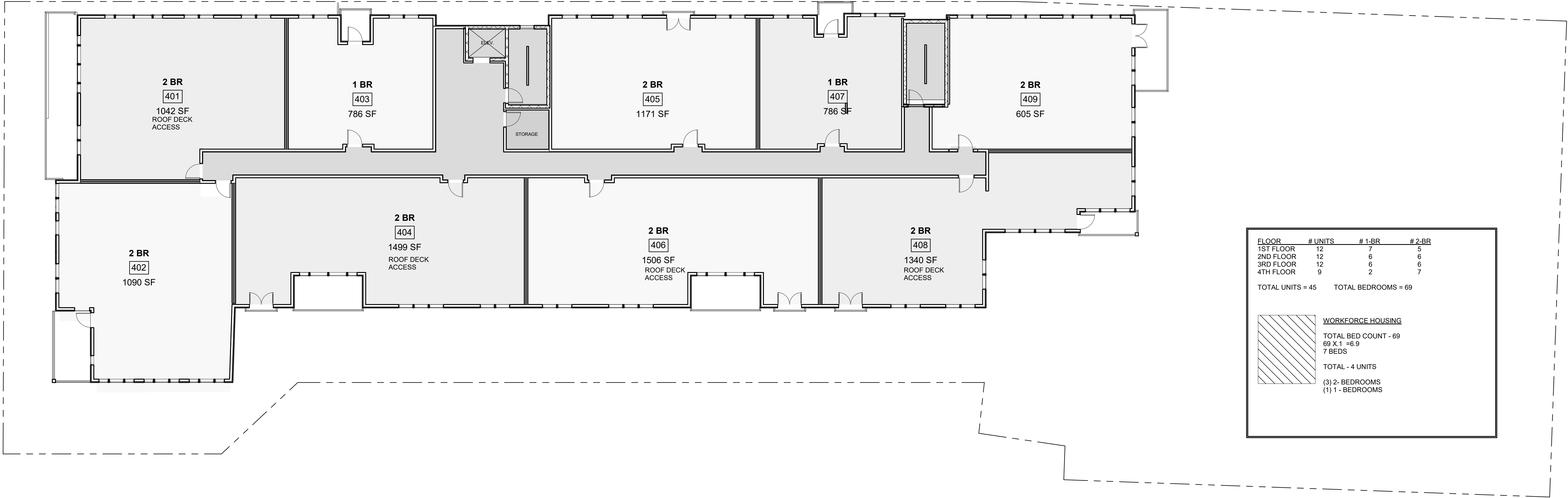
5/5/2017

FIRST & SECOND  
 FLOOR PLANS

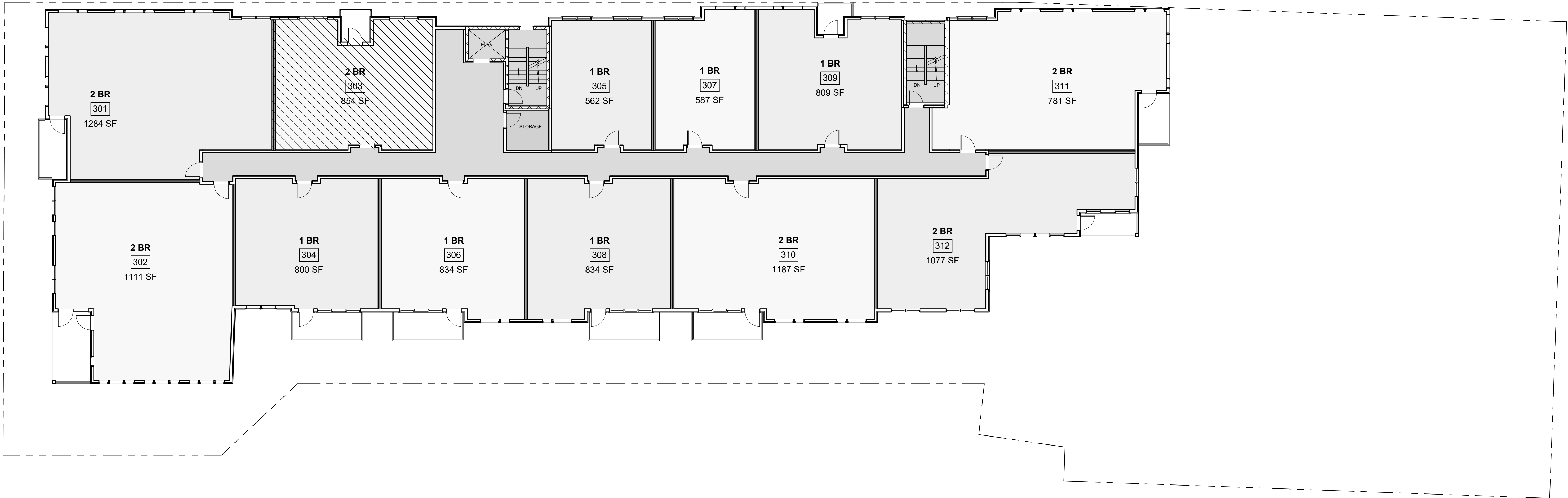
A1.01



2 | FOURTH FLOOR PLAN  
3/32" = 1'-0"



1 | SECOND AND THIRD FLOOR  
3/32" = 1'-0"



Prepared For:

218 Washington Avenue LLC

Address  
City, State

Consultant:

**ARCHETYPE** architects

48 Union Wharf Portland, Maine 04101  
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:

218 WASHINGTON AVE  
AVE

218 WASHINGTON AVE  
PORTLAND MAINE

|            |   |          |            |
|------------|---|----------|------------|
| Revisions: | 1 | 7-28-201 | Revision 1 |
|            | 7 |          |            |

Date: 5/5/2017

Scale: 3/32" = 1'-0"

THIRD AND FOURTH FLOOR PLAN

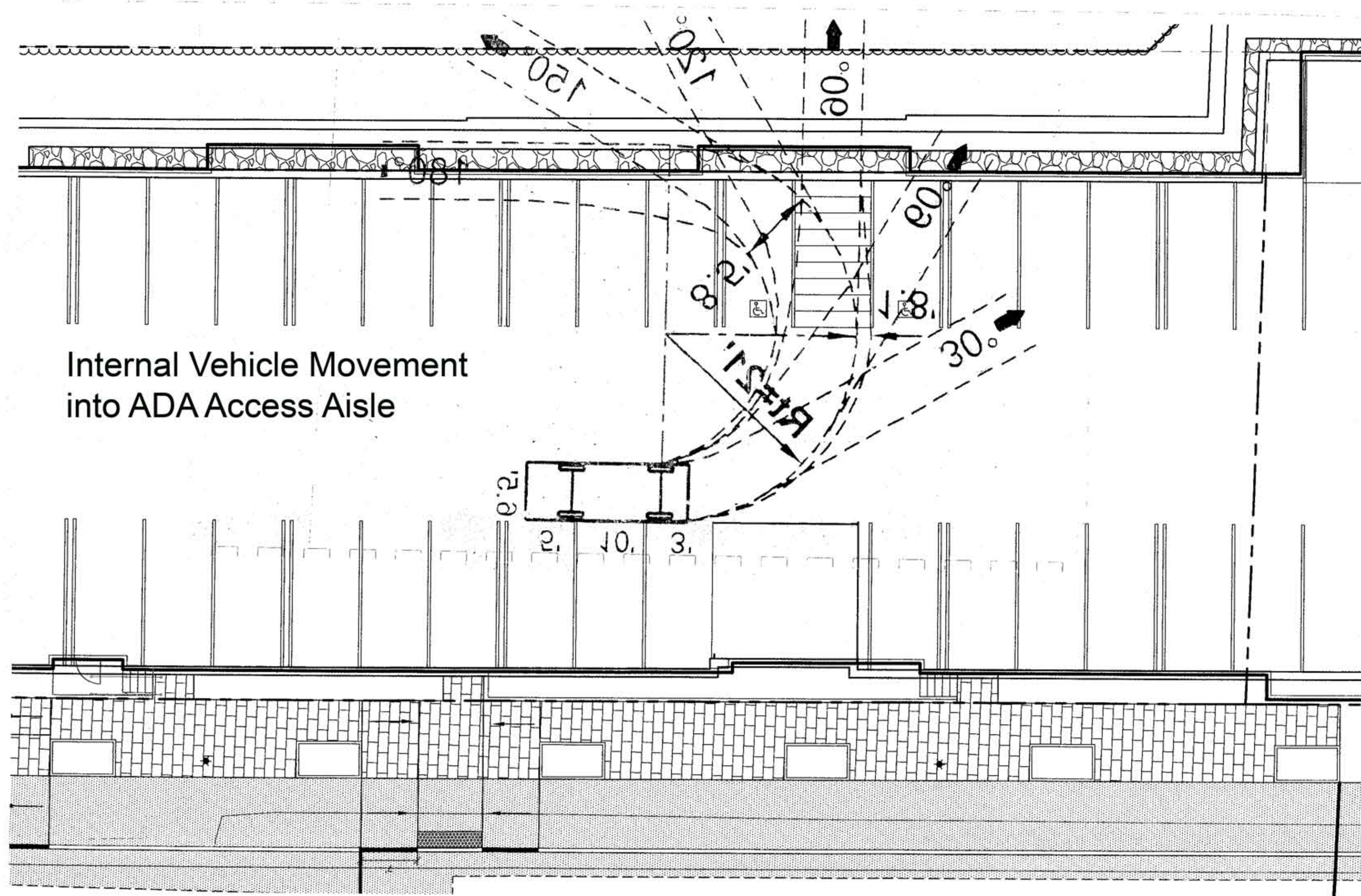
A1.02

SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION S-7 INTERNAL VEHICLE MOVEMENTS

THE TRAFFIC PEER REVIEW COMMENTS REQUEST THAT THE APPLICANT SHALL CONFIRM THAT ALL INTERNAL VEHICLE MOVEMENTS CAN OCCUR WITHOUT HAVING TO BACK OUT OF THE SITE.

AS DEPICTED IN THE ATTACHED DIAGRAMS, A VEHICLE CAN TURN AROUND USING THE ADA ACCESS AISLE, WHICH WILL ALWAYS BE FREE OF CARS, EVEN IF ALL OF THE GARAGE PARKING SPACES ARE OCCUPIED.

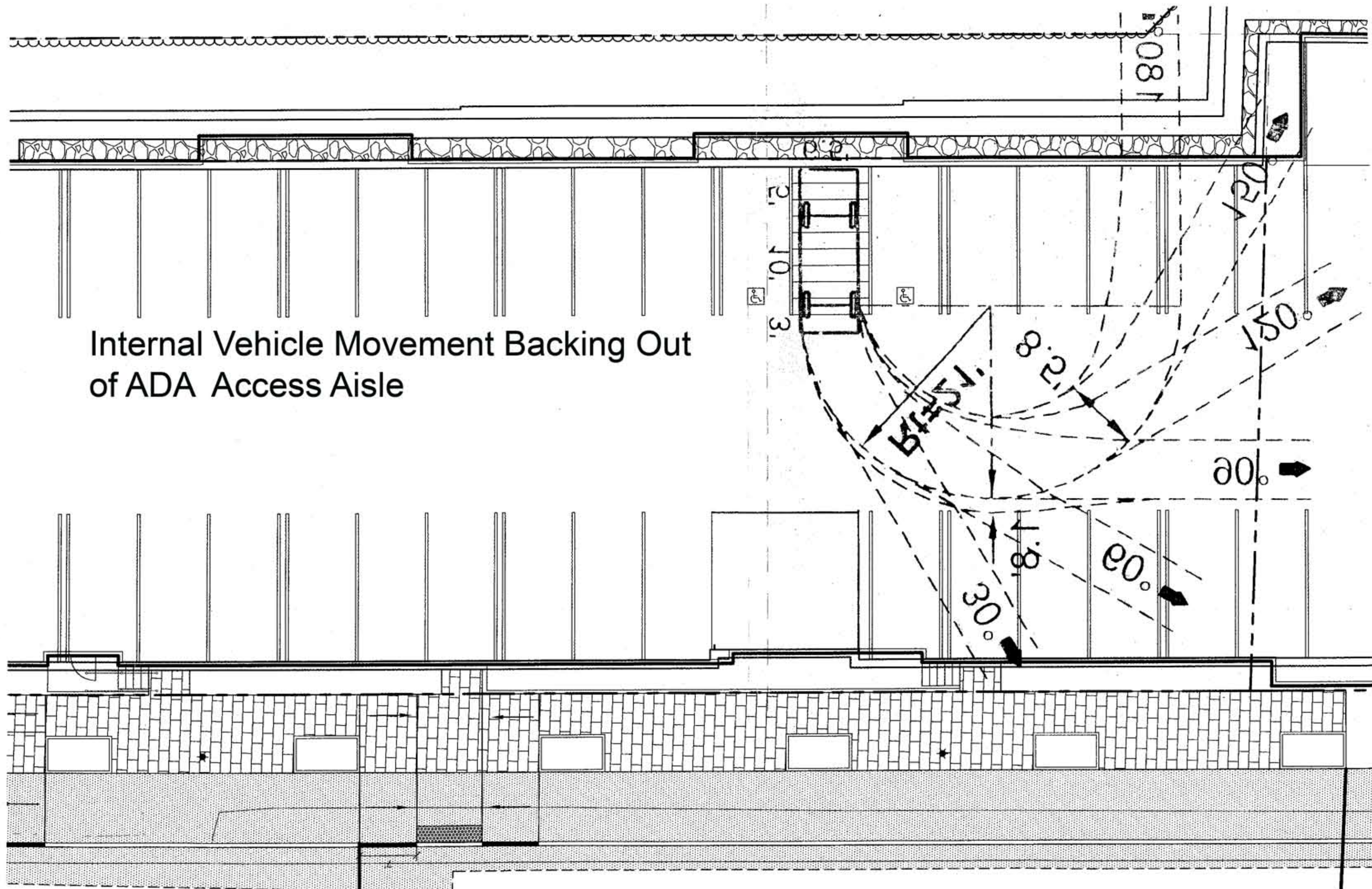




Internal Vehicle Movement  
into ADA Access Aisle



## Internal Vehicle Movement Backing Out of ADA Access Aisle





SITE PLAN APPLICATION  
218-220 WASHINGTON AVENUE  
WRITTEN SUBMISSION S – 4 RESPONSES TO REVIEW COMMENTS

THESE RESPONSES TO COMMENTS ARE BASED UON THE STAFF REPORT AUTHORED BY JEAN FRASER AND DATED JULY 7, 2017.

RESPONSES TO ITEM VI NEXT STEPS ON PAGE 12 OF THE STAFF REPORT :

- THE PLAT HAS BEEN REVISED AND SUBMITTED SEPARATELY.
- CONDOMINIUM DOCUMENTS HAVE BEEN SUBMITTED AS WRITTEN SUBMISSION S-5.
- THIS DOCUMENT CONTAINS RESPONSES TO REVIEW COMMENTS.
- WRITTEN SUBMISSION F HAS BEEN REVISED AND RESUBMITTED TO ADRESS WAIVER REQUESTS.
- THE REQUIREMENT TO REMOVE INVASIVE PLANT SPECIES IS INCLUDED IN THE CONDOMINIUM DOCUMENTS.
- WRITTEN SUBMISSION I HAS BEEN REVISED TO ADRESS COMMENTS ON THE CONSTRUCTION MANAGEMENT PLAN.
- FINAL PLANS FOR THE WASHINGTON STREET RIGHT OF WAY HAVE BEEN REVISED AND SUBMITTED SEPARATELY. THE APPLICANT PROPOSES TO OFFSET THE STREET TREE DEFICIT BY INSTALLING (32) SILVA CELLS ADJACENT TO THE RAISED GRANITE TREE WELLS.
- SCREENING DETAILS FOR HVAC UNITS HAVE BEEN PREVIOUSLY SUBMITTED.
- A CAPACITY LETTER FOR WASTEWATER HAS BEEN SUBMITTED AS WRITTEN SUBMISSION S-6.
- ADDITIONAL WORKFORCE HOUSING INFORMATION WILL BE SUBMITTED SEPARATELY.

RESPONSES TO TOM ERRICO'S EMAIL DATED APRIL 21, 2017 :

- A WAIVER HAS BEEN REQUESTED FOR DRIVEWAY SEPARATION – SEE REVISED WRITTEN SUBMISSION F.
- A WAIVER HAS BEEN REQUESTED FOR CORNER CLEARANCE – SEE REVISED WRITTEN SUBMISSION F.
- THE CONSTRUCTION MANAGEMENT PLAN HAS BEEN REVISED – SEE REVISED WRITTEN SUBMISSION I.
- THE TANDEM PARKING SPACES IN THE GARAGE ARE ACTUALLY NOT TANDEM SPACES – THE AREA IN FRONTN OF THE USEABLE SPACES WILL BE USED FOR STORAGE.
- WRITTEN SUBMISSION S- 7 DEMONSTRATES THA VEHICLES WILL NOT HAVE TO BACK OUT OF THE SITE.
- AS REQUESTED A SHORT NARROW LEFT TURN LANE IS NOW PROPOSED AT THE EASTERN PROMENADE INTERSECTION.
- THE DRIVEWAY APRON HAS A MAXIMUM CROSS SLOPE OF 2% AND HAS BEEN CHANGED TO BRICK PAVERS.

NOTE : ALL OF THE COMMENTS IN JEFF TARLING'S EMAIL DATED JUNE 28, 2017 AND LAUREN SWETT'S MEMO DATED JULY 6, 2017 HAVE BEEN ADRESSED.



**DECLARATION OF  
WASHINGTON HEIGHTS CONDOMINIUMS**

PORTLAND, MAINE

\*\*\*\*\*  
**TABLE OF CONTENTS**  
\*\*\*\*\*

**ARTICLE 1 CREATION OF THE CONDOMINIUM**

- 1.1 Submission of Property
- 1.2 Applicability
- 1.3 Defined Terms
- 1.4 Income Restricted Units
- 1.5 Interpretation

**ARTICLE 2 DESCRIPTION OF PROPERTY**

- 2.1 Description of the Property – Plat
- 2.2 Location and Dimensions of Buildings and Units – Floor Plans
- 2.3 Recording of Plat and Plans
- 2.4 Condominium Documents

**ARTICLE 3 CONDOMINIUM UNITS**

- 3.1 Creation of Units
- 3.2 Units and General Unit Boundaries
- 3.3 Description of Specific Unit Components
- 3.4 Allocated Interests
- 3.5 Interior Alterations and Improvements

**ARTICLE 4 COMMON ELEMENTS, LIMITED COMMON ELEMENTS**

- 4.1 Common Elements
- 4.2 Limited Common Elements
- 4.3 Common Elements to Remain Undivided
- 4.4 Exterior Alterations and Improvements

**ARTICLE 5 DECLARANT'S RIGHTS AND PHASING**

- 5.1 Declarant Rights.
- 5.2 Phasing.
- 5.3 Restrictions
- 5.4 Assignment
- 5.5 Amendment, Waiver, Etc.

## **ARTICLE 6 CONDOMINIUM ASSOCIATION**

- 6.1 The Association
- 6.2 Board of Directors; Declarant Control Period
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DRAFT

# DECLARATION OF WASHINGTON HEIGHTS CONDOMINIUM

PORTLAND, MAINE

This Declaration of **WASHINGTON HEIGHTS CONDOMINIUM** ("Declaration") is executed by **218-220 WASHINGTON AVENUE LLC**, a Maine limited liability company (the "Declarant"), pursuant to the Maine Condominium Act, chapter 31 of Title 33 of the Maine Revised Statutes of 1964, as amended (the "Condominium Act").

## ARTICLE 1 CREATION OF THE CONDOMINIUM

**§1.1 Submission of Property.** The Declarant as the owner in fee simple of the land located on Washington Avenue in the City of Portland, County of Cumberland and State of Maine described in Exhibit A, the buildings and improvements now or hereafter located thereon, subject to and together with all easements, rights, privileges and appurtenances thereto (together with any other real estate subsequently subjected to this Declaration, all collectively referred to as the "Property"), hereby submits the land and related rights and easements as described in Exhibit A to the Condominium Act in accordance with this Declaration, and establishes a condominium as defined in Section 1601-103(7) of the Condominium Act to be known as "Washington Heights CONDOMINIUM" (the "Condominium").

The name of the Unit Owners' association is the "Washington Heights Condominium Association," a Maine nonprofit corporation (the "Association") formed under the Maine Non-Profit Corporation Act, 13-B M.R.S.A. Section 101 et seq.

The Condominium consists of the Property described in Exhibit A. Pursuant to this Declaration and the Act, the Declarant reserves various Development Rights, Special Declarant Rights and easements, including without limitation the right to physically construct and legally create additional Condominium Units up to a total of up to forty-five (45) Condominium Units with associated Limited Common Elements.

**§1.2 Applicability.** This Declaration governs the Property. All present and future owners, occupants and tenants, their guests, licensees, invitees, employees, agents, and any other person entering on the Property shall be subject to this Declaration, the Bylaws of the Association, and the Rules and Regulations of the Association, all of which shall be deemed to be covenants running with the land, and shall bind any person having at any time any interest in or entering upon the Property.

**§1.3 Defined Terms.** Capitalized terms not otherwise defined in this Declaration, the Plat and Plans, the Bylaws, and the Rules and Regulations shall have the meanings specified in the Condominium Act.

**§1.4 Interpretation.** In the event of any conflict or discrepancy between this Declaration, the Plat and Floor Plans, the Bylaws, and the Rules and Regulations, the foregoing documents shall control in accordance with the order of priority in which they are listed, and the



Floor Plans shall control over the Plat. If any provision of this Declaration, the Plat and Plans, the Bylaws or the Rules and Regulations conflicts with any applicable laws, including, but not limited to, the Condominium Act, then the Condominium Act shall be deemed controlling. In the event of any such conflict, the validity of the remainder of this Declaration, the Plat and Plans, the Bylaws and Rules and Regulations, and the application of any such provision, section, clause, phrase, or word in other circumstances shall not be affected thereby.

**§1.5 Units Subject to Eligibility Restrictions.** In accordance with the City of Portland's Inclusionary Zoning Ordinance, the ownership and occupancy of Units #105, 109, 205, 305 and 309 (the "Restricted Units") must be used as primary residences of the occupants and the occupancy is restricted as set forth and referenced Exhibit F. All occupants and owners of the Restricted Units must comply with such requirements, which shall constitute a covenant running with the land which may be enforced by the City of Portland may enforce Compliance.

## **ARTICLE 2 DESCRIPTION OF CONDOMINIUM PROPERTY**

**§2.1 Description of the Property – Plat.** A legal description of the initial Property included in the Condominium is set forth in Exhibit A.

The location and dimensions of the Property included in the Condominium are depicted on the Condominium Plat of Washington Heights CONDOMINIUM made for the Declarant prepared by Sebago Technics, Inc. dated \_\_\_\_\_, 2017 and recorded in the Cumberland County Registry of Deeds in Plan Book \_\_\_\_\_, Page \_\_\_\_\_, a reduced copy of which is attached hereto as Exhibit B (the "Plat").

**§2.2 Location and Dimensions of Buildings – Floor Plans** The term "Building" means any building erected or to be erected on the Property containing one or more Units, as well as other improvements comprising a part of a building or intended to be used for purposes incidental to the use of a building.

The proposed location, dimensions and chart of finish floor elevation of the building and other improvements which may be erected on the Property, including the Common Elements, are shown on or set forth in the Condominium Plat as depicted on Exhibit B. The proposed location, dimensions and finish floor elevations of each proposed Unit together with its appurtenant Limited Common Elements are depicted on the Floor Plans entitled "Washington Heights Condominium" last revised \_\_\_\_\_, 2017, sheets # \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ prepared by Archetype Architects, signed and sealed by William Kenneth Hopkins and recorded in said Registry of Deeds in Plan Book \_\_\_\_\_, Pages \_\_\_\_\_ (the "Floor Plans" or "Plans"), reduced copies of which are attached hereto as Exhibit C. The proposed configuration, location and dimensions of each Unit are subject to change by the Declarant until such time as each Unit is legally created, and such improvements NEED NOT BE BUILT or may be built with configurations, locations and dimensions different than those shown on the Condominium Plat and Plans, as further appears in Article 5 below.

**§2.3 Recording of Plat and Plans.** The Plat and Plans are recorded in said Registry of Deeds and any amendments thereto shall be recorded, all of which are a part of this Declaration.

**§2.4 Condominium Documents.** "Condominium Documents" means this Declaration, the Plat, the Plans, the Bylaws of the Association, and the Rules and Regulations adopted by the Board of Directors, and any amendments to any of the foregoing adopted from time to time.

### ARTICLE 3 CONDOMINIUM UNITS

**§3.1 Creation of Units.** Initially no Units are created under this Declaration. The Declarant has the right to create additional Units for a total of forty five (45) Units. For each Unit subsequently created pursuant to this Declaration, its Allocated Interests shall be set forth in an amendment to **Exhibit D**, and a description of such Unit including each Unit's identifying number, the locations and dimensions of the vertical boundaries and horizontal boundaries of each Unit, the Common Elements to which the Unit has direct access, and any other information necessary to identify the Unit shall be shown on the Condominium Plat and Plans.

**§3.2 Units and General Unit Boundaries.** "Unit" means a part of the Property designated for separate ownership or occupancy which has a direct exit to Limited Common Elements and Common Elements. For each Unit created from time to time pursuant to this Declaration, the identification number and approximate area of each Unit shall be shown on the Condominium Plat and Plans of the Property as amended from time to time. Any internal room configuration shown on the Plans is illustrative only, and is not binding on an owner except that the structural support of the Building must be preserved.

The boundaries of each Unit created under this Declaration are generally shown on the Condominium Plat and Plans, and shall consist of:

(a) *General Horizontal Boundaries:* The general upper and lower boundaries of each Unit are generally the following boundaries extended to an intersection with the vertical (perimeter) boundaries:

- (i) Upper Horizontal Boundaries: The upper horizontal Unit boundaries are the planes at the lower surfaces of the joists of the attic which directly support the gypsum board or finished surfaces of the ceiling above a Unit's uppermost floor, generally as shown on the Plans, including the upper (outside) side of the gypsum board of the ceiling and any other materials constituting any part of the finished surfaces thereof, if any, extending to the intersection with the vertical boundaries
- (ii) Lower Horizontal Boundaries: The lower Unit boundary is the horizontal planes at the intersection of the uppermost surface with the sub-flooring at the lower surfaces of the carpeting, tiles, vinyl or other floor surfaces and any other materials constituting any part of the finished floor surfaces thereof, if any, extending to the intersection with the vertical boundaries.

(b) *General Vertical Boundaries:* The general vertical boundaries of each Unit shall be the vertical planes located at the interior stud line at the exterior or outer-most surface of the

gypsum-board, sheetrock or other wall materials, if any, located on the inside of its exterior or common walls, all extended to the intersections with each other and with the horizontal boundaries, and runs along the interior surfaces of exterior doors, windows, and glass walls.

(c) *Interior Finishes.* The Unit shall include all wallboard, plasterboard, drywall, plaster, paneling, tiles, wallpaper, paint, wallpaper, carpeting, finished flooring, paint, varnish, stain, wallpaper, tile, window and door trim, and any other materials constituting any part of the finished surfaces thereon located within or on the boundaries of the Unit.

(d) *Interior and other Unit Components and Spaces.* All other spaces, interior partitions, interior stairways, and other fixtures and improvements within the boundaries of a Unit are a part of the Unit together those specific Unit components identified in Section 3.2 above.

(e) *Relocation and Subdivision.* Relocation of boundaries between Units is permitted by amendment to the Declaration in compliance with the provisions of the Condominium Act. The subdivision of Units is not permitted.

**§3.3 Description of the Specific Unit Components.** Each Unit includes the following items:

- (a) All interior partitions (excepting those portions thereof which are load-bearing), and interior doors located wholly within the Unit;
- (b) Finish flooring, floor coverings, carpeting and the like, and finish wall and ceiling coverings, including paint, wallpaper, tile, furring, gypsum board, wallboard, plaster, paneling, moldings, trim, and any other materials constituting any part of the finished surfaces thereof;
- (c) Plumbing, kitchen and bathroom pipes, lines and fixtures, the heating and ventilating equipment, fans, ducts, vents, controls and air intakes, kitchen appliances and cabinets, air conditioning systems if any, and components thereof serving only a single Unit, if any, all even if located outside of a Unit's general boundaries;
- (d) Electrical wiring, equipment outlets, doorbells, entranceway intercoms, and lighting devices from the point where the feed wire enters the Unit's circuit breaker distribution box inwards, any natural gas system from the point where the piping leaves the natural gas meter, and portions of electric, water, natural gas and sewer utility lines, pipes, outside lights, doorbells, conduits, vents, flues, fans, ducts, and equipment serving only that Unit, even if located outside of a Unit's general boundaries

A Unit generally does not include the exterior walls, balconies the roof, joists, studs, girders and other structural components of load-bearing walls, insulation, foundation walls and footings, land, and related components if any, the windows and exterior doors, their glass, frames, sills, flashing, thresholds, storm doors and windows, skylights, and balconies doors, (some of which are later designated as Limited Common Elements), and any pipes, wires, conduits, meters, flues, ducts, or other utility lines running through a Unit which serve more than one Unit or which serve the Common Elements.

Each Unit and the Common Elements shall have an easement for lateral and subjacent support from every other Unit and the Common Elements, and shall have the benefit of the easement for encroachments established under Section 1602-114 of the Condominium Act. In addition, each Unit Owner has an unrestricted, perpetual right of ingress and egress to his or her Unit across the Common Elements, which automatically transfers with a transfer of title to the Unit. Any conveyance, encumbrance, judicial sale, or other transfer (whether voluntary or involuntary) of an interest in the Common Elements shall be void unless the Unit to which that Common Element interest is allocated is also transferred.

Responsibilities for the maintenance of the Unit are governed by Article 7 below.

**§3.4 Allocated Interests.** The term "Allocated Interests" means the Common Element Interest, the Common Expense Liability and the voting rights in the Association allocated to each Unit pursuant to this Declaration. The term "Common Element Interest" means the percentage of undivided interest in the Common Elements appurtenant to each Unit. The term "Common Expense Liability" means the allocation to each Unit of the respective liability for Common Expenses. Generally the Common Expense Liability allocated to a Unit is a percentage equal to the Common Element Interest appurtenant to such Unit. The Allocated Interests of each Unit are set forth in Exhibit D.

The percentage of each Unit's Common Element Interest and Common Expense Liability is allocated among all Units that have been created pursuant to a formula represented by a fraction wherein (i) the numerator is the number of square feet of the Unit and its adjoining Common Element measured to the outside of exterior walls and center of party walls with another Unit or with Common Elements areas and (ii) the denominator is the total number of such square feet for Units which have been created in the Condominium subject to rounding in order to permit ease of administration, provided however that the percentage stated in Exhibit C (as it may be amended) shall prevail in any event.

Each Unit shall each have one (1) vote in the Association on a formula of one vote per Unit to permit equality among Units.

The Association shall have the express power to separately assess "Service Charges" against a Unit and the Owner thereof for services rendered by the Association to or for the benefit of that Unit and to assess and allocate "Limited Common Expenses" as set forth below.

**§3.5 "Interior" Alterations and Improvements.** Subject to this Declaration, the Bylaws and the Rules and Regulations of the Association as amended from time to time, a Unit Owner may make nonstructural improvements and alterations within the interior of the Unit. However, no Unit Owner may make any improvements or alterations or do any work whatsoever which would impair the structural integrity or mechanical systems or the walls separating units or life safety systems of a Building, lessen the support of any portion of the Condominium, or jeopardize the soundness or safety of the Property.

No Unit Owner shall make any structural addition, alteration or improvement in or to his or her Unit without the prior written consent thereto of the Executive Board. The consent of the Executive Board shall not be unreasonably withheld so long as such addition, alteration or

improvement shall be in keeping with the integrity of the Condominium and shall not adversely affect the structural or mechanical systems of the Unit as certified by a licensed architect or engineer, retained by the Unit Owner at his or her cost. The Executive Board, in its discretion, may retain its own licensed architect or engineer, at the expense of the Unit Owner applying for such permission, to review the application and advise the Executive Board. (Any application to any department or to any other governmental authority for a permit to make such an addition, alteration or improvement shall be at the Unit Owner's expense.

No Unit Owner shall alter any of the Common Elements or paint or otherwise change the appearance of the Common Elements (including without limitation the Limited Common Elements) or paint or otherwise change the exterior appearance of the Unit or the building (including, but not limited to, the exterior surfaces of doors or windows leading to a Common Element or a Limited Common Element) or any other portion of the Condominium, without the prior written approval of the Board of Directors of the Association in its discretion or in accordance with Rules and Regulations adopted and amended by the Association from time to time.

#### ARTICLE 4 COMMON ELEMENTS, LIMITED COMMON ELEMENTS

**§4.1 Common Elements.** The term "Common Elements" means the entire Property other than the Units, and includes:

- i. The land, together with the benefit of and subject to all the accompanying rights and easements described in **Exhibit A** and the private drive, the parking areas, retaining walls, walkways and paths, lawn, landscaping, trees, vegetation, pavement, and storm water facilities, equipment and detention areas;
- ii. The foundations, subfloors, concrete floors, structural, load bearing walls, studs, framing, joists, and rafters, roof, exterior walls, windows, exterior doors and doors leading to the Common Elements, storm and screen doors, garage doors, the elevator, lobbies, vestibules, common stairways and hallways, basement garage, bicycle and trash storage areas, exterior steps, decks, patios, balconies, and all structural and load bearing portions of the buildings;
- iii. The utility lines, pipes, wires, electrical and transmission wires and conduits, any life safety systems including permanent hard wired smoke and carbon monoxide detectors, sprinklers, and fire alarms, wires, pipes, pumps, and water and sewer utility lines which serve more than one Unit or the Common Elements (excepting lines and equipment owned by public and municipal utilities or which form portions of the Unit as defined above), and the storm water detention, storage and filtration system; and



- iv. All other parts of the property necessary or convenient to its existence, maintenance and safety or normally in common use, except as otherwise expressly provided in this Declaration.

Responsibilities for the maintenance and use of the Common Elements are governed by Article 7 below.

**§4.2 Limited Common Elements.** The term "Limited Common Elements" means those portions of the Common Elements where the exclusive use is reserved to one or more, but fewer than all, of the Units in accordance with this Declaration. Limited Common Elements, consist of the following:

- i. For each Unit, at least one parking space as now shown and assigned as Limited Common Elements on the Condominium Plat and/or Plans labeled "PLCE" followed by a Unit number of which spaces #\_\_\_\_, \_\_\_\_, \_\_\_\_ and \_\_\_\_ are tandem spaces sufficiently long for two parked vehicles to share the same space;
- ii. Generally certain interior and exterior parking spaces now or hereafter designated on the Plans and/or Plat labeled "PLCE" followed by an alphabetical letter designation [not by a Unit number] are SUBJECT TO the Declarant's right to assign such spaces to a specific Unit pursuant to an amendment to this Declaration, a deed conveying a Unit, or an instrument executed in the same manner as a deed assigning such parking space, following which such parking space may be reassigned by such Unit Owner to a different Unit pursuant by a recorded instrument, a copy of which shall be provided to the Association
- iii. The two parking spaces # \_\_\_\_, and \_\_\_\_ marked "ADA" may be initially assigned to a Unit but such a parking space may be reassigned by the Board of Directors in a parking space swap upon submission of a written request to the Board from the occupant of a Unit who qualifies for its use as a "reasonable accommodation" under the US Americans with Disabilities Act and Maine Human Rights Act for handicapped parking, on a first come first served basis, and if the occupant no longer so qualifies then the occupancy of such spaces shall then be swapped with an occupant who so qualifies, all subject to such further Rules and Regulations as may be adopted by the Board of Directors in accordance with said Acts;
- iv. The exterior patio-balcony areas now or hereafter labeled "LCE" followed by a Unit number, the finish floor surfaces thereof, the fences and railings surrounding or abutting such areas, and any other areas now or hereafter shown as Limited Common Elements on the Plat and Plans or as may be subsequently assigned by the Declarant at the time of the creation of individual Units;
- v. For fourth floor Units assigned rooftop patio-balcony areas now or hereafter labeled "LCE" followed by a Unit number, such areas, the finish floor surfaces thereof, the fences and railings surrounding or abutting such areas, the exterior rooftop structure, windows, flashing and entrance door housing the stairway

leading up the rooftop areas, and any other areas now or hereafter shown and assigned as Limited Common Elements on the Plat and Plans

- vi. The doors leading to the Common Elements (including the Limited Common Elements), exterior windows and their screens and frames, together with their glass, tracks, hardware, locks, screens, flanges, flashing, sills and all other components of prefabricated doors and windows;
- vii. Exterior lights attached to the outside of a Unit, the portion of the intercom/door entry system that services only that Unit, and any other similar separate building fixture designed to serve a single Unit but located outside its Unit boundary, either as presently or hereafter built in accordance with this Declaration or shown on the Plans adjacent to a Unit and which is not defined as a part of the Unit as set forth above; and
- viii. The portions of the Property now or hereafter shown on the Condominium Plat and Plans or as described as Limited Common Elements pursuant to Section 1602-102(2) and (4) of the Condominium Act.

The Declarant reserves the right to create and assign additional Limited Common Elements within Common Elements to a specific Unit pursuant to an amendment to this Declaration, a deed conveying a Unit, or an instrument executed in the same manner as a deed assigning such parking space. The allocation of Limited Common Elements may not be altered except in compliance with the Condominium Act, and with the written consent of the Owners and Mortgagees of record of the Units affected by the reallocation of Limited Common Elements. The power to create and initially assign Limited Common Elements is exclusively held by the Declarant.

**§4.3 Common Elements to Remain Undivided.** The Common Element Interest of a Unit shall be inseparable from each Unit, and any conveyance, lease, devise or other disposition and any mortgage or other encumbrance of any Unit shall include the Common Element Interest, whether or not expressly referred to in the instrument making such transfer. Except as set forth in Section 4.2 above the Common Elements shall remain undivided and no action for partition or division of any party shall be permitted, unless otherwise provided by law and permitted by this Declaration.

**§4.4 Exterior Improvements/Connection of Adjoining Units and Limited Common Elements.**

A. Conditions Precedent. If the record owner(s) of the subject Unit(s) affirmatively elect, upon application to and subject to the written approval of the Board of Directors of the association based on each owner's compliance with the standards set forth hereinafter, with prior notice to any abutting Units, all to be evidenced by a recorded instrument duly executed and acknowledged setting forth the requirements itemized below, then:

- (i) that portion of the Common Elements located between the boundary lines of adjoining Units or located between a Unit and an adjoining Limited Common Element (with the consent of any other Units sharing the same), may be thereby subjected to an

easement in favor of each such Unit respectively running to the midpoint of the space between each Unit or to the Limited Common Element for the removal and alteration of any intervening partition and the creation of apertures therein for passage back and forth between the two Units or to the Limited Common Element and construction of improvements on the Limited Common Element area; and

(ii) for the installation of doors, windows, skylights and frames thereto,

SUBJECT TO the following limitations and requirements, compliance with which shall be as specified and approved by the Board of Directors in its discretion prior to construction:

- (a) The improvements shall be of first quality, permanent construction and shall be compatible with the architectural design of existing buildings and structures;
- (b) Each application shall include detailed plans prepared by a licensed architect or engineer of the proposed construction and a copy of any agreement between the Unit Owner and contractors for the proposed project;
- (c) Exterior improvements may be built only in the Limited Common Element locations, and shall not enclose any patio/deck/balcony Limited Common Elements;
- (a) The Board shall determine whether the affected Unit Owners approve or disapprove of the proposed construction. The Board shall fully consider the position of abutting Unit Owners. However, the Board may approve or disapprove a particular application notwithstanding the abutters' position based upon a full consideration of the application and the impact that the proposed construction will have upon the entire Property.
- (d) The Unit Owner shall preserve and maintain the structural integrity and architectural style, the mechanical and utility systems, and the support of all portions of the Property, shall strictly comply with all fire, building code and other governmental laws, ordinances and requirements and shall provide the Board of Directors with plans and evidence that the proposed construction complies with such requirements prior to starting any work;
- (e) The Unit Owner shall be responsible for the construction of the improvements in accordance with the Plans, this Declaration, and the Bylaws and shall preserve and maintain the structural integrity and architectural style, the mechanical and utility systems, and the support of all portions of the Property; and shall strictly comply with all fire, building code and other governmental laws, ordinances and requirements. The Unit Owner shall be solely responsible for any contractual obligations and charges incurred to any installers, workmen or suppliers, and shall advise said persons of Unit Owner's responsibilities;
- (f) The Unit Owner shall provide the Association with evidence that all contractors have general liability and automobile insurance, and worker's compensation if applicable, in an amount satisfactory to and naming the Association as an additional insured;

- (g) The Unit Owner shall indemnify and hold the Association harmless from any mechanic's or materialman's liens and to perform all work hereunder at the sole cost and expense of the Unit Owner in a good and workmanlike manner and so as to minimize any inconvenience to other Unit Owners;
- (h) Unit Owner shall pay such expenses as may be determined by the Association in reviewing any application under and enforcing this Section, including any expenses and legal costs incurred by the Association in correcting any defective work or in enforcing compliance with this Agreement;
- (i) Unit Owner shall indemnify and hold harmless the Association, its Board of Directors and officers, other Unit Owners, their guests, invitees and family members from any loss or damage which may be incurred on account of the installation of the improvements in violation of this Section even if not due to the negligence and fault of Owner, including reasonable attorney's fees and expenses; and
- (j) The Unit owner shall be fully responsible for the maintenance, repair, insurance and replacement of such improvements in good condition and repair at the Unit Owner's expense in a neat and attractive appearance, which may be charged to the Unit owner as a Limited Common Expense or Service Charge based on such methodology as the Board may approve; and

The Association may require a cash bond or other assurances of compliance with the foregoing standards. During construction the Unit Owner shall provide builder's risk insurance at the cost of the Owner and shall name the Association as an additional insured. The Unit Owners shall be strictly liable for any resulting damage caused by defective construction of the improvements, including without limitation post construction rot and water damage to the Unit and other Common Elements.

B. Post Completion. Upon completion of the improvements in accordance with this Section and occupancy, the Unit Owner shall be fully responsible for the costs of maintenance, repair, insurance and replacement of such improvements at the Unit Owner's expense in a neat and attractive appearance.

Upon completion of the improvements in accordance with this Section and occupancy, the Association shall provide exterior maintenance and repairs to the same extent as the Common Element improvements but at the cost of the Unit Owners, and shall obtain hazard insurance on the improvements under the Association's master insurance policy (see Article 10 below), the expense of which shall be assessed as a Limited Common Expense or Service Charge, as the Executive Board may approve in accordance with Article 6 of this Declaration or as may be set forth in a separate recorded Agreement between the Unit Owner and the Association if required by the Executive Board, which agreement shall control in the event of any conflict with this Section that cannot be otherwise resolved. The Unit Owner shall provide all interior maintenance.

C. Revocation. Any such Unit Owner or his or her respective heirs, mortgagees or assigns, may at any time revoke such election by instrument duly executed and acknowledged served on the other such owners and duly recorded, and thereafter may remove the

improvements, seal up passageways and/or remove the stairs, doors and their frames, and/or install a permanent wall, floor ceiling or other partitions, at all times preserving the structural integrity, the mechanical and utility systems and support of all portions of the Property. Nothing contained herein shall be deemed to merge or otherwise affect the separate identity, configuration or the boundaries of said Units.

## ARTICLE 5 DECLARANT'S RIGHTS AND PHASING

**§5.1 Declarant Rights.** The Declarant reserves the rights until the construction, marketing and closing of the sales of all Units and the Common Element is completed, including any future Units which may be created hereunder, to:

(a) Locate in the Common Elements and Units of the Property, even though not depicted on the Condominium Plat and Plans, and grant and reserve easements, licenses and rights-of-way for the installation, maintenance, repair, replacement and inspection of public utility lines, wires, pipes, conduits and facilities servicing or burdening the Property including, but not limited to, water, electric, telephone, cable television, data, fuel, sewer, and surface and subsurface drainage, provided however that no such easement shall be effective until of record, that no such easements or license may be granted through Units sold by Declarant to third party who is not a successor Declarant and that the Common Elements shall be promptly restored upon installation and repair;

(b) Connect with and make use of utility lines, wires, pipes and conduits located on the Property for construction and sales purposes, provided that the Declarant shall be responsible for the cost of services so used;

(c) Use the Common Elements for ingress and egress, for the construction, reconstruction, maintenance, repair, renovation, replacement or correction of the Units or Common Elements including without limitation the movement and temporary storage of construction materials and equipment, the right of vehicular and pedestrian access, the right to park motor vehicles, and for the installation of signs and lighting for sales and promotional purposes;

(d) Operate and relocate construction, sales, leasing and management offices, to permit prospective tenants, purchasers, lenders, appraisers, and others to visit the offices and use the Common Elements and to use unsold Units and the Common Elements for construction, sales, leasing and display purposes;

(e) Approve of the creation of improvements in accordance with this Declaration in accordance with the standards set forth herein;

(f) Grant easements for public utilities running over, through or under the Common Elements;

(g) Grant easements for all purposes from time to time for the benefit of third parties, including easements for access, utilities, drainage, excavation, alternation of the surface of the earth, connection to utility and sewer lines, and the installation, use, maintenance, repair and



replacement of utility lines, poles, conduits, facilities and equipment, pavement, culverts, drainage ditches and swales; and

(h) Those rights established under the Condominium Act.

In addition, the Declarant has the rights to appoint and remove members of the Board of Directors and Officers of the Association in accordance with Section 6.2 of this Declaration;

**§ 5.2 Phasing.** Developer reserves the following rights until Ten (10) years from the date of the recording of this Declaration:

A. General. To create up to forty-five (45) Units and Limited Common Elements appurtenant to such Units and related improvements, including without limitation the creation and assignment of Limited Common Elements.

Said additional Units, Limited Common Elements and other improvements may not be built with the configurations or in the locations as shown on the Condominium Plat, and the DECLARANT EXPRESSLY RESERVES THE RIGHT TO ADD AND VARY SUCH UNITS, LIMITED COMMON ELEMENTS AND THEIR LOCATIONS in its discretion. Upon the addition of such Units Limited Common Elements and other improvements, which may occur in such stages and in such order as the Declarant may determine, they shall be fully integrated into the Condominium as if this Declaration had been originally executed and recorded containing the additional Units, Limited Common Elements and other improvements and the Allocated Interests of the Units shall be reallocated in accordance with the formulas set forth in this Declaration and may be as more particularly set forth in the amendment adding said Units. Such future Units need not be built.

B. Improvements. All Units and associated Limited Common Elements *shall be* consistent with the initial Units in terms of the quality of construction, general architectural style and principal materials, provided that the Declarant may substitute construction materials and technique of equal or better quality and may change the Unit and Limited Common Element configuration and size. Declarant need not add said Units or said Limited Common Elements to the Condominium and hence said buildings, Units and Limited Common Elements NEED NOT BE BUILT. The Declarant must exercise its rights hereunder within Ten (10) years of the recording of this Declaration.

C. Allocated Interests and Limited Common Elements. Upon the addition of Units to the Condominium, the Allocated Interests of all Units shall be reallocated in accordance with Section 3.4 of this Declaration and Exhibit D shall be amended accordingly. Following the addition of a Unit, the Declarant may subsequently create and assign additional Limited Common Elements appurtenant to a Unit.

D. To exercise any rights under this Section, the Declarant shall prepare, execute and record an amendment to the Declaration pursuant to the Condominium Act, which amendment may include a revised Condominium Plat and Plans as required by the Condominium Act to the extent not previously recorded. Said amendment shall become effective upon recording without need for the consent of any other person.

**§5.3 Restrictions.** The exercise of Development Rights shall be subject to the following restrictions:

- i) No changes shall be made by the Declarant or any other person to the road, utility, drainage, storm water detention system or any other improvements located in the Common Elements forming part of the Property (whether located on land owned in fee or easement areas) required in order to comply with the City of Portland's or other governmental applicable requirements, unless such changes are first approved by applicable governmental bodies with jurisdiction; and
- ii) No changes shall be made to the site plan and subdivision approvals from the City of Portland's Planning Board, reference being made to the Plan signed by the City of Portland Planning Board, unless any applicable approval is received to the extent applicable.

**§5.4 Assignment.** All or any part of the rights, powers or reservations of Declarant contained in this Declaration may be assigned by Declarant from time to time to any person(s) or entity(ies) which will assume the duties and obligations of Declarant related to the rights, powers or reservations assigned. Upon the recording of an assignment of such rights, powers or reservations pursuant to which the assignee assumes the duties and obligations of Declarant related thereto, the assignee shall become a successor Declarant as to such rights, powers or reservations assigned and shall have the same rights and powers and be subject to the same duties and obligations as are given to and assumed by Declarant herein, and Declarant shall be relieved from all liability with respect to the rights, powers, reservations, duties and obligations hereunder which are assumed by the assignee.

**§5.5 Amendment, Waiver, Etc.**

Neither ARTICLE 5 nor any other part of this Declaration shall be amended or waived nor shall any Bylaws or Rules and Regulations be adopted or amended which may infringe the Declarant's Special Declarant's Rights and Development Rights without the consent of the Declarant duly recorded in said Registry of Deeds.

The rights and benefits of ARTICLE 5 and all other rights of Declarant set forth in this Declaration, the Bylaws or otherwise, as amended from time to time, may be transferred in whole or part by recorded instrument specifically referring to this Section and executed by Declarant and its successor or assignee.

The Declarant shall have the right to waive the Development and Special Declarant Rights reserved hereunder in whole or part by an written instrument provided that such waiver shall only be effective upon recording in said Registry of Deeds and such waiver shall be subject to the limitations of Section 1603-103(d) of the Act regarding Declarant Control of the Association.

## ARTICLE 6 CONDOMINIUM ASSOCIATION

**§6.1 The Association.** The term "Association" as used in this Condominium Declaration" means the association of the Unit Owners organized pursuant to Section 1603-101 of the Condominium Act as a nonprofit corporation under the Maine Nonprofit Corporation Act. The membership of the Association at all times shall consist exclusively of all Condominium Unit Owners, or in the event of a termination of the Condominium as provided in the Condominium Act, of all former Unit Owners entitled to distributions of proceeds, or their heirs, successors or assigns. Persons having an interest in a Unit solely as security for an obligation shall not be considered Members.

The Association shall have all the powers granted pursuant to its Bylaws, the Condominium Act, and the Maine Nonprofit Corporation Act.

Each Unit Owner shall automatically become a Member of the Association, which membership shall continue as long as she or he continues as a Unit Owner, and upon the termination of the interest in the Condominium, his or her membership and any interest in the assets of the Association shall be automatically transferred and inure to the next Unit Owner or Owners succeeding him or her in interest.

**§6.2 Board of Directors; Declarant Control Period.** Except as otherwise provided in Section 1603-103(b) of the Condominium Act, in this Declaration, the Board of Directors may act on behalf of the Association and shall have all of the powers necessary or appropriate for the administration of Association.

During the Declarant Control Period, the Board of Directors shall be composed of three (3) natural persons. The term "Declarant Control Period" means the period which extends from the date of the recording of this Declaration until the earlier of (a) seven (7) years following the conveyance of the first Unit to a Purchaser or (b) sixty (60) days after the conveyance of seventy-five percent (75%) of the 45 Units which may be created hereunder, other than a conveyance to a successor Declarant. The Declarant shall have the right during the Declarant Control Period to appoint, remove and replace from time to time any and all members of the Board of Directors, and officers of the Association, and to appoint and remove the Master Association's Voting Representatives and Directors to be designated by the Association without the necessity of obtaining resignations. The directors and Voting Representatives appointed by the Declarant need not be Unit Owners.

Following the expiration of Declarant Control Period, the affairs of the Association shall be governed by a 5 person Board of Directors, but subsequently the number of directors may be no less than three (3) and no more than seven (7) natural persons, the exact number of which shall be established pursuant to the Bylaws of the Association and the vote of the Owners. A majority of the Members at the Board of Directors shall be Unit Owners or spouses of Unit Owners or in the case of a Unit Owner which is a corporation, limited liability company, partnership, trust or estate or other legal entity, a designated agent thereof.

The transition from Declarant-appointed members of the Board of Directors to the Unit Owners and the new Board of Director's rights to appoint Voting Representative and Directors

to the Master Association generally shall occur no later than the earlier of (a) sixty (60) days after the conveyance of 75% of the Units which may be created hereunder to purchasers other than a successor Declarant, or (b) seven (7) years following conveyance of the first Unit to a person who is not a Declarant, or (c) at such earlier date as the Declarant in its sole discretion shall specify. Prior to the expiration of the Declarant Control Period, a transition meeting of the Association and a transition election shall be held at which all of the members of the Board of Directors and officers of the Association appointed by the Declarant shall resign, and the Unit Owners, including the Declarant if the Declarant owns any Units, shall thereupon elect a Board of Directors to act in the place and stead of those resigning.

By written notice duly recorded in said Registry of Deeds specifically referring to this Section, the Declarant may voluntarily surrender the right to appoint and remove officers and members of the Board of Directors prior to the termination of the Declarant Control Period, but in that event the Declarant may require, for the duration of the Declarant Control Period that specified actions of the Association or Board of Directors, as described in a recorded instrument executed by the Declarant, be approved by the Declarant before such action can become effective.

**§6.3 Bylaws.** The Bylaws of the Association are attached hereto as **Exhibit E**.

**§6.4 Rules and Regulations.** The Board of Directors shall have the power from time to time to adopt, amend and enforce Rules and Regulations relative to the operation, use and occupancy of the Units and the Common Elements, consistent with the provisions of this Declaration, Bylaws and the Condominium Act including, but not limited to, the appointment of such committees and the enactment and enforcement of such enforcement procedures and penalties for violations as the Board of Directors shall deem appropriate. Any such Rules and Regulations shall be adopted or amended, by means of appropriate resolutions duly approved by the Board of Directors after first giving the Unit Owners notice and an opportunity to be heard but the failure of a Unit Owner to receive notice shall not affect the validity of the Rules and Regulations. Notice of such Rules and Regulations and any amendment thereto shall be sent to each Unit Owner or occupant of a Unit promptly after the adoption thereof, and they shall bind all Unit Owners, their heirs and assigns, any all tenants, invitees, guests and other persons entering upon the Property.

## **ARTICLE 7 FINANCIAL MATTERS**

**§7.1 Common Expenses, Limited Common Expenses and Service Charges.** The term "Common Expenses" include, but are not limited to, such costs and expenses established by the Condominium Act, by this Declaration, by the Bylaws, or by the Board of Directors in connection with the administration, operation, maintenance and repair of the Condominium and the Property, the supply of utility services, the establishment of reserves, and the rendering to Unit Owners of all related services, as assessments for Common Expenses, Limited Common Expenses, Special Assessments, and Service Charges and all amounts due to the Association.

The term "Limited Common Expenses" mean the Common Expenses associated with the maintenance, repair or replacement of a Limited Common Element, which may be assessed against the Unit(s) to which the appurtenant Limited Common Element is assigned in proportion

to the relative Common Expense Liabilities of such Unit(s), all as the Board of Directors may periodically establish and determine. If all Units have substantially similar Limited Common Elements, then the Board of Directors may determine that all Units shall pay such expenses in accordance with their liability for Common Expenses.

The term "Service Charges" shall mean charges for services benefiting fewer than all the Units, which are assessed exclusively against the Unit or Units benefited in accordance with the use of such services as permitted by Section 1603-115(c) of the Condominium Act and the Bylaws.

All expenses for the administration, operation, maintenance and repair of the Condominium and the Property shall be borne by the Unit Owners by means of assessments as set forth herein and by all other persons liable in accordance with this Declaration.

**§7.2 Allocation and Payment of Expenses.** The total amount of Common Expenses shall be assessed to the Units as follows.

(a) The Common Expenses that are not otherwise assessed as Limited Common Expenses or Service Charges shall be assessed against all the Units in proportion to the relative Common Expense Liabilities as set forth herein.

(b) If the Board of Directors determines that a Limited Common Expense benefits more than a single Unit in a manner which is uniquely disproportionate in relation to the general relative Common Expense Liabilities among all Units, then such Limited Common Expense may then be assessed solely against the benefited Units benefited in proportion to the relative Common Expense Liabilities of such Units as among themselves, all as the Board of Directors may periodically determine in its discretion. If a Limited Common Expense only benefits a single Unit as the Board of Directors may periodically determine in its discretion, that Limited Common Expense may then be assessed solely against the Unit benefited.

(c) For electricity, telephone, internet, data and cable television services, water and sewer serving each Unit if separately metered, and natural gas if supplied by a central system and not billed directly to the Unit by the supplier, each Unit Owner shall promptly pay the bills for such services consumed or used in his or her Unit.

The expenses of electricity serving the Common Elements, and water and sewer if not separately metered shall be assessed to each Unit as a Common Expense, subject of the option of the Association to sub-meter and then separately charge for water and sewer services and natural gas centrally supplied to the Units as Service Charges. At the election of the Board of Directors, the expense of capital improvements, major repairs or renovations to the water and sewer supply systems and/or central natural gas systems may be assessed either as a Common Expense or as a Service Charge.

(d) Any electricity, water, sewer and fuel serving the Common Elements and the expenses for the maintenance, repair and replacement of these systems, if any, shall be assessed as a Common Expense.



(e) ) Each Unit is subject to a lien in favor of the Association for the unpaid Common Expenses, Limited Common Expenses, Special Assessments, Service Charges and penalties, fines, interest and costs of collection and enforcement including reasonable attorneys' fees, all as provided in the Condominium Act, the Declaration, Bylaws and the Rules and Regulations.

(f) In order to fund significant improvement, repair or renovation projects and associated costs as the Board of Directors may approve, the Association may make special assessments for such Common Expenses or Limited Common Expenses payable either in a single installment or payable in installments over a period of months and/or years, all on such further terms and conditions and such interest rate as may be approved by the Board of Directors ("Special Assessments"). If any portion of the Special Assessments is due *after* the end of the Association's current budget year, then the affirmative approval of a majority in interest of all the Unit Owners shall be required. If the Special Assessments due in full *prior* to the end of the Association's current budget year, the normally applicable Unit Owners' budget ratification requirements shall apply, except as otherwise provided below.

If the amount of a proposed Special Assessment does not exceed two (2) months regular common charges and the Board determines that the Special Assessment is necessary to meet an emergency, the Executive Board may make the Special Assessment immediately in accordance with the terms of the Board's vote, without need for budget ratification by the Unit Owners.

(h) Until such time as the Association makes a Common Expense Assessment, the Declarant is responsible for all Common Expenses, Limited Common Expenses and Services Charges, but need not establish any reserves. In any event no later than 60 days after the first Unit is conveyed, all Unit owners including the Declarant shall commence paying monthly Common Expense assessments to the Association for all Units which have been legally created and submitted to the Condominium.

**7.3 Service Charges.** The Association shall have the express power to separately assess a Unit and the owner thereof as a "Service Charge" for services rendered to that Unit or its Limited Common Elements and for the costs of water and sewer and natural gas fuel and natural gas system operation, maintenance, repair and replacement, if any, which are not separately billed by the natural gas supplier. Such Service Charge assessments shall constitute a lien on the Unit with the same status as a lien for Common Expense Liability assessments under the Condominium Act, this Declaration and Bylaws, which lien for Service Charges may be foreclosed in like manner as a mortgage on real estate. The recordation of this Declaration constitutes record notice of the lien. Service Charges shall include without limitation:

(i) If a Unit Owner, members of his or her family, guests or tenants requests the Association or its agent to perform repair and maintenance work on his or her Unit or its Limited Common Elements, or damages the Common Elements or safety systems or fails to perform maintenance and repair work required, the expense thereof as determined by the Board of Directors or its designee may be assessed as a Service Charge;

(ii) Fees, if any, which may be established by the supplier for the delivery, consumption and maintenance of water, and sewer, natural gas and/or other utility services and equipment. Water and sewage services supplied to each Unit, if not separately metered and billed by the public utility supplier, may be measured separately by such methods and

systems established by the Board of Directors in their discretion. At the election of the Board of Directors, the expense of maintenance and repair, capital improvements, major repairs or renovations to the water and sewer systems may be assessed either as a Common Expense or as a Service Charge;

(iii) Fees, if any, which may be established by the Board of Directors, for cable television, internet, data, and telephone services and equipment, if not separately billed by the utility supplier; and

(iv) Increases in the Association's insurance premiums for permanent building improvements and betterments to Units or the Limited Common Elements installed by Unit Owners and insured with the Association's hazard insurance carrier, as determined by the Board of Directors.

**§7.4 Borrowing and Pledge.** The Board of Directors shall have power to borrow and to pledge, assign and grant a security interest covering all Association revenues including Assessments for Common Expenses, Limited Common Expenses, Special Assessments, and Service Charges in order to raise funds for repairs, renovations, improvements and associated costs and expenses with respect to the Common Elements and related charges. The exercise of such power is subject to the approval of a majority in interest vote of the unit owners as required by the Maine Condominium Act.

#### **§7.5 Payment of and Lien for Assessments, Service Charges, Fines, Etc.**

Each Unit Owner shall pay to the Association or its designee the following amounts: (i) on the first day of each month or on such other date and intervals that the Board of Directors may determine, one-twelfth (1/12<sup>th</sup>) of the common charges for Common Expenses including Limited Common Expenses, and Service Charges, and provided that revised Common Expenses including revised Limited Common Expenses shall be paid over such intervals over the remainder of the fiscal year and Special Assessments shall be paid in accordance with the terms of the approval of Special Assessments; (ii) all Special Assessments and any other sums duly levied against the Unit pursuant to this Declaration, the Bylaws, the Rules and Regulations or the Condominium Act which are assessed against Unit Owners; and (iii) fines, penalties and fees as provided by this Declaration, the Bylaws, the Rules and Regulations or the Condominium Act, all interest and late charges and legal fees and other costs of collection thereof.

Each Unit Owner shall pay his or her share of assessments for Common Expense assessments, Limited Common Expense assessments, Special Assessments and Services Charges without setoff or deduction.

All amounts levied against each Unit for Common Expense assessments, Limited Common Expenses, Service Charges, any Special Assessments, other sums duly levied against the Unit pursuant to this Declaration, the Bylaws, the Rules and Regulations, or the Act, all interest and late charges, all legal fees and other costs of collection, enforcement and foreclosure thereof, and all fines, penalties and fees as provided in this Declaration or the Bylaws or the Rules and Regulations: (i) shall constitute the personal liability of the Owner of the Unit so assessed; and (ii) shall, until fully paid, constitute a lien against the Unit in favor of the Association as provided in Section 1603-116 of the Condominium Act.

Recording of the Declaration constitutes record notice and perfection of the lien for Common Expense assessments, Limited Common Expense assessments, Special Assessments, and Services Charges, other sums duly levied against the Unit Owners pursuant to this Declaration, the Bylaws, the Rules and Regulations, or the Act, including penalties, fines, late charges, interest and costs of collection, enforcement and foreclosure. The Association may record a notice from time to time stating the amount and nature of the lien signed by an officer or director of the Association or by an agent authorized by the Board of Directors but such recorded notice is not necessary to establish or perfect the lien. The lien is extinguished unless action to enforce the lien is started within five (5) years after the full amount becomes due if so limited by the Condominium Act, but the Unit Owner shall remain personally liable.

Such lien is prior to all other liens and encumbrances on a Unit except (a) liens and encumbrances recorded before the recordation of this Declaration, (b) to the extent required by the Maine Condominium Act, a first priority mortgage recorded before or after the date on which the assessment sought to be enforced becomes delinquent, and (c) statutory liens for real estate taxes and other governmental assessments or charges against the Units; provided, however, that such lien is not subject to the provisions of 14 M.R.S.A. Section 4651 and 18-A M.R.S.A. Section 2-201, et seq., as they or their equivalents may be amended or modified from time to time.

(b) If any Unit Owner shall fail or refuse to pay to the Association when due his or her share of the Common Expense assessments, Limited Common Expense assessments, Special Assessments, and Services Charges, user fees, fines or penalties, thereafter the amount thereof shall bear interest at the rate of Eighteen percent (18%) per annum or such other rate as may be set by vote of the Board prior to the date on which the payment came due. Such amounts with such late charges in such amount as may be determined by the Board of Directors, interest and all costs of collection, including reasonable attorneys' fees, shall constitute a lien on the unit of such Unit Owner. Unless otherwise determined by the Board, a late charge shall apply when any payment due to the Association is more than 30 days past due, which late charge shall be immediately due and payable. If such late charges and Common Charges, Limited Common Charges and Services Charges are not paid within 30 days of when they were due, then interest shall be charged on all past due amount calculated retroactively back to the date when originally due.

(c) If such payments are not received within ninety (90) days after they become due, the Board shall have the power to exercise and enforce any and all rights and remedies provided in the Maine Condominium Act, this Declaration or these Bylaws or otherwise available at law or in equity for the collection of all unpaid amounts and, if available, all possessory remedies against the delinquent owner's unit under the Forcible Entry and Detainer Laws of Maine, as amended from time to time; in such event the Association may suspend any right or privilege appurtenant to the Unit including without limitation parking and voting rights and the prohibition of the use of the Common Elements, but the Association may not deny all means of access to the Unit or withhold services provided to a unit or a unit owner by the Association if the effect of withholding the service would be to endanger the health, safety or property of any person. The delinquent unit owner or other occupant shall be required to pay to the Association a reasonable rental for such unit until sale or foreclosure.

(d) In any action to foreclose the lien for Common Expense assessments, Limited Common Expense assessments, Special Assessments, and Services Charges, other sums duly levied against the Unit pursuant to this Declaration, the Bylaws, the Rules and Regulations, or the Act, late charges, penalties, interest, and costs of collection, foreclosure and enforcement including reasonable attorneys' fees, the Association may act through its manager or Board of Directors in the same manner as any mortgagee of real property. The manager or Board of Directors acting on behalf of the Unit Owners shall have the power to bid and acquire such Unit at a foreclosure sale and to lease, mortgage, convey, or otherwise deal with the Unit. Suit to recover a money judgment for unpaid Common Expense assessments, Service Charges, Special Assessments, user fees, fines, penalties and all other amounts due to the Association, with interest and all costs and reasonable attorneys' fees, may be maintained without foreclosing upon or waiving the lien securing the same.

(e) If for any reason the Association revises its annual budget and as a result the Common Expenses or Limited Common Expenses are increased, then commencing on the next day assessments are due, each Unit Owner shall pay to the Association or its authorized representative such revised Common Expenses.

If any assessment is payable in installments, upon a default by such Unit Owner in the timely payment of any two (2) installments in any fiscal year, the maturity of the remaining total of the unpaid installments may be accelerated at the option of the Board of Directors, and the entire balance of the assessment may be declared by the Board of Directors to then be due and payable in full.

(f) The liens for assessments described herein may be enforced and foreclosed by the Association in like manner as a mortgage on real estate as provided in the Condominium Act, or by any other means presently or hereafter provided by law or in equity. A suit to recover a money judgment for unpaid assessments, interest, fines, penalties, and costs of collection may be maintained against the Unit Owner personally without foreclosing or waiving the lien securing such assessments, and a foreclosure may be maintained notwithstanding the pendency of any suit to recover a money judgment.

Upon a default in the payment of any amount due the Association or a violation of any provision of the Condominium Act, this Declaration, the Bylaws, or the Rules and Regulations of the Association, which violation continues after reasonable notice from the Association to the Unit Owner, then that Unit and its occupants may be excluded from the use and enjoyment of any and all of the Common Elements not essential to access to the Unit may be suspended and services may be withheld in accordance with Rules and Regulations adopted by, in addition to all other remedies available to the Board of Directors but the right to physically gain access the Unit shall not be suspended and the Association may not withhold services provided to a Unit or a Unit Owner if the effect of withholding the service would be to endanger the health, safety or property of any person.

**§7.6 Liability/Resale Certificate.** Multiple owners of a Unit shall each be jointly and severally liable for all Common Expenses, Limited Common Expenses, Special Assessments, Service Charges, interest, fees, penalties and costs of collection. In the transfer of a Unit, the grantee(s) of such Unit shall be jointly and severally liable with the grantor for all unpaid Common Charges, assessments and Service Charges, penalties, fees, interest and costs of

collection outstanding at the time of the grantor's transfer, without prejudice to the grantee's right to recover from the grantor the amounts paid by the grantee therefore. A grantee receiving a conveyance of a Unit shall not be prevented from exercising any right to recover from the grantor such amounts paid for those Common Expense assessments, Service Charges, etc. arising prior to the conveyance.

A grantee or proposed purchaser for a Unit under a purchase and sale contract may obtain a statement from the Association setting forth the amount of the then outstanding unpaid common charges, assessments and Service Charges, late fees, interest and costs of collection against the Unit and such other items required by the Condominium Act, upon payment of such fee as may be established from time to time by the Board of Directors. The Association has no obligation to subsequently update the information contained in such statement. The grantee shall not be liable for, and the Unit conveyed shall not be subject to a lien for any unpaid amounts due from the grantor before the statement date in excess of the amount set forth in the statement as of its effective date except interest, late fees and costs of collection accruing thereafter.

**§7.7 Initial Working Capital Fund.** A segregated working capital fund for the Association shall be established into which each Unit purchaser shall pay the Association an amount equal to two (2) months common charges per Unit, at the time of initial transfer of title from the Declarant other than transfers to a successor Declarant. Such fund shall be held in a segregated account, owned by and in the name of the Association, established at a Maine financial institution insured by the Federal Deposit Insurance Corporation or other equivalent federally sponsored insurance. Such funds shall be used for such purposes as may be established by the Board of Directors from time to time, including without limitation the funding of repairs, improvements, reserves and operating deficits.

No purchaser shall be entitled to a refund of such monies from the Association upon any subsequent transfer of a Unit.

**§7.8 Budget.** A proposed budget or any amendment to the budget adopted by the Association's Board of Directors shall be deemed to be ratified by the Unit Owners unless rejected by a 66 2/3% in interest vote of all Unit Owners, whether or not a quorum is present. Within 30 days after the Board's adoption of any proposed budget or amended budget, the Board of Directors shall provide a summary of the budget to all the Unit Owners, and shall set a date for a meeting of the Unit Owners to consider ratification of the budget not less than 10 nor more than 30 days after mailing of the summary. In the event the proposed budget is rejected, the periodic budget last ratified by the Unit Owners shall be continued until such time as the unit owners ratify a subsequent budget proposed by the executive board. The Board of Directors shall have the power to expend funds and incur expenses out of the reserves even if not set forth in the budget but if such reserve expenditures may be reasonably anticipated to cause the aggregate amount of all such expenditures to exceed 10% of the budget including contributions to reserves shall require budget ratification by the Unit Owners as set forth above.

The requirements for the adoption and Unit Owners' approval of Special Assessments are set for in Subsection 7.2(g) above.



## **ARTICLE 8 MAINTENANCE AND USE**

**§8.1 General Maintenance Responsibilities.** The Units and Common Elements shall be generally maintained and repaired by each Unit Owner and the Association in accordance with the provisions of Sections 1603-107(a) and 1603-115 of the Condominium Act except as otherwise provided herein.

**§8.2 Maintenance of Common Elements.** Generally the Association shall be responsible for the maintenance, repair and replacement of the Common Elements, including but not limited to landscaping, lawn care, sewer, storm water and drainage system, snowplowing, interior roadways and parking areas that are Common Elements or Limited Common Elements, area lighting and trash pickup (unless provided by the municipality), all as determined by the Board of Directors. Such obligations shall include without limitation compliance with the storm water and drainage system maintenance obligations established by the Maine Department of Environmental Protection and the City of Portland as set forth in Exhibit G.

If repair or replacement of the Common Elements shall be necessitated by the negligence, neglect or misconduct of fewer than all of the Unit Owners, such cost shall be assessed to the Unit Owners responsible as a Service Charge. Unit Owners shall be responsible for the costs of maintenance and repair of any improvements made under Sections 3.6 and 4.4 in good condition and repair.

**§8.3 Maintenance of Windows, Doors and other Limited Common Elements.** Generally the Association shall maintain, repair and replace the Limited Common Elements, all as determined by the Board of Directors; provided, however, that each Unit shall be responsible for providing the ordinary maintenance and repair of individual Limited Common Element windows, doors, sliding patio doors, screens, storm windows and doors, and their components consisting of window and door locks, glass, slides, hinges, tracks, knobs, automatic openers, and hardware, together with the painting of the interior surfaces of the exterior windows and doors, the washing of interior and exterior glass surfaces, and maintaining the sewer line leading from the Unit to the point where it connects to the common line, but the Association may elect to provide ordinary maintenance and repair services for such components, assessing the Units therefore as a Limited Common Expense assessment, a Service Charge or as a part of the general Common Expense assessments.

Each Unit Owner shall provide the ordinary cleaning of the interior and exterior glass surfaces of door and window glass, the repair of broken glass and screens, and the removal of snow and ice from the patio, porch and deck Limited Common Elements appurtenant to the Unit, but the Association may elect to provide such services and assess the Units therefore as a Service Charge or as a part of the general Common Charges.

The Association shall be responsible for the painting of the exterior finishes of exterior doors, windows (excluding window glass) and garage doors, gutters, downspouts, exterior window and door caulking, and chimney flashing, and shall be responsible for carrying out the replacement of the entire window and door assemblies.

The Association may assess the costs of maintenance, repair and replacement of the doors, windows and other Limited Common Expenses applicable to the particular Unit(s) to which they are appurtenant if the item giving rise to the expense shall be disproportionately for the benefit of such Unit(s) only, as may be determined from time to time by the Board of Directors in its discretion.

If such repair or replacement of the Limited Common Elements shall be necessitated by the acts, omissions, negligence, neglect or misconduct of fewer than all of the Unit Owners, in which case such cost shall be assessed to the Unit Owners responsible as a Service Charge, as determined by the Board of Directors.

**§8.4 Maintenance of Unit/Repair Responsibility.** Each Unit Owner shall keep and maintain his or her Unit and its equipment, appliances and appurtenances in good order, condition and repair and in a neat, clean and sanitary condition, whether such maintenance and repair shall be structural or non-structural. Each Unit Owner shall maintain, repair and replace the exterior lights and light bulbs controlled from inside the Units, the door bells, and the vents and ducts which serve their Unit exclusively.

Each Unit Owner shall do all redecorating, painting and varnishing of the Unit interior which at any time may be necessary to maintain the good appearance and condition of such Unit. The Unit Owner shall clean the interior and exterior glass surfaces of windows, maintain all interior finishes and trim on doors and windows, repair broken or damaged glass, including the cleaning and repair of glass and the ordinary maintenance and repair of screens, locks, hinges, tracks, and knobs, but the Association shall provide routine painting of the exterior finishes of exterior doors and windows (excluding window glass).

For Units with exterior accessories and improvements, if any, installed by or at the request of the Unit Owner or any prior Unit Owner as set forth in Sections 3.5 and 4.4, such items shall be maintained, repaired and replaced by the Association but each Unit Owner shall pay the Association for its costs of maintaining, repairing and replacing such items as a Limited Common Expense.

No Unit Owner shall deposit any trash, dirt, debris or other substance from the Unit onto the Common Elements or Limited Common Elements, except in designated trash disposal areas.

Only ordinary household waste in normal quantities shall be deposited into the sewage system. No person shall pour any grease, paint, solvents, oil or non-household chemicals other substances which may be identified in the Rules and Regulations into the sewage system or storm drains.

The Board of Directors may adopt Rules and Regulations requiring the Unit Owners periodically to replace water heaters and washing machine hoses.

Each Unit Owner shall be responsible for all damage to his or her Unit, to any other Units or to the Common Elements resulting from his or her failure or negligence to make any of the repairs required by this Article. Each Unit Owner shall perform his or her responsibilities in such manner as shall not unreasonably disturb or interfere with the other Unit Owners. Each

Unit Owner shall promptly report to the Board of Directors or the managing agent any defect or need for repairs for which the Association is responsible.

To the extent that any damage to a Unit is covered by the Association's insurance, the Unit Owner shall be responsible for (i) payment of any insurance deductible (or such other amount established by the Rules and Regulations), with respect to the Unit, and (ii) for uninsured damage to his or her Unit or to any Common Element for which the Unit Owner is otherwise responsible due to the fault or negligence of the Unit Owner.

**§8.5 Liability of Owner.** Each Unit Owner shall be liable, and the Association shall have a lien against his or her Unit for all costs of maintaining, repairing or replacing any portion of such Owner's Unit, any other Unit or of the Common Elements including Limited Common Elements to the extent that such costs are caused by or attributable to such Unit Owner's wrongful or negligent act, neglect, omission or carelessness or by that of such Unit Owner's guests, employees, agents, lessees, invitees, or their pets. The Association shall have the right to repair any damage so caused, to cure or correct the cause of the damage and to maintain or replace such damaged Unit or Common Element to the extent the Association deems necessary and appropriate all at the Unit Owner's expense. Such liability shall include any increase in insurance rates occasioned by uses, misuse, occupancy, or abandonment of any Unit or its appurtenances. Nothing herein contained, however, shall be construed to modify any waiver by insurance companies of rights of subrogation against such Unit Owner.

**§8.6 Use and Occupancy Restrictions.** Each Unit and its associated Limited Common Elements shall be occupied and used subject to the following restrictions:

(a) *Single Family Residential Use.* No Unit shall be used or occupied for any purpose other than a single family residence with only one unified, complete set of cooking and sleeping facilities, provided, however, that an occupant of a Unit may conduct business activities within the confines of such Unit so long as no signs are displayed, the Unit is not used for meeting with customers or third parties and there is no noticeable increase in deliveries, all except as otherwise permitted by the Board of Directors in its discretion. Further provided that nothing in this Declaration or the Bylaws shall be construed to prohibit the Declarant from exercising any easements and Special Declarant Rights and Development reserved by the Declarant, including without limitation promotional, marketing, sales office or display purposes, sales of Units and for customer service purposes, or from leasing Units owned by Declarant as provided in this Declaration.

(b) *Maximum Number of Unit Occupants.* No more than two (2) persons may occupy a one bedroom Unit and no more than four (4) persons may occupy a two bedroom Unit. The Executive Board may adopt and amend Rules and Regulations further interpreting and governing the maximum number of persons who may occupy a Unit.

(c) *Insurance.* No activities shall be carried on or materials used or kept in any Unit or in any of the Common Elements that will increase the rate of insurance for the Property, or any part thereof, without the prior written consent of the Board of Directors. No Unit Owner shall permit anything to be done or kept in his or her Unit or in the Common Elements which will result in the cancellation of insurance on the property, or any part thereof, or which would be in

violation of any law, regulation or administrative ruling. No waste may be committed on or to the Common Elements.

(c) *Nuisance/Hazard/Illegal uses.* No Unit shall be used so as to create a nuisance, hazards, or an unreasonable interference with the peaceful enjoyment of any other Unit or the Common Elements or to carry on any illegal activities.

No owner or occupant of any Unit shall carry on, or permit to be carried on, any practice which unreasonably interferes with the quiet enjoyment and proper use of another Unit or the Common Elements by the Unit Owner or occupant of any other Unit, or which creates or results in a hazard on the Property.

No immoral, improper, offensive, or unlawful use shall be made of the Property or any part thereof, and all valid laws, zoning ordinances and regulations of all governmental bodies having jurisdiction thereof shall be observed.

(d) *Pets and Animals.* Except for household pets permitted below, the maintenance, keeping, boarding and/or raising of animals, including without limitation laboratory animals, livestock, poultry or reptiles of any kind, regardless of number, is prohibited within any Unit or upon the Common Elements.

Well behaved, orderly dogs, cats and other ordinary household pets may be kept in a Unit, subject to such additional and more restrictive Rules and Regulations as established from time to time by the Board of Directors, and to local and state ordinance, statutes and regulations, and ordinances. In any event all pets and animals shall be restrained so as not to become noisome, bothersome, threatening or offensive to other persons, as determined by the Board of Directors.

No dogs shall be permitted outside of a Unit except on a leash directly attended by a responsible person or except of "off-leash" area(s), if any, that may be designed from time to time by the Board of Directors. Pet owners shall promptly clean up the droppings left by their pets which shall be disposed of in such manner as may be prescribed in Rules and Regulations.

The Association shall have the power to further regulate and restrict the keeping of pets and animals under Rules and Regulations of the Association as promulgated or amended from time to time.

In the event of repeated, significant violations of the Condominium Documents by a pet or animal that interfere with the safety, peaceful and quiet enjoyment of the Property notwithstanding prior notices thereof, to the Unit Owner Upon notice and opportunity to be heard, the Board of Directors may expel any offending pets and animals from the Property.

(e) *Fire Safety and Noise Control.* No person shall impair or remove or alter the any acoustical, sound-deadening, or fire-resistant material or smoke detector from the walls, floors or ceilings of a Unit without replacing the same with materials of equal or greater such qualities after securing proper written permission from the Executive Board.

(f) *Trash.* Trash, garbage and other waste shall be kept only in sanitary containers and shall be disposed of in such manner as may be prescribed in Rules and Regulations established by the Board of Directors and in compliance with the requirements of the City of Portland.

(g) *Personal Property.* No articles of personal property belonging to any Unit Owner shall be stored in any portion of the Common Elements except for outdoor furniture located on the exterior decks, balconies and patios kept in a neat and attractive condition or as permitted by the Board of Directors pursuant to the Rules and Regulations.

(h) *Electrical.* No Unit Owner shall overload the electrical wiring in the Condominium. No Unit Owner shall operate any machinery, appliances, accessories or equipment in such a manner as to cause, in the judgment of the Board of Directors, as appropriate, an unreasonable disturbance or make any alterations, repairs or modifications to or connection with the electrical or plumbing systems without the prior written consent of the Board of Directors, as appropriate.

Additional major appliances, including without limitation hot tubs, generators and exterior space heaters may not be installed in a Unit or Limited Common Elements except with the prior written consent of the Board of Directors.

(i) *Governmental Requirements.* All Unit Owners, Unit Occupants, their families, guests, and invitees shall comply with and conform to all applicable laws and regulations of the State of Maine and of the United States, and all ordinances, rules and regulations of the City of Portland. A Unit Owner shall hold the Association and other Unit Owners harmless from all fines, penalties, costs and prosecutions for the violation thereof or noncompliance therewith.

(j) *Water and Sewer.* The sewer system shall be used only for ordinary household purposes. Since the water supply depends in part on the forces of nature, the Association shall not be responsible for any insufficiency or failure of water supply or the purity thereof, even if due to the alleged negligence or fault of the Association.

(k) *Heat.* Every Unit Owner must at his or her own expense maintain heat at levels sufficient to protect the Common Elements from damage. Further, the heat must be set at a minimum level as set forth in the Rules and Regulations, if any, but in any event not less than 55° F. In the event the Board of Directors or its agents learn that the heat in a Unit is, in its opinion, insufficient, and if the Board of Directors or its agents cause the heat in the Unit to be increased in a good faith attempt to prevent damage to the Unit, other Units or Common Elements, the Unit Owner shall be solely liable for any increase in the utility costs associated with the increased heat.

(l) *Water Heaters, Hoses and Vents.* The Association may adopt Rules and Regulations requiring the periodic replacements of or specifying the types of water heaters and washing machine hoses.

**§8.7 Use of Common Elements.** Subject to this Declaration, the Bylaws, or the Rules and Regulations adopted from time to time by the Board of Directors pursuant to its powers, each Unit Owner, occupant, tenant, guest, visitor and invitee may use the Common Elements in common with all other Unit Owners and their occupants, tenants, guests, visitors and invitees, in



accordance with the single family residential purposes for which they are intended, without hindering or encroaching upon the lawful rights of the other Unit Owners, upon the following terms:

(a) *Motor Vehicles.* Only passenger vehicles and trucks with a gross vehicle weight of less than 6,000 pounds and which fit into the Limited Common Element parking space may be kept or stored on the Property. Vehicles must be in operable condition and fully licensed and inspected for operation on public highways. Parking is further regulated in Section 8.8 below.

(b) *Exterior Alterations.* Except with the written consent of the Board of Directors or as otherwise expressly provided in this Declaration, Bylaws, or the Rules and Regulations, no person shall (i) construct or maintain any enclosures, planters, antennas, dishes, wires, cables, fences, signs, canopies, lights, awnings, clotheslines or other structures in the Common Elements (including the Limited Common Elements), nor (ii) plant, trim, cut or remove vegetation, trees or shrubs, nor (iii) materially alter the grading or landscaping, nor (iv) do any other thing which affects the appearance from the exterior of the Common Elements including without limitation the Limited Common Elements. The Board shall have the authority to adopt Rules and Regulations regarding such matters including without limitation water shut offs, natural gas systems and items placed on the interiors of glass windows and doors that are visible from the Common Elements.

The Board of Directors may in its discretion designate areas in which Unit Owners may plant flowers and annuals based on plans specifically approved by the Board and subject to the obligation of the Unit Owner to maintain such items in good condition and repair, failing which they may be removed by the Association at the Unit Owner's expense.

(c) *Signs.* No signs of any character shall be erected, posted or displayed from any Unit, Common Element or Limited Common Element without the prior written approval of the Board of Directors, except for such signs as may be posted by the Declarant for the promotional or marketing purposes as permitted herein or as permitted by the Condominium Documents. The Board of Directors may also erect or authorize directional, speed control, safety, anti-solicitation, and identifying sign(s) listing the name and location of each occupant of the Units.

(d) *Obstruction/Storage.* No Unit Owner shall obstruct any of the Common Elements or another Unit's Limited Common Elements, nor shall any Unit Owner place or store anything on any of the Common Elements except those areas designated for parking by the Condominium Documents or as permitted by the Board of Directors pursuant to the Rules and Regulations.

(e) *Responsibility.* Neither the Board of Directors, the Association, nor any Unit Owner, nor the Declarant shall be considered a bailee of any personal property stored on the Common Elements or Limited Common Elements (including vehicles parked on the Common Elements), whether or not exclusive possession of the particular area is given to a Unit Owner for storage or parking purposes. None of them shall be responsible for the security of such personal property or for any loss or damage thereto, whether or not due to negligence, except to the extent covered by insurance in excess of any applicable deductible.

**§8.8 Parking.** Motor vehicles may be parked only in those portions of the Common Elements designated from time to time by the Board of Directors for parking spaces.

In any event no more than one (1) vehicle per Unit (including motorcycles) may be kept on the Property, except that Units with one of the four tandem Limited Common Element parking spaces may keep up to two (2) vehicles. No parking shall be permitted in areas posted against parking by the Board of Directors, nor shall any person park so as to block access to a parking space owned by another Unit Owner.

No designated "guest" parking spaces are provided.

The exterior parking spaces are provided for the parking of private motor vehicles and shall not be used for the parking or storage of commercial vehicles, trailers, motor homes, boats, or vehicles with a gross weight of over 6,000 pounds. All vehicles must be in operable condition and fully licensed and insured for operation on public highways. No inoperable vehicles, nor any boats, recreational vehicles, snowmobiles, all-terrain vehicles or other similar vehicles, recreational equipment, trailers, or similar items may be kept or parked or stored on the Property except within an enclosed garage.

No unattended vehicle shall at any time be left in such a manner as to impede the passage of traffic or to impair access to parking areas. Parking areas and Common Elements shall at all times be kept free of unreasonable accumulations of debris or rubbish of any kind and no junk or derelict vehicles or other vehicle on which current registration plates are not displayed shall be kept upon any of the Common Elements. Vehicle repairs, other than ordinary light maintenance, are not permitted on the exterior areas of the Property. Owners may be required to move vehicles in order to facilitate snow plowing.

The Board of Directors may adopt such Rules and Regulations as it deems necessary or appropriate to further regulate and restrict parking and the use and storage of motor vehicles generally.

### **§8.9 Leasing & Renting**

(a) No unit may be leased, licensed or rented for transient purposes and no Unit may be leased for a period of less than six (6) months except at the discretion of the Board of Directors. No portion of any Unit (other than the entire Unit) shall be leased, licensed or rented for any period of time. No unit owner shall rent, license or lease a Unit other than in accordance with a written form of lease which contains the following provisions, which shall automatically be incorporated into every lease, rental, license and every other form of rights to occupy a Unit (collectively sometimes referred to herein as "Lease"):

- (i) The tenant and all other guests, occupants of each Unit shall comply with the Declaration, the Bylaws, and the Rules and Regulations of the Association, and a failure to comply constitutes a default under the Lease and any other rights to occupy a unit;
- (ii) The Board of Directors has the power to terminate the Lease and/or to bring summary proceedings to evict all tenants, guests or other occupants in the name of the Unit Owner after thirty (30) days prior written notice to the Unit Owner in the event of an uncured default by any tenant, guest or other occupant of a Unit

in the performance of the Lease or this subsection, but that no notice period need be given in the event of a threat to personal safety or property; and

- (iv) In the event that the payment of Common Expenses, Limited Common Expenses, Assessments, Service Charges and/or other amounts due to the Association becomes more than ninety (90) days past due, the Association may require the tenant or other occupant to pay directly to the Association the rent on the Unit in an amount of up to the balance of current and delinquent Common Expenses and other unpaid amounts outstanding, subject to the rights of any recorded first mortgage or Eligible Mortgage Holder which has exercised an assignment of rents. The Association's notice to the tenant or other occupant shall be conclusive and binding on the tenant and occupants as to the obligation to pay the rent directly to the Association and as to the amount of Common Expenses and other amounts due. The Unit Owner shall have ten (10) days after such notice is sent to file an objection with the Board of Directors, which objection must be in writing and signed under oath under the pains and penalties of perjury, must contain a short and plain statement of any alleged errors by the Association, and shall include copies of cancelled checks or other written evidence of objection or miscalculation of the amounts due. The Unit Owner must state what amounts, if any, which the Unit Owner admits is owed to the Association.

Every Lease shall be in writing. The foregoing provisions shall be deemed to be automatically incorporated into every Lease and the terms of any tenancy or other agreement for the occupancy of a Unit.

Each Unit owner of a Unit shall, promptly following the execution of any written lease of a Unit, forward a true copy thereof to the management company for the Association.

The foregoing provisions of this paragraph (a) shall not apply to an institutional lender in possession of a Unit as a result of foreclosure, judicial sale or a proceeding in lieu of foreclosure.

(b) In the event a tenant, guest or other occupant of a Unit fails to comply with the provisions of this Declaration, the Bylaws, the Rules and Regulations or the Lease and tenancy, then, in addition to all other remedies which it may have, the Association may notify the Unit Owner of such violation(s) and demand that the same be remedied through the Unit Owner's efforts within a reasonable time after such notice in the judgment of the Board of Directors, recognizing that no notice period need be given in the event of a threat to personal safety or property.

If such violation(s) is(are) not remedied within said period if applicable, then the Unit Owner shall at his or her own cost and expense immediately institute and diligently evict all tenants, guests or other occupants of the Unit on account of such violation(s). In the event the Unit Owner fails to so act promptly, then the Board of Directors shall have the right, but not the duty, to institute and prosecute such eviction as attorney-in-fact for the Unit Owners and at the Unit Owner's sole cost and expense, including all legal fees and costs incurred. Said costs and expenses shall be due and payable upon demand by the Association and shall be deemed to constitute a lien on the particular Unit involved, and collection thereof may be enforced by the

Board of Directors in the same manner as the Board of Directors is entitled to enforce collection of Common Expenses and all other amounts due to the Association.

The Declarant shall have the right to operate any Units (even if not then created as Units) owned by the Declarant as a rental property, and may establish and maintain offices, signs and other accouterments normally used in the operation of rental properties in the Declarant's discretion. Such rental operations shall be for the benefit of the Declarant; neither the Association nor any Unit Owner shall have any interest or right in the profits and losses from such operations.

**§8.10 Invasive Species.** To the extent required by the City of Portland, the State of Maine, or otherwise required by law, the Association shall remove and dispose of invasive plant species located on the Condominium Property.

**§8.11 No Liability of Association.** The Association shall not be liable for the failure of water supply, sewage disposal and storm water systems, electricity, telephone, or other services to be obtained by the Association or paid for out of the Common Expense or Service Charge funds, or for injury or damages to persons or property caused by the elements or by the owner of any Unit or by any other person, or resulting from water which may leak or flow from any portion of the Common Elements or Limited Common Elements, from within the Unit, or from another Unit or from any roof, wire, pipe, drain, conduit, appliance, fixture or equipment, even if due to the alleged fault or negligence of the Association, provided that this shall not impair the scope of any insurance coverage provided by the Association.

The Association shall not be liable to the Unit Owner for loss or damage, by theft, or otherwise, of property which may be stored upon or in any individual Unit or in any of the Common Elements even if due to the alleged fault or negligence of the Association.

No reduction, set-off, diminution or abatement of assessments for Common Expenses or Service Charges, shall be claimed or allowed for the expense, damage or discomfort arising from the making of repairs or improvements to the Common Elements or facilities or to any Unit, or from any action taken by the Association to comply with any law, ordinance, or order of any other governmental authority.

## **ARTICLE 9 EASEMENTS**

**§9.1 Utilities, Pipes and Conduits.** Each Unit Owner shall have an easement, in common with all other Unit Owners, to use all pipes, wires, ducts, cables, conduits, public utility lines and other Common Easements serving his or her Unit and located in any of the other Units. Each Unit shall be subject to an easement in favor of other Unit Owners to use the pipes, ducts, cables, wires, conduits, life safety systems, sprinkler systems, fire alarms, utility lines and other Common Elements serving such other Units and located in such Unit. The Association shall have the right to grant to third parties additional permits, licenses and easements over and through the Common Elements for utilities, ways, and other purposes reasonably necessary or useful for the proper maintenance and operation of the Condominium.

**§9.2 Access.** Subject to the terms of this Declaration, the Bylaws and the Rules and Regulations, each Unit Owner shall have an easement in common with all other Unit Owners to use the Common Elements as a means of access to and from his or her Unit. In the event that a Unit is not in good standing in the payment of all amounts due to the Association and in the performance of other obligations under this Declaration, then the rights to use all or any portion of the Common Elements, including without limitation the Limited Common Element Parking Spaces, may be suspended and services may be withheld in accordance with Rules and Regulations adopted by the Board of Directors but the right to physically gain access the Unit shall not be suspended and the Association may not withhold services provided to a Unit or a Unit Owner by the Association if the effect of withholding the service would be to endanger the health, safety or property of any person.

**§9.3 Association Access to Units.** Upon such notice as may be reasonable at the time, the Association and its officers and directors and such persons as may be authorized by the Board of Directors shall have the right of access to each Unit as provided in Section 1603-107(a) of the Condominium Act for the inspection, maintenance, repair or replacement of the Common Elements and Limited Common Elements located in the Unit or accessible from the Unit or for making any addition or improvements thereto; or to make repairs to any Unit, the Common Elements or the Limited Common Elements if such repairs are reasonably necessary for public safety or to prevent damage to any other Unit, the Common Elements or the Limited Common Elements; or to abate any violation of law, orders, rules or regulations of the Association or of any governmental authorities having jurisdiction thereof. In case of an emergency, such right of entry shall be immediate, whether or not the Unit Owner is present at the time.

Keys to locked entry doors to every Unit, and any other locked door within the Unit where integral utility or other Common Element or Limited Common Element systems are housed, shall be provided to the Association in order to allow access by the Association and under the direct supervision of the Association's management company as may be authorized by the Board of Directors. If such keys are not provided, the Association and its agents shall have no liability for any damage to doors and/or windows created by gaining entry into a Unit in the event there is a reasonable belief that circumstances exist for which entry is authorized.

**§9.4 Encroachments.** Each Unit and the Common Elements are subject to an easement for structural and lateral support in favor of every other Unit. If any portion of the Common Elements or Limited Common Elements hereafter encroach upon any Unit, or if any Unit hereafter encroaches upon any other Unit or upon any portion of the Common Elements or Limited Common Elements, as a result of settling or shifting of any building in which they are located, other than as a result of the willful or negligent act or omission of the owner of the encroaching Unit or of the Association in the case of encroachments by the Common Elements or Limited Common Elements, then a valid easement for the encroachment and for the maintenance of the same shall exist. In the event that a building is partially destroyed as a result of fire or other casualty or as a result of a taking by eminent domain or by deed in lieu of condemnation and is subsequently rebuilt, encroachments due to such rebuilding shall be permitted, and valid easements appurtenant thereto shall exist.

**§9.5 Easements through Common Elements.** The Common Elements (including, but not limited to, the Limited Common Elements) adjacent to a Unit are subject to the following easements in favor of the adjacent Unit:



(i) For the installation, repair, maintenance, use, removal and/or replacement of pipes, ducts, heating and air conditioning systems, electrical, data, cable television, telephone and other communication wiring and cables and all other life safety, utility lines and conduits which are a part of or serve any Unit and which pass across or through a portion of the Common Elements.

(ii) For the installation, repair, maintenance, use, removal and/or replacement of lighting fixtures, electrical receptacles, panel boards and other electrical installations which are a part of or serve any Unit but which encroach into a part of a Common Elements adjacent to such Unit; provided, however, that the installation, repair maintenance, use, removal or replacement of any part of the Common Elements shall not adversely affect either the thermal, fire safety or acoustical character of the building or impair or structurally weaken the building.

(iii) For driving and removing nails, screws, bolts and other attachment devices into the Unit side surface of the studs which support the sheet rock or plaster perimeter walls bounding the Unit, the bottom surface of joists above the Unit and the top surface of the floor joists below the floor of a Unit to the extent such nails, screws, bolts and other attachment devices may encroach into a part of a Common Element adjacent to such Unit; provided, however, that any such action will not unreasonably interfere with the common use of any part of the Common Elements, or adversely affect either the thermal, safety, or acoustical character of the buildings or impair or structurally weaken the buildings.

## **ARTICLE 10**

### **RIGHTS OF MORTGAGE LENDERS ON UNITS**

**§10.1 Right to Mortgage.** Each Unit Owner shall have the right to mortgage or encumber his or her own respective Unit together with its appurtenant Allocated Interests. Except as provided by Section 1603-112 of the Condominium Act, a Unit Owner may not mortgage or encumber the Common Elements in any manner except as a component of the Allocated Interests appurtenant to his or her Unit.

**§10.2 Identification of Mortgagee.** Upon request of the Board of Directors, each Unit Owner who mortgages his or her Unit shall notify the Board of Directors in writing of the name and address of his or her Mortgagee(s).

**§10.3 Mortgage Foreclosure and Dispositions.** Any holder of a first mortgage covering a Unit which obtains title to the Unit pursuant to a foreclosure or other exercise of the remedies provided in the Mortgage or through deed in lieu of foreclosure after written notice of default which deed identifies the circumstances classifying it as such a deed shall, to the extent required under the Maine Condominium Act, take title to the Unit with its appurtenant Allocated Interests, free of any claims for unpaid assessments for Common Expenses, Service Charges, late fees, interest and costs levied against such Unit which accrued prior to the acquisition of title to such Unit by the Mortgagee, other than the proportionate share of the Common Expenses which become due and payable from and after the date on which the Mortgagee shall acquire title to the Unit through a completed foreclosure or deed in lieu of foreclosure.

In the event the Association adopts any right of first refusal or purchase option arising in the event of the sale or transfer of a Unit, it shall not impair the right of an institutional mortgage lender to foreclose its mortgage, to accept a deed in lieu of foreclosure after written notice of default which deed identifies the circumstances classifying it as such a deed, or to dispose or lease a Unit so acquired.

**§10.4 Eligible Mortgage Holder.** "Eligible Mortgage Holder" means the holder of record of a recorded first Mortgage encumbering a Unit (a "Mortgage") which has delivered written notice to the Association, by prepaid United States Mail, return receipt requested, or by delivery in hand securing a receipt therefore, stating: (a) the name and address of the holder of the Mortgage, (2) the name and address of the owner of the Unit encumbered by such Mortgage, (3) the identifying number of such Unit, and (4) containing a statement that such Mortgage is a recorded first mortgage. The Secretary or manager of the Association shall maintain such information.

Eligible Mortgage Holders shall have all rights specified in the Condominium Act. Furthermore after the filing of the request by an Eligible Mortgage Holder, the Board shall cause notice to be sent to the Eligible Mortgage Holders (and any insurers or guarantors of such mortgages identified in the request), if any, of any one or more of the following events affecting the mortgaged Unit(s), if so requested.

- i. Default in the payment of Assessments, Service Charges, or other amounts due the Association which continues for Sixty (60) days or as required by the Condominium Act;
- ii. Default or violation of the Condominium Documents, or any proceedings by the Association relating thereto;
- iii. The expiration, cancellation or material modification of insurance required to be maintained under the Declaration or Bylaws of the Association;
- iv. A material amendment to the Declaration requiring the consent of Eligible Mortgage Holders;
- v. Termination of the Condominium pursuant to Section 1602-118 of the Condominium Act;
- vi. Change in the Allocated Interests of a Unit, voting rights, a change in Unit boundaries or the subdivision of a Unit;
- vii. The merger or consolidation of the Condominium with another condominium;
- viii. The conveyance or subjection to a security interest of any portion of the Common Elements;

- ix. The lapse, cancellation or material modification of any insurance policy maintained by the Association or any use of any hazard insurance proceeds other than for repair or restoration of the Property; and
- x. Such other events specified in the Condominium Act.

**§10.5 Mortgagee Approval Rights.** For a material amendment to the Declaration or any of the actions specified below but subject in any event to the provisions of the Condominium Act, an Eligible Mortgage Holder who has duly qualified as such by properly registering with the Association in accordance with the Condominium Act and Section 10.4 above shall have the right but not the obligation in place of the Unit Owner to cast the votes allocated to that Unit or give or withhold any consent required of the Unit Owner for such action by delivering written notice to the association with a copy to the Unit Owner prior to or at the time of the taking of the proposed action, which notice shall be sent by prepaid United States mail, return receipt requested, or by delivery in hand. Failure of the Eligible Mortgage Holder to so exercise such rights shall constitute a waiver thereof and shall not preclude the Unit owner from exercising such right. An amendment affecting any of the following is considered material:

- i. Voting rights in the Association;
- ii. Change in percentage liability for Common Expenses, assessment liens for Common Expenses, priority of assessment liens, or the subordination of assessment liens, or increases in the assessments of more than 25% over the prior year;
- iii. Reduction in reserves for maintenance, repair and replacement of Common Elements;
- iv. Responsibility for maintenance and repairs;
- v. Reallocation of pro rata interests in the Common Elements, the Limited Common Element or rights to their use;
- vi. Alteration of the definitions of the boundaries of any Unit, including the partition or subdivision of a Unit;
- vii. Convertibility of Units into Common Elements or vice versa;
- viii. Expansion or contraction of the Condominium, or the addition, annexation or withdrawal of property to or from the Condominium;
- ix. Hazard insurance or fidelity bond requirements;
- x. Imposition of any further restrictions on the leasing of Units;
- xi. Imposition of any restrictions on a Unit Owner's right to sell or transfer his or her Unit;

- xii. A decision by the Association to establish self-management when professional management had been required previously by an Eligible Mortgage Holder or by this Declaration or the Bylaws;
- xiii. Restoration or repair of the Property (after damage or destruction, or partial taking by eminent domain or condemnation) in a manner other than that specified in this Declaration;
- xiv. Any action to terminate the Condominium after substantial damage destruction or condemnation occurs;
- xv. Any provisions of this Article and any other provision of this Declaration expressly benefits mortgage holders, insurers or guarantors; or
- xvi. Any provisions of this Article.

When Unit Owners are considering termination of the Condominium for reasons other than substantial damage, destruction or taking by eminent domain of the Condominium, the Eligible Mortgage Holders representing at least Sixty-Seven percent (67%) of the votes of Units subject to mortgages held by Eligible Holders must agree.

If required by Federal Home Loan Mortgage Corporation, the Federal National Mortgage Association, the Veterans' Administration, the Federal Housing Administration or other recognized institutional mortgage programs for mortgaged units, amendments of a material adverse nature or a decision to terminate the legal status of the Condominium after substantial destruction or condemnation occurs must be agreed to by 51% of the votes of Units that are subject to such mortgages they hold which are qualified as Eligible Mortgage Holders.

Approval shall be presumed when an Eligible Mortgage Holder or other mortgagee is sent a written request for approval of a proposed amendment by registered or certified mail, return receipt requested, and then fails to submit a response within 60 calendar days after the notice is received.

**§10.6 Mortgagee Priority.** No provision of the Condominium Documents shall be deemed or construed to give a Unit Owner, or any other person, priority over the rights of any Eligible Mortgage Holder under its mortgage in the case of a distribution of insurance proceeds or condemnation awards for losses to or taking of Units, Common Elements, or both.

**§10.7 Records.** An Eligible Mortgage Holder may examine the books, records and accounts of the Association at reasonable times. The Association shall maintain current copies of this Declaration, the Association's articles of incorporation, Bylaws, and other Rules and Regulations concerning the Condominium as well as its own books, records, and financial statements available for inspection by Unit Owners or by any Eligible Mortgage Holder, insurers, and guarantors of first mortgages that are secured by Units available during normal business hours. Upon written request, any Eligible Mortgage Holder may obtain an audited statement of the Association's fiscal affairs prepared by an independent certified public

accountant once the Condominium has been established for a full fiscal year, which preparation shall be prepared at the Eligible Mortgage Holder's expense.

## **ARTICLE 11 INSURANCE**

**§11.1 General.** No later than the date of the first conveyance of a Unit to a person other than the Declarant, the Association shall obtain and maintain as a Common Expense the policies of insurance described below to the extent such policies shall be reasonably available as determined by the Board of Directors. If such insurance is not maintained, then the Association shall give written notice thereof to the Unit Owners and the Eligible Mortgage Holders, if any. To the extent that such insurance subsequently becomes unavailable, the Association shall obtain such comparable insurance as may be reasonably available.

The Board of Directors is hereby irrevocably appointed as attorney-in-fact for each Unit Owner and for each Mortgagee and Eligible Mortgage Holder and for each owner of any other interest in the Property, for purchasing and maintaining the insurance, for the collection and disposition of any insurance, including distribution pursuant to Section 1603-113(c) of the Condominium Act, for the negotiation of losses and execution of releases of liability, and for the execution of all documents, and performance of all other acts necessary to accomplish these purposes.

**§11.2 Property and Casualty Insurance Coverage, Deductible and Exclusions.** The Association shall obtain and maintain in effect a broad "special form" fire and casualty insurance policy covering the Property with extended coverage, vandalism, malicious mischief, windstorm, debris removal, cost of demolition and water damage endorsements, subject to the exclusions and limitations as may be set forth in such policies, issued by an insurance company authorized to do business in the State of Maine (which company shall also meet the ratings requirements of the Federal National Mortgage Association), insuring as a single entity the entire Property including the Common Elements, the Limited Common Elements, the Units, and the fixtures, supplies and common personal property belonging to the Association, *excepting* the land, foundations, excavations, and other similar items customarily excluded from property insurance policies and also *excepting* furniture, furnishings or other personal property supplied or installed by Unit Owners. The policy shall cover the interests of and name as insureds the Association, the Board of Directors, and all Unit Owners and their Mortgagees as their insurable interests may appear.

Such blanket or master insurance policy shall be in an amount equal to one hundred percent (100%) of the then current full replacement cost of the insured Property (exclusive of the land, excavations, foundations and other similar items and perils customarily excluded from such coverage), without deduction for depreciation, but subject to such exclusions and limitations as may be set forth therein. Such insurance policy may, at the option of the Board of Directors, contain such deductible as the Board of Directors shall reasonably deem appropriate but not to exceed the lesser of \$10,000 or one (1) percent of the policy's face amount. Unless otherwise established under Rules and Regulations adopted by the Board of Directors from time to time, a Unit Owner shall be responsible for the expense of repair of damage to his or her Unit in the amount of the Association's insurance deductible. The Association shall not be responsible for the costs of repair of uninsured damage to the Unit in the amount of the insurance deductible or



due to exclusions and limitations in the Association's insurance coverage unless otherwise required by the Condominium Act.

Such property and casualty insurance policy shall also include the following provisions:

(i) The following endorsements or their equivalent: (a) "no control," meaning that coverage shall not be prejudiced by any act or neglect of any occupant or Unit Owner or their agents, when such act or neglect is not within the control of the Association or the Unit Owners collectively, nor by any failure of the Association or the Unit Owners collectively, to comply with any warranty or condition with regard to any portion of the Condominium over which the Association or the Unit Owners collectively, have no control; (b) "Construction Code Endorsement" or "increased cost of construction," (c) "agreed amount" or elimination of co-insurance clause; and (d) "inflation guard," when it can be readily obtained.

(ii) That any "no other insurance" clause shall expressly exclude individual Unit Owners' policies from its operation, so that the physical damage policy purchased by the Board of Directors shall be deemed primary coverage and any individual Unit Owners' policies shall be deemed excess coverage and/or deductible and excluded perils coverage, and in no event shall the insurance coverage obtained and maintained by the Board of Directors hereunder provide for or be brought into contribution with insurance purchased by individual Unit Owners or their Mortgagees;

(iii) The recognition of any Insurance Trust Agreement whereby the Board of Directors may designate in writing an Insurance Trustee to hold any insurance proceeds in trust for disbursement, as provided in Section 12.3 below; and

(iv) A standard "mortgagee clause" which shall: (a) provide that any reference to a mortgagee in such policy shall mean and include all holders of mortgages of any Unit, in their respective order and preference, whether or not named therein; (b) provide that such insurance as to the interest of any mortgagee shall not be invalidated by any act or neglect of the Unit owners or any persons acting under any of them; and (c) waive any provision invalidating such mortgagee clauses by reason of the failure of any mortgagee to notify the insurer of any hazardous use or vacancy.

Subject to the foregoing, the Association's insurance coverage will include betterments and improvements to a Unit installed after the original construction, but Unit Owners who arrange for the newly installed improvements should report betterments and improvements to the Association so that it may maintain adequate insurance and the Executive Board may elect to assess the increased property insurance premiums resulting from such improvements to the Owners of such Units and Limited Common Elements.

**§11.3 Casualty Losses, Adjustment and Payment; Insurance Trustee.** Any loss covered by the insurance policy maintained by the Association shall be adjusted with the Association acting through its Board of Directors, but the insurance proceeds shall be payable to the Insurance Trustee designated for that purpose, if any, as provided in the Condominium Act and otherwise to the Association, and not to any Mortgagee. Any affected Unit Owner shall have ten (10) business days after receiving notice of the Association's proposed settlement with an

insurance carrier in which to dispute the amount and terms of settlement with respect to his or her Unit; if the Unit Owner objects then the Association may elect to assign such Unit damage claim to the objecting Unit Owner and its mortgagee without further liability to the Unit Owner so that the Association may settle the balance of the claim and fund repairs for the benefit of the non-objecting Unit Owners.

The Insurance Trustee or the Association as applicable shall hold any insurance proceeds in trust for Unit Owners, Mortgagees and other lien holders as their interests may appear. The Board of Directors shall cause the Association's fidelity insurance coverage is at least equal to 100% of the amount of the insurance proceeds for the faithful performance of the duties as insurance trustee before it shall be entitled to receive such proceeds. Subject to the provisions of this Article, the Bylaws and Section 1603-113(e) of the Condominium Act, the proceeds shall be disbursed first for the repair or restoration of the damage to the Common Elements and then to the Units forming a part of the Property. If only Units are affected by the insured casualty or if the insurance proceeds are insufficient to cover all damages to the Units, then the available insurance proceeds shall be divided in proportion to the total loss among the affected Units. Unit Owners, Mortgagees and other lien holders are not entitled to receive payment of any portion of the proceeds, unless either (i) there is a surplus of proceeds after the damaged Common Elements and Units have been repaired or restored, or (ii) the decision has been made not to repair or restore the damage as provided in Section 1603-113(h) of the Condominium Act, or (iii) the Condominium is terminated in whole or part.

**§11.4 Liability Insurance.** The Board of Directors shall obtain and maintain, as a Common Expense, comprehensive general public liability insurance (including medical payments insurance) and property damage insurance in such limits as the Board may from time to time determine, insuring each Board of Directors member, the managing agent, and each Unit Owner against any liability to the public or to the Unit Owners (and their invitees, agents and employees) covering all occurrences commonly insured against for death, bodily injury or property damage, arising out of the maintenance, ownership or use of the Common Elements, and for any legal liability resulting from suits or actions related to employment contracts to which the Association is a party. Such insurance shall be issued on a comprehensive liability basis and shall contain: (i) a cross liability endorsement, under which the rights of a named insured under the policy shall not be prejudiced with respect to his or her action against another named insured; (ii) hired and non-owned vehicle coverage; (iii) a "severability of interest" endorsement, which shall preclude the insurer from denying liability to a Unit Owner because of negligent acts of the Association or of another Unit Owner; and (iv) a broad form liability extension endorsement including "personal injury," contractual liability, and other coverage commonly included in such broad form endorsement. The Board of Directors shall review such limits once each year, but in no event shall such insurance be less than two million dollars (\$2,000,000.00) covering all claims for bodily injury or property damage arising out of one occurrence.

**§11.5 Additional Required Provisions.** All insurance policies required to be carried by the Association under this Article shall in addition contain the following provisions or features:

- i. The insurer waives any right to claim by way of subrogation against the Association, the Board of Directors, the managing agent or the Unit Owners, and their respective agents, employees, guests and, in the case of the Unit Owners, the members of their households;

- ii. The Declarant, so long as the Declarant shall own any Unit, shall be protected by all such policies as a Unit Owner;
- iii. Each Unit Owner is an insured person under the policy with respect to liability arising out of the ownership of an undivided interest in the Common Elements or membership in the Association;
- iv. The insurer waives its right to subrogation under the policy against any Unit Owner or members of his or her household;
- v. No act or omission by any Unit Owner, unless acting within the scope of his or her authority on behalf of the Association, will void the policy or be a condition to recovery under the policy; and
- vi. If at the time of a loss under the Association's policy, there is other insurance in the name of a Unit Owner covering the same risk covered by the policy, the Association's policy provides primary insurance except with respect to any applicable deductible or excluded perils and special coverage limitations.

**§11.6 Other Insurance.** The Board of Directors shall obtain and maintain as a Common Expense:

- (i) To the extent reasonably available, "directors and officers" liability insurance, to satisfy the indemnification obligations of the Association;
- (ii) Workers' compensation insurance, if and to the extent necessary to meet the requirements of law;
- (iii) Flood insurance if any or all of the Property is located in a special flood hazard area in an amount equal to the greater of 100% of the insurable value of the Property or the maximum coverage available under the appropriate national flood insurance Administration program. The Board may elect to purchase additional excess flood insurance coverage; and
- (iv) A blanket or master policy shall be obtained which includes a maximum deductible of one percent (1.00%) of the policy face amount but not to exceed \$10,000 unless approved by the Unit Owners; and
- (v) Fidelity insurance covering those employees of the Board of Directors and those agents and employees hired by the Board of Directors who handle Condominium funds, in amounts as determined by the Board of Directors.
- (vi) Such other insurance as the Board of Directors may determine, or as may be requested by a majority of the Unit Owners or as may be required by Federal National Mortgage Association guidelines or any similar replacement national secondary mortgage market guidelines (including, without limitation, fidelity bond coverage).

**§11.7 Memoranda and Cancellation.** All insurers that shall issue an insurance policy or policies under this Article shall issue certificates or memoranda of insurance to the Association, and, upon request, to any Unit Owner or Mortgagee.

All such insurers issuing the policy may not cancel, substantially modify, or refuse to renew such policy or policies until Ten (10) days, and in the case of non-payment ten (10) business days, after notice of the proposed cancellation of non-renewal has been mailed to the Association, the managing agent, each Unit Owner and each Mortgagee to whom a certificate or memorandum of insurance has been issued at their respective last known addresses.

**§11.8 Owner's Separate Insurance.** Each Unit Owner should investigate and obtain at his or her own expense, a personal condominium insurance policy (for example, form type HO-6 as established by Insurance Services Office, Inc.) for damage to his or her Unit and personal property in the Unit for his or her own benefit including without limitation coverage for such portion of the deductible of the Association's deductible as the Owner may desire, for any special loss assessments made by the Association and for his or her personal liability; Each Unit Owner should also consider obtaining at his or her own expense coverage for loss of use and/or lost rental income. Provided, however, that no Unit Owner shall be entitled to exercise his or her right to acquire or maintain such insurance coverage which would decrease the amount which the Association on behalf of all Unit Owners may realize under any insurance policy maintained by the Association, or to cause any insurance coverage maintained by the Association to be brought into contribution with insurance coverage obtained by a Unit Owner. All such Unit Owner's policies shall contain waivers of subrogation in favor of the Association.

Each Unit Owner should notify the Board of Directors in writing of all betterments, upgrades and improvements made by the Unit Owner to his or her Unit; provided, however, that this sentence shall not be construed as an authorization to Unit Owners to make structural improvements to Units otherwise than in accordance with this Declaration, the Bylaws and Rules and Regulations promulgated by the Board of Directors.

Neither the Association nor its officers, directors, agents and managers shall have responsibility for ascertaining whether or not the Unit Owner maintains such personal insurance in effect, or whether all betterments, upgrades and improvements have been properly reported.

Notwithstanding any other provision of this Declaration, during the period a building or other associated improvements are under construction prior to the creation of Units therein, the Declarant shall be responsible for procuring casualty insurance on the building and the proceeds of such insurance shall be the exclusive property of the Declarant and its mortgagee.

## **ARTICLE 12 DAMAGE OR DESTRUCTION.**

**§12.1 Repair.** Any portion of the Property damaged or destroyed by a casualty shall be repaired or replaced promptly by the Association unless:

- i. The Condominium is terminated;
- ii. Repair or replacement would be illegal under any state or local health or safety statute or ordinance; or

- iii. One Hundred percent (100%) in interest of the Unit Owners vote not to rebuild, including every owner of a Unit or Limited Common Element which would not be rebuilt, and including the consent of the Eligible Mortgage Holders as required herein.

The cost of repair or replacement in excess of insurance proceeds and reserves or not covered by insurance shall be a general Common Expense, provided that the owners of the damaged Unit shall be responsible for the costs of the repair of damage to the Unit not covered by the insurance deductible, prorated among all damaged Units if multiple Units are damaged, or such other amount established by the Rules, and for the cost of damage which is uninsured due to damage from water leaks and seepage originating from within their Unit or due to failure to maintain heat, and also for the costs of repairing damage to betterments, upgrades or other improvements unless insured under the Association's policy. For improvements in the basement or other below grade areas, such improvements are at the sole risk of the Owner; the Association shall have no responsibility for the maintenance and repair of such improvements or for mold, water intrusion or damage to such improvements.

**§12.2 Application of Insurance Proceeds.** If the entire Property is not completely repaired or replaced:

- i. the insurance proceeds attributable to the damaged Units and Common Elements shall be used to restore the damaged areas to a condition compatible with the remainder of the Condominium;
- ii. the insurance proceeds attributable to Units which are not rebuilt, including without limitation the interest in the Common Elements and in the Limited Common Elements, shall be distributed to such Unit Owners and their mortgagees; and
- iii. the remainder of the proceeds shall be held in trust to be distributed to the Unit Owners and their mortgagees in accordance with the Condominium Act.

Any loss covered by such insurance shall be adjusted with the Association, which shall exclusively represent all Unit Owners in any proceedings, negotiations, settlements or agreements. The insurance proceeds shall be paid to the Association as trustee for the Unit Owners and lien holders as their interests may appear. Mortgagees' liens shall transfer in order of priority to the insurance proceeds. Notwithstanding the provisions of this Section, Article 13 of the Declaration governs the distribution of insurance proceeds if the Condominium is terminated. If the Unit Owners vote not to rebuild any Unit, that Unit's percentage interest in the Common Elements shall be automatically reallocated to the then remaining Units in proportion to their percentage interests prior to the reallocation, and the Association shall promptly prepare, execute and record an amendment to the Declaration reflecting the reallocation. Unless a Unit Owner has requested and received written confirmation from both the Association and the Association's hazard insurance carrier of optional insurance coverage for the owner's permanent improvements and betterments within the Unit, the Unit Owner shall be responsible for the expense of repair or replacement.

Notwithstanding any other provision of this Declaration, during the period a Unit is under construction prior to the creation as a Unit and the time the Unit commences paying common charges, the Declarant shall be responsible for procuring casualty insurance on such



Unit and the proceeds of such insurance shall be the exclusive property of the Declarant and its mortgagee.

**§12.3 Utility Services/Limitation of Liability.** Except to the extent otherwise required by law, the Association shall not be liable for the failure of water supply, sewage disposal systems, drainage, electricity, data, telephone, or other services to be obtained by the Association or for injury or damages to persons or property caused by the elements or by the owner of another Unit or by any other person, or resulting from electricity, water, snow or ice which may leak, fall or flow from or settle from another Unit or any portion of the Common Elements or Limited Common Elements or from any roof, wire, pipe, drain, conduit, appliance or equipment, even if due to the alleged fault or negligence of the Association, but these provisions shall not limit the liability of another owner or person to the damaged party nor limit the scope of insurance coverage. The Association shall not be liable to the owner of any Unit for loss or damage, by theft or otherwise of property which may be stored upon or in any individual Unit or in any of the Common Elements.

No set-off, diminution or abatement of assessments for Common Expenses, Limited Common Expenses, Special Assessments or Service Charges, shall be claimed or allowed for the expense, damage or discomfort arising from the making of repairs or improvements to the Common Elements or facilities or to any Unit, or from any action taken by the Association to comply with any law, ordinance, or order of any other governmental authority.

## **ARTICLE 13 TERMINATION OF CONDOMINIUM**

**§13.1 Termination.** In accordance with the Condominium Act, the Condominium may be terminated in whole or part with the agreement of the Unit Owners to which at least eighty (80) percent of the Votes in the Association are allocated, and that percentage of Eligible Mortgage Holders required herein and the Condominium Act. Termination shall not bar the subsequent resubmission of the Property to the Condominium Act.

**§13.2 Effect of Termination.** Upon removal of the Property from the Condominium Act, the Unit Owners shall hold the Property and any proceeds thereof as tenants in common in accordance with the Condominium Act and subject to the Condominium Act with any mortgages or liens affecting a Unit to attach in order of priority against the resulting interest.

## **ARTICLE 14. EMINENT DOMAIN.**

**§14.1 Acquisition of Unit(s).** If a Unit is acquired by eminent domain, to the extent the award is paid to the Association or is controlled by this Declaration or the Association, the award shall be applied to compensate the Unit Owner and his or her mortgagee(s), if any, for the Unit and its percentage interest in the Common Elements, whether or not any Common Elements are acquired. Upon acquisition of the Unit, its Allocated Interests shall be automatically reallocated to the remaining Units in proportion to their respective Allocated

Interests before the taking, and the Association shall promptly prepare, execute, and record an instrument reflecting the reallocations.

If part of a Unit is acquired by eminent domain, to the extent the award is paid to the Association or is controlled by this Declaration or the Association, the award shall be applied to compensate the Unit Owner and his or her mortgagee(s), if any, for the reduction in value of the Unit and its interest in the Common Elements, whether or not any Common Elements are acquired. Upon such acquisition, (i) that Unit's Allocated Interests shall be reduced in proportion to the reduction in the size of the Unit, and (ii) the portion of the Allocated Interest divested from the partially acquired Unit shall automatically be reallocated to that Unit and the remaining Units in proportion to their respective Allocated Interests, with the partially acquired Unit participating in the reallocation on the basis of its reduced Allocated Interests; provided however, that each Unit shall continue to have one vote to permit equality among Units.

**§14.2 Acquisition of Common Elements.** If part of the Common Elements are acquired by eminent domain, the Association shall be entitled to payment of the award, subject, however, to the Condominium Act; generally the portion of the award attributable to the Common Elements taken shall be distributed to the Unit Owners and their mortgagee(s) in accordance with the Condominium Act, unless the Association rebuilds or acquires comparable elements. Any portion of an award attributable to the acquisition of a Limited Common Elements or as may otherwise benefit the Condominium as determined by a Court of competent jurisdiction must be equally divided among the owners of the Units to which that Limited Common Element was allocated at the time of acquisition in proportion to their interests in the Common Elements.

**§14.3 Rights of the Association and Mortgage Holders.** In the event of a proposed acquisition by eminent domain, the Association shall have the right but not the obligation to act and to intervene on behalf of Unit Owners. Nothing contained in this Declaration, the Bylaws or any rule or regulation adopted by the Association, however, shall entitle any Unit Owner or other person to priority over a first mortgagee of a Unit pursuant to its mortgage instrument in the right to receive eminent domain awards for the taking of Units and/or Common Elements.

## ARTICLE 15 AMENDMENTS

**§15.1 General.** Certain amendments to this Declaration may be made unilaterally by the Declarant in accordance with this Declaration and the Condominium Act.

In addition, certain amendments may be unilaterally executed and recorded by the Association as described in Condominium Act Sections 1601-107, Eminent Domain, 1602-108(c), Allocation of Limited Common Elements, 1602-112(a), Relocation of Boundaries Between Adjoining Units, 1602-113, Subdivision of Units and 1602-117(a), Amendment of Declaration, and certain amendments to this Declaration may be made by certain Unit Owners under Sections 1602-108(b), Reallocation of Limited Common Elements, 1602-112(a), Relocation of Boundaries Between Adjoining Units, 1602-113(b), Subdivision of Units, or 1602-118(b) of the Condominium Act.

Otherwise subject to the other provisions of this Declaration and of the Condominium Act, this Declaration and the accompanying Plats and the Plans may be amended as follows:

- (a) *Before Any Conveyance.* Prior to the conveyance of any Unit by the Declarant to a third party purchaser (other than as security for an obligation), the Declarant shall have the right to unilaterally amend and re-amend this Declaration in any manner that the Declarant may deem appropriate.
- (b) *After First Conveyance.* After the first conveyance of Unit by a Declarant to a third party purchaser, the terms of the following procedures shall apply to an amendment of this Declaration:
  - (i) *Development and Special Declarant Rights.* Notwithstanding any other provision of this Declaration, the Declarant acting unilaterally may record amendments to this Declaration which result from the exercise of Development and Special Declarant Rights pursuant to this Declaration and/or the Act.
  - (ii) *Proposal and Notice.* An amendment to the Declaration may be proposed by either by the Board of Directors or by Unit Owners holding at least Ten (10) percent of the votes in the Association. Notice of the subject matter of a proposed amendment, including the proposed text thereof, shall be included in the notice of any meeting in which a proposed amendment is to be considered, and such notice shall be given to all Unit Owners and all eligible Mortgage Holders.
  - (ii) *Approval.* The amendment shall be adopted if it receives the affirmative vote or written consent of Sixty-Seven percent (67%) or more of the total percentage in interest of all votes in the Association in all cases and such Eligible Mortgage Holders, if any, as may be required herein. Unit Owners and mortgagees may express their approval in writing or by proxy. Provided however that no amendment may change the class of uses to which a Unit may be put without the unanimous consent of the Unit Owners. Except as specifically provided to the contrary in this Declaration or the Act, no amendment may alter the boundaries of

a Unit or the Allocated Interests allocated to a Unit without the unanimous consent of all affected owners.

- (iii) *By Written Agreement.* In the alternative, an amendment may be made by an agreement signed by the record owners of Units to which are allocated one hundred percent (100%) of the Units in the manner required for the execution of a deed and acknowledged by at least one of them, together with any required approval by Eligible Mortgage Holders, and such amendment shall be effective when certified and recorded as provided below.

**§15.2 Proviso; Consent of Declarant.** No amendment of this Declaration shall make any change which would in any way affect any of the rights, privileges, powers and options of the Declarant, its successors or assigns, unless the Declarant shall approve such amendment.

**§15.3 Notice, Execution and Recording.** After each amendment to this Declaration adopted by the Association pursuant to this Article has been recorded, notice thereof shall be sent to all Unit Owners and to all Eligible Mortgage Holders, but failure to send such notices shall not affect the validity of such amendment. A certificate of each such amendment shall be executed and acknowledged by such officer(s) or director(s) of the Association designated for that purpose by the Bylaws. The amendment shall be effective when such certificate and copy of the Amendment are recorded.

**§15.4 Notice and Challenge.** No action to challenge the validity of an amendment to this Declaration adopted by the Association may be brought more than one (1) year after such amendment is recorded.

## ARTICLE 16 GENERAL PROVISIONS

**§16.1 Enforcement.** A failure to comply with this Declaration, the Bylaws, and the Rules and Regulations adopted pursuant thereto shall entitle the Association to (a) take court action, including without limitation suit for injunctive relief, and/or (b) take such further action as permitted under the Governing Documents, (c) to impose fines and penalties in accordance with the Rules and Regulations adopted from time to time, and/or (d) enter the Unit or Common Elements in which such violation or breach exists and summarily to abate and cure the violation at the expense of the Unit Owner, and the Board of Directors shall not be deemed guilty in any manner of trespass when enforcing these terms. The exercise of any one remedy shall not preclude the exercise of other remedies provided by law, the Condominium Act, this Declaration or in the Bylaws. In any such enforcement action or proceeding the Association shall be entitled to recover the costs of the proceeding, including reasonable attorney's and paralegal's fees and expenses all with interest at the rate of 18% per annum.

A delay or failure of the Board of Directors to enforce any covenant, restriction or other provision of this Declaration, the Condominium Act, the Bylaws, or the Rules and Regulations adopted pursuant thereto, shall not constitute a waiver of the right to do so thereafter.

**§16.2 Units Not Yet Separately Assessed.** In the event that for any year real estate taxes are not separately taxed and assessed to each separate Unit Owner but are taxed on the

Property as a whole, then each Unit Owner shall pay his proportionate share thereof in accordance with his respective Common Expense Liabilities.

**§16.3 Conflict.** If any provision of this Declaration, the Bylaws, or the Rules and Regulations conflicts with any applicable laws, including, but not limited to, the Condominium Act, then the laws shall be deemed controlling; but the validity of the remainder of this Declaration, the Bylaws, and Rules and Regulations, and the application of any such provision, section, clause, phrase, or word in other circumstances shall not be affected thereby.

**§16.4 Severability.** The invalidity of any provision of this Declaration shall not be deemed to impair or affect in any manner the validity, enforceability or effect of the remainder of this Declaration, and in such event, all of the other provisions of this Declaration shall continue in full force and effect as if such invalid provision had never been included herein.

**§16.5 Waiver.** No provision contained in this Declaration shall be deemed to have been abrogated or waived by reason of any failure to enforce the same irrespective of the number of violations or breaches which may occur.

**§16.6 Captions.** The headings in this Declaration are for purposes of reference only, and shall not limit or otherwise affect the meaning hereof. The table of contents is attached to this Declaration for purposes of reference and convenience only, and shall neither limit nor otherwise affect the meaning of this Declaration. References in this Declaration to Articles, and Schedules without references to the document in which they are contained are references to this Declaration. Schedules are attached to and incorporated by reference into this Declaration.

**§16.7 Gender, Number, Etc.** The use of the singular number in this Declaration shall be deemed to include the plural, the plural the singular, and the use of any one gender shall be deemed applicable to all genders.

**§16.8 Power to Interpret.** Any dispute or disagreement with any person other than the Declarant with respect to interpretation or application of this Declaration or the Bylaws or the Rules and Regulations shall be determined by the Board of Directors, which determination shall be final and binding on all parties.

**§16.9 Disputes with Declarant and Arbitration.** In any dispute between one or more Unit Owners and the Declarant regarding the Common Elements, the Board of Directors shall act for the Unit Owners, and any agreement with respect thereto by the Board of Directors shall be conclusive and binding upon the Unit Owners.

All claims, disputes and other matters in question between the Declarant, on the one hand, and the Association or any Unit Owner(s), on the other hand, arising out of or relating to a Unit, the Common Elements, the Limited Common Elements, this Declaration, the Bylaws, the Rules and Regulations, or the deed to any Unit or the breach thereof, or the course of dealing between any Unit Owner, the Association and the Declarant, except for claims which have been waived by the acceptance of a deed, shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining unless the parties mutually agree otherwise in writing. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the



arbitrators shall be final, and judgment may be entered upon it in accordance applicable law in any court having jurisdiction thereof.

## ARTICLE 17 NOTICES

### §17.1 Notices.

(a) *To Unit Owners.* All notices, demands, bills and statements or other communications affecting the Condominium shall be given to Unit Owners by the Association in writing and shall be delivered in hand, delivered to the Unit, or sent by United States mail, postage prepaid, or if the Unit Owner consents, by electronic mail which consent shall be presumed when an Owner provides an email address unless such consent is specifically disclaimed. Regular monthly statements may be electronically mailed and do not need to be sent by United States mail. If such notification is of a default or lien, then it shall be sent by registered or certified United States mail, return receipt requested, postage prepaid, addressed to the Unit Owner at the address which the Unit Owner shall designate in writing and filed with the Secretary of the Association, or if no such address is so designated, the address of the Unit of such Unit Owner who is the record owner thereof.

(b) *Notice to the Association.* All notices, demands, statements or other communications affecting the condominium given by the Unit Owners to the Association shall be in writing, and shall be deemed to be delivered personally, securing a written receipt therefore, or sent by United States mail, postage prepaid, return receipt requested, addressed to the Association at the principal office of the managing agent, if any, and to the Secretary of the Association at the Secretary's address.

(c) *Notice to Eligible Mortgage Holder.* All notices, demands, statements or other communications affecting the Condominium given by the Association to any Eligible Mortgage Holder shall be in writing and shall be delivered personally, securing a written receipt, or sent by United States mail, postage prepaid, addressed to the Eligible Mortgage Holder at the address identified pursuant to the notice given to the Association when it became an Eligible Mortgage Holder.

WITNESS its hand and seal as of \_\_\_\_\_, 2017.

218-220 WASHINGTON AVENUE LLC

\_\_\_\_\_  
Witness

By: \_\_\_\_\_  
Patrick Tinsman, its Manager

State of Maine  
Cumberland, ss

\_\_\_\_\_, 2017

Personally appeared the above-named Patrick Tinsman in his said capacity and acknowledged the foregoing Declaration to be his free act and deed, and the free act and deed of said limited liability company, before me,

\_\_\_\_\_  
Name: \_\_\_\_\_  
Maine Attorney at Law/Notary Public

Exhibit A      Legal Description  
Exhibit B      Condominium Plat  
Exhibit C      Condominium Floor Plans  
Exhibit D      Allocated Interests  
Exhibit E      Condominium Association Bylaws  
Exhibit F      Legal Description of Future Land Phases

## Exhibit A

Declar Wash Heights Condo 7.31.2017.doc

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**Exhibit B     Condominium Plat**

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**Exhibit C     Condominium Floor Plans**

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## Exhibit D Percentages of Allocated Interests

| <u>Unit #</u> | <u># Votes</u> | <u>% Interest in<br/>Common Elements</u> | <u>Condominium % Common<br/>Expense Liability</u> |
|---------------|----------------|------------------------------------------|---------------------------------------------------|
|---------------|----------------|------------------------------------------|---------------------------------------------------|

Units to be created at time of unit sale.

Each Unit shall each have one vote in the Association on a formula of one vote per Unit in the Condominium Association to permit equality among Units.

The Condominium Association shall have the express power to separately assess "Service Charges" and "Limited Common Expenses" against a Unit and the Owner thereof for services rendered by the Association to or for the benefit of that Unit and its Limited Common Elements.

**Exhibit E     Condominium Association Bylaws**

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**Exhibit F**  
**City of Portland Inclusionary Zoning Requirements**  
*[This Language is taken from the City's Ordinance]*

In accordance with Division 30 of the City of Portland's Zoning Ordinance, Section 14-487, the rental of the Restricted Units will be restricted to households at or below 100% of the area median income (AMI) who occupy the Unit as their primary residence and the Owner of the Restricted Units shall comply with and be responsible for compliance with the City's requirements, which may be directly enforced by the City. The City shall have the final approval of whether or not a household meets the income or size requirements of each Workforce Unit prior to the signing of the lease.

Eligible households may not qualify if at the time of application any member of the household owns residential real estate. The City has the right to investigate the income and assets of the occupants of the Unit to help determine a household's income. This may include making certain assumptions about the average returns that would be reasonable to expect from certain investments including stocks, bonds, annuities, mutual funds, dividends, trusts,

# H & A HOPKINSON & ABBONDANZA

A T T O R N E Y S

Please respond to our Portland office

- James A. Hopkins
- 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.

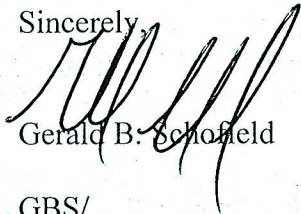
By virtue of this letter, and on behalf of 202, it is respectfully requested that the City of Portland decline to approve or move forward or find complete the proposed project of 218-220 until such time as matters resolve by and between 202 and 218-220 and/or Mr. Morse.



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. B. 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.

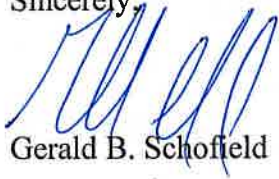
While 218-220 and Mr. Morse own the fee interest in and to the land upon which the proposed project rests, my client's have a clear, recorded and legal right to the portion of the land which is affected by the Maintenance Easement and Negative Easement. Property remains within the ownership and control 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

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- 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  
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**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:

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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 printed name.

Gerald B. Schofield

GBS/

Email: [gschofield@hablaw.com](mailto:gschofield@hablaw.com)

## 218 Washington Avenue Project Concerns

1 message

**'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 <randanne@aol.com>, Pam Macomber <pam@nimestonespa.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

---

## Suggestion re: shared-use path at 218 Washington Avenue

1 message

---

**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).

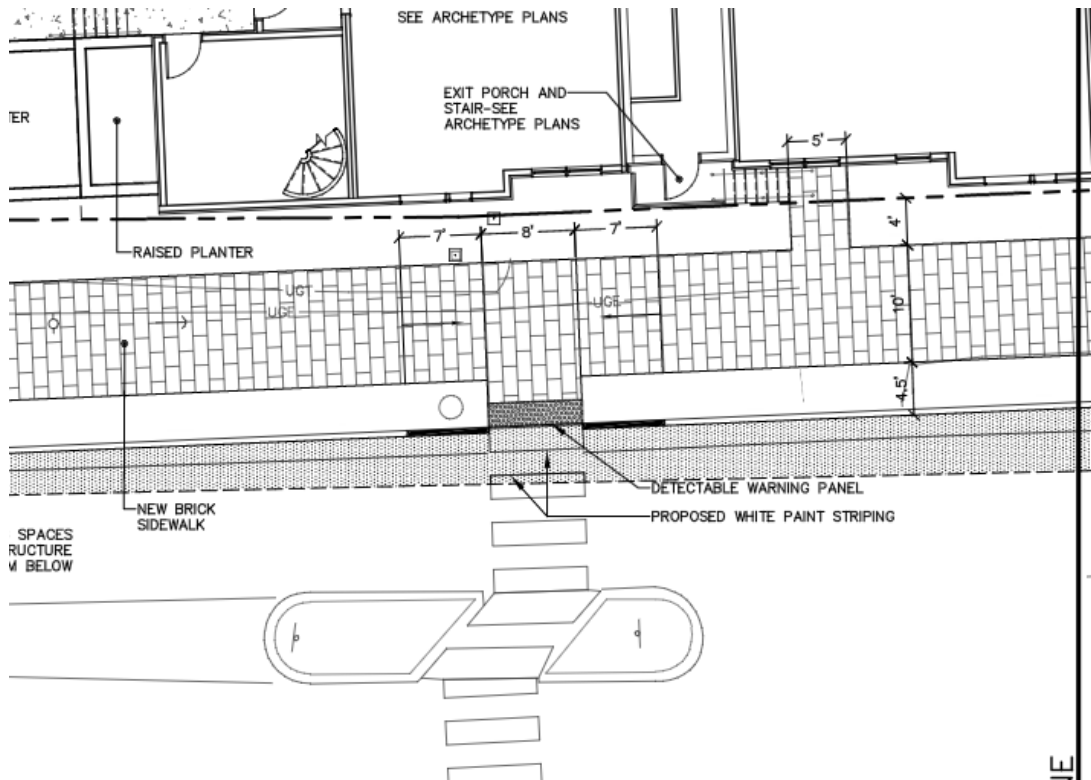
First of all, the rebuilt sidewalk should preserve this ramp in front of the current 218 Washington building to give cyclists an easy, direct route onto the off-street path:



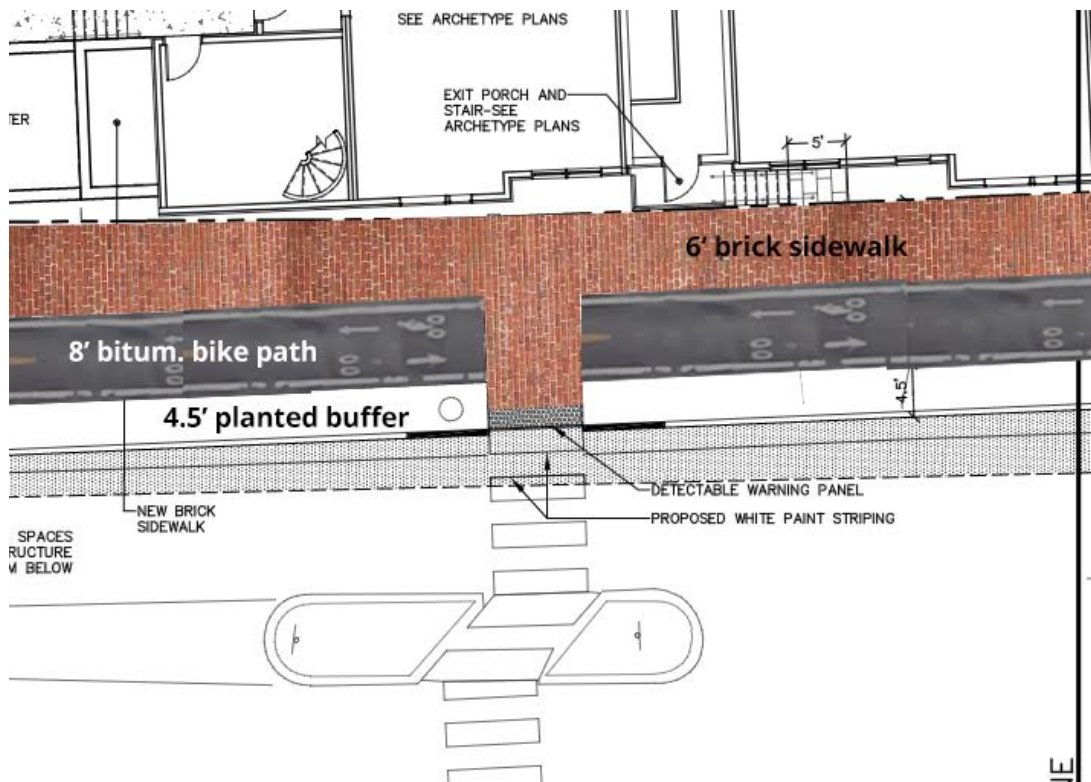
Second suggestion has to do with the conversion of the shared-use path's material to more brick – which I'm not thrilled about. Brick has higher maintenance issues and its

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)

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**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,

A handwritten signature in blue ink, appearing to read "G. B. Schofield", with a stylized, cursive script.

Gerald B. Schofield  
GBS/  
Email: [gschofield@hablaw.com](mailto:gschofield@hablaw.com)



# 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

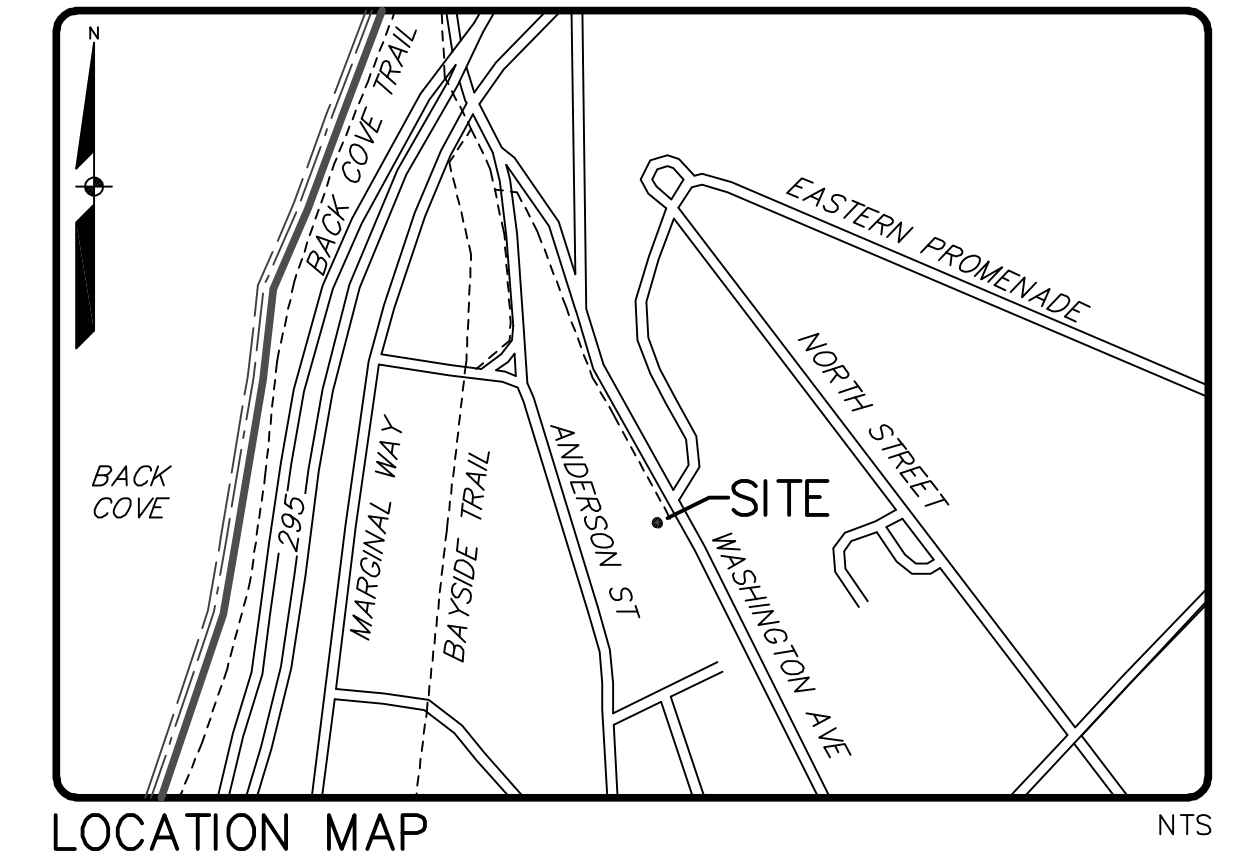
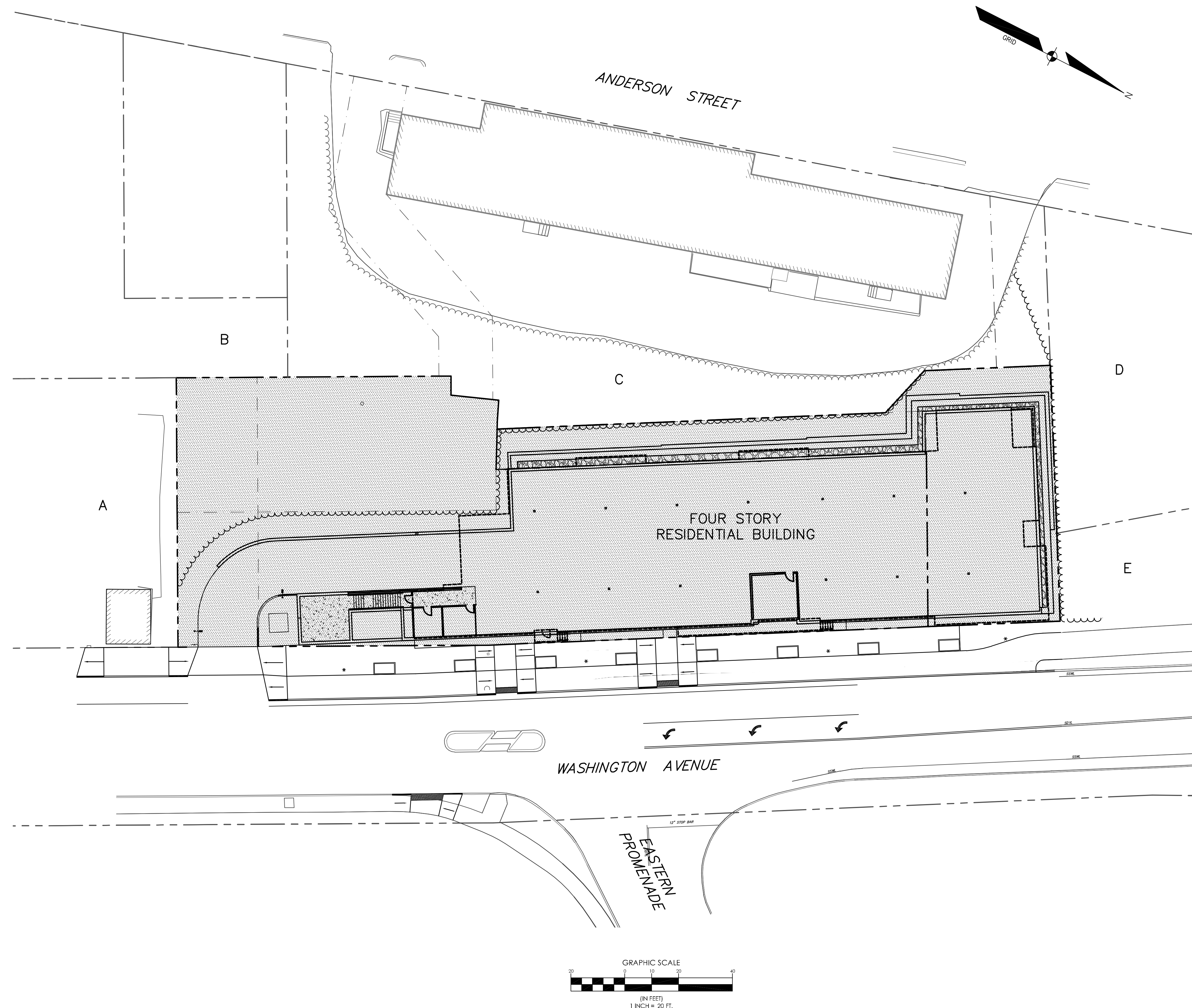
WWW.SEBAGOTECHNICS.COM  
75 John Roberts Rd. Suite 1A South Portland, ME 04106 Tel. 207-200-2100  
250 Goddard Rd. Suite B Lewiston, ME 04240 Tel. 207-763-5656

PROJECT ARCHITECT:

ARCHETYPE  
ARCHITECTS  
48 UNION WHARF  
PORTLAND, MAINE

LIST OF ABUTTERS:

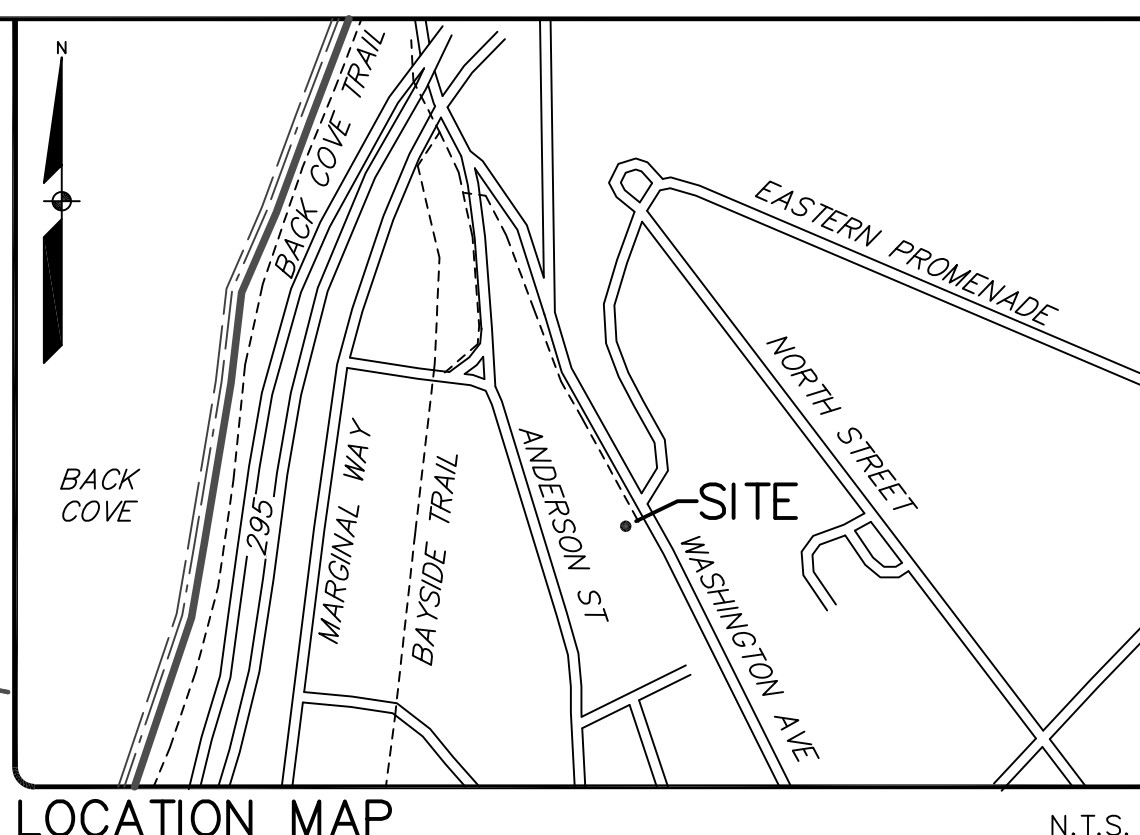
| KEY | ABUTTER                 | BOOK/PAGE            |
|-----|-------------------------|----------------------|
| A   | 202 WASHINGTON LLC      | 25509/156            |
| B   | 203 ANDERSON LLC        | 21587/100 & 21587/96 |
| C   | ROCKINGHAM LLC          | 27757/278            |
| D   | PINE STATE 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 |





LOCATION MAP N.T.S.

GENERAL NOTES:

1. 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 27859 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)
2. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND SURVEY BY SEBAGO TECHNIQS, INC. WITH SUPPLEMENTAL TOPOGRAPHY OBTAINED FROM LIDAR INFORMATION.
3. 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.
4. 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.
5. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD TOGETHER WITH PLANS PROVIDED BY THE CITY. UNDERGROUND UTILITIES WITHIN WASHINGTON AVENUE ARE APPROXIMATE AND MAY NOT HAVE BEEN FIELD VERIFIED. DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. OWNERS AND/OR DESIGNERS SHOULD CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.

[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 Geddard Rd.  
Suite B  
Lewiston, ME 04240  
Tel. 207-783-5656

EXISTING CONDITIONS PLAN  
 OF:  
 218-220 WASHINGTON AVENUE  
 218 WASHINGTON AVENUE  
 PORTLAND, MAINE  
 FOR:  
 218-220 WASHINGTON AVENUE LLC  
 199 ELDERBERRY ROAD  
 SOUTH PORTLAND, MAINE 04106

|             |          |
|-------------|----------|
| PROJECT NO. | SCALE    |
| 06172       | 1" = 20' |

SHEET 2 OF 23

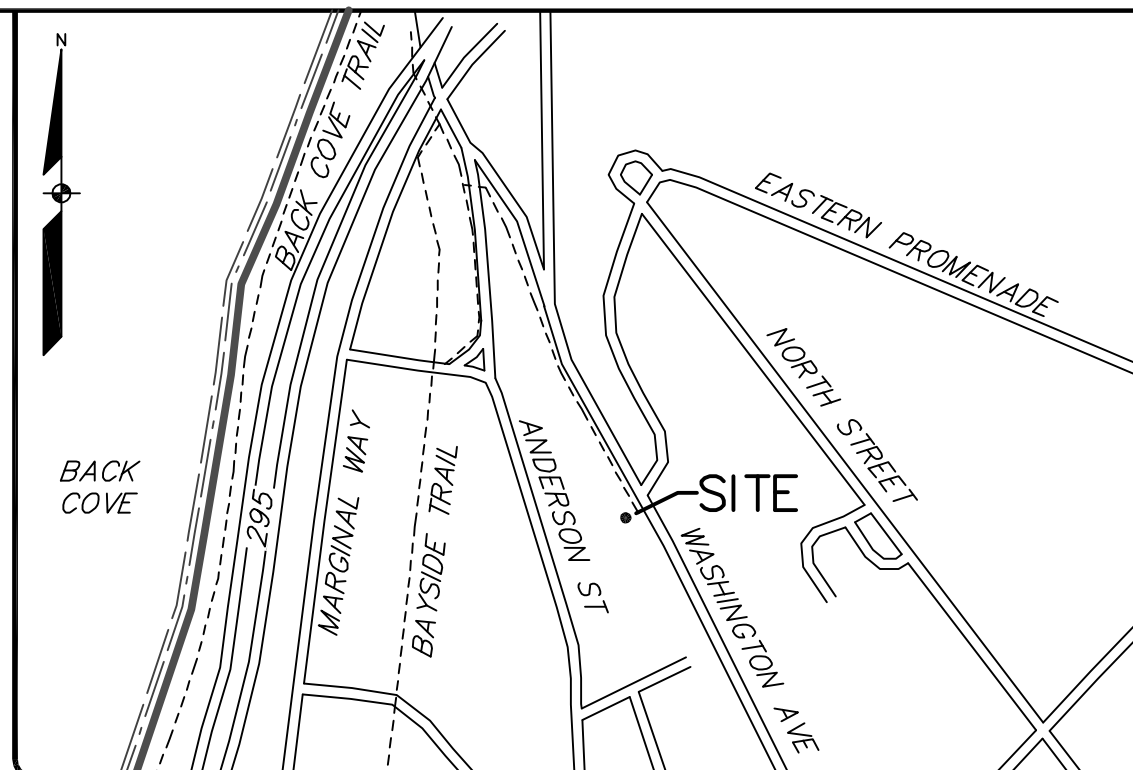
06172EC dwo TAB·EC







WAIVERS GRANTED



LOCATION MAP N.T.S.

THE RECORD OWNERS OF THE PARCELS ARE AS FOLLOWS:

TAX MAP 10 BLOCK A LOT 15: GLENN MORSE 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)

2. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND SURVEY BY SEBAGO TECHINICS, INC. WITH SUPPLEMENTAL TOPOGRAPHY OBTAINED FROM LIDAR INFORMATION.

3. PLAN REFERENCES:

A. STANDARD BOUNDARY SURVEY, AS-BUILT TOPOGRAPHY AND DEED ANALYSIS LOT AT 1802-N/4 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.

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.

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5. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD TOGETHER WITH PLANS PROVIDED BY THE CITY. UNDERGROUND UTILITIES WITHIN WASHINGTON AVENUE ARE APPROXIMATE AND MAY NOT HAVE BEEN FIELD VERIFIED. HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.

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. IMPERVIOUS AREA  | 90%        | 79%        |

\* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION

9. PLAN DEPICTS FIRST FLOOR LEVEL OF BUILDING. BUILDING INCLUDES FOUR FLOORS AND A TOTAL AREA OF 92,400 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 SITE. A SECOND HYDRANT IS LOCATED AT THE CORNER OF WASHINGTON AVENUE AND GOLD STREET, APPROXIMATELY 330 FEET SOUTH OF THE SITE.

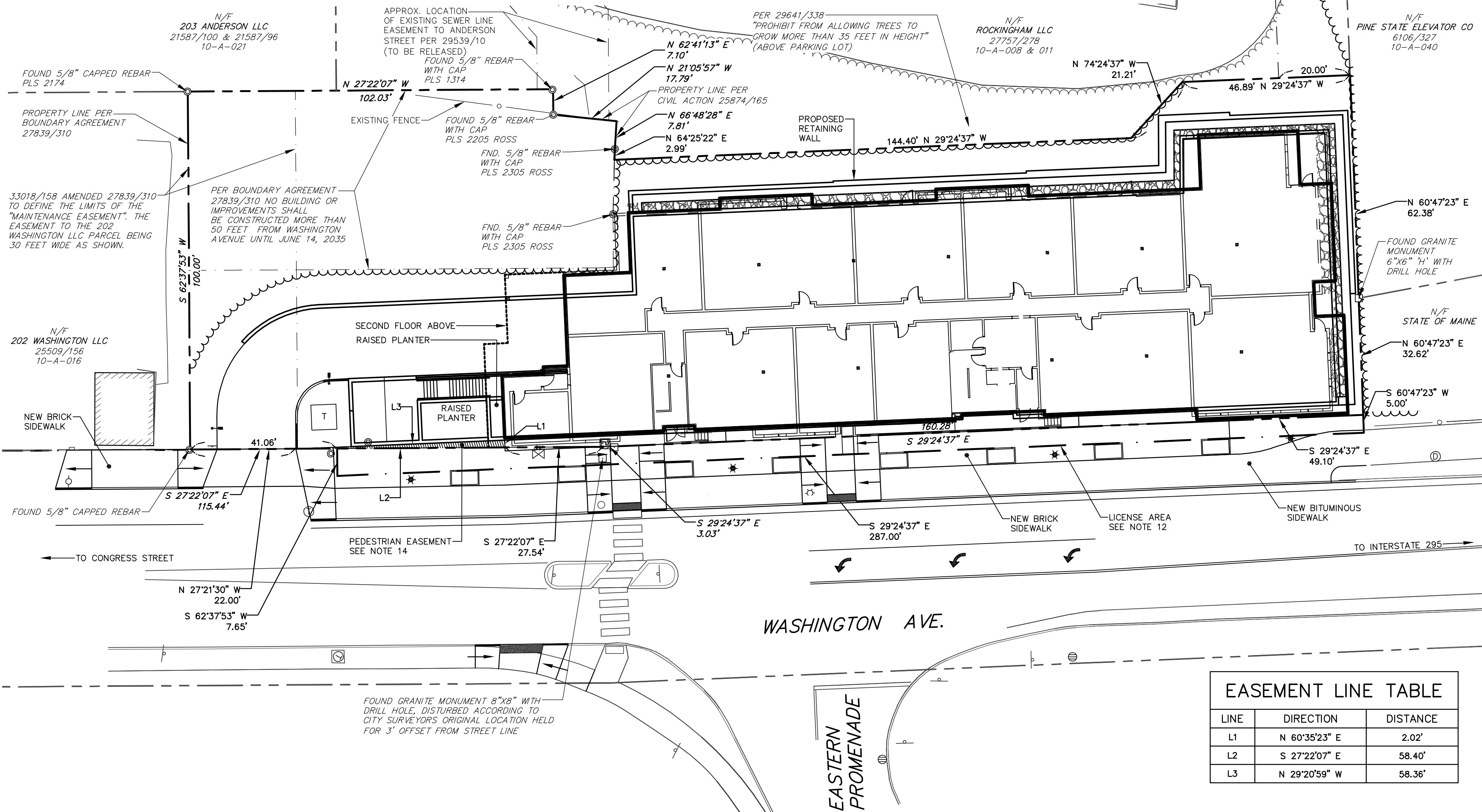
14. PLAN DEPICTS A PEDESTRIAN EASEMENT TO BE GRANTED TO THE CITY OF PORTLAND.

|                       | (REQUIRED) | (PROPOSED) |
|-----------------------|------------|------------|
| MIN. LOT SIZE         | NONE       | 28,372 SF  |
| MIN. LOT AREA PER DU  | 435 SF     | 630 SF     |
| MIN. STREET FRONTAGE  | 20 FT      | 32.85 FT   |
| MIN. LOT WIDTH        | NONE       | 32.85 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%        |

\* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION

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14. PLAN DEPICTS A PEDESTRIAN EASEMENT TO BE GRANTED TO THE CITY OF PORTLAND.

|                   |       |                         |
|-------------------|-------|-------------------------|
| EXISTING          |       | PROPERTY LINE/R.O.W.    |
| ---               | ---   | ABUTTER LINE/R.O.W.     |
| ---               | ---   | EASEMENT                |
| ⊗                 | ---   | MONUMENT                |
| ---               | ---   | IRON PIPE/ROD           |
| CL/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                    |
| G                 | ---   | GAS                     |
| ⊗                 | ---   | GAS GATE VALVE          |
| W                 | ---   | WATER                   |
| ⊕                 | ---   | WATER SHUT OFF          |
| S                 | ---   | SANITARY SEWER          |
| ⊙                 | ---   | SANITARY MANHOLE        |
| ⊙C                | ---   | SANITARY CLEANOUT       |
| ---               | ---   | STORM DRAIN             |
| ⊙                 | ---   | DRAINAGE MANHOLE        |
| ⊕                 | ⊕     | CATCH BASIN             |
| OHU               | ---   | OVERHEAD UTILITY        |
| UGU               | ---   | UNDERGROUND UTILITY     |
| ⊕                 | ---   | TRANSFORMER PAD         |
| ⊕                 | ---   | TELEPHONE MANHOLE       |
| ☆                 | ---   | LIGHT POLE              |
| U                 | ---   | UTILITY POLE            |
| G                 | ---   | GUY WIRE                |
| ---               | ---   | GUARD RAIL              |
| ---               | ---   | LICENSE AREA            |



| EASEMENT LINE TABLE |               |          |
|---------------------|---------------|----------|
| LINE                | DIRECTION     | DISTANCE |
| L1                  | N 60°35'23" E | 2.02'    |
| L2                  | S 27°22'07" E | 58.40'   |
| L3                  | N 29°20'59" W | 58.36'   |

## STATE OF MAINE

CUMBERLAND COUNTY SS REGISTRY OF DEEDS  
RECEIVED \_\_\_\_\_, 20\_\_\_\_  
AT \_\_\_\_h \_\_\_\_m \_\_\_\_M. AND RECORDED IN  
PLAN BOOK \_\_\_\_\_ PAGE \_\_\_\_\_  
  
ATTEST \_\_\_\_\_ REGISTRAR

| DESIGNED |  |  |  |  |     | CHECKED                                                                                                                                                                                                         |     |          |                      |  |  |     |
|----------|--|--|--|--|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|----------------------|--|--|-----|
|          |  |  |  |  | WTC |                                                                                                                                                                                                                 |     |          |                      |  |  | MWE |
|          |  |  |  |  |     | B                                                                                                                                                                                                               | WTC | 7/24/16  | CITY SUBMITTAL NO. 6 |  |  |     |
|          |  |  |  |  |     | A                                                                                                                                                                                                               | WTC | 12/15/18 | CITY SUBMITTAL NO. 1 |  |  |     |
|          |  |  |  |  |     | REV:                                                                                                                                                                                                            | BY: | DATE:    | STATUS:              |  |  |     |
|          |  |  |  |  |     | 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. |     |          |                      |  |  |     |

**SEBAGO**  
T E C H N I C S

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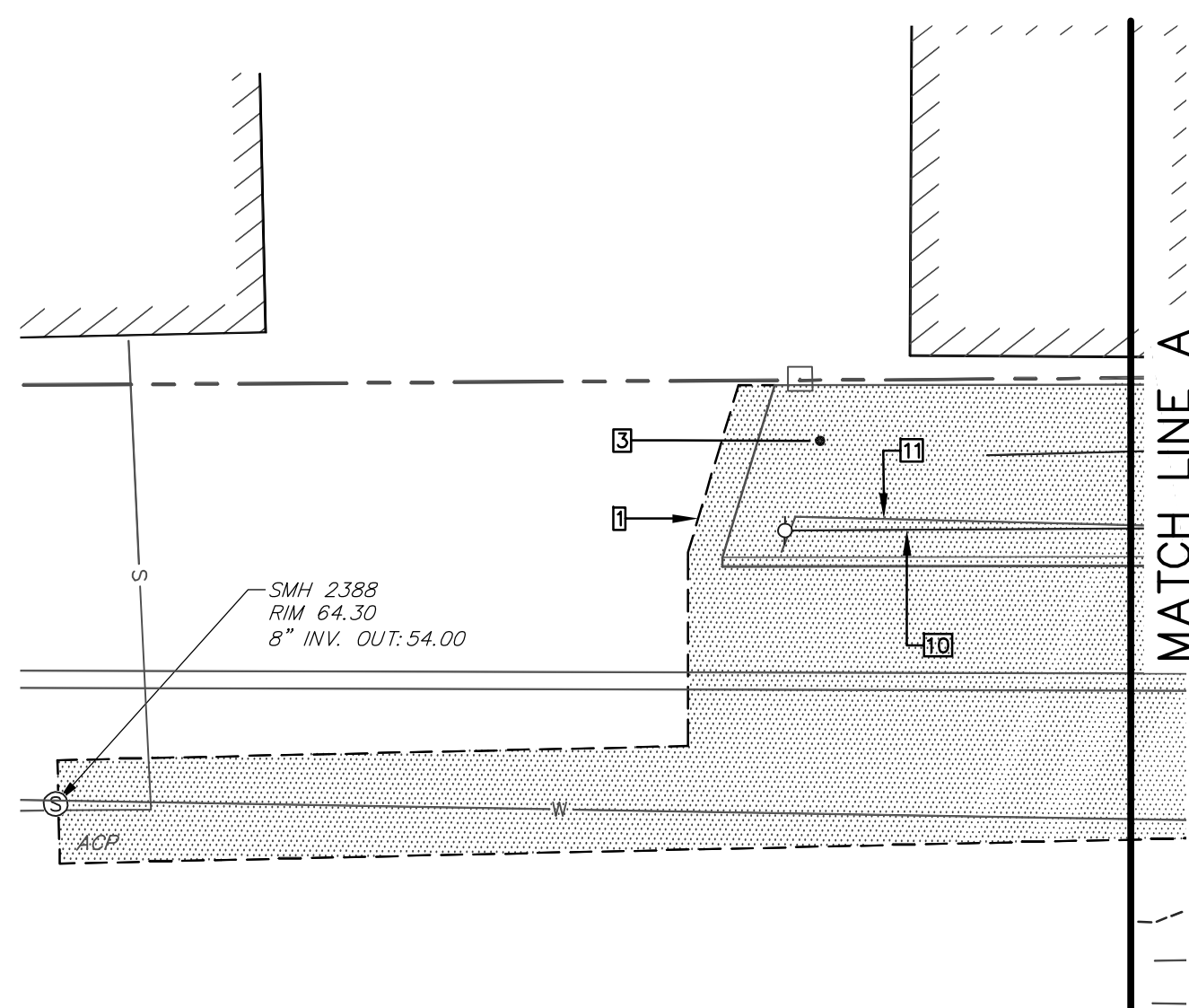
[WWW.SEBAGOTECHNICS.COM](http://WWW.SEBAGOTECHNICS.COM)

75 John Roberts Rd.  
Suite 1A  
South Portland, ME 04106  
Tel. 207-200-2100

250 Goddard Rd.  
Suite B  
Lewiston, ME 04240  
Tel. 207-783-5656

|                                                                                  |                                                                                             |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| SUBDIVISION PLAT                                                                 |                                                                                             |
| OF:<br>218-220 WASHINGTON AVENUE<br>218-220 WASHINGTON AVENUE<br>PORTLAND, MAINE | FOR:<br>218-220 WASHINGTON AVENUE LLC<br>199 ELDERBERRY ROAD<br>SOUTH PORTLAND, MAINE 04106 |
| PROJECT NO.<br>06172                                                             | SCALE<br>1" = 20'                                                                           |
| SHEET 1 OF 1                                                                     |                                                                                             |

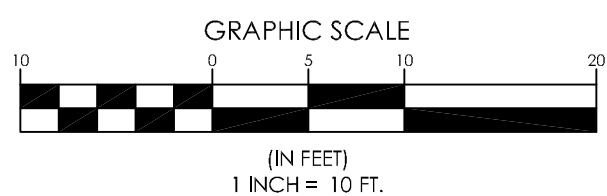




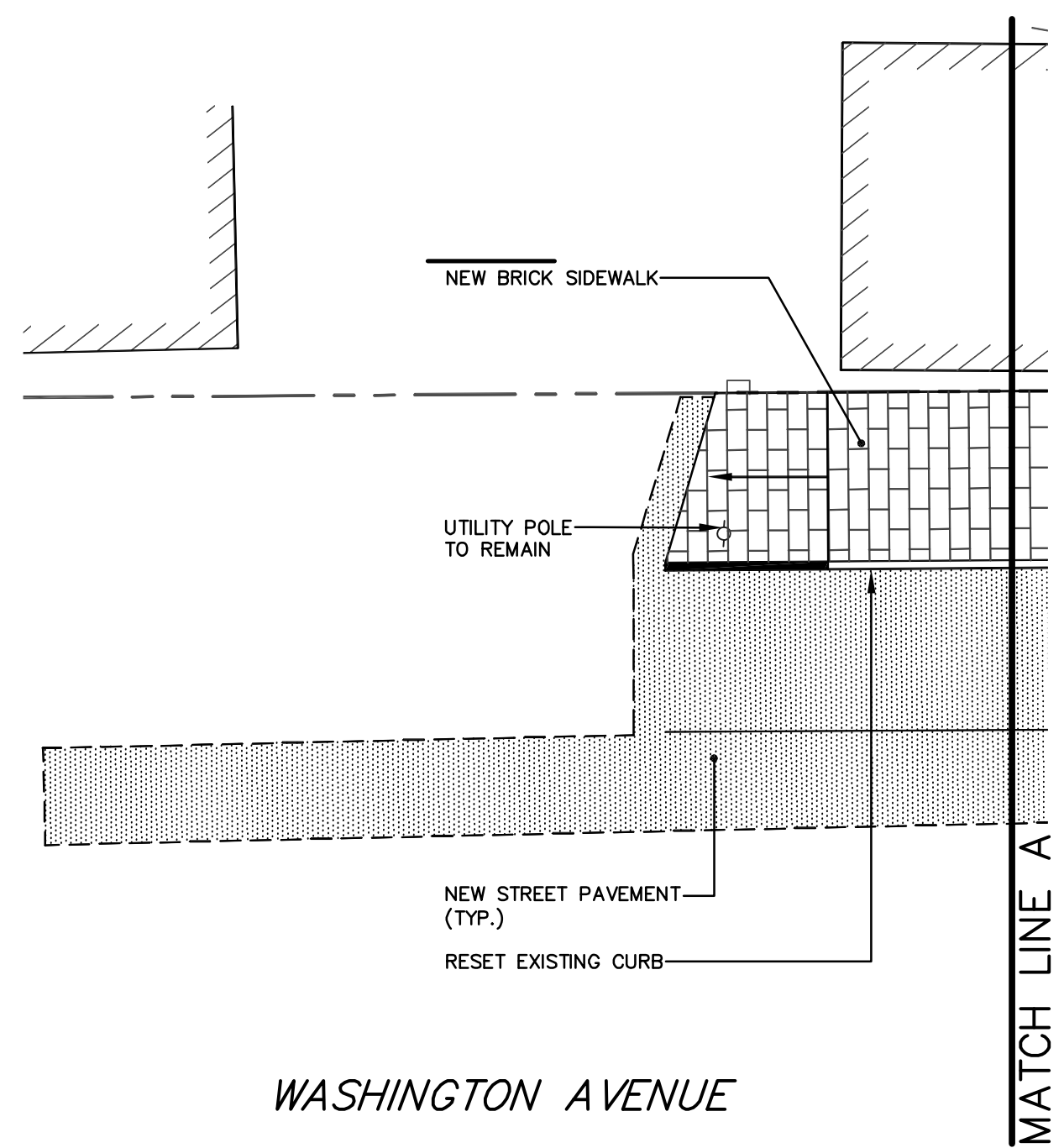
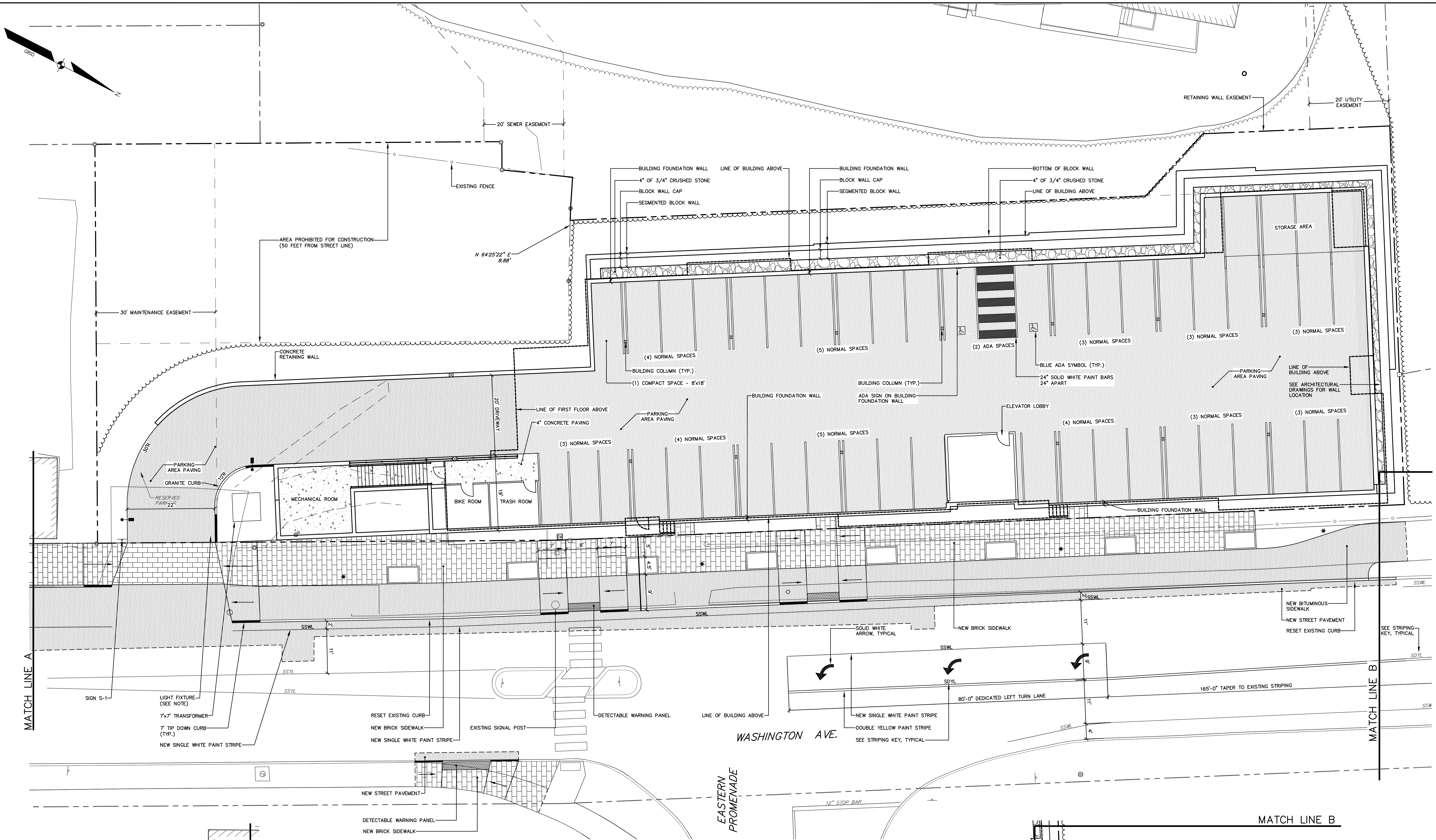
1. CONTRACTOR SHALL NOTIFY DIGSAFE FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.
2. EXISTING MATERIALS TO BE SALVAGED AND RE - USED SHALL BE STORED AND PROTECTED DURING CONSTRUCTION.
3. EXISTING HOUSE, DECK AND MISCELLANEOUS ITEMS SHALL BE REMOVED AFTER ELECTRICAL AND NATURAL GAS SERVICES HAVE BEEN REMOVED. REMOVE ALL FOUNDATIONS AS PART OF THIS DEMOLITION.
4. ALL DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE TO ALL APPLICABLE CODES AND REGULATIONS.

- 1 SAW CUT PAVEMENT
- 2 REMOVE ASPHALT PAVING
- 3 REMOVE AND SALVAGE BRICK PAVERS
- 4 REMOVE AND SALVAGE GRANITE CURB
- 5 REMOVE TREE
- 6 REMOVE WOOD FENCING
- 7 REMOVE CHAIN LINK FENCING
- 8 REMOVE SIGN
- 9 REMOVE AND SALVAGE SIGN
- 10 OVERHEAD POWER AND UTILITY POLE TO BE REMOVED BY CMP
- 11 UNDERGROUND ELECTRIC CONDUIT TO REMAIN
- 12 UNDERGROUND TELEPHONE CONDUIT TO REMAIN
- 13 WATER SERVICE TO BE TERMINATED AS REQUIRED BY THE PORTLAND WATER DISTRICT
- 14 TRAFFIC SIGNAL POLE TO REMAIN
- 15 REMOVE AND SALVAGE TACTILE WARNING PANEL
- 16 REMOVE AND SALVAGE RIGHT OF WAY MONUMENTS
- 17 REMOVE PLANTER STONES AND SHRUBS
- 18 NATURAL GAS SERVICE TO BE REMOVED AND REPLACED BY UNILIT
- 19 WATER MAIN TO REMAIN
- 20 CHAINLINK FENCING TO REMAIN
- 21 STREET LIGHT TO REMAIN

| EXISTING                                                                              | PROPOSED                |
|---------------------------------------------------------------------------------------|-------------------------|
| =====                                                                                 | PROPERTY LINE/R.O.W.    |
| -----                                                                                 | ABUTTER LINE/R.O.W.     |
| -----                                                                                 | EASEMENT                |
| =====                                                                                 | BUILDING                |
| =====                                                                                 | DECK/STEPS/<br>OVERHANG |
| =====                                                                                 | EDGE PAVEMENT           |
| =====                                                                                 | PAVEMENT SAWCUT         |
| =====                                                                                 | EDGE CONCRETE           |
| =====                                                                                 | PAVEMENT PAINT          |
| =====                                                                                 | EDGE GRAVEL             |
| =====                                                                                 | CURB LINE               |
| =====                                                                                 | RETAINING WALL          |
|  | DECIDUOUS TREE          |
|  | SIGN                    |
|                                                                                       | DEMOLITION KEY          |







**NOTE:**

(2) LIGHT FIXTURES SHALL BE SPAULDING CIMARRON, 20 FOOT POLE, COLOR BLACK

**LEGEND**

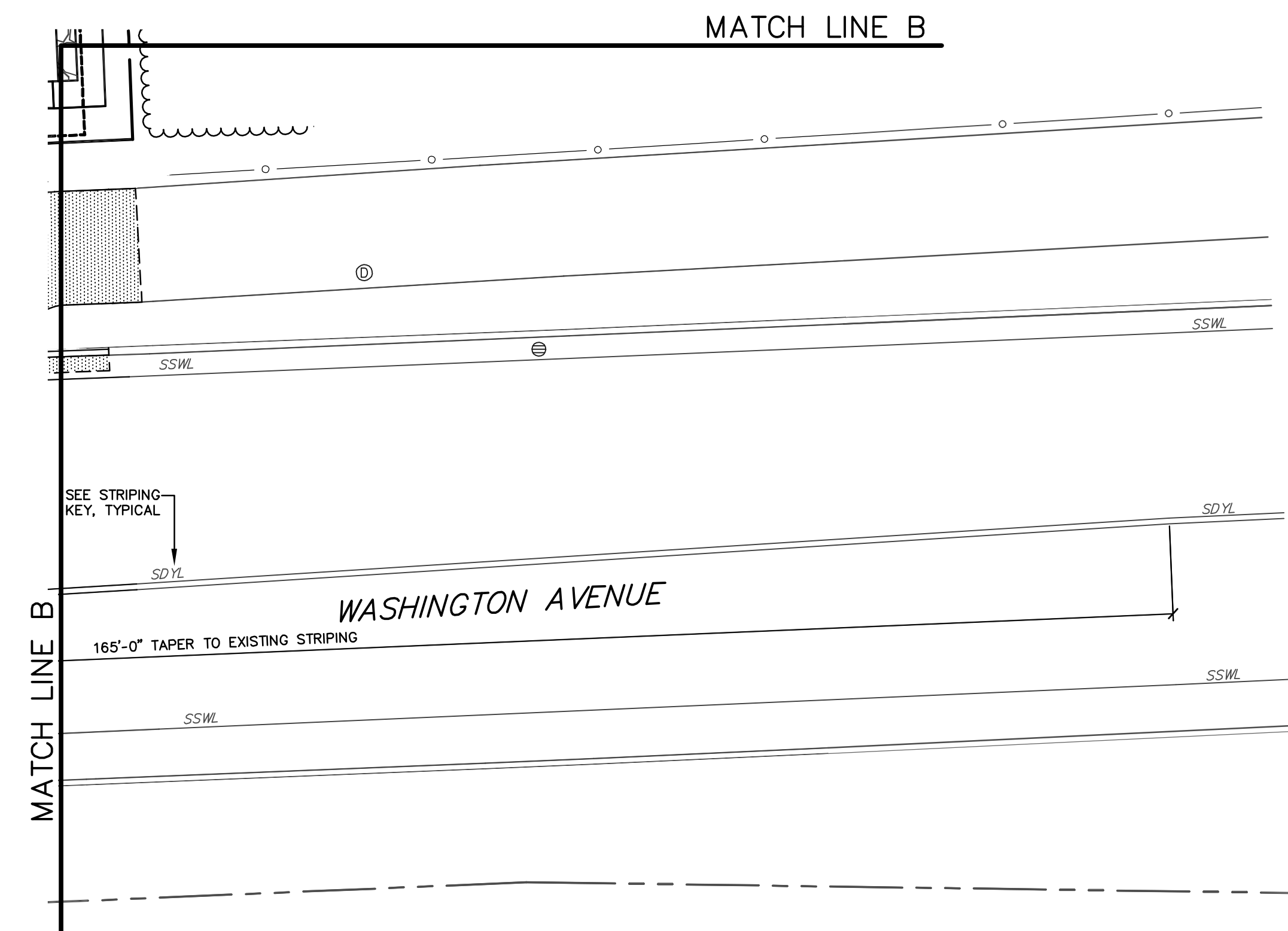
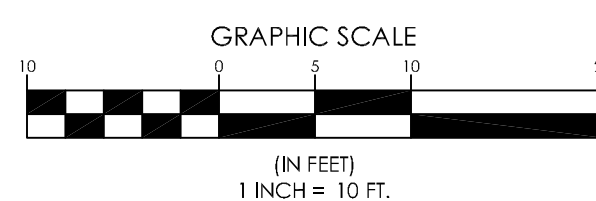
| EXISTING | PROPOSED             |
|----------|----------------------|
|          | PROPERTY LINE/R.O.W. |
|          | EASEMENT             |
|          | BUILDING             |
|          | DECK/STEPS/OVERHANG  |
|          | EDGE PAVEMENT        |
|          | PAVEMENT SAWCUT      |
|          | EDGE CONCRETE        |
|          | EDGE BRICK           |
|          | PAVEMENT PAINT       |
|          | EDGE GRAVEL          |
|          | CURB LINE            |
|          | RETAINING WALL       |
|          | DECIDUOUS TREE       |
|          | SIGN                 |

**SIGN SCHEDULE**

|     |                                                             |
|-----|-------------------------------------------------------------|
| S-1 | STOP SIGN                                                   |
| S-2 | 12"x18" HORIZONTAL SIGN-BICYCLES TRANSITION TO STREET AHEAD |

**STRIPING SCHEDULE**

|      |                          |
|------|--------------------------|
| SSWL | SOLID SINGLE WHITE LINE  |
| SDYL | SOLID SINGLE YELLOW LINE |
| SDYL | SOLID DOUBLE YELLOW LINE |
| SSWL | SOLID SINGLE WHITE LINE  |
| SDYL | SOLID DOUBLE YELLOW LINE |



| DESIGNED | CHECKED |
|----------|---------|
| WTC      | WTC     |

|                                      |                                                                                                                                                                                                                                               |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D. WTC 07-24-17 CITY SUBMITTAL NO. 6 | STATUS:<br>DATE:<br>BY:<br>THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNIQUES, INC. ANY ALTERATIONS, ADDITIONS, OR DELETIONS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNIQUES, INC. |
| 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: 01/17                           |                                                                                                                                                                                                                                               |

WWW.SEBAGOTECHNIQUES.COM  
75 John Stevens Rd. 250 South Portland Rd.  
South Portland, ME 04106  
Tel. 207-783-5656

SITE PLAN LOWER LEVEL  
OF: 218-220 WASHINGTON AVENUE  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE

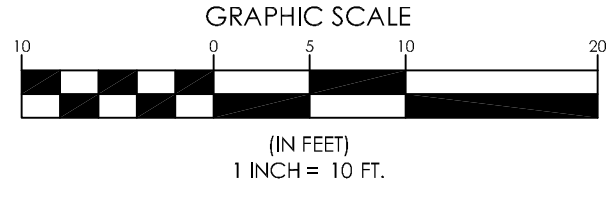
FOR: 218-220 WASHINGTON AVENUE LLC  
190 ELDRETH ROAD  
SOUTH PORTLAND, MAINE 04106

| PROJECT NO. | SCALE  |
|-------------|--------|
| 06172       | 1"=10' |

SHEET 3 OF 12

061725.dwg, 7/26/17





**SITE PLAN UPPER LEVEL**

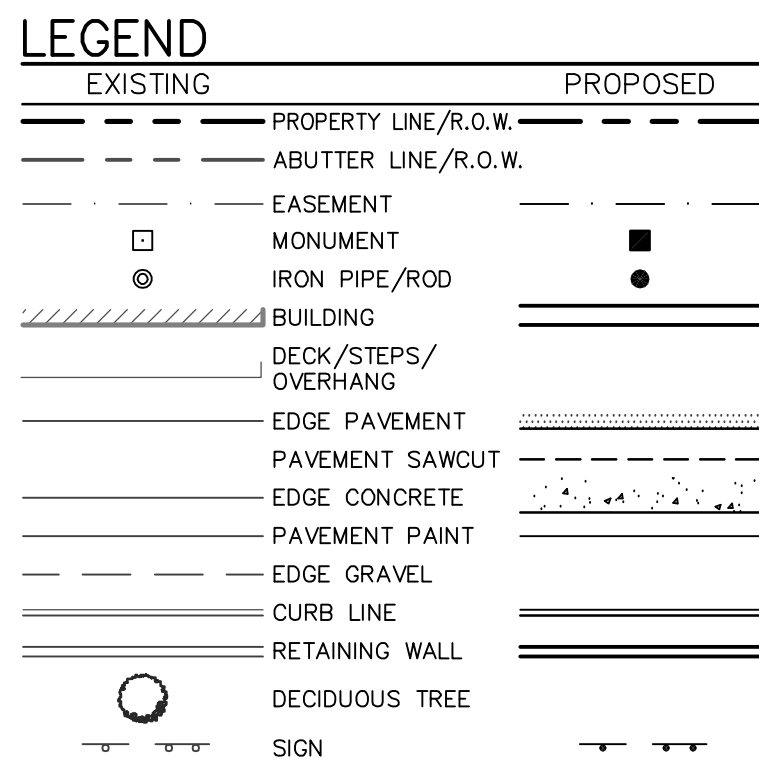
OF:  
**218-220 WASHINGTON AVENUE**  
 218-220 WASHINGTON AVENUE  
 PORTLAND, MAINE

FOR:  
**218-220 WASHINGTON AVENUE LLC**  
 199 ELDGEERRY ROAD  
 SOUTH PORTLAND, MAINE 04106

|                    |              |
|--------------------|--------------|
| <b>PROJECT NO.</b> | <b>SCALE</b> |
| 06172              | 1"=10'       |

**SHEET 4 OF 12**





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)                  | 52.90 (SD-7)                  | 48"   |
| DMH-1                      | 58.90 | 52.50 (SD-3)<br>54.00 (SD-2)  | 52.10 (SD-4)                  | 48"   |
| DMH-2                      | 58.60 | 51.28 (SD-5)                  | 51.28 (SD-6)<br>51.62 (SD-16) | 48"   |
| DMH-3                      | 58.40 | 47.00 (SD-9)<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)                  |                               | 48"   |
| 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"   |
| OC5-1                      | 58.60 | 50.80 (SD-10)                 | 47.57 (SD-11)                 | 60"   |
| OIL-CR. SEPARATOR          | 58.30 | 54.52 (SD-1)                  | 54.42 (SD-2)                  | 48"   |

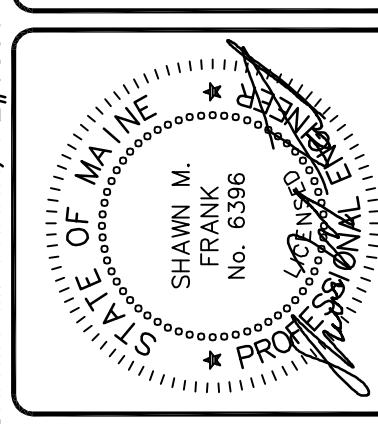
### STORM DRAIN PIPE DATA

| NAME  | SIZE | LENGTH | SLOPE   |
|-------|------|--------|---------|
| SD-1  | 10"  | 94'    | 0.830%  |
| SD-2  | 10"  | 25'    | 1.688%  |
| SD-3  | 12"  | 62'    | 2.067%  |
| SD-4  | 12"  | 12'    | 5.549%  |
| SD-5  | 15"  | 3'     | 1.258%  |
| 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"  | 54'    | 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 NOT SHOWN MAY BE LOCATED ANYWHERE TO REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO VERIFY CONTACT D-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VISIT EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
2. THE PROJECT IS TO BE SERVICED 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 SHALL MEET THE CITY OF PORTLAND WATER AND SEWER DISTRICT STANDARDS.
3. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES, PUBLISHED BY BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003 OR LATER EDITION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
4. ALL SLOESIDES STEEPER THAN 3:1 (H: V) SHALL BE LINED WITH EROSION CONTROL BLANKET OR ROCK WALL AS SHOWN ON THIS PLAN.
5. STALLS HAVE BALL BARRIER AROUND ALL CATCH BASIN NOT IN PAVEMENT.
6. INSTALL SILL SACS IN ALL CATCH BASINS IN PAVEMENT.
7. SEE DETAIL SHEETS FOR EROSION CONTROL NOTES
8. SOIL STOCKPILES SHALL NOT BE LOCATED WITHIN 100 FEET OF ANY MAJOR DRAINAGE. STOCKPILES SHALL BE CONTAINED WITH A DOUBLE DUNDATION OF FILTRATION BARRIER. SEE EROSION CONTROL NOTES.
9. PIPE MATERIALS:
  - a. STORM DRAIN: HOPE HOPE WITH THE EXCEPTION OF:
    - SD-13 SHALL BE 14" DUCTILE IRON LINED AND COATED
    - SD-12, SD-14 & SD-15 SHALL BE 15" ASD HOPE STORM
    - UNDRUN PIPES PER PORTLAND HOPE TYPE "D"
    - SANITARY SEWER: SD-35 HOPE
    - WATER MAIN: PER PORTLAND WATER DISTRICT STANDARDS
  - b. SEWER: SD-40 PVC

SHAWN M. FRANK, PE #6396



|                                                                                                                                                                   | DESIGNED                          | CHECKED |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------|
| KDG                                                                                                                                                               | SMF                               |         |
| D                                                                                                                                                                 | WTC 03/24/17 CITY SUBMITTAL NO. 6 |         |
| C                                                                                                                                                                 | WTC 06/15/17 CITY SUBMITTAL NO. 2 |         |
| B                                                                                                                                                                 | WTC 04/11/17 CITY SUBMITTAL NO. 3 |         |
| A                                                                                                                                                                 | WTC 12/15/16 CITY SUBMITTAL NO. 1 |         |
| REV:                                                                                                                                                              | DATE:                             | STATUS: |
| THIS PLAN OR PORTION NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEABO TECHNIKS INC. ANY ALTERATIONS TO THIS PLAN SHALL BE INDICATED BY THE REVISIONS HEREON. |                                   |         |

|                                                                                                        |     |       |         |
|--------------------------------------------------------------------------------------------------------|-----|-------|---------|
| REV:                                                                                                   | BY: | DATE: | STATUS: |
| THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, |     |       |         |

**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 04240  
Tel. 207-783-5666

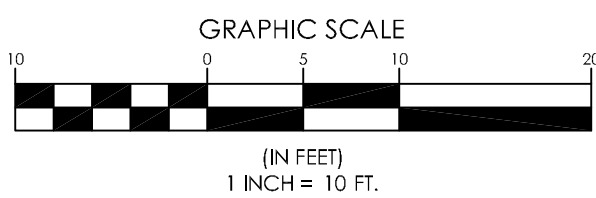
UTILITY PLAN  
OF:  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE  
FOR:  
218-220 WASHINGTON AVENUE LLC  
199 ELDERBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

|             |          |
|-------------|----------|
| PROJECT NO. | SCALE    |
| 06172       | 1" = 20' |

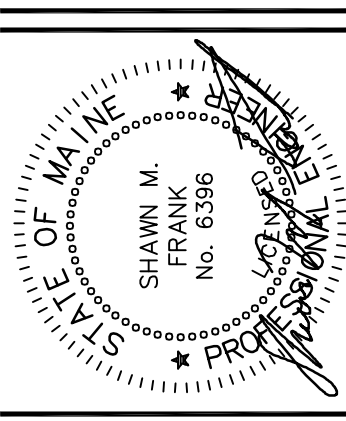
SHEET 5 OF 12

06172GU.dwg, TAB: 06172GU-1





SHAWN M. FRANK, PE #6396



| DESIGNED<br>KDG                           | CHECKED<br>SMF |
|-------------------------------------------|----------------|
| D WTC 07-24-17 CITY SUBMITTAL NO. 6       |                |
| C WTC 08-15-17 CITY SUBMITTAL NO. 5       |                |
| B WTC 04/11/17 CITY SUBMITTAL NO. 3       |                |
| A WTC 12/15/16 CITY SUBMITTAL NO. 1       |                |
| REV'D BY: _____ DATE: _____ STATUS: _____ |                |



OF:  
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 6 OF 12

6172GU.dwg, TAB: 06172GU-2

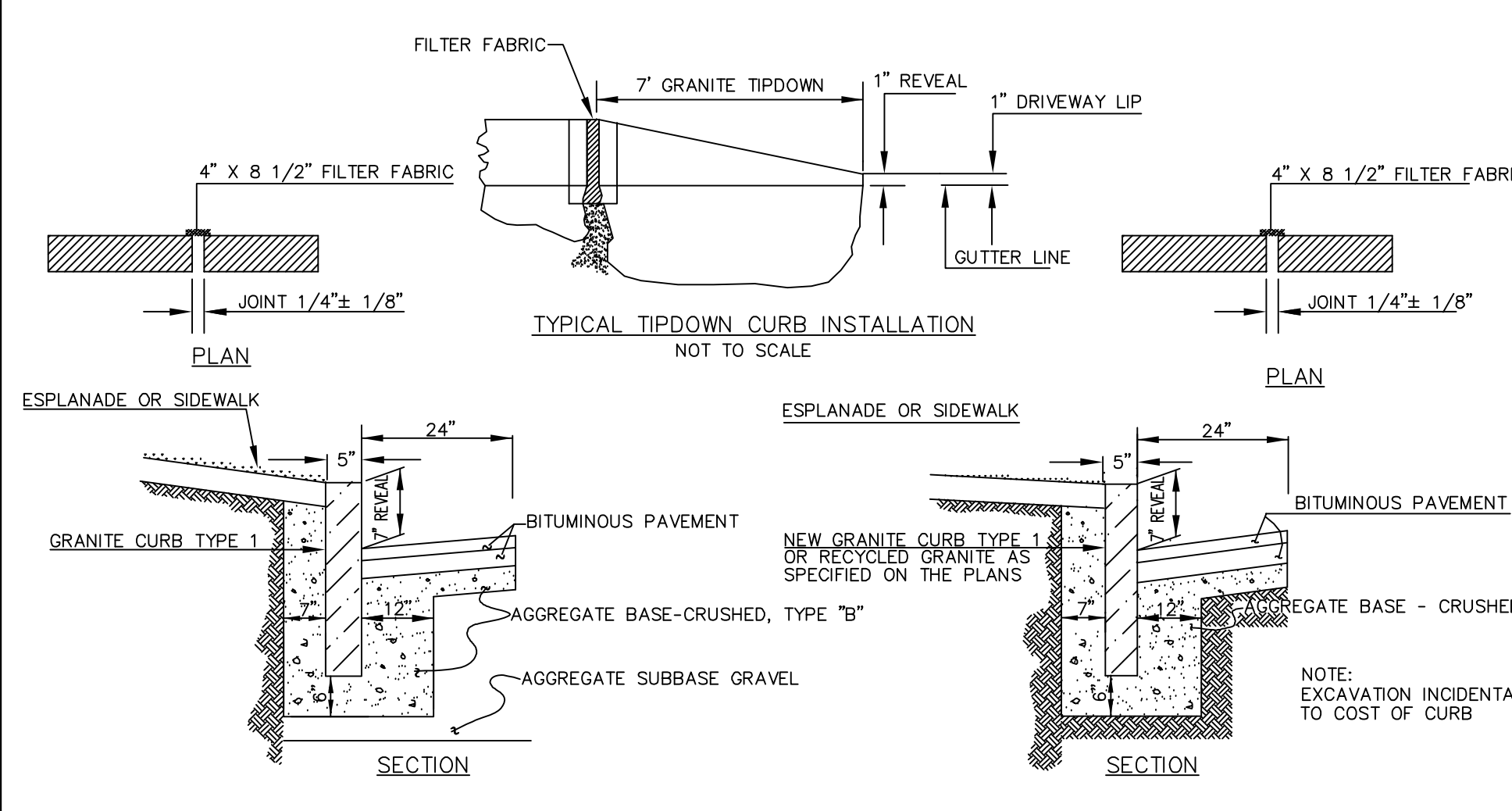




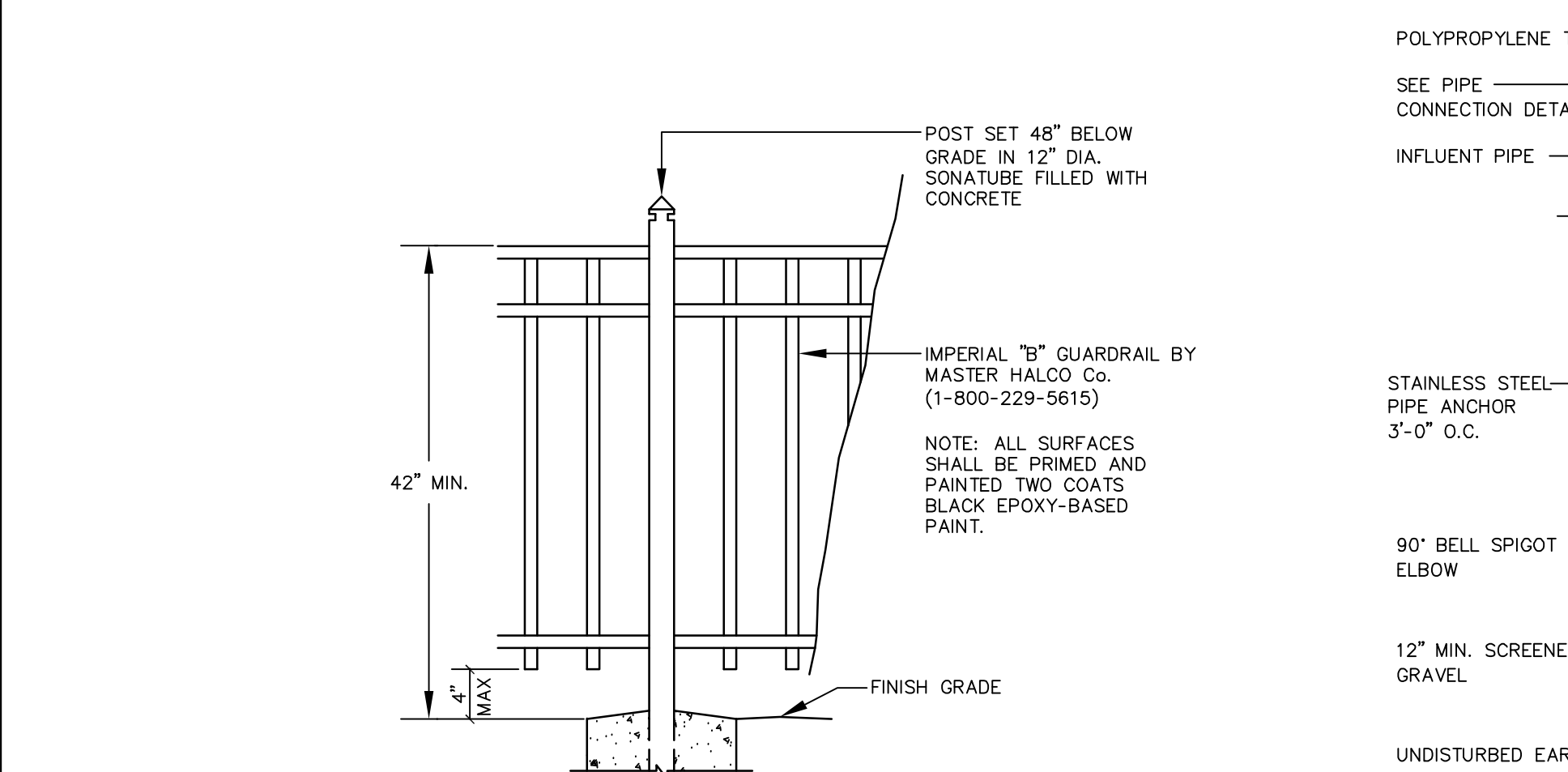




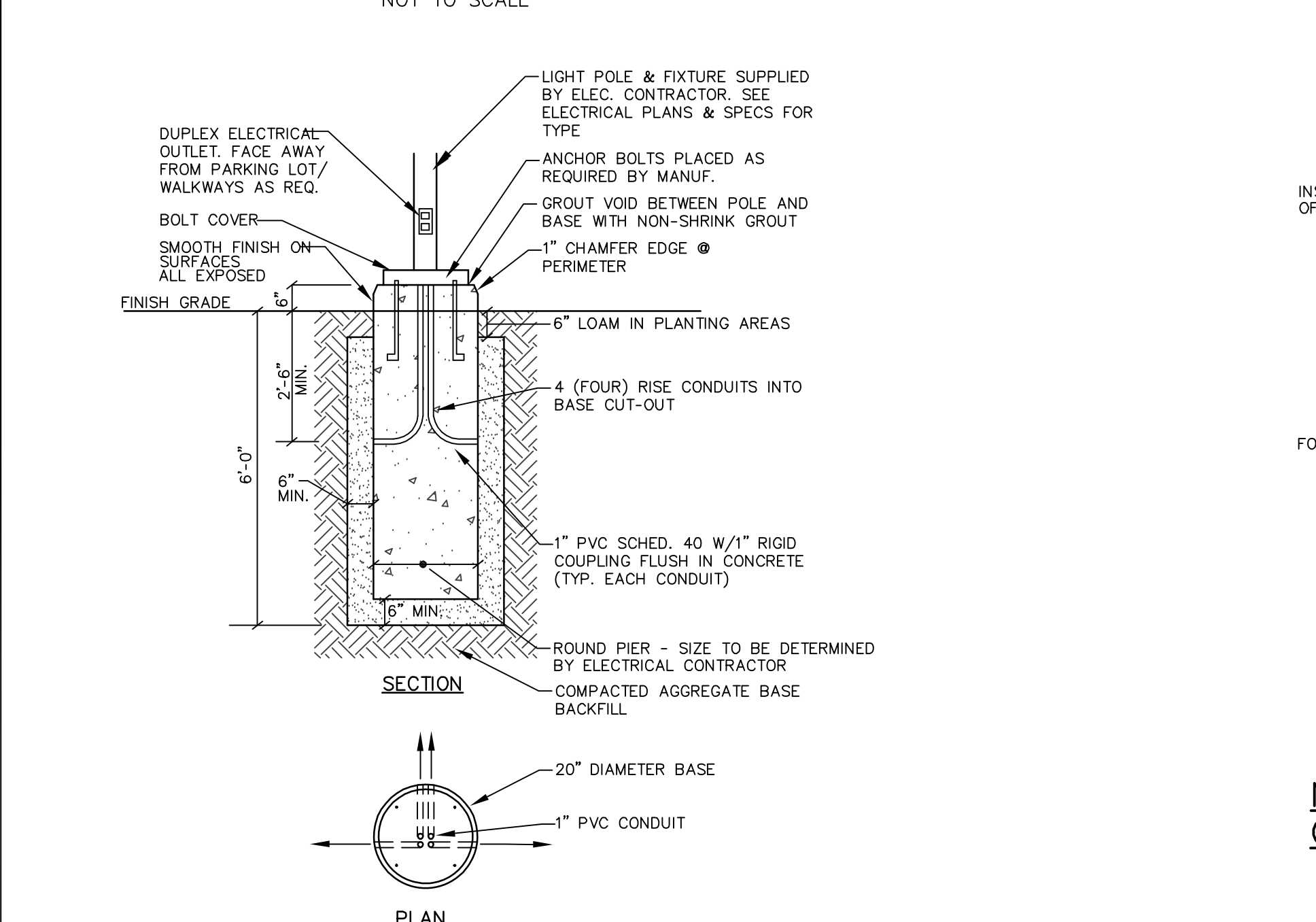




INSTALLATION OF CURB, TYPE 1  
NOT TO SCALE

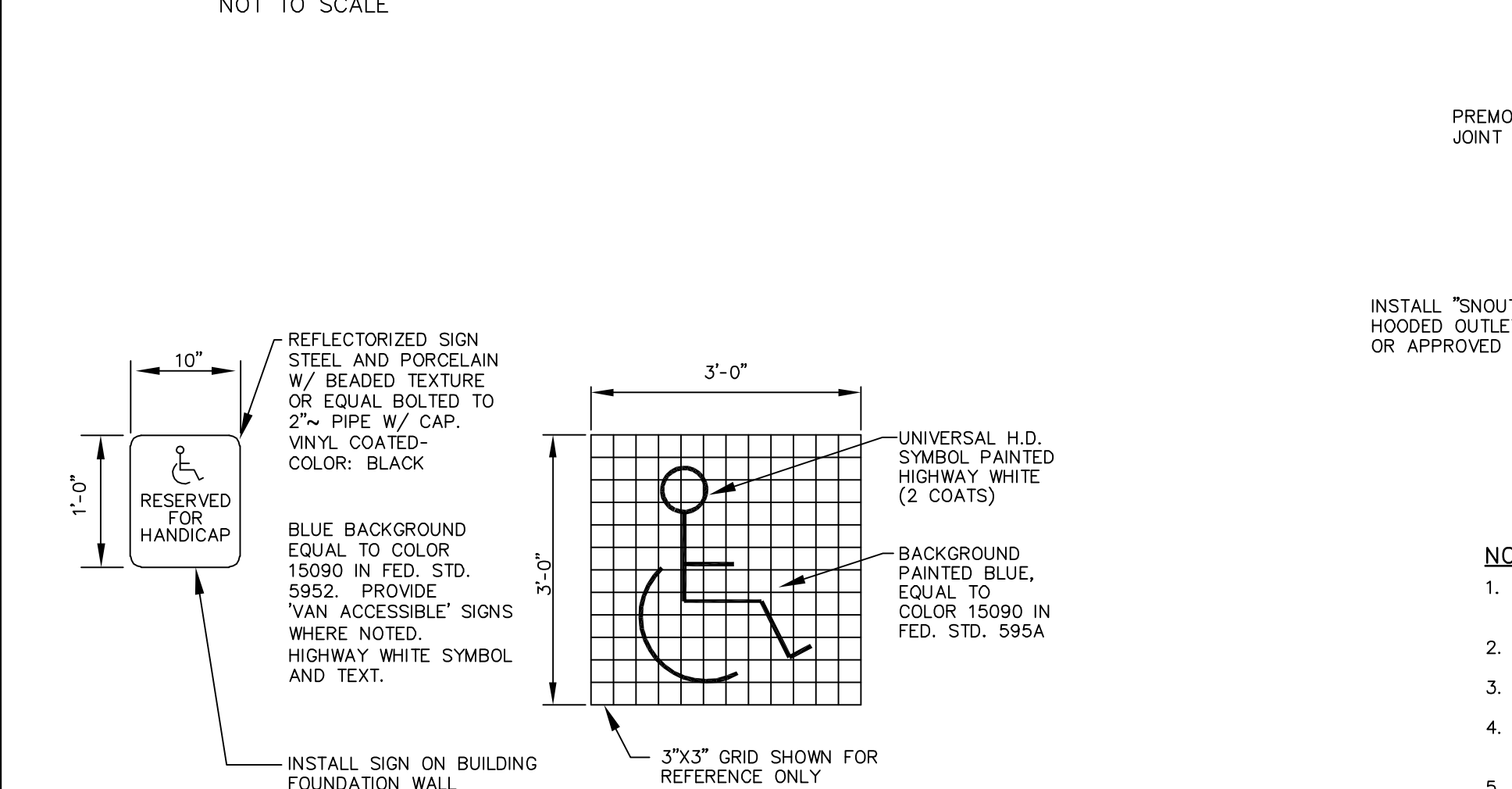


PEDESTRIAN GUARDRAIL  
(ALUMINUM TUBING)  
NOT TO SCALE

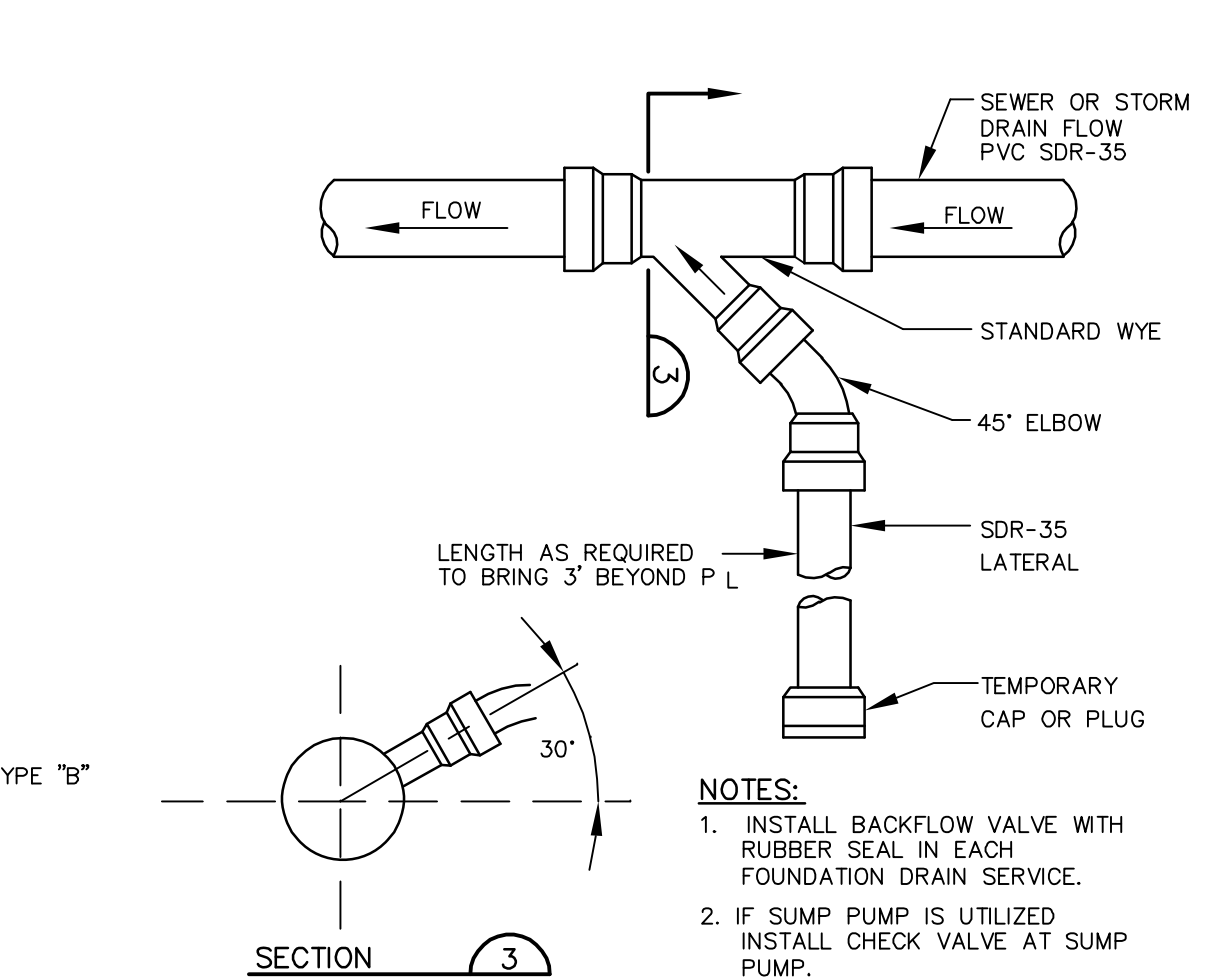


- NOTES:
1. CONCRETE  $f'_c=5000$  psi,  $\phi$  28 DAYS WITH STEEL REINFORCEMENT.
  2. CONDUIT AND ANCHOR BOLTS PLACED AS REQUIRED PROVIDED BY ELECTRICAL CONTRACTOR.
  3. PROVIDE 2 COATS BITUMINOUS DAMPROOFING FOR ALL CONCRETE BELOW GRADE.
  4. INSTALL BASE 3'-0" ABOVE FINISH GRADE IN LOCATIONS WHERE POLES ARE IN PARKING LOT PAVEMENT.
  5. LIGHT POLE BASE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.

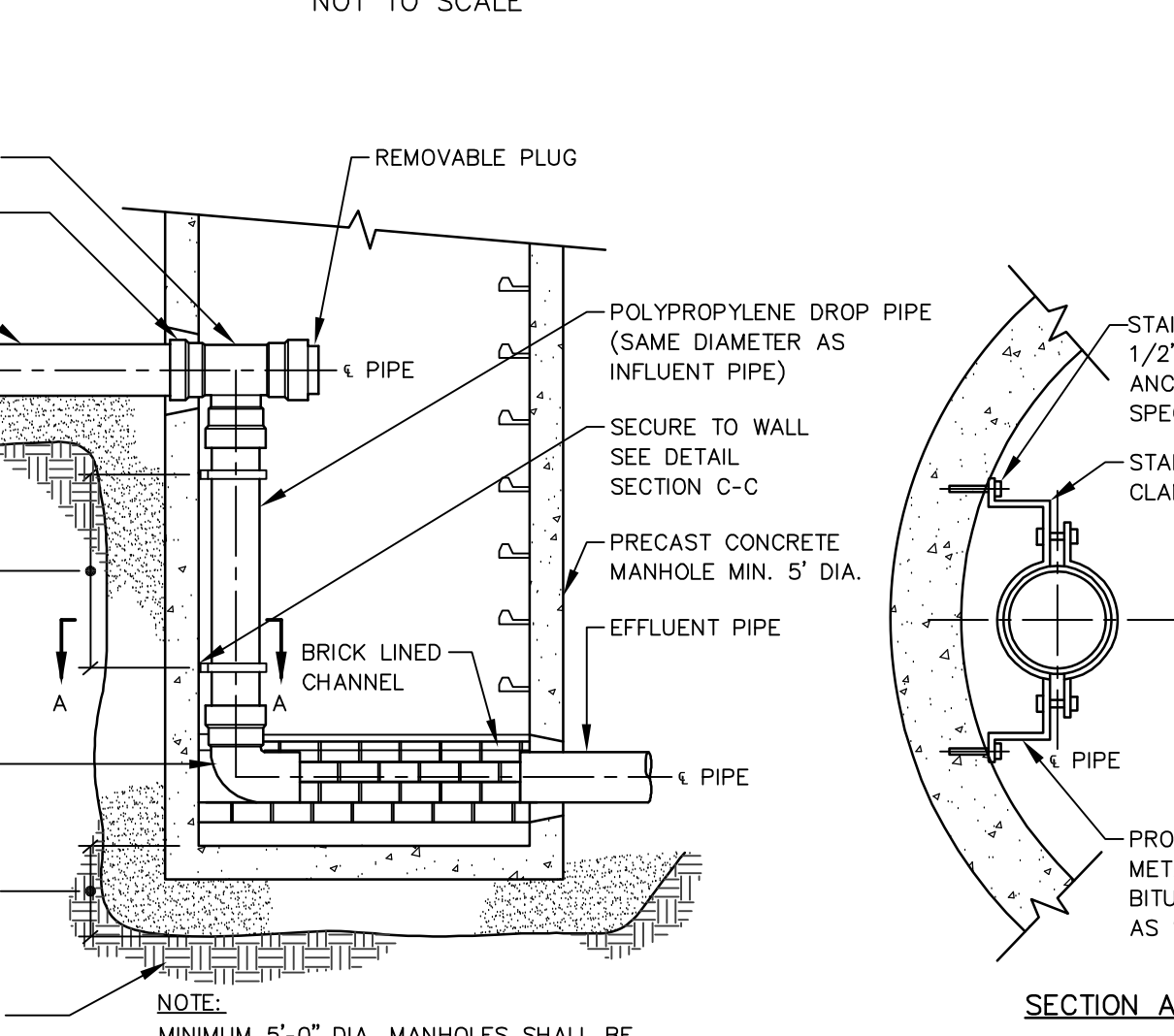
20" ROUND LIGHT POLE BASE  
NOT TO SCALE



HANDICAP SIGNS AND STRIPING  
NOT TO SCALE

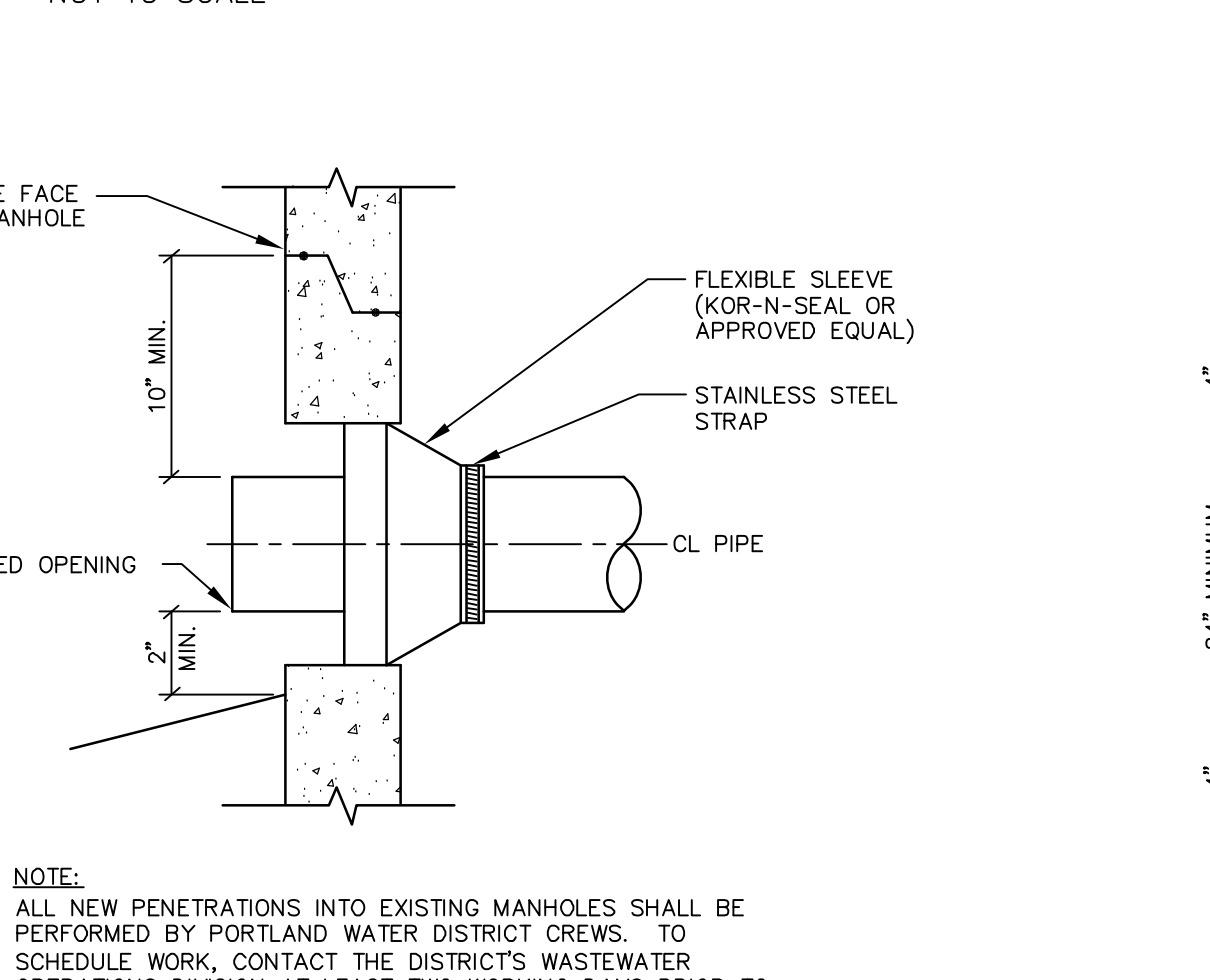


SEWER / FOUNDATION DRAIN  
SERVICE CONNECTION  
NOT TO SCALE

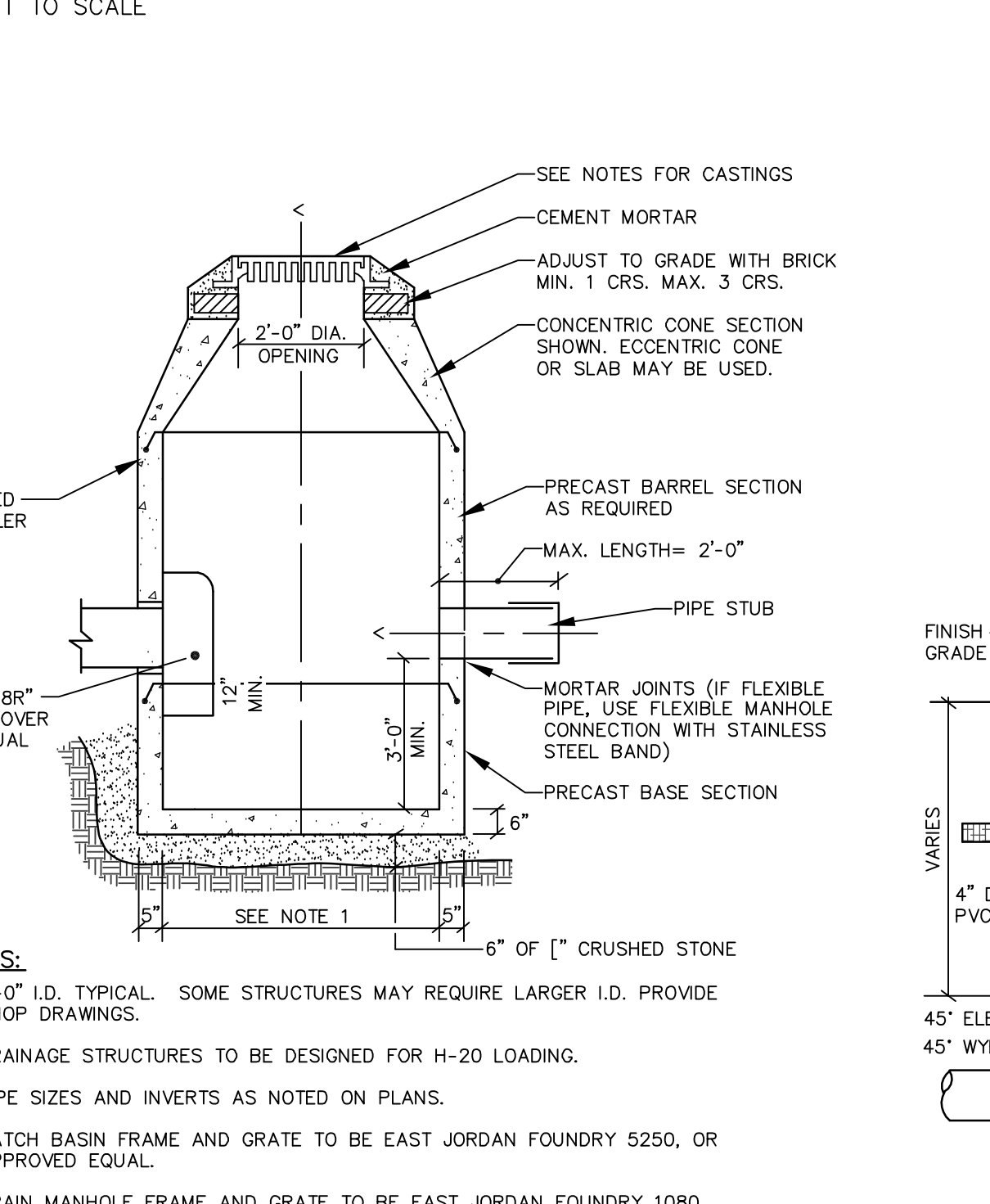


- NOTES:
1. THE INTERNAL DROP CONNECTION IS REQUIRED FOR DMH-4 (5.4' DROP) AND DMH-5 (14.7' DROP).

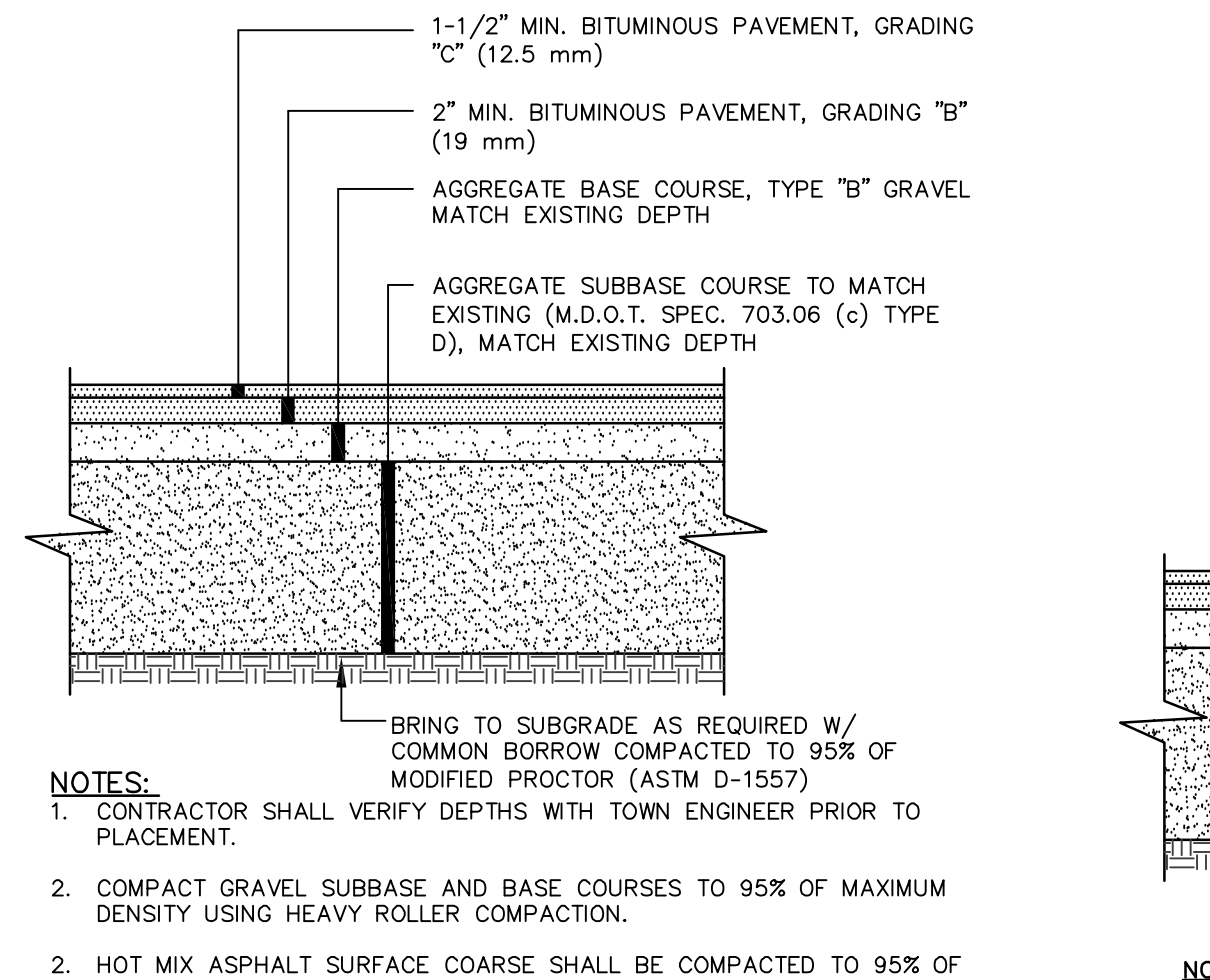
PVC DROP CONNECTION (INTERNAL)  
NOT TO SCALE



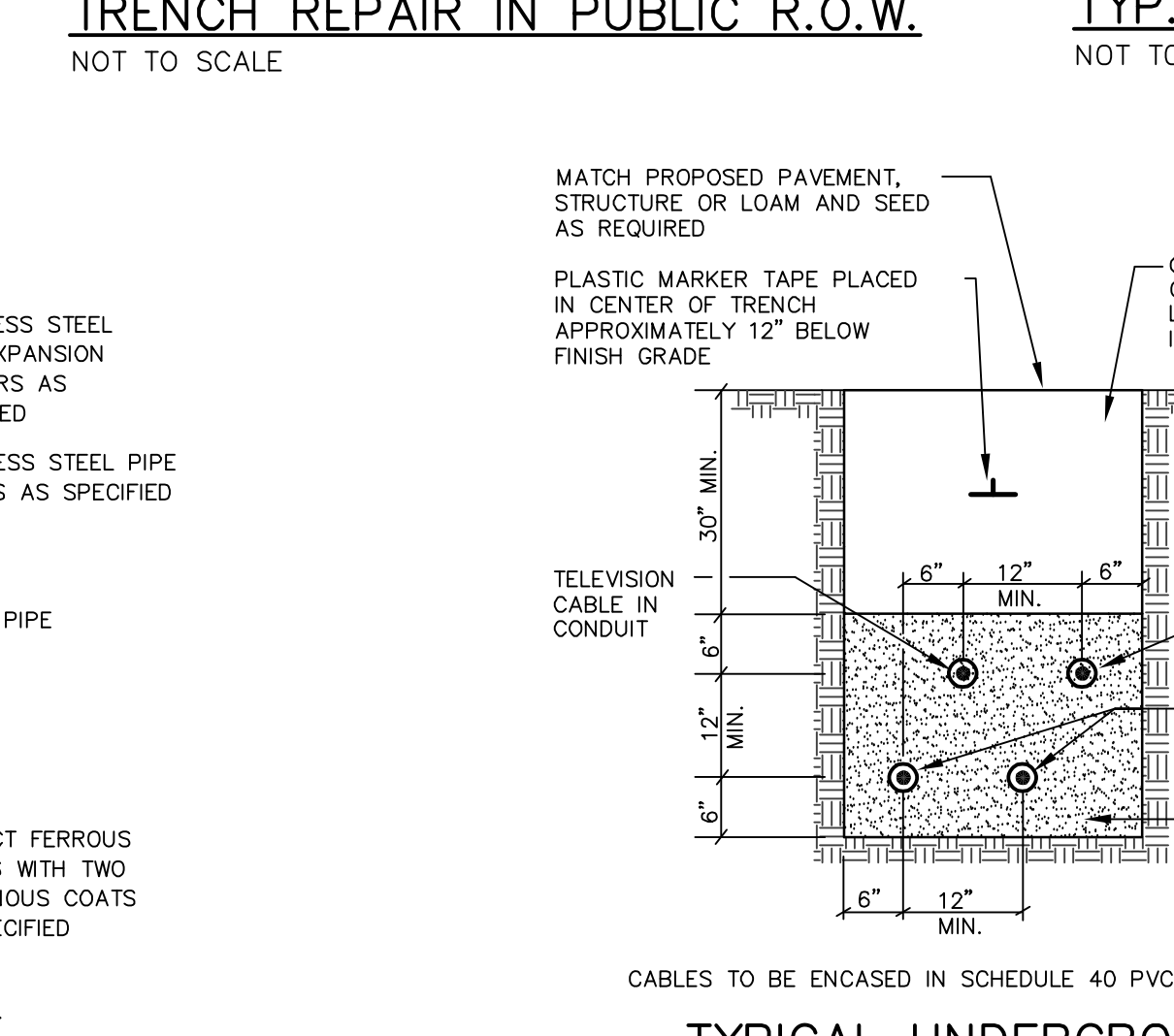
NEW PIPE TO EXISTING MANHOLE  
CONNECTION - 4" TO 24"  
NOT TO SCALE



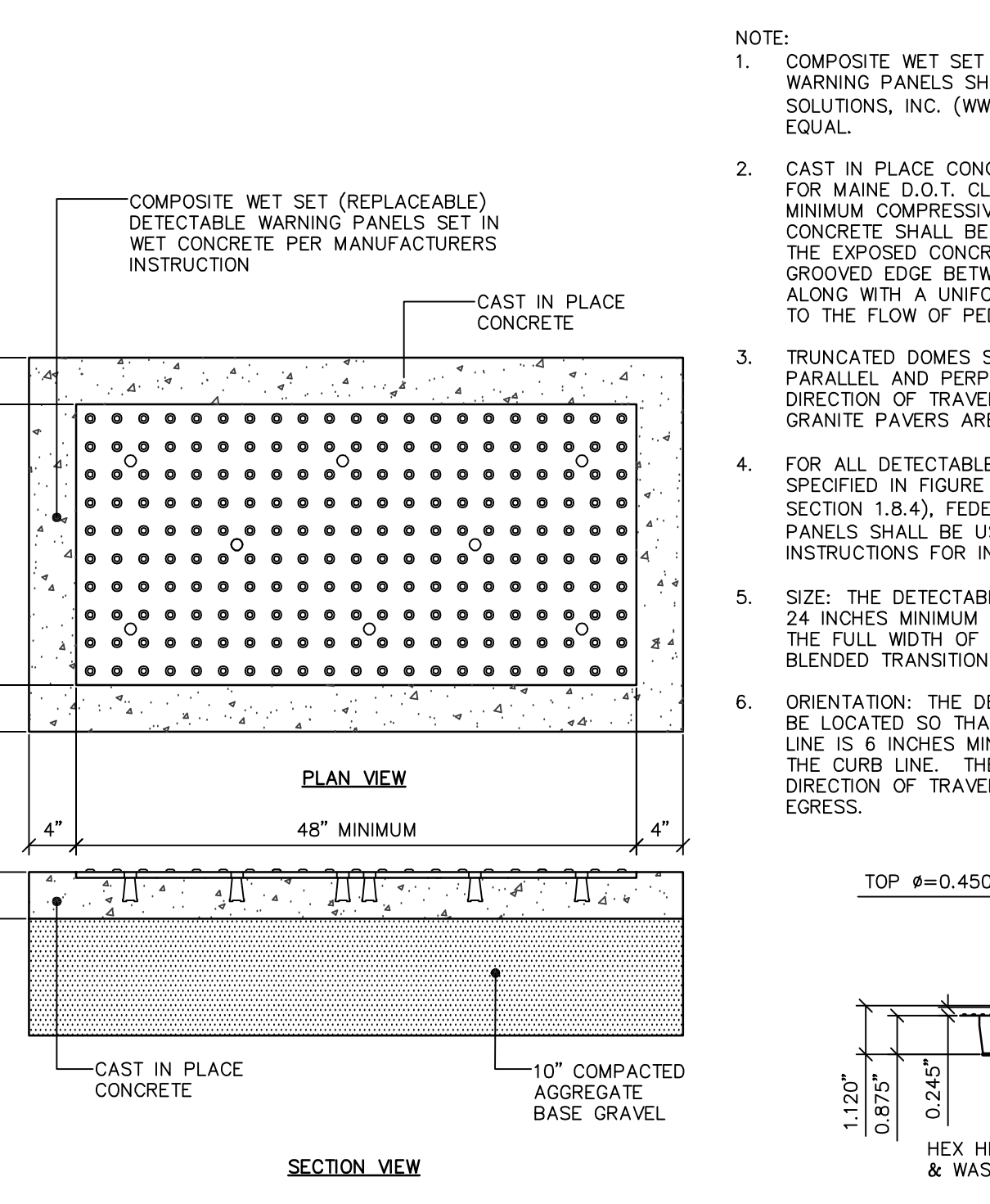
TYPICAL DRAINAGE  
MANHOLE/CATCH BASIN  
NOT TO SCALE



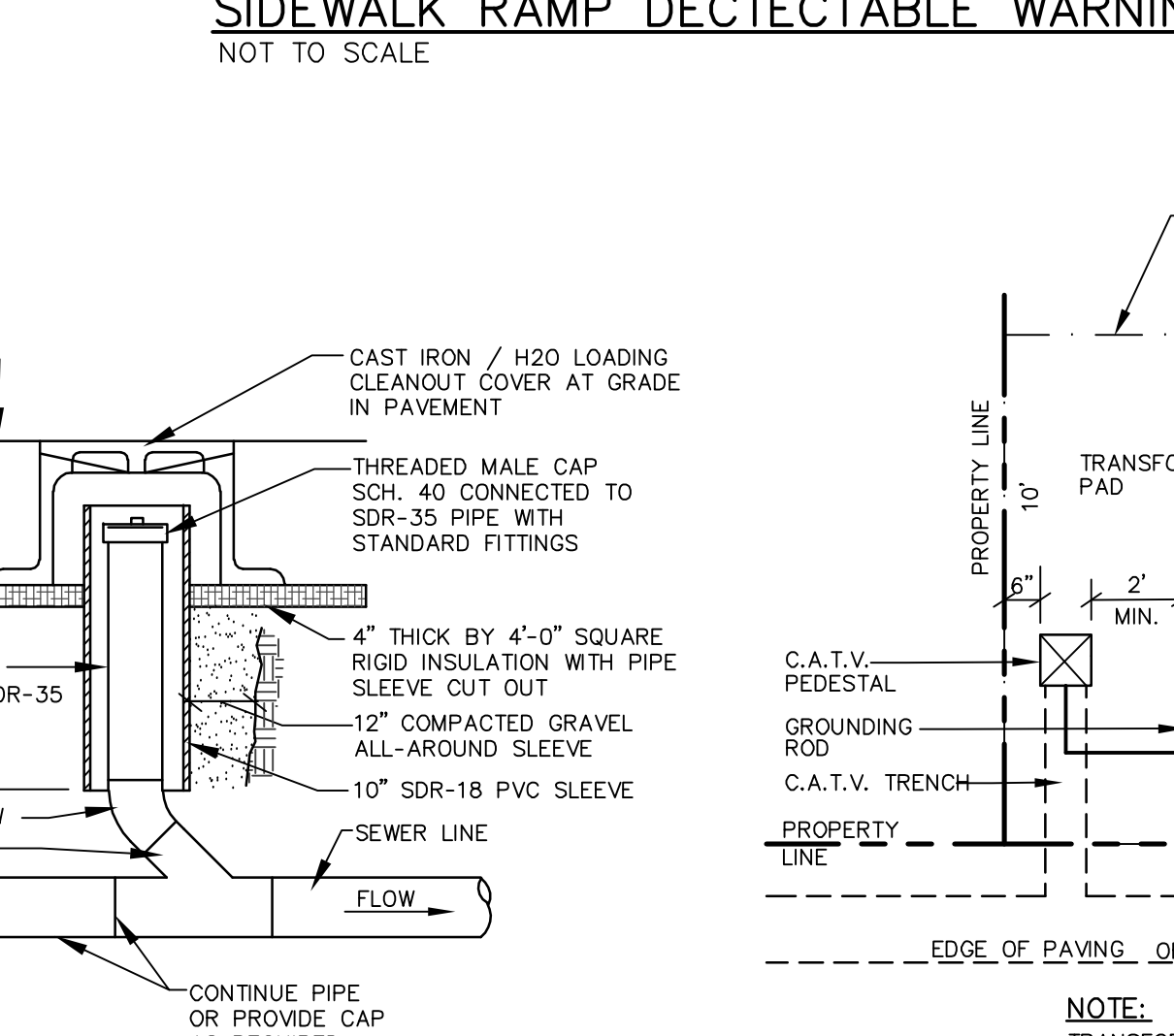
TRENCH REPAIR IN PUBLIC R.O.W.  
NOT TO SCALE



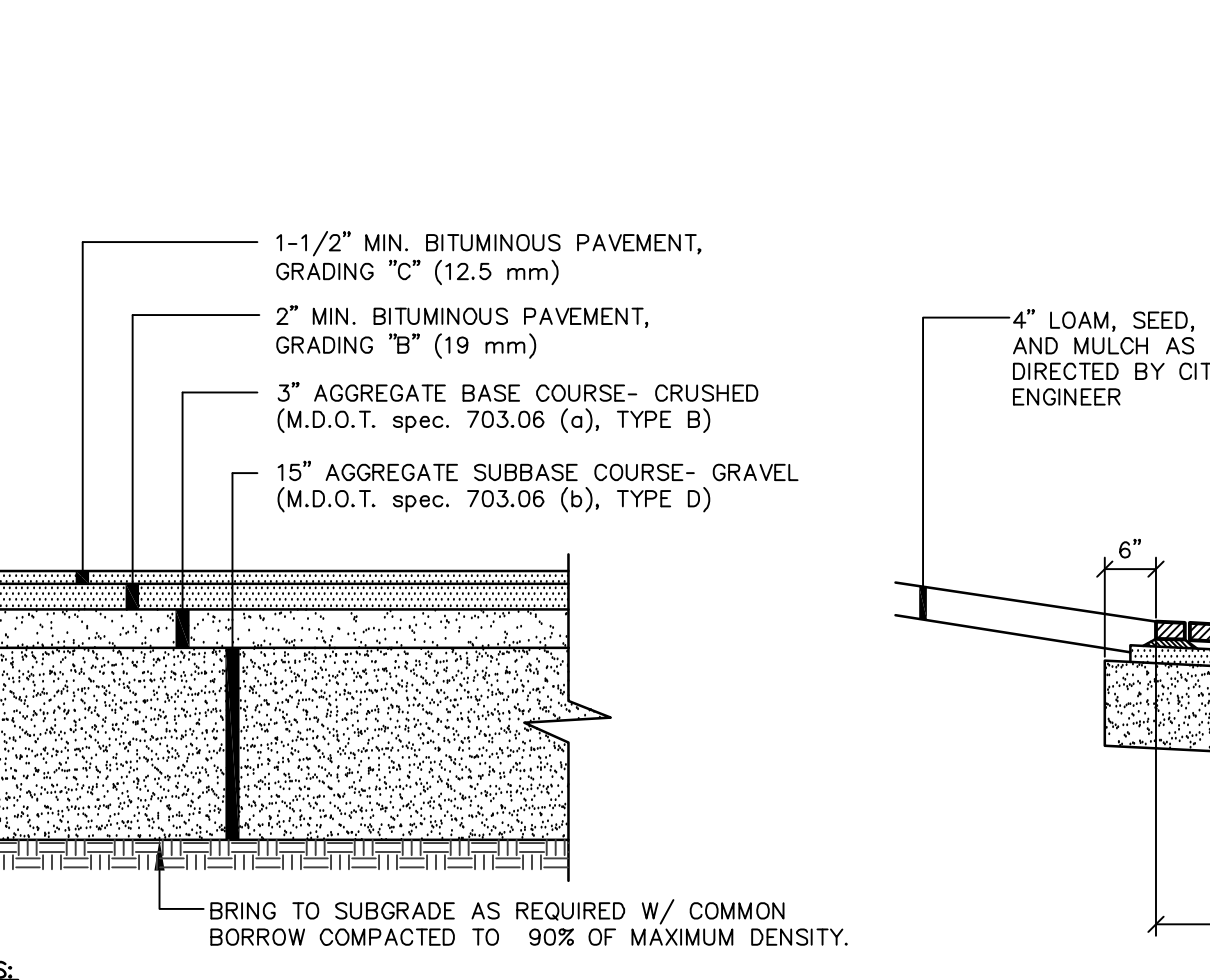
TYPICAL UNDERGROUND  
CABLE INSTALLATION  
NOT TO SCALE



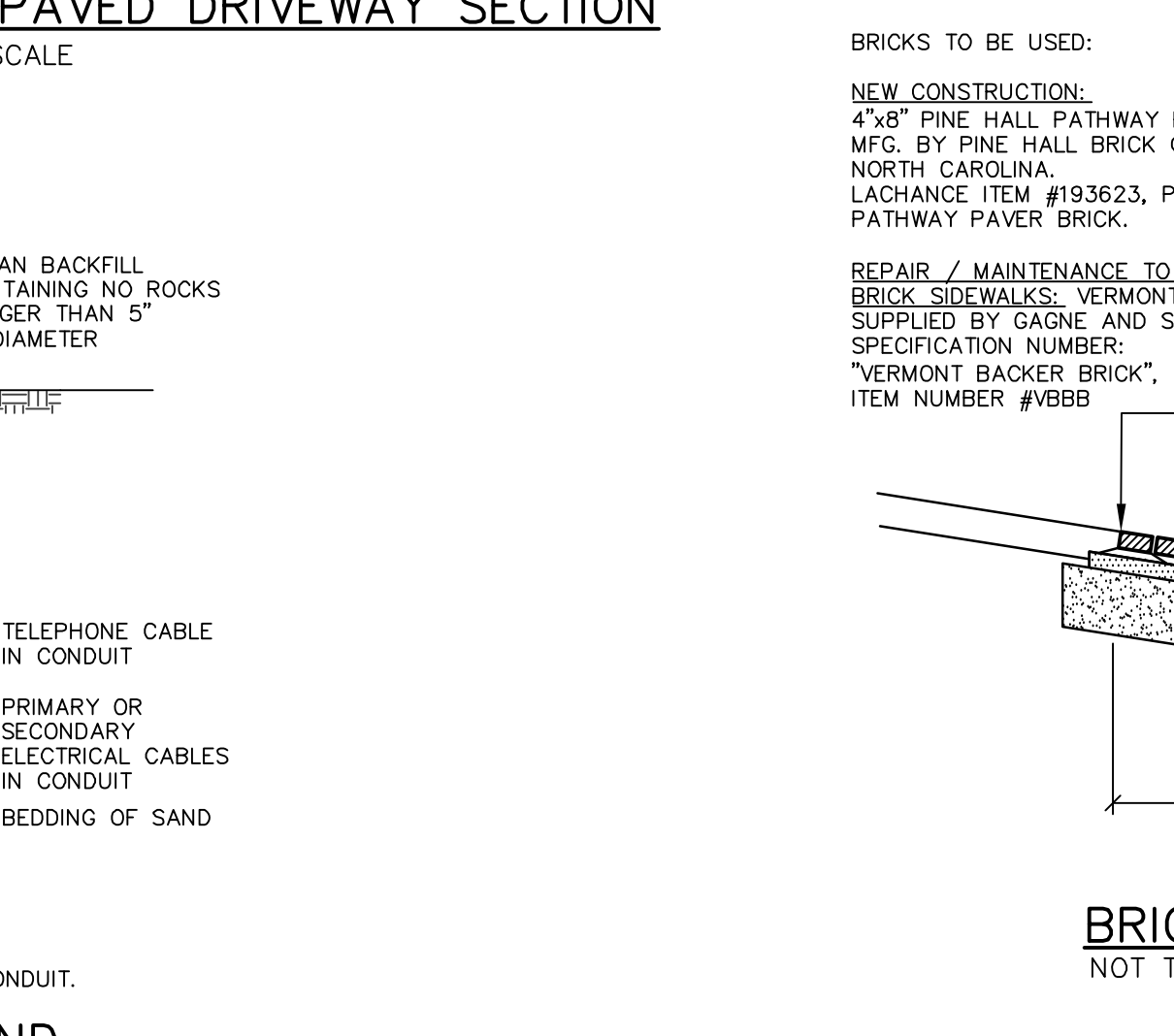
SIDEWALK RAMP DETECTABLE WARNING PANEL  
NOT TO SCALE



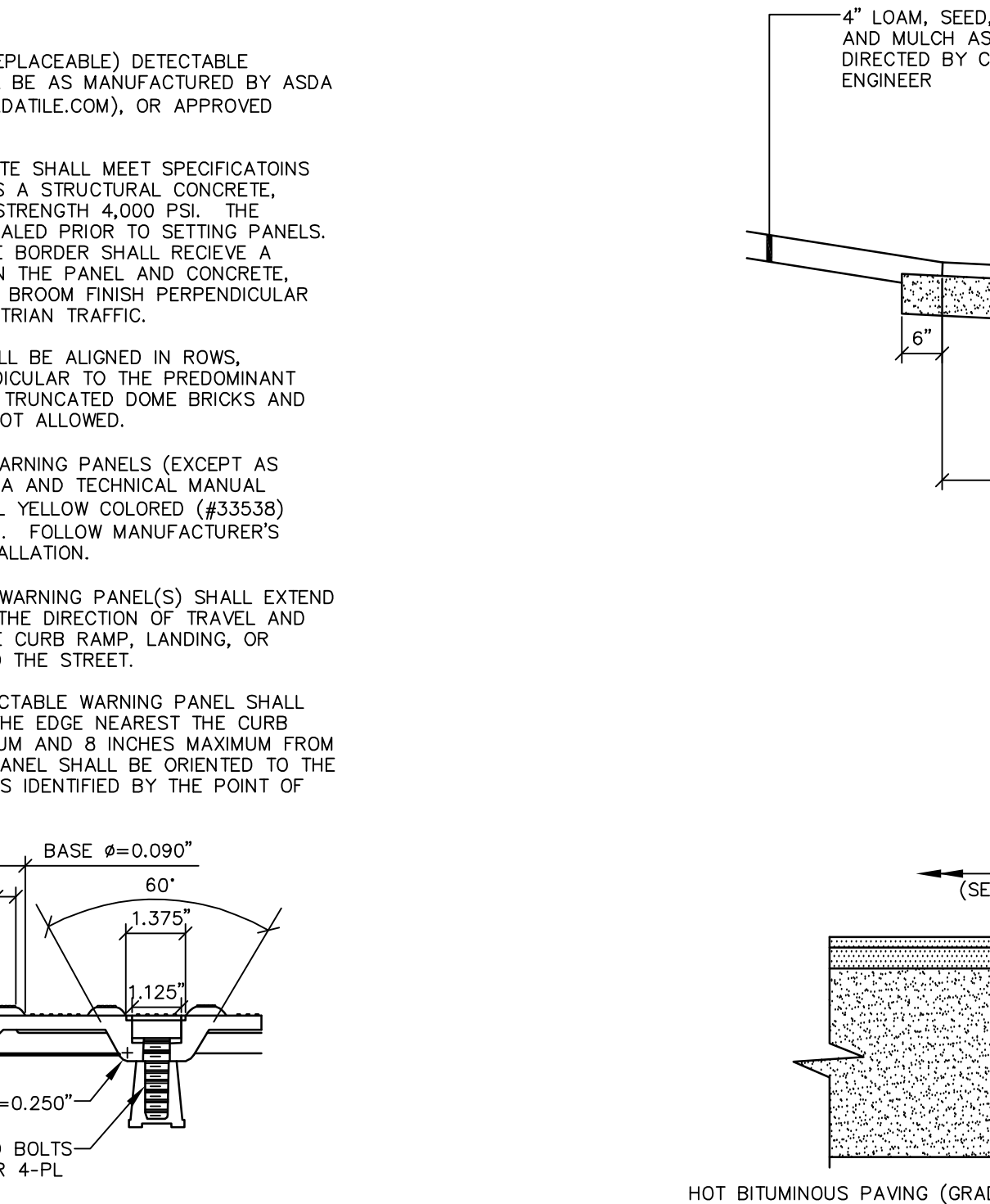
SEWER CLEANOUT IN  
PAVEMENT AREAS  
NOT TO SCALE



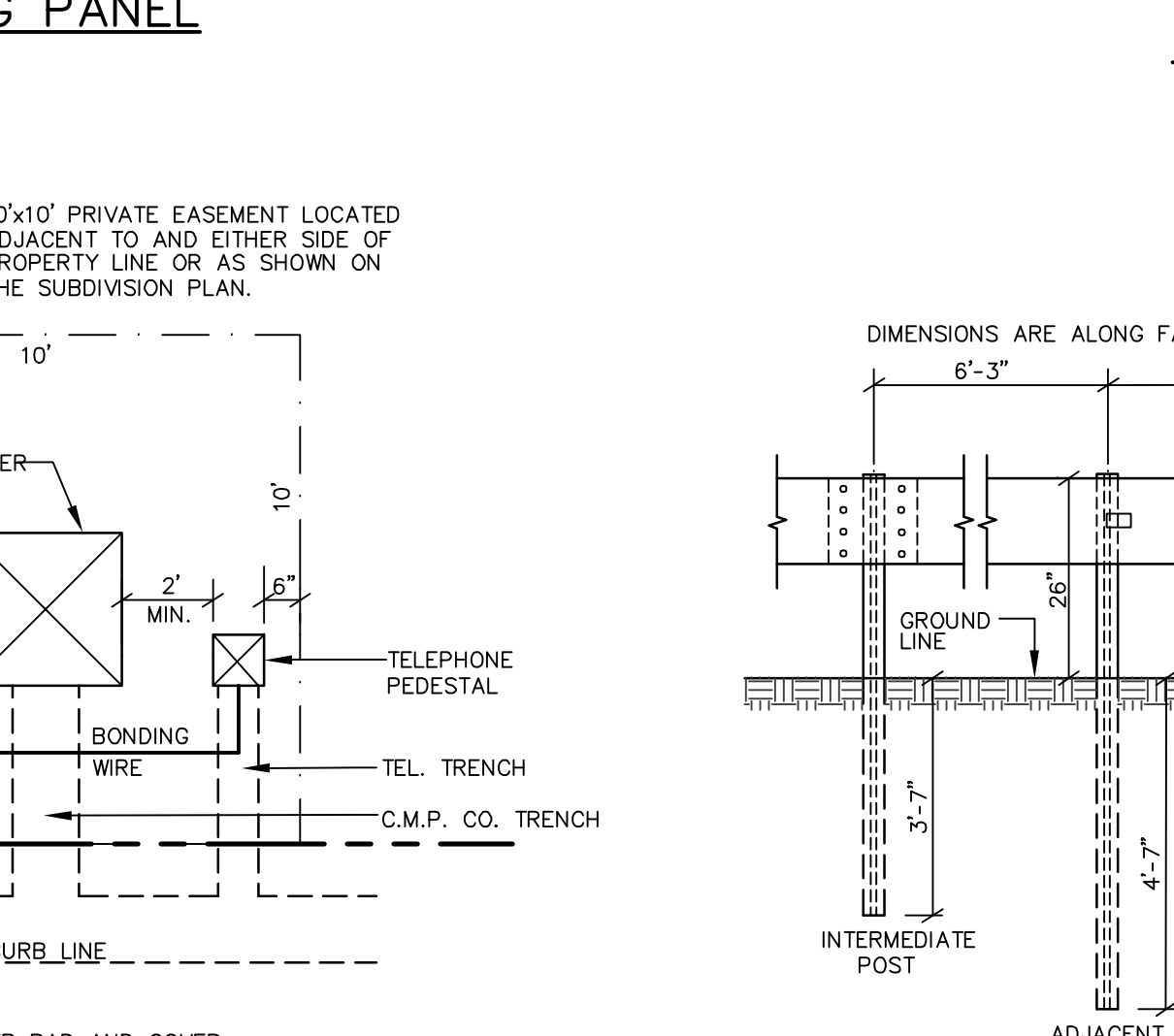
TYP. PAVED DRIVEWAY SECTION  
NOT TO SCALE



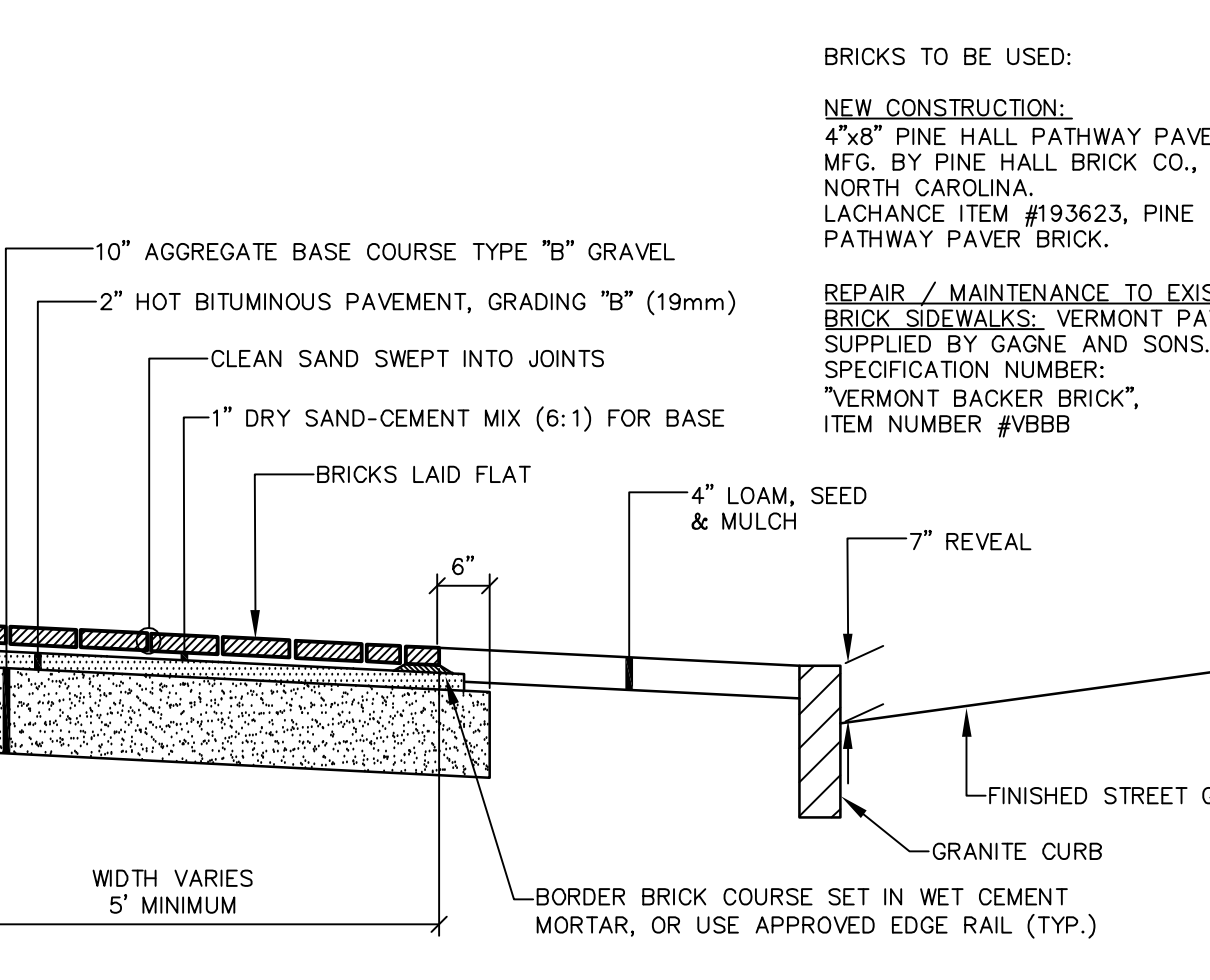
BRICK DRIVEWAY APRON WITH BITUMINOUS BASE  
NOT TO SCALE



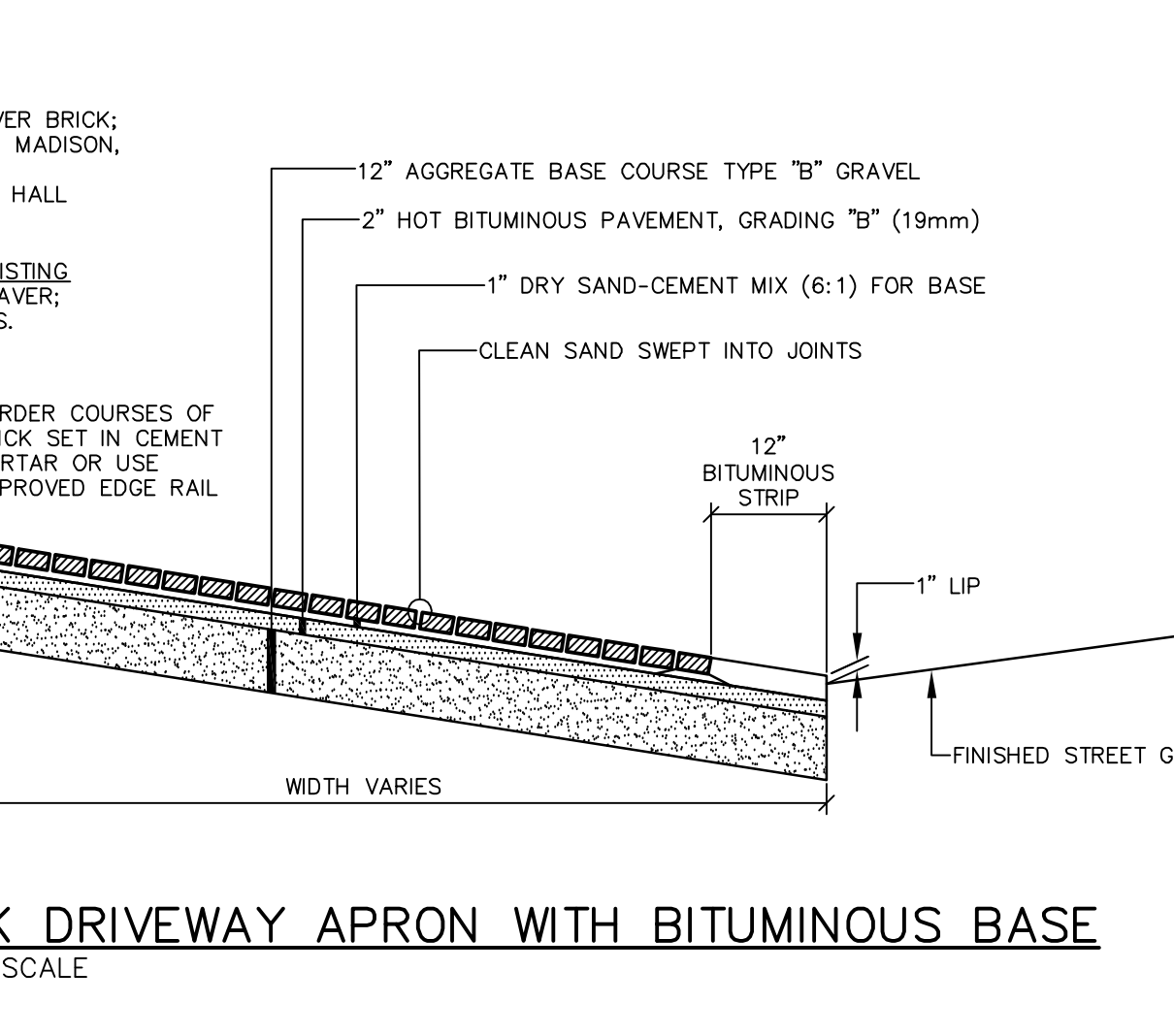
BITUMINOUS SIDEWALK  
NOT TO SCALE



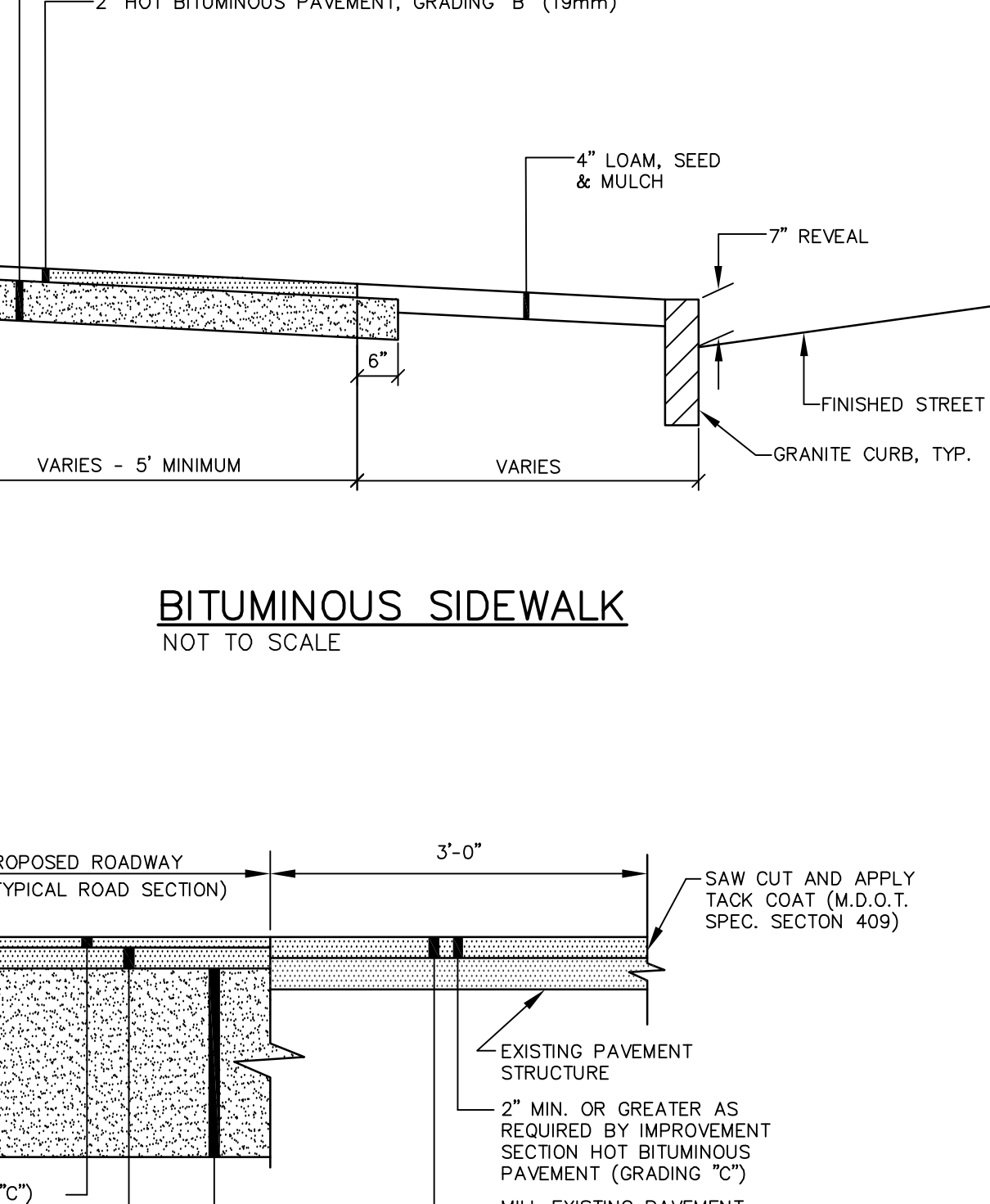
PAVEMENT SAW CUT DETAIL  
NOT TO SCALE



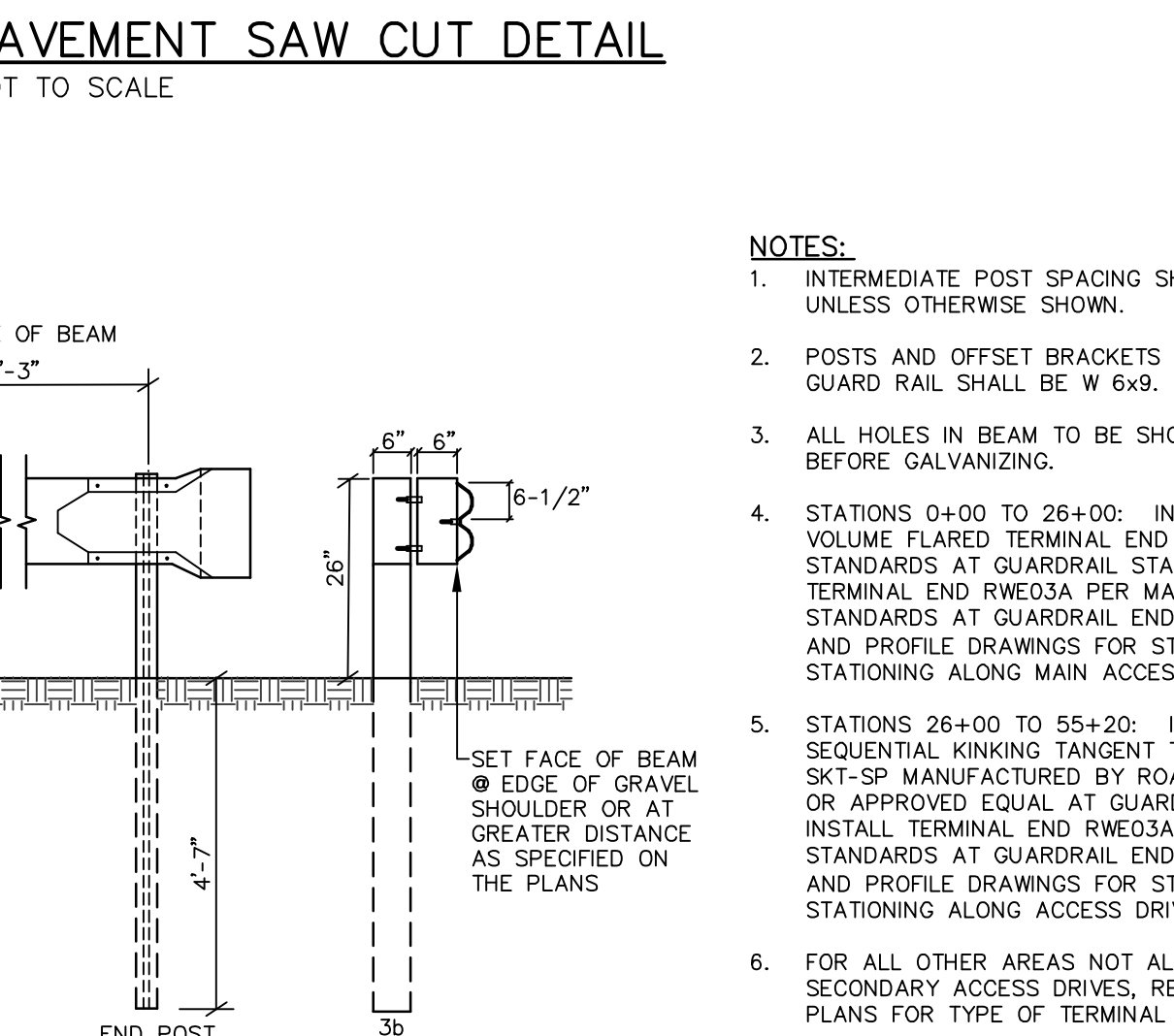
BRICK SIDEWALK WITH BITUMINOUS BASE  
NOT TO SCALE



BRICK DRIVEWAY APRON WITH BITUMINOUS BASE  
NOT TO SCALE



BITUMINOUS SIDEWALK  
NOT TO SCALE



PAVEMENT SAW CUT DETAIL  
NOT TO SCALE

SEBAGO TECHNICS

75 Jan. Ave. Portland, ME 04106  
South Portland, ME 04106  
Tel. 207-783-5556

DESIGNED

CHECKED

KDG

SMF

CITY SUBMITTAL NO. 6

CITY SUBMITTAL NO. 5

CITY SUBMITTAL NO. 1

DATE:

STATUS:

218-220 WASHINGTON AVENUE

PORTLAND, MAINE

218-220 WASHINGTON AVENUE LLC

FOR: 190 ELDREDDY ROAD SOUTH PORTLAND, MAINE 04106

PROJECT NO.

SCALE

06172

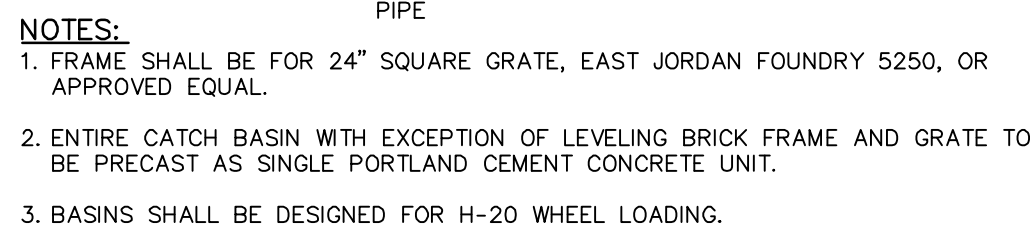
AS SHOWN

SHEET

1100F

12





NOT TO SCALE



**A. SPILL PREVENTION:** CONTROLS MUST BE TAKEN TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON-SITE. CONSTRUCTION PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION CONTROLS, MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED TO STORMWATER.

**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 ADJACENT WATER BODY. TO PREVENT CONTAMINATION OF GROUNDWATER, THE FOLLOWING FACTORS MUST BE CONSIDERED: TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL, DIKES, BERMS, BUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO PREVENT DISCHARGE OF POLLUTANTS TO GROUNDWATER.

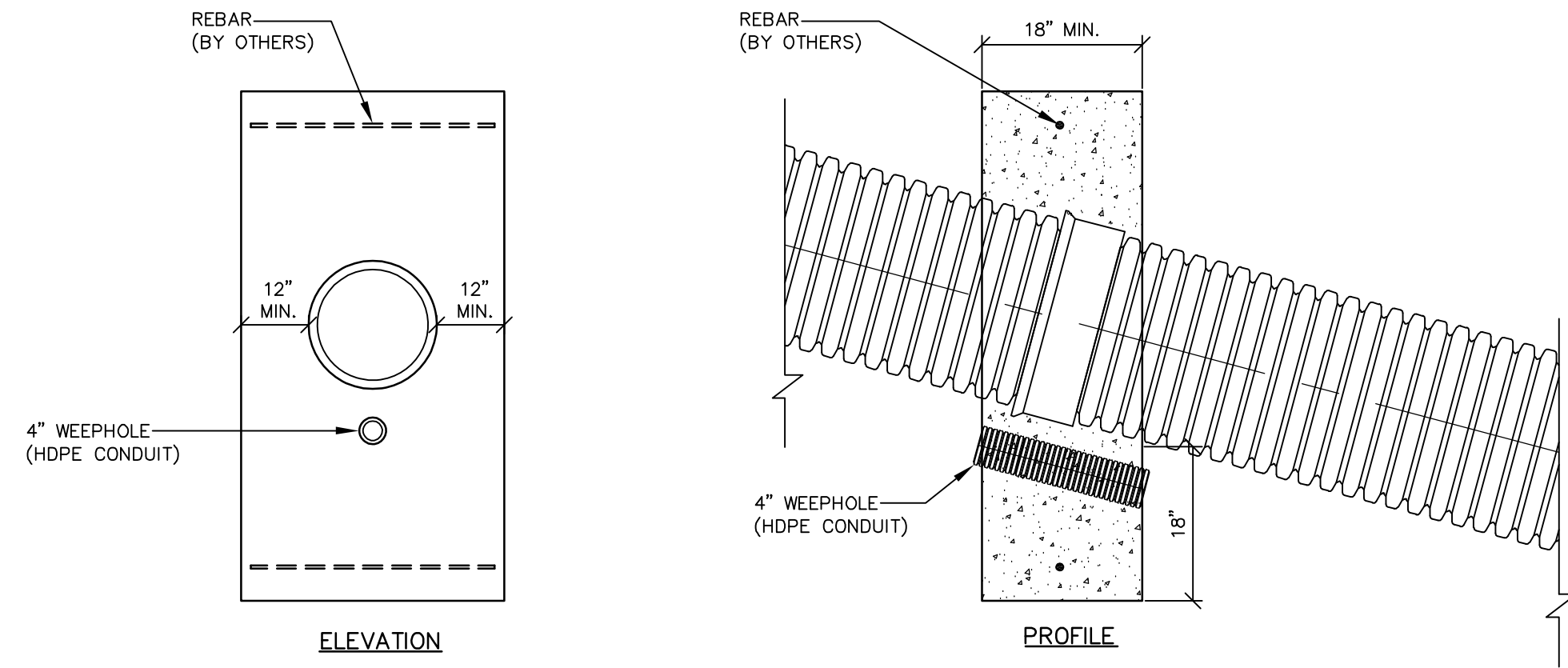
**C. FUGITIVE SEDIMENT AND DUST:** ACTIONS MUST BE TAKEN TO INSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.

**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 WHERE WATER IS COLLECTED THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES, THE COLLECTED WATER IS HEAVILY SOILED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER MUST BE REMOVED FROM THE SITE AND DISPOSED OF IN AN APPROPRIATE MANNER. THE FOLLOWING FACTORS MUST BE CONSIDERED: NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SOIL POSSIBLE, LIKE A COFFERDAM SEDIMENT BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT TO A COFFERDAM SEDIMENT BASIN.



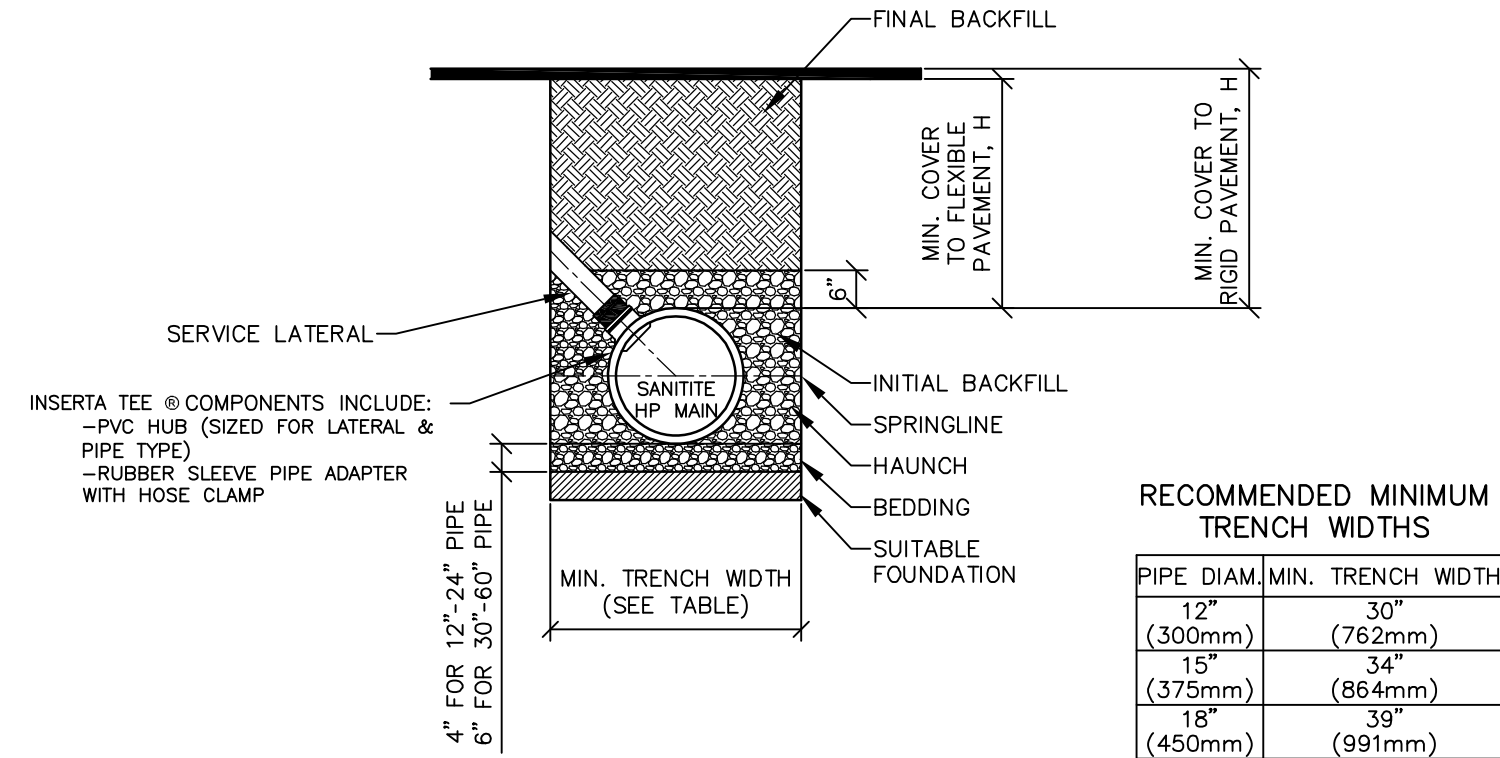




NOTES:

- 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.

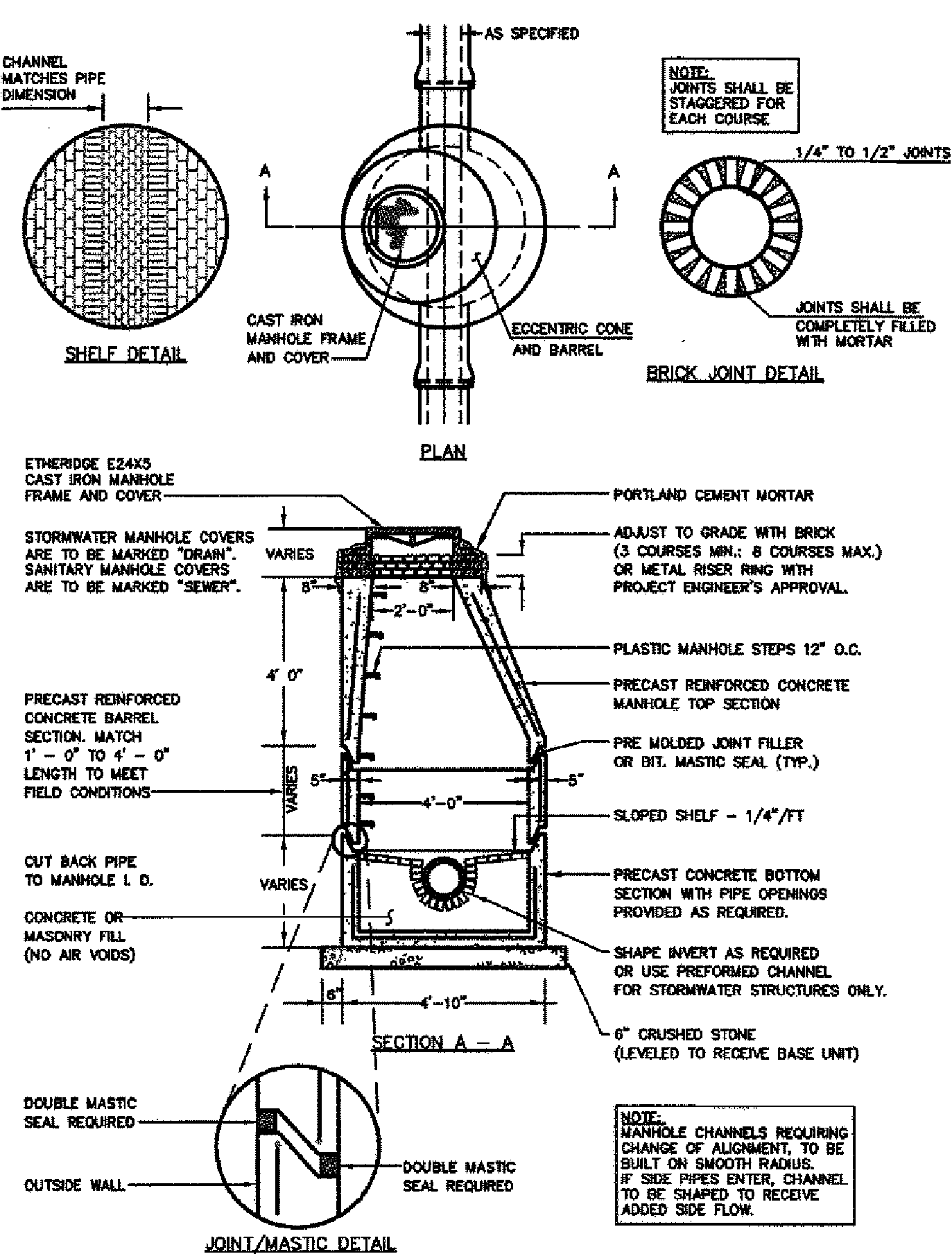
CONCRETE ANCHORS FOR STEEPLY SLOPED PIPES INSTALLATION  
NOT TO SCALE



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 EDITION.
- 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 FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60"-1500mm DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

INSERTA TEE DETAIL  
NOT TO SCALE



PRECAST CONCRETE SEWER MANHOLE  
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 EDITION, 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. 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. 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 FLOTATION. FOR TRAFFIC APPLICATIONS, CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% 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.

TRENCH INSTALLATION DETAIL  
NOT TO SCALE

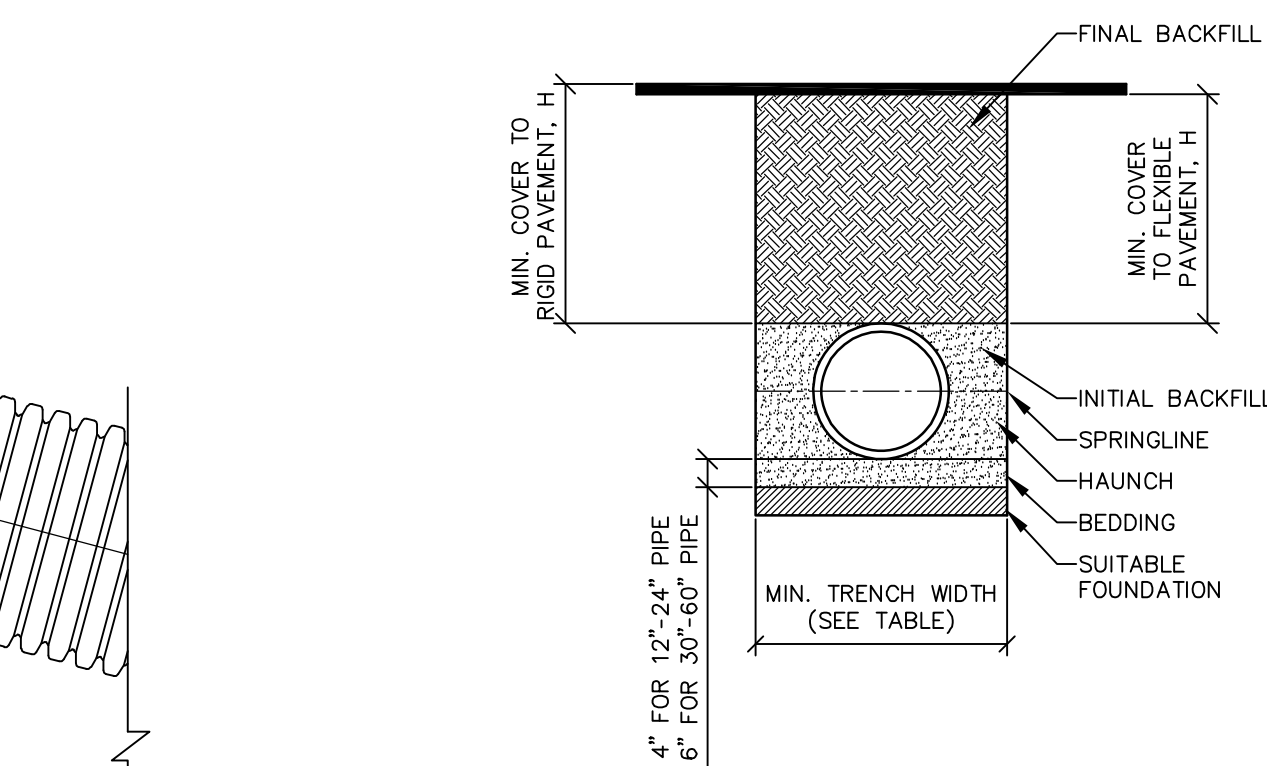


TABLE 1. RECOMMENDED MINIMUM TRENCH WIDTHS

| PIPE DIAM.   | MIN. TRENCH WIDTH |
|--------------|-------------------|
| 12" (300mm)  | 30" (762mm)       |
| 15" (375mm)  | 34" (864mm)       |
| 18" (450mm)  | 39" (991mm)       |
| 24" (600mm)  | 48" (1219mm)      |
| 30" (750mm)  | 56" (1422mm)      |
| 36" (900mm)  | 64" (1626mm)      |
| 42" (1050mm) | 72" (1829mm)      |
| 48" (1200mm) | 80" (2032mm)      |
| 60" (1500mm) | 96" (2438mm)      |

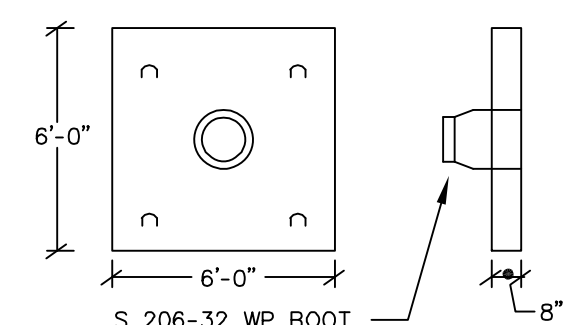
TABLE 2. MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

| PIPE DIAM.                 | SURFACE LIVE LOADING CONDITION |                                      |
|----------------------------|--------------------------------|--------------------------------------|
|                            | H-25                           | HEAVY CONSTRUCTION (75T AXLE LOAD) * |
| 12" - 48" (300mm - 1200mm) | 12" (305mm)                    | 48" (1219mm)                         |
| 60" (1500mm)               | 24" (610mm)                    | 60" (1524mm)                         |

\* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 3. MAXIMUM COVER FOR ADS HP STORM PIPE, ft

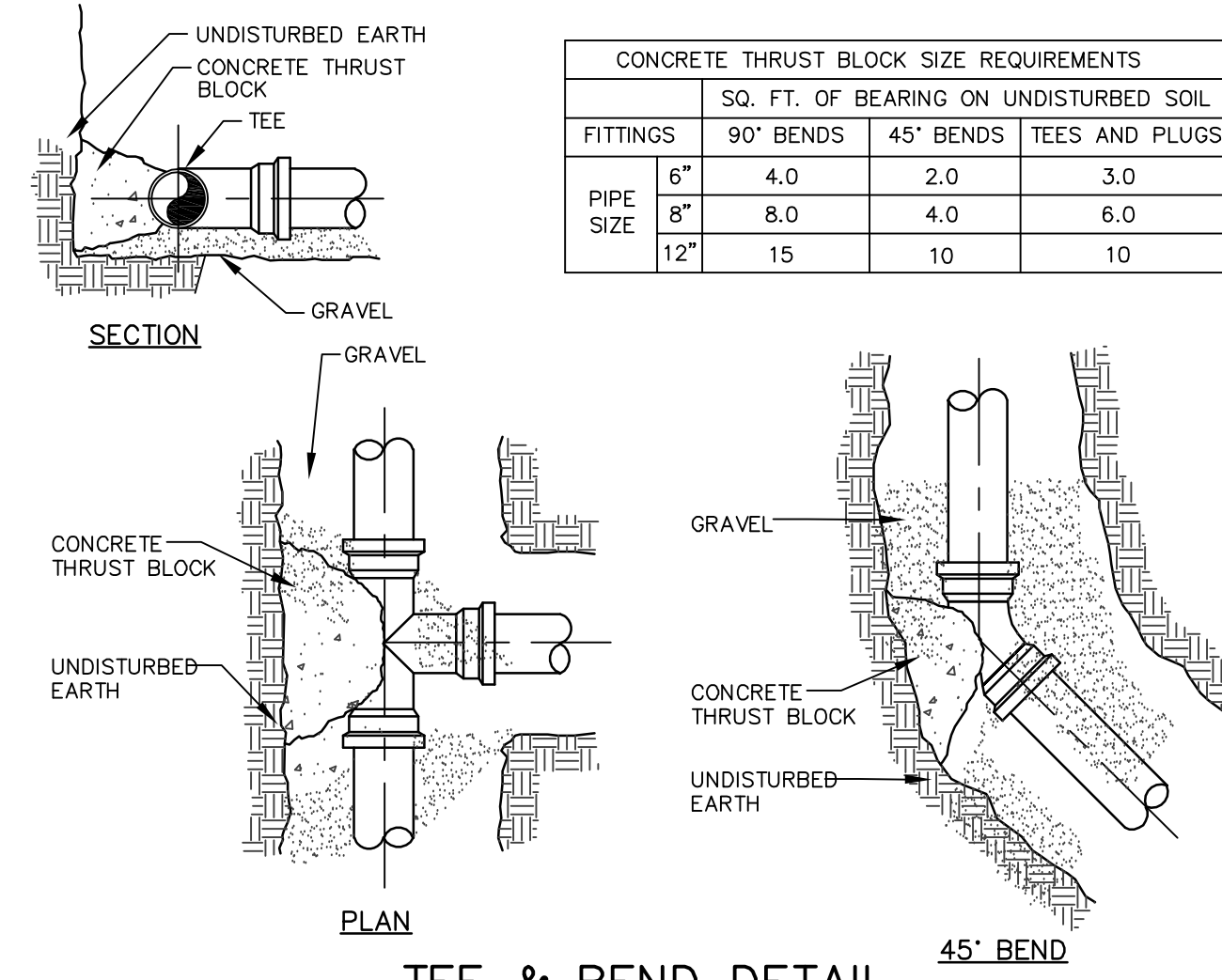
| PIPE DIA     | CLASS I   |        |        | CLASS II |        |        | CLASS III |        |        | CLASS IV |        |        |
|--------------|-----------|--------|--------|----------|--------|--------|-----------|--------|--------|----------|--------|--------|
|              | COMPACTED | 95%    | 90%    | 95%      | 90%    | 85%    | 95%       | 90%    | 85%    | 95%      | 90%    | 85%    |
| 12" (300mm)  | (12.5m)   | (8.5m) | (6.4m) | (4.9m)   | (6.1m) | (4.3m) | (6.1m)    | (4.9m) | (4.3m) | (6.1m)   | (4.9m) | (4.3m) |
| 15" (375mm)  | (12.8m)   | (8.8m) | (6.4m) | (4.9m)   | (6.4m) | (4.9m) | (6.4m)    | (4.9m) | (4.3m) | (6.4m)   | (4.9m) | (4.3m) |
| 18" (450mm)  | (13.4m)   | (9.1m) | (6.4m) | (4.9m)   | (6.7m) | (5.2m) | (6.7m)    | (5.2m) | (4.6m) | (6.7m)   | (5.2m) | (4.6m) |
| 24" (600mm)  | (11.3m)   | (7.9m) | (5.5m) | (4.3m)   | (5.8m) | (4.3m) | (5.8m)    | (4.3m) | (4.3m) | (5.8m)   | (4.3m) | (4.3m) |
| 30" (750mm)  | (11.9m)   | (8.2m) | (5.8m) | (4.3m)   | (5.8m) | (4.6m) | (5.8m)    | (4.6m) | (4.3m) | (5.8m)   | (4.6m) | (4.3m) |
| 36" (900mm)  | (8.5m)    | (6.1m) | (4.3m) | (3.0m)   | (4.3m) | (3.4m) | (4.3m)    | (3.4m) | (3.0m) | (4.3m)   | (3.4m) | (3.0m) |
| 42" (1050mm) | (9.1m)    | (6.4m) | (4.3m) | (3.0m)   | (4.6m) | (3.4m) | (4.6m)    | (3.4m) | (3.0m) | (4.6m)   | (3.4m) | (3.0m) |
| 48" (1200mm) | (8.8m)    | (6.1m) | (4.3m) | (3.0m)   | (4.3m) | (3.0m) | (4.3m)    | (3.0m) | (3.0m) | (4.3m)   | (3.0m) | (3.0m) |
| 60" (1500mm) | (8.8m)    | (6.1m) | (4.3m) | (3.0m)   | (4.3m) | (3.0m) | (4.3m)    | (3.0m) | (2.7m) | (4.3m)   | (3.0m) | (2.7m) |



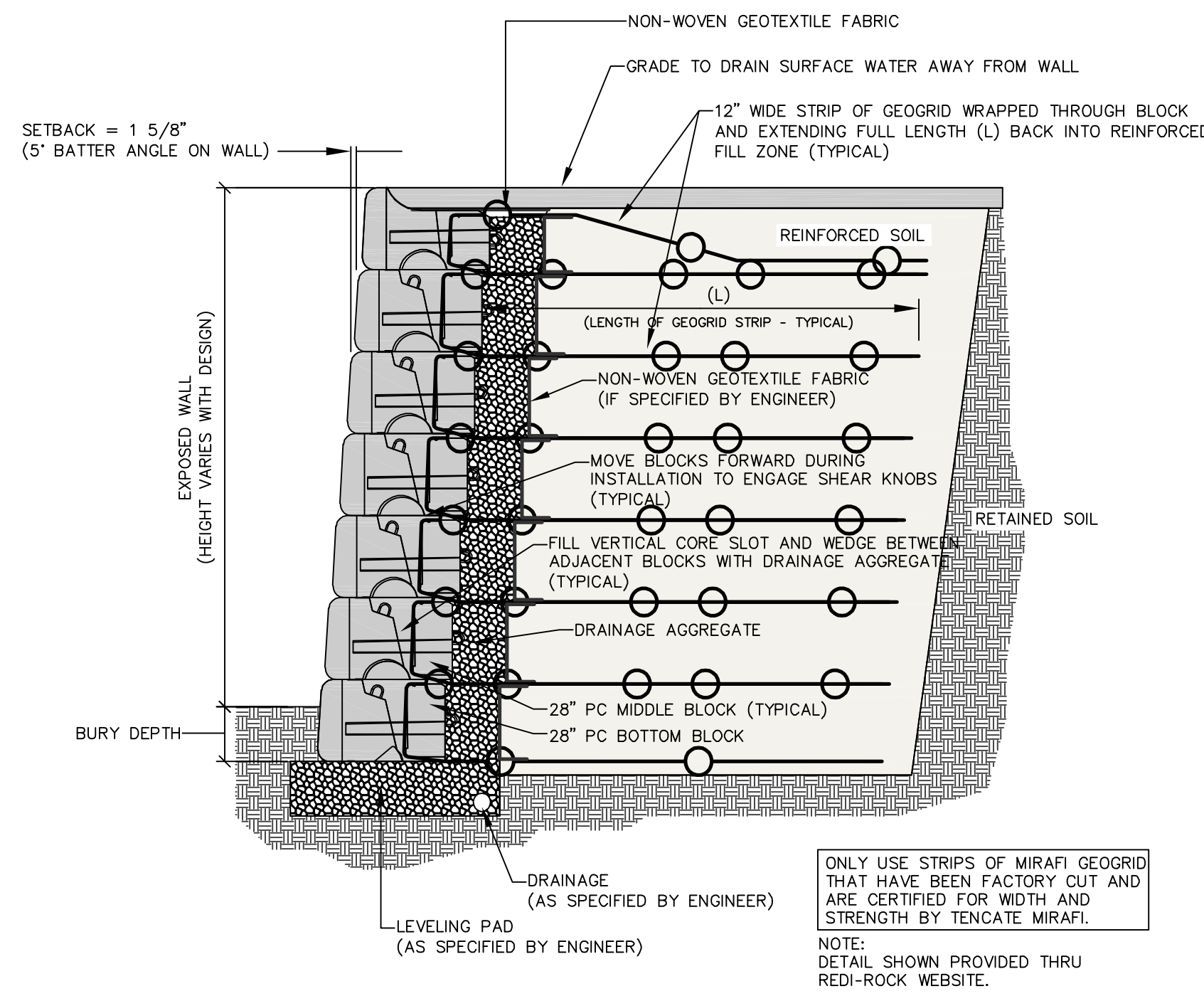
NOTES:

HOPE MANUFACTURED ANTI-SEEP COLLARS ARE AN APPROVED EQUAL.

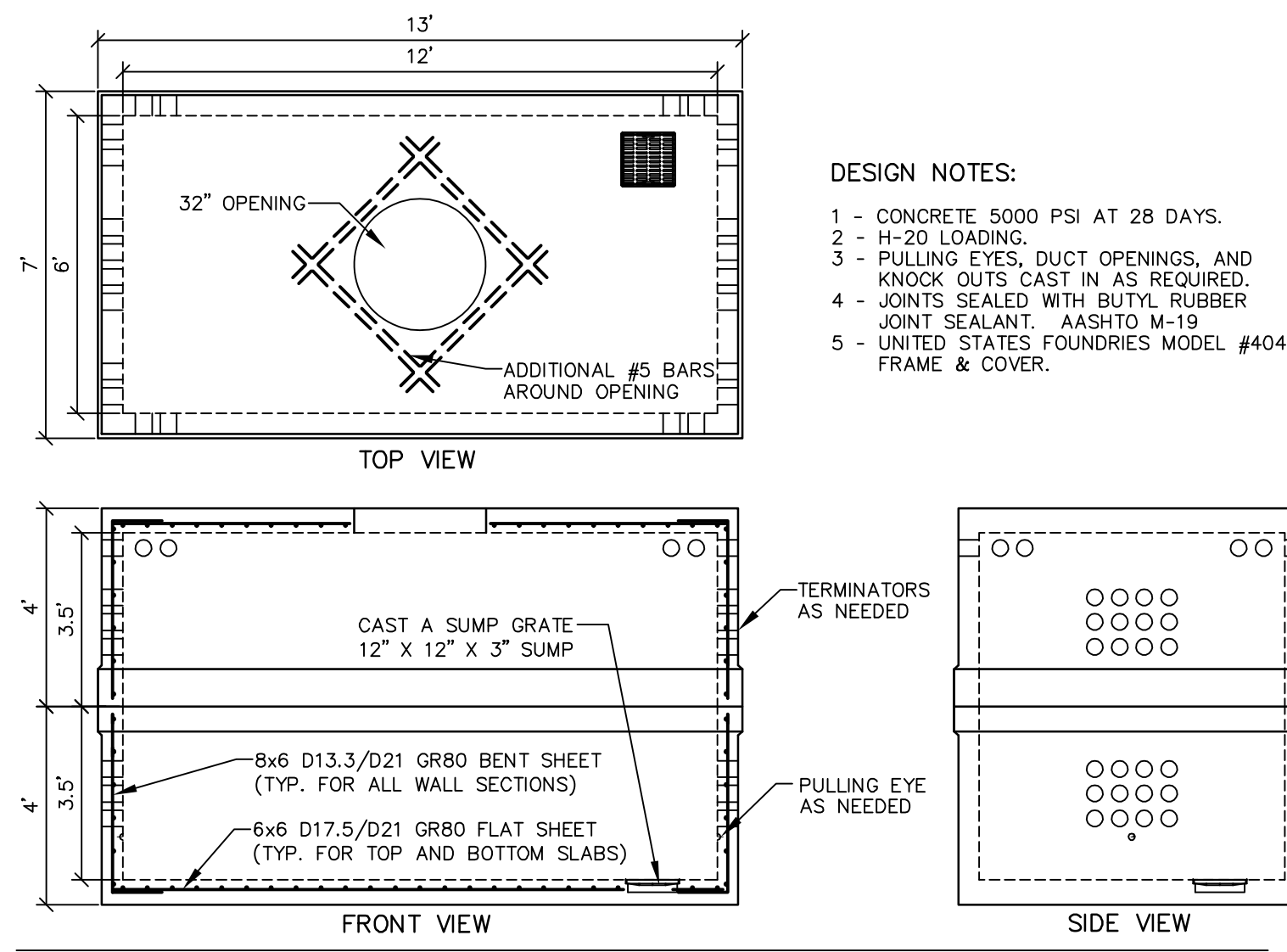
ANTI-SEEP COLLAR  
NOT TO SCALE



TEE & BEND DETAIL  
NOT TO SCALE



TYPICAL REINFORCED WALL SECTION  
NOT TO SCALE



DESIGN NOTES:

- CONCRETE 3000 PSI AT 28 DAYS.
- H-20 LOADING.
- PULLING EYES, DUCT OPENINGS, AND KNOCK OUTS CAST IN AS REQUIRED.
- JOINTS SEALED WITH BUTYL RUBBER JOINT SEALANT - AASHTO M-19
- UNITED STATES FOUNDRIES MODEL #4044-B FRAME & COVER.

PROVIDED BY: PRECAST CONCRETE PRODUCTS OF MAINE, INC. OR APPROVED EQUAL.

ELECTRICAL UTILITY VAULT DETAIL  
NOT TO SCALE

SHAWN M. FRANK, PE#6396

DESIGNED: KDG  
CHECKED: SMF

|   |              |                      |
|---|--------------|----------------------|
| C | WTC 07-24-17 | CITY SUBMITTAL NO. 6 |
| 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, APPROVED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNIQS, INC.

SEBAGO  
TECHNIQS

WWW.SEBAGOTECHNIQS.COM  
75 John S. Davis Rd.  
South Portland, ME 04106  
Tel. 207-200-2100

218-220 WASHINGTON AVENUE  
PORTLAND, MAINE  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE 04106  
Tel. 207-752-5656

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 1" = 1'

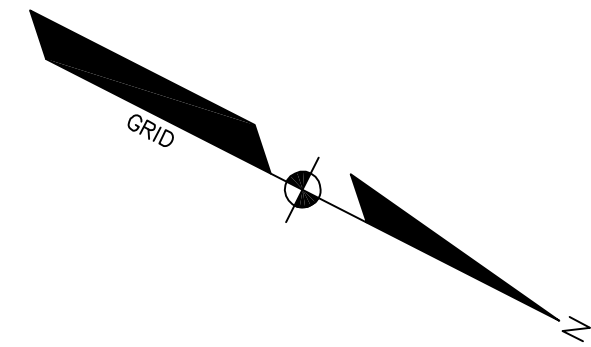
SHEET 12 OF 12

061720.dwg, 146.04









**LEGEND**

WATERSHED BOUNDARY  
TIME OF CONCENTRATION

REACH

WATERSHED LABEL

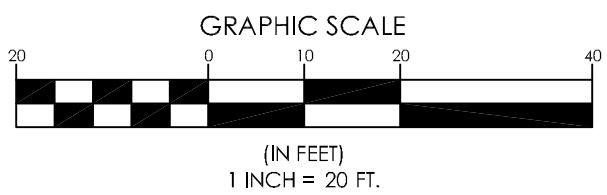
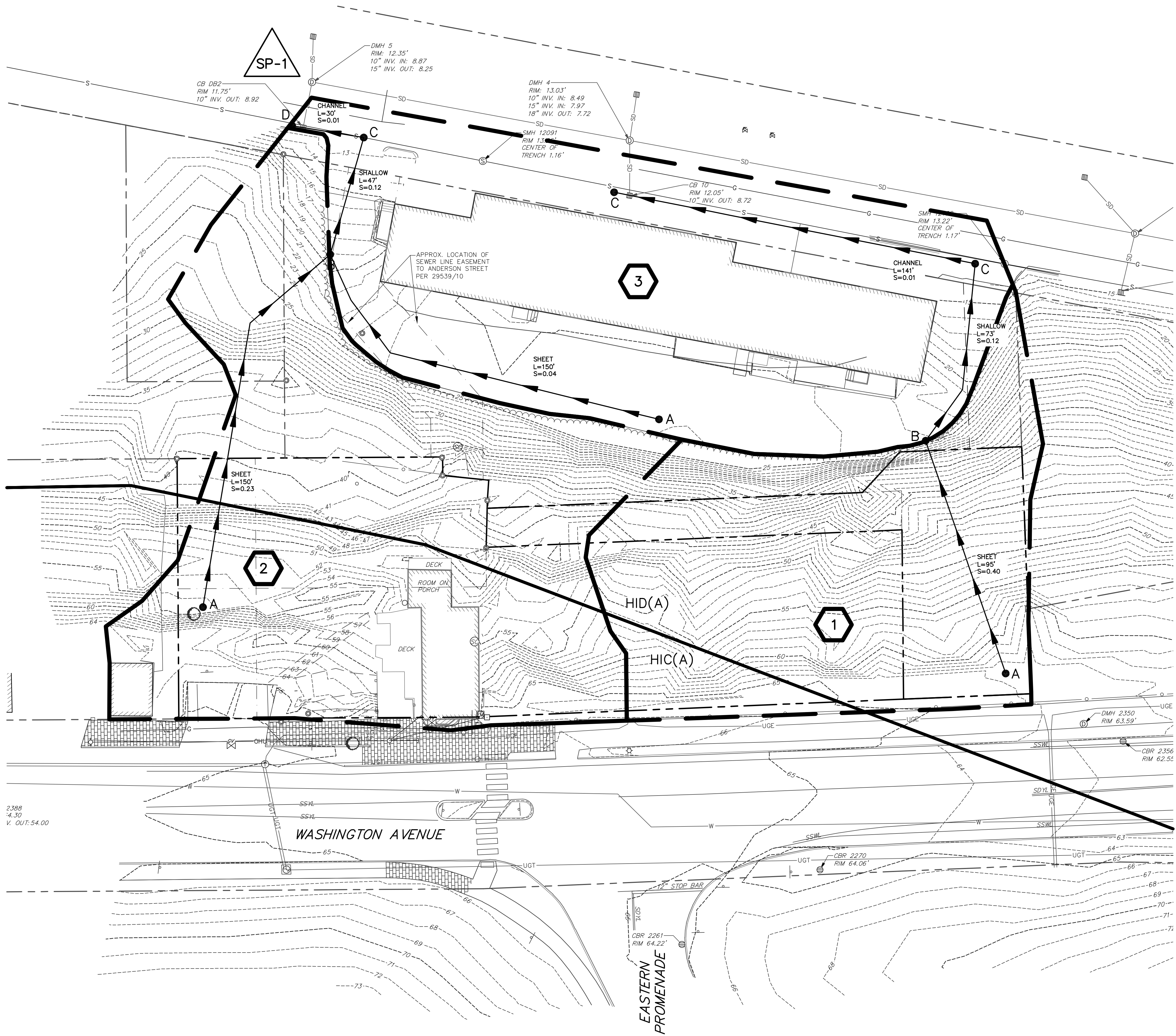
REACH

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                    |



SHAWN M. FRANK P.E.#6396

DESIGNED: KDG  
CHECKED: SMF

| NO. | DATE     | BY | DESCRIPTION                       |
|-----|----------|----|-----------------------------------|
| 1   | 07/24/17 | C  | WTC 07-24-17 CITY SUBMITTAL NO. 6 |
| 2   | 08/15/17 | B  | WTC 08-15-17 CITY SUBMITTAL NO. 5 |
| 3   | 12/15/16 | A  | WTC 12/15/16 CITY SUBMITTAL NO. 1 |

REV: 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 Stevens Rd.  
South Portland, ME 04106  
Tel: 207-200-2100

250 S. Main Rd.  
Lewiston, ME 04240  
Tel: 207-783-5556

PRE DEVELOPMENT WATERSHED PLAN  
OF:  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE

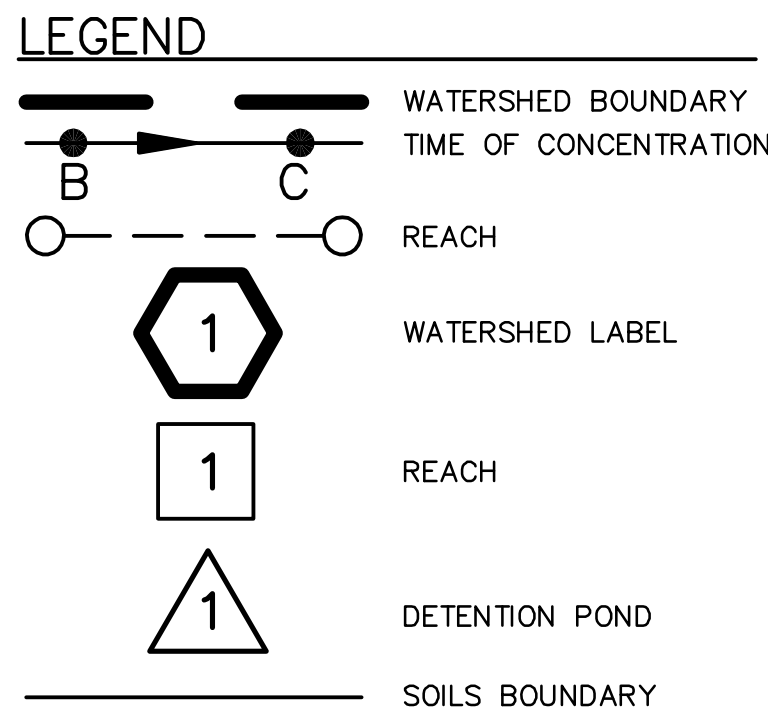
FOR:  
218-220 WASHINGTON AVENUE LLC  
190 ELDREBBERRY ROAD  
SOUTH PORTLAND, MAINE 04106

PROJECT NO. 06172  
SCALE 1" = 20'

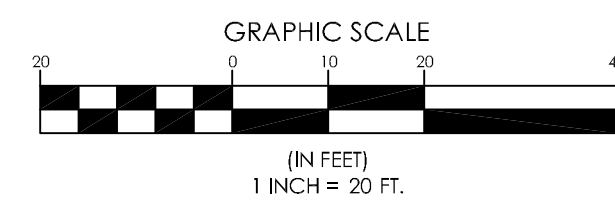
SHEET 1 OF 2

06172SMF.dwg

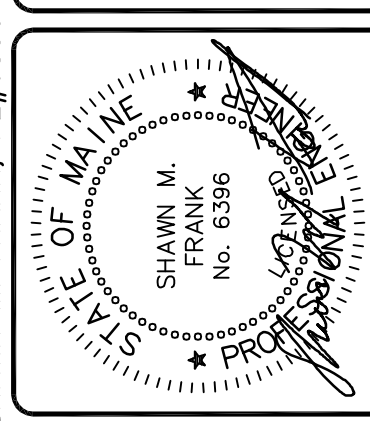




| LEGEND   |                         |
|----------|-------------------------|
| EXISTING | PROPOSED                |
| =====    | =====                   |
|          | PROPERTY LINE/R.O.W.    |
| =====    | =====                   |
|          | ABUTTER LINE/R.O.W.     |
| =====    | =====                   |
|          | EASEMENT                |
| =====    | =====                   |
|          | MONUMENT                |
| =====    | =====                   |
|          | IRON PIPE/ROD           |
| =====    | =====                   |
|          | BUILDING                |
| =====    | =====                   |
|          | DECK/STEPS/<br>OVERHANG |
| =====    | =====                   |
|          | EDGE PAVEMENT           |
| =====    | =====                   |
|          | PAVEMENT SAWCUT         |
| =====    | =====                   |
|          | EDGE CONCRETE           |
| =====    | =====                   |
|          | PAVEMENT PAINT          |
| =====    | =====                   |
|          | EDGE GRAVEL             |
| =====    | =====                   |
|          | CURB LINE               |
| =====    | =====                   |
|          | RETAINING WALL          |
| =====    | =====                   |
|          | DECIDUOUS TREE          |
| =====    | =====                   |
|          | SIGN                    |



---



| DESIGNED                                                                                              |              | CHECKED             |  |
|-------------------------------------------------------------------------------------------------------|--------------|---------------------|--|
| KDG                                                                                                   |              | SMF                 |  |
| C                                                                                                     | WIC 03-24-17 | QTY SUBMITTAL NO. 6 |  |
| B                                                                                                     | WIC 06-15-17 | QTY SUBMITTAL NO. 7 |  |
| A                                                                                                     | WIC 12-15-16 | QTY SUBMITTAL NO. 1 |  |
| REV: BY: DATE: STATUS:                                                                                |              |                     |  |
| THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEABO TECHNIQS, INC. ANY ALTERATIONS, |              |                     |  |

**S=BAGO**  
T E C H N I C S  
WWW.SEBAGOTECHNICS.COM

75 John Roberts Rd.  
Suite 100  
South Portland, ME 04106  
Tel. 207-783-5656  
Fax 207-783-5656

250 Goddard Rd.  
Suite 100  
Lewiston, ME 04240  
Tel. 207-783-5656

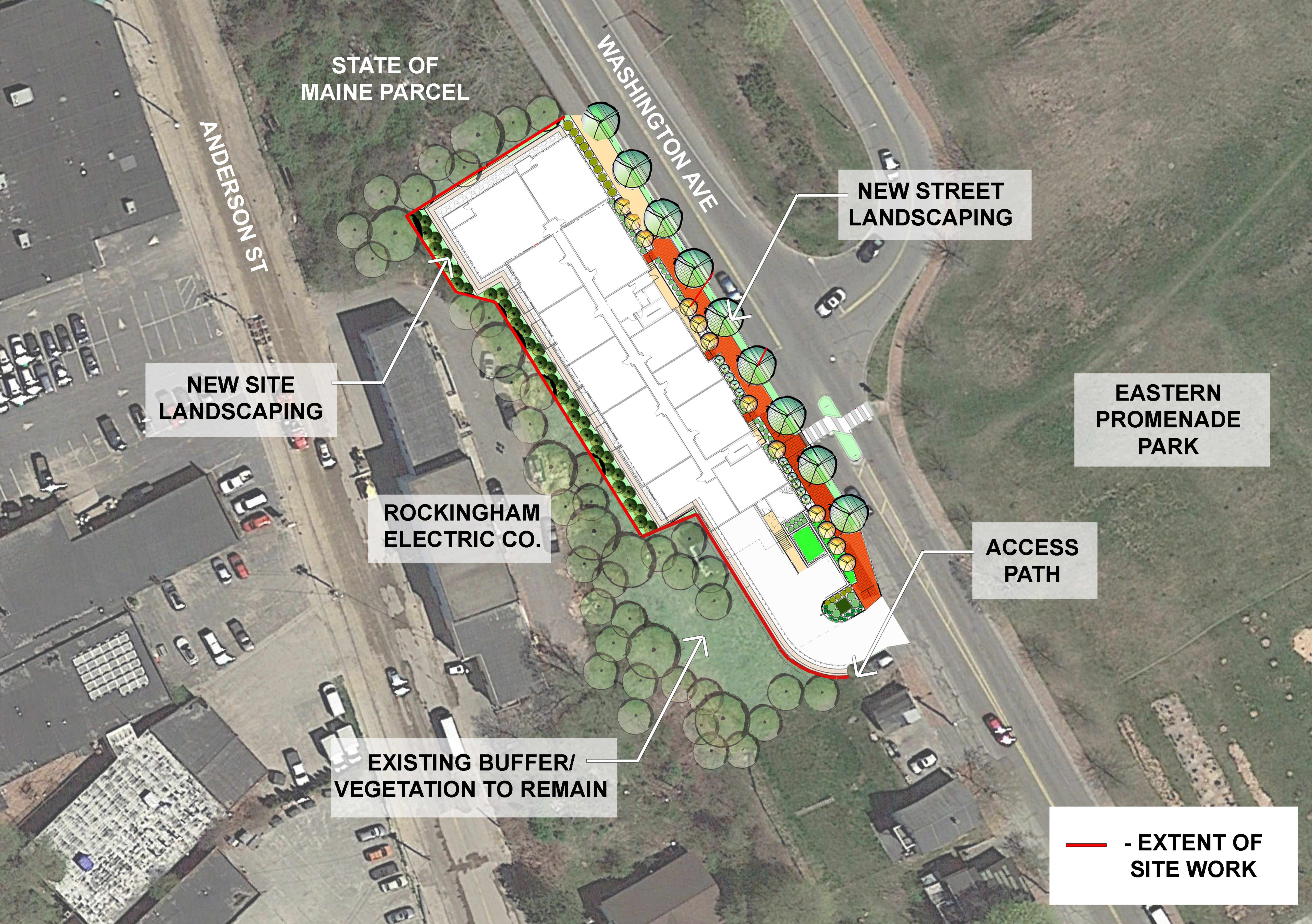
POST-DEVELOPMENT WATERSHED PLAN  
OF:  
218-220 WASHINGTON AVENUE  
218-220 WASHINGTON AVENUE  
PORTLAND, MAINE  
FOR:  
218-220 WASHINGTON AVENUE LLC

|             |          |
|-------------|----------|
| PROJECT NO. | SCALE    |
| 06172       | 1" = 20' |

SHEET 2 OF 2

06172SWP.dwg. TAB:06172SWP-POST

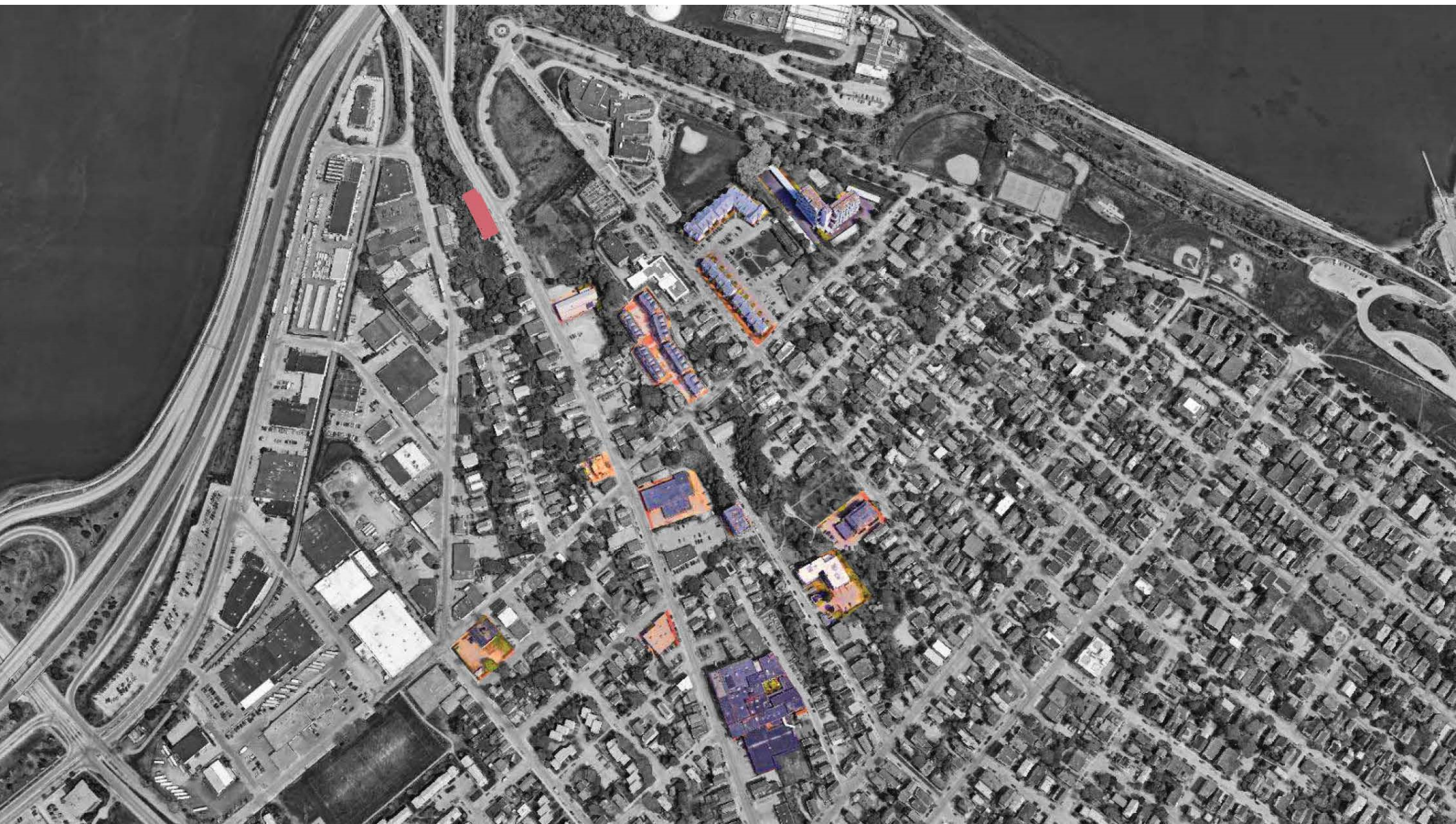




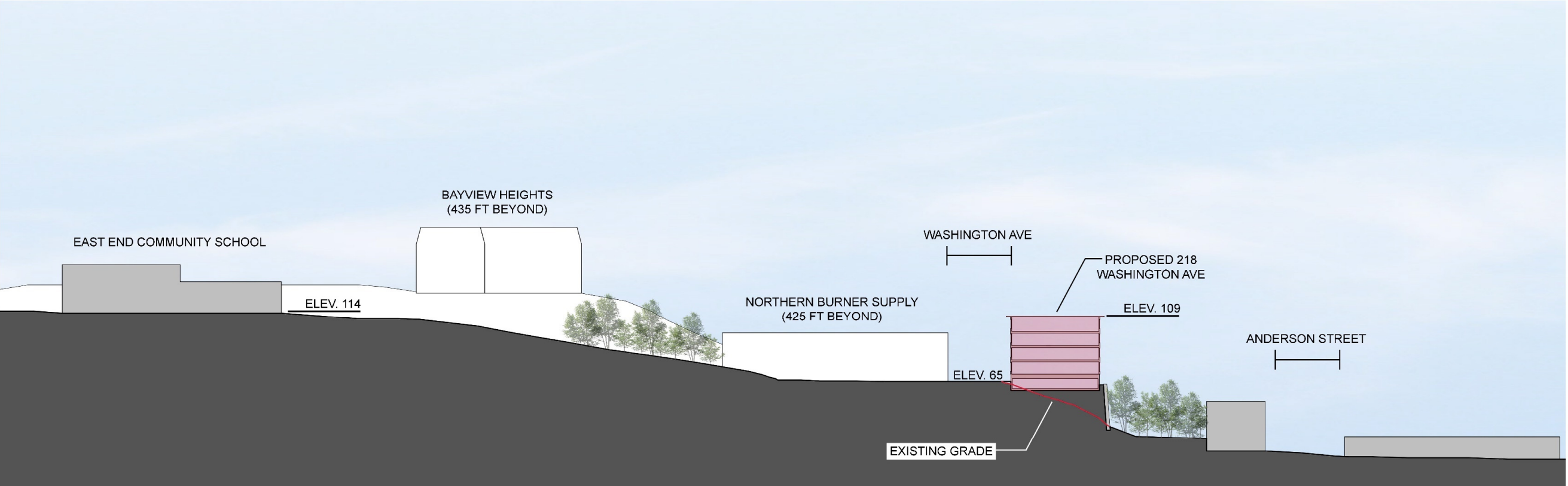


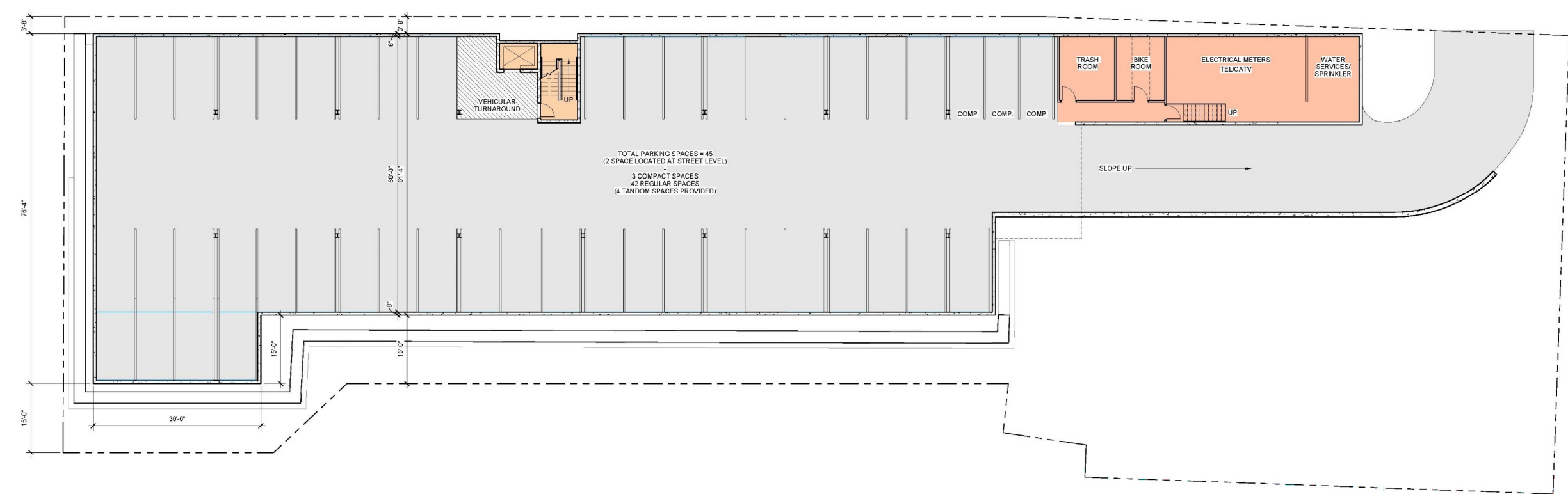








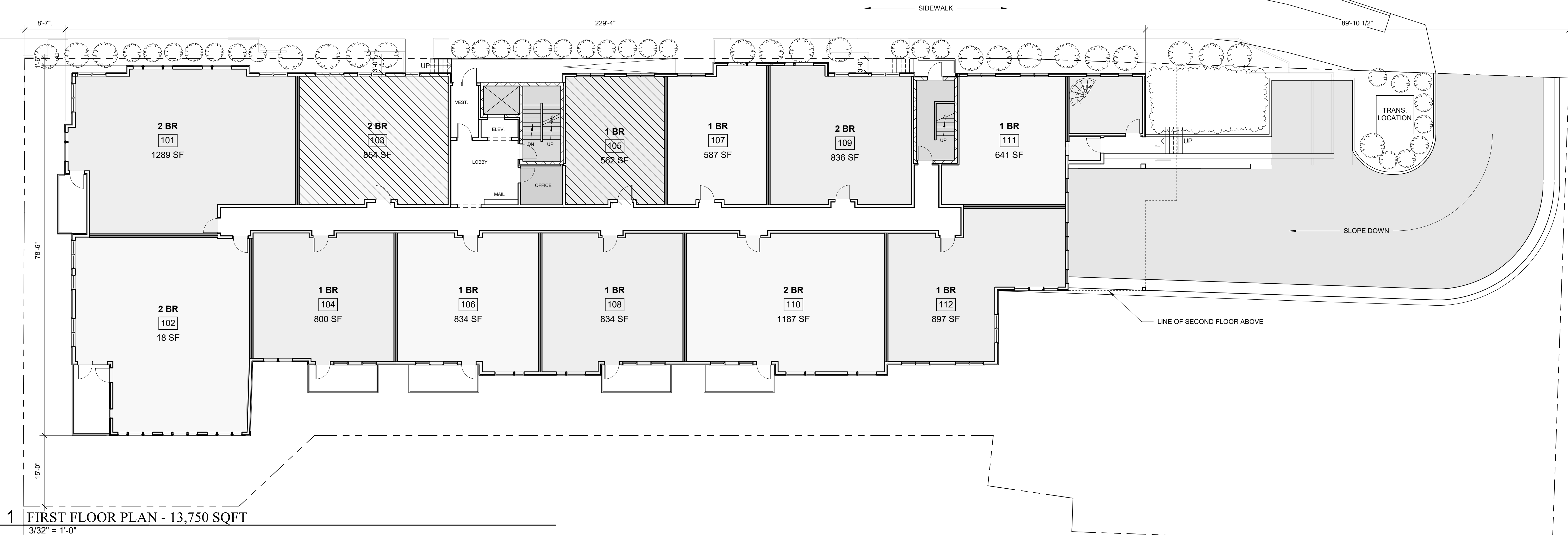
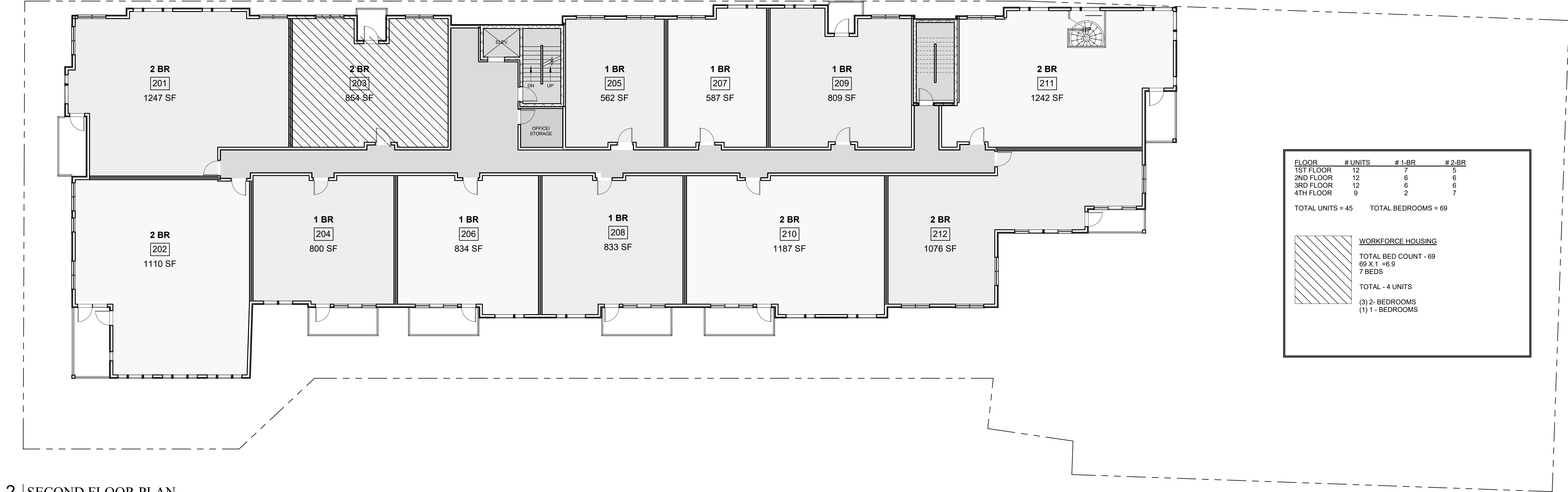




1 | GROUND FLOOR  
3/32" = 1'-0"

|       |  |                   |  |                  |                      |            |          |                                                                                                          |            |             |               |       |
|-------|--|-------------------|--|------------------|----------------------|------------|----------|----------------------------------------------------------------------------------------------------------|------------|-------------|---------------|-------|
| A1.00 |  | Ground Floor Plan |  | Date: DECEMBER 4 | Scale: 3/32" = 1'-0" | Revisions: | Project: | Project Name                                                                                             | Architect: | Consultant: | Prepared For: | Owner |
|       |  |                   |  |                  |                      |            |          | ARCHETYPE architects<br>48 Union Wharf Portland, Maine 04101<br>(207) 772-9022 ARCHETYPE@ARCHETYPEPA.COM |            |             |               |       |





Prepared For:  
**218 Washington  
Avenue LLC**

Consultant:

Architect:  
**ARCHETYPE**  
architects  
48 Union Wharf Portland, Maine 04101  
(207) 772-0022 ARCHETYPE@ARCHETYPEPA.COM

Project:  
**218 WASHINGTON  
AVE**  
218 WASHINGTON AVE  
PORTLAND, MAINE

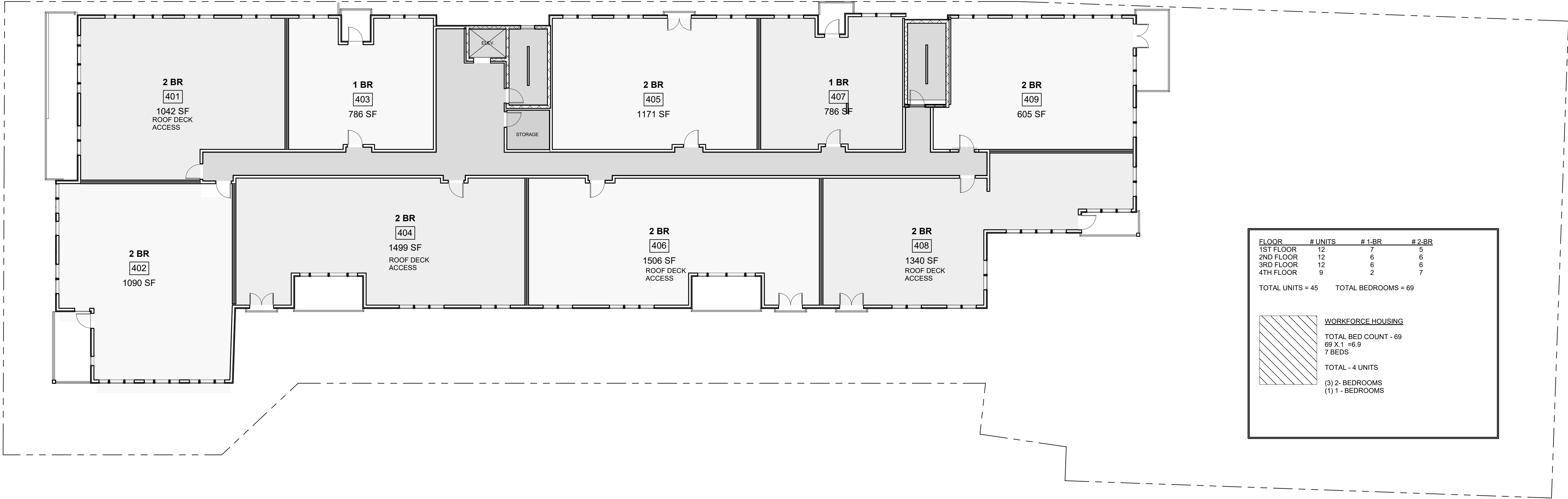
Revisions:

Date: 5/5/2017  
Scale: 3/32" = 1'-0"  
**FIRST & SECOND  
FLOOR PLANS**

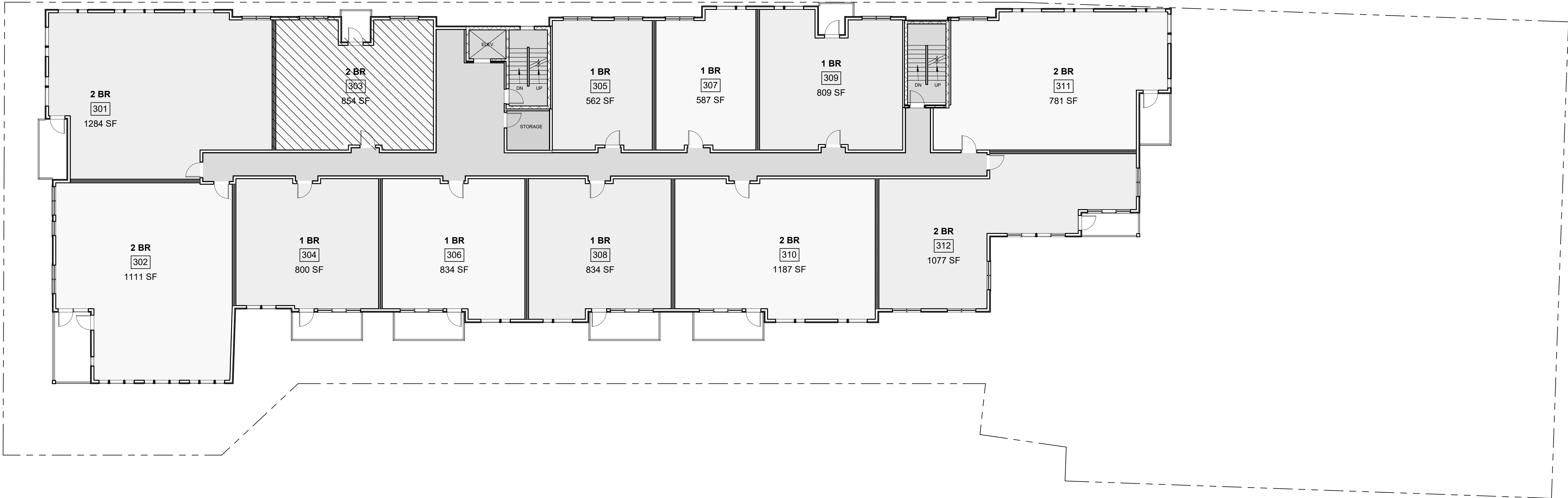
**A1.01**



2 | FOURTH FLOOR PLAN  
3/32" = 1'-0"



1 | SECOND AND THIRD FLOOR  
3/32" = 1'-0"





1 | WEST ELEVATION - ANDERSON STREET  
3/32" = 1'-0"

2 | EAST ELEVATION - WASHINGTON AVE  
3/32" = 1'-0"

3 | Elevation 3 - a  
3/32" = 1'-0"

4 | Elevation 2 - a  
3/32" = 1'-0"

|                                                                                                                              |                                                         |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Prepared For:<br><b>218 Washington Avenue LLC</b><br>199 Elderberry Rd<br>South Portland, Maine                              |                                                         |
| Consultant:<br><b>ARCHETYPE architects</b><br>48 Union Wharf Portland, Maine 04101<br>(207) 724-2242 ARCHTYPE@ARCHTYPEPA.COM | Project:<br><b>218 WASHINGTON AVE</b><br>PORTLAND MAINE |
| Revisions:<br>1 7-28-2017 Revision 1                                                                                         | Date:<br>5/5/2017                                       |
| Scale:<br>3/32" = 1'-0"                                                                                                      |                                                         |
| Building Elevations                                                                                                          |                                                         |
| <b>A2.01</b>                                                                                                                 |                                                         |



















