

1. Legal Ad

Documents:

[PB LEGAL AD 6-12-18.PDF](#)

2. Agenda

Documents:

[PB AGENDA 6-12-18.PDF](#)

3. 86 Newbury Street

3.I. Memo

Documents:

[PB MEMO - WORKSHOP 86 NEWBURY 6.12.18.PDF](#)

3.II. Attachments

Documents:

[NEWBURY ST. - 86 \(MEMO ATTACHMENTS\).PDF](#)
[NEWBURY ST. - 86 \(APPLICANTS SUBMITTAL\).PDF](#)
[NEWBURY ST. - 86 \(PUBLIC COMMENT\).PDF](#)
[NEWBURY ST. - 86 \(PLANS\).PDF](#)

4. 1006 Congress Street (THIS ITEM IS BEING TABLED TO JUNE 26, 2018)

4.I. Tabling Memo

Documents:

[CONGRESS ST. - 1006 \(TABLING MEMO\).PDF](#)

5. 44 Pleasant Street

5.I. Report And Attachments

Documents:

[PLEASANT ST. - 44 \(REPORT\).PDF](#)
[PLEASANT ST. - 44 \(REPORT ATTACHMENTS\).PDF](#)
[PLEASANT ST. - 44 \(APPLICANTS SUBMITTAL\).PDF](#)
[PLEASANT ST. - 44 \(PLANS\).PDF](#)

6. Inclusionary Workforce Units

6.I. Memo And Attachments

Documents:

[INCLUSIONARY WORKFORCE UNITS \(MEMO AND ATTACHMENTS\).PDF](#)

7. 300 Allen Avenue

7.I. Memo And Attachments

Documents:

[ALLEN AVE. - 300 \(MEMO\).PDF](#)
[ALLEN AVE. - 300 \(MEMO ATTACHMENTS\).PDF](#)
[ALLEN AVE. - 300 \(APPLICANTS SUBMITTAL\).PDF](#)
[ALLEN AVE. - 300 \(PLANS\).PDF](#)

7.II. Public Comment

Documents:

[PC1 - SUSAN MCKENNA, JAMES MCKENNA AND JANE ORBETON 6-12-18.PDF](#)

8. 28 Vannah Avenue

8.I. Memo And Attachments

Documents:

[VANNAH AVE. - 28 \(MEMO\).PDF](#)
[VANNAH AVE. - 28 \(MEMO ATTACHMENTS\).PDF](#)
[VANNAH AVE. - 28 \(APPLICANTS SUBMISSION\).PDF](#)
[VANNAH AVE. - 28 \(PUBLIC COMMENT\).PDF](#)
[VANNAH AVE. - 28 \(PLANS\).PDF](#)

LEGAL ADVERTISEMENT PORTLAND PLANNING BOARD

The Portland Planning Board will hold a meeting on Tuesday, June 12, 2018, Council Chambers, 2nd Floor, City Hall, 389 Congress Street. Public comments will be taken for each item on the agenda during the estimated allotted time and written comments should be submitted to planningboard@portlandmaine.gov

Workshop – 4:30 p.m.

- i. Level III Site Plan, 86 Newbury Street, 86 Newbury Street, LLC., Applicant. (4:30 – 6:00 p.m. estimated time) The Board will hold a workshop to consider a proposal for the redevelopment of Shipyard Brewery at 86 Newbury Street. The site is bounded by Newbury, Mountfort, Fore and Hancock Streets. The existing brewery building will be renovated and a new four to six story building is proposed with a gross floor area of 174,000 sf. The proposed uses include 60,000 sf of office space, 40,000 of technical fulfillment pharmacy, 10,000 of brewery, 4,000 sf of tasting room and retail, and a 105 room hotel. Two residential buildings are to be demolished and replaced with nine residential units in two buildings. Structured parking for 360 vehicles is proposed. The project is located in the India Street Form Based Code and subject to review under Portland's subdivision, site plan, and housing replacement review standards.

Public Hearing – 7:00 p.m.

- i. Zoning Map Amendment, IL to B-2, 1006 Congress Street, Richard Packer, Applicant. (7:00 – 7:30 p.m. estimated time) The Board will hold a public hearing to consider a proposal for a zoning map amendment to rezone 1006 Congress Street and adjoining properties along the southeasterly side of Congress Street from the rail line to beyond Westfield Street from the Industrial I-L to the Community Business B-2 zone. The B-2 zone allows for commercial and mixed-use development.
- ii. Level III Site Plan, 44 Pleasant Street, Justin Tourigny Applicant. (7:30 – 8:00 p.m. estimated time) The Board will hold a public hearing to consider a proposal to legalize 4 existing residential units at 44 Pleasant Street. The building was approved for 5 residential and 5 commercial units in 1995 and the new owner seeks to obtain approval for a total of 9 residential units and 2 commercial units in the structure. The site is in the B-3 zone and subject to site plan and subdivision review standards.
- iii. Amendment to Guidelines for Developers of Inclusionary Workforce Units on Calculation of Maximum Sale Price, City of Portland, Applicant. (8:00-8:30 p.m.). The Planning Board will hold a public hearing on the proposal to change the calculation of the maximum sale price of workforce units to 30% of 110% of AMI.

Evening Workshop (immediately following the public hearing)

- i. Level III Site Plan, 300 Allen Avenue, Estelle Estates, LLC., Applicant. (8:30– 9:00 p.m. The Board will hold an evening workshop to consider a mixed-use project which includes a 2,400 sq ft office building fronting on Allen Avenue with a surface parking lot for 24 spaces. The project also proposes the demolition of one home and the construction of 12 two-bedroom residential units contained in three duplexes and two three-unit buildings (total square footage of 16,520 sf). The site is zoned Residence Professional (RP) and Residential R-5. The project is subject to review under Portland's conditional use standards for parking in a residential zone, conditional use standards for inclusionary zoning, and both subdivision and site plan standards.

- ii. Level III Site Plan Application, 28 Vannah Avenue, Walsh Engineering, Applicant. (9:00 p.m. estimated time) The Board will hold an evening workshop to consider a proposal for the construction of a new building with seven (7) residential units and one (1) commercial unit at 28 Vannah Avenue. The existing 1 story building will be replaced with a three-story building with 9,100 sf. On-site parking for 17 vehicles is proposed. The site is in the B-1 zone and Residential R-3. The proposal is subject to Portland's subdivision and site plan standards.

SEAN DUNDON, CHAIR – PORTLAND PLANNING BOARD

CITY OF PORTLAND, MAINE

PLANNING BOARD



Sean Dundon, Chair
Brandon Mazer, Vice Chair
David Eaton
David Silk
Austin Smith
Maggie Stanley
Lisa Whited

AGENDA

PORTLAND PLANNING BOARD MEETING

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PUBLIC HEARING – 7:00 p.m.

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATIONS AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON MAY 17, 2018:

Workshop: Dundon (4:50 arrive), Mazer, Eaton, Silk, Smith and Stanley present. Whited absent.

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

Evening Workshop: Dundon, Mazer, Eaton, Silk, Smith and Stanley present. Whited absent.

4. REPORT OF DECISIONS AT THE MEETINGS HELD ON MAY 17, 2018:

- i. Zoning Text Amendment, Section 14-403. Street Access; Portland Corporation Counsel, Applicant. Mazer moved and Stanley seconded a motion to find the proposed text amendments consistent with the Comprehensive Plan and to recommend to City Council the adoption of the amendments to Section 14-403. Vote: 6-o, Whited absent.
- ii. Level III Site Plan; 82 Hanover Street; Tom Watson & Co., LLC, Applicant. Mazer moved and Stanley seconded a motion to waive the driveway separation requirement to allow the driveway to be located approximately 30 feet from the Parris and Kennebec and the Hanover and Kennebec intersections. Vote: 6-o, Whited absent. Mazer moved and Stanley seconded a motion to limit on the number of curb cuts to allow 4 curb cuts for the site. Vote: 6-o, Whited absent. Mazer moved and Stanley seconded a motion to waive the number of compact spaces to allow 0 greater than 49% compact spaces. Vote: 6-o, Whited absent. Mazer moved and Stanley seconded a motion to waive the parking lot layout standards to permit the layout as shown on the plan. Vote: 6-o,

Whited absent. Mazer moved and Stanley seconded a motion to approve the Traffic Movement Permit with one condition of approval to pay \$23,000 towards the implementation of the Marginal Way Master Plan. Vote: 6-0, Whited absent. Mazer moved and Stanley seconded a motion to approved the site plan application with 7 conditions of approval. Vote: 5-1, Silk opposed and Whited absent.

5. NEW BUSINESS

- i. **This item is being tabled to the June 26th meeting** Zoning Map Amendment, IL to B-2, 1006 Congress Street, Richard Packer, Applicant. The Board will hold a public hearing to consider a proposal for a zoning map amendment to rezone 1006 Congress Street and adjoining properties along the southeasterly side of Congress Street from the rail line to beyond Westfield Street from the Industrial I-L to the Community Business B-2 zone. The B-2 zone allows for commercial and mixed-use development.
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Memorandum

Planning and Urban Development Department

Planning Division

To: Chair Dundon and Members of the Portland Planning Board

From: Caitlin Cameron, Urban Designer; Christian Roadman, Planner

Date: June 8, 2018

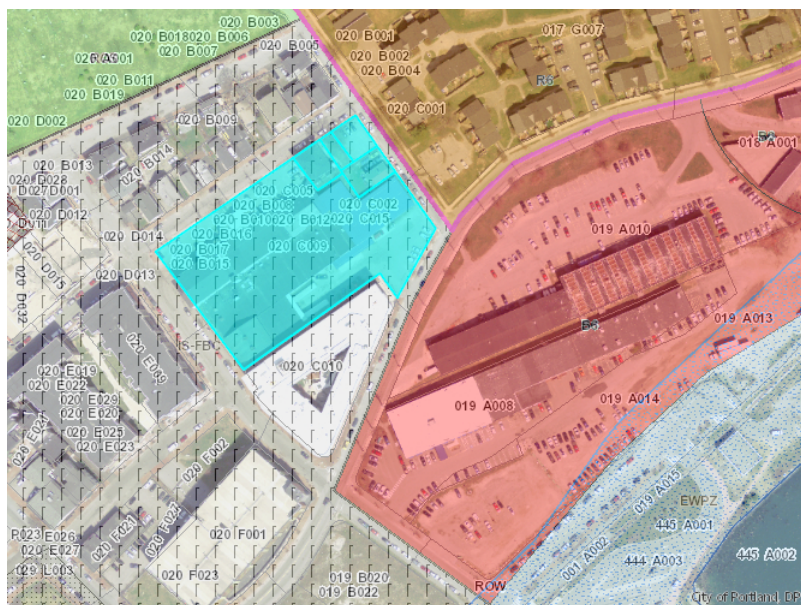
Re: **June 12th 2018 Planning Board Workshop**
Level III Site Plan, Subdivision
2-Acre Redevelopment: office, commercial, industrial, retail, residential
86 Newbury Street (#000045-2018)
86 Newbury Street LLC, David Bateman, Applicant

I. INTRODUCTION

86 Newbury Street LLC proposes to redevelop 93,775 square feet of space bounded by Fore, Hancock, Newbury, and Mountfort Streets. The proposed redevelopment site is currently home to Shipyard Brewing Company, which will retain a scaled-down presence on the site. Aside from the Residence Inn at 145 Fore Street (which is not part of this project), the only other building on the block proposed to remain is Shipyard's three-story brick building fronting Hancock Street. The proposed redevelopment includes the following:

office space – 107,171 s.f.
specialty pharmacy – 24,190 s.f.
technical fulfillment – 34,808 s.f.
brewery – 9,590 s.f.
tasting room, retail – 5,398 s.f.
hotel – 72,797 s.f. & 105 rooms
residences – 9,060 s.f. & 10 units across
three buildings
structured parking – 380 spaces, four levels

The proposed project is located in the India Street Form-Based Code zone (UN and UT subdistricts) and is within 100 feet of the Abyssinian Meeting House (73 Newbury Street, a local landmark). Because of this proximity, the Historic Preservation Board reviewed preliminary project designs at its May 16 and June 6 meetings. The applicant team incorporated input from the first meeting into the updated designs, while limited feedback from the June 6 meeting is included later in this report.



230 neighbors and interested parties, and public notice appeared in the *Portland Press-Herald* on May 10 and June 4, 2018. The applicant held a Neighborhood Meeting on May 15, 2018. At the time of this writing, the Planning Department received 3 public comments (Attachments PC1 to PC3) expressing varying degrees of concern for the impact of this development on neighborhood character, aesthetics, and congestion. Commenters raised questions regarding building height, construction, traffic and on-street parking impacts, and whether or not overhead utilities will remain.

Applicant: 86 Newbury Street LLC (represented by David Bateman)

Agent / Representative: Gorrill Palmer (Lucas Anthony, P.E.)

Architect: Archetype, P.A. (David Lloyd)

Required reviews and requested waivers:

Applicant's Proposal	Applicable Standards
New construction over 50,000 s.f.	Level III Site Plan Review and ISFBC UN/ UT Design Review
Subdivision (10 dwelling units)	Level III Subdivision Review
Multi-family Residential of 10 units	Inclusionary Zoning Conditional Use – APPLICATION REQUIRED
Waiver Requests	Citation
Number of Driveways (4 proposed)	City of Portland Technical Manual (limit of 2)
Driveway Location (100 ft. to intersection)	City of Portland Technical Manual (150 ft. to collector intersection)
Parking Aisle Width (20 ft. proposed)	City of Portland Technical Manual (24 ft.)
Frequency of Entries (UN - Newbury Street)	IS-FBC UN Dimensional Standards – 1 entry per building required; 1 entry directly facing street frontage on middle building
Frequency of Entries (UT - Mountfort Street)	IS- FBC UT Dimensional Standards – 2 entries required; 1 provided
Frequency of Entries (UT – Fore Street)	IS-FBC UT Dimensional Standards – 1 entry required; 0 provided

II. PROJECT DATA

SUBJECT	DATA
Total Area of the Site	93,375 s.f.
Total Disturbed Area	93,375 s.f.
Existing Zoning	IS-FBC (UT, UN)
Existing Use	industrial & retail (brewery operations, tasting room/shop), surface parking
Proposed Use	office, commercial/ hotel, residential, industrial, retail, parking structure
Impervious Surface Area	
--Existing	90,000 sf.
--Proposed	76,500 sf.
--Net Change	13,500 sf.
Building Footprint	
--Existing	51,812 s.f.
--Proposed	~73,660 s.f.
--Net Change	21,848 s.f.
Building Floor Area	
--Existing	56,489 s.f.
--Proposed	~160,721 s.f.
-Net Change	104,232 s.f.
Proposed Room Mix	TBD, mix of one and two-bedroom (10 rental units)
Parking Spaces	392 (180 parking garage, 12 below residential units)

III. EXISTING CONDITIONS

The site of the proposed development currently includes Shipyard Brewing Company's operations and parking as well as two multifamily buildings. The Shipyard complex spreads across the site (the entire complex touches each street bounding the development: Fore, Hancock, Newbury, and Mountfort). Immediately abutting Shipyard to the southeast is a Residence Inn hotel, the only building on the block that is not part of the proposed redevelopment. That hotel benefits from a loading and access easement off Fore Street and a 10-foot wide no-build easement at its boundary with the project site. The two existing multifamily buildings are located in the northeast area of the project site.

The site slopes downhill from Newbury Street to Fore Street, and the character of its surrounding development varies. Newbury Street falls under the UN – Urban Neighborhood Subdistrict, while Fore, Hancock, and Mountfort Streets fall under the UT – Urban Transitional subdistrict. Across Mountfort Street are the Munjoy South Townhouse apartments. Across Hancock Street is an uninterrupted block of 4 – 5 story condominiums. To the southeast of the site is the aforementioned Residence Inn hotel, and across Fore Street is Hamilton Marine. Across Newbury Street are single-family and multi-family dwellings ranging from 1.5 – 2 stories, as well as limited commercial frontage and the Abyssinian Meeting House (a local historic landmark).

Within the proposed redevelopment area there are currently six curb cuts/ driveways: one on Fore Street, one on Hancock Street, three on Newbury Street, and one on Mountfort Street. While the project falls under the India Street Form Based Code, it is not part of nor within 100 feet of the India Street Historic District.

IV. PROPOSED DEVELOPMENT



Hancock Street Elevation showing one of three proposed residential buildings, the existing Shipyard Building to be retained, the proposed hotel with entrance to parking garage, proposed office building in the background and existing Residence Inn (image: applicant)

The proposed redevelopment will eliminate all existing site buildings except for the three-story brick Shipyard building with frontage on Hancock Street. This building is proposed to house a reduced Shipyard operation (brewing, tasting room, and retail) while the upper floors are repurposed as pharmacy and technical fulfillment. Proposed new buildings include:

- three residential buildings (two of which are proposed with retail on the ground floor)
- office building stretching from Newbury to Fore Street
- hotel and limited retail space off Hancock Street
- structured parking serving both the hotel and the new office / pharmacy / fulfillment spaces.

Additionally, the plan includes an open space/ pocket park across from the Abyssinian meeting house.

The applicant seeks three waivers as part of their submission. The applicant seeks to retain the existing driveway approximately 95 feet from the intersection of Mountfort and Fore Streets (this does not meet the Technical Manual's specification that driveways be 150 feet from intersections along arterial/ collector roads). Additionally, the applicant seeks to have four driveways as part of the project, which exceeds the Technical Manual's specification of two. Two driveways are currently proposed for the parking garage, which serves multiple uses, and two are currently proposed for a rear access drive serving the residential buildings along Newbury Street.

As mentioned above, the applicant previously presented designs at the Historic Preservation Board's May 16, 2018 meeting. These comments are addressed below.



Fore Street perspective rendering showing proposed office building along Mountfort Street (image: applicant)

V. STAFF REVIEW

A. RIGHT, TITLE AND INTEREST

The applicant has not submitted proof of right, title, or interest; a copy of the deed is needed. A current Boundary Survey is also needed.

The property includes two easement agreements with the neighboring Residence Inn property ([Attachment P](#)). One easement keeps a no-build zone of 10' between the Residence Inn property and the 86 Newbury property – this easement is maintained as noted in the Site Plan ([Plan P4](#)). The second easement is a loading and access easement to allow for access across the applicant's property to the 10' easement and for maintenance, dumpster, and service parking/loading. The status of that easement is being negotiated and may be terminated. For now, the easement area is noted on the Site Plan ([Plan P4](#)) and the proposed new building encroaches on the easement area and does not fully maintain the minimum 14' clearance required in the legal document. The Site Plan and Subdivision approval for the Residence Inn did not make any further requirements regarding this access and loading area.

The City will request an access easement from the applicant for those portions of the sidewalk that cross the property line – this occurs on Mountfort, Newbury, and Fore streets.

B. ADDITIONAL PERMITS

Traffic Movement Permit – Based on the traffic assessment memo, this project will generate greater than 100 trips which will require a Traffic Movement Permit issued by the City under its delegated authority. This permit will be submitted under separate cover from this Level III Site Plan/Subdivision application.

DEP Permitting – The proposed construction will disturb over one acre; a Maine Construction General Permit (CGP) and a Permit by Rule (PBR) applications will be filed with the Maine DEP.

C. ZONING ASSESSMENT

1. General Assessment: The proposed buildings and parking structure are located in the IS-FBC zone application is quite complex and includes multiple buildings and four (4) different street frontages. Newbury Street is the UN subdistrict, Mountfort, Fore, and Hancock streets are all UT subdistricts. The more restrictive UN dimensional requirements apply on that frontage for a depth of 35' after which point the UT standards take over. On UN streets there is a three-story minimum and a four-story, 45' maximum. On UT streets the height maximum is six stories and 65'. The project appears to meet the height and setback requirements. The building on Mountfort/Fore street proposes to take advantage of the ability to have a height bonus on the UT portions of the building – this takes the building up to seven stories and potentially 77'. More evidence must be provided before this height bonus may be granted. The project meets the maximum building length on all streets. The project seeks to use Additional Building Length provisions on Mountfort Street – 200' in length with massing variation and also the hotel building on Hancock Street exceeds the 100' building length – 114' with two modules with active doors and partitions. On Newbury Street, which can allow up to 50' (50' proposed), the project includes three (3) residential buildings and a commercial ground floor in two of those buildings. The Shipyard building remains as existing on Hancock Street; there is an addition to the building on the Newbury Street side but is interior to the lot and meets the exemptions for additions. Most significant is the applicant's request for partial waivers from the Frequency of Entries requirements on Fore, Mountfort, and Newbury Streets. See the Zoning Checklist for a complete analysis (Attachment 1).
2. Staff Analysis: The intent of the zone is for new buildings to be human-scaled and contextual – staff feel the intent of the zone and subdistrict purpose statements are being met by the project as currently proposed.
14-275.1 Purpose: *The India Street Form-based Code is different that traditional zoning, . . . The intent of the India Street Form-based Code Zone is to establish a zoning district that encourages a vibrant, walkable, mixed-use urban district, preserves and values the existing historic neighborhood fabric, and fosters and supports local businesses and residential areas.*

Specifically, the three small-scale residential buildings on Newbury Street continue the scale, width, and pattern found on the streetscape. The Hancock Street façade incorporates more active commercial ground floors for the hotel, brewery, and potential commercial retail. Fore Street is not anticipated to be an active edge at the ground level – the building interfaces with the street using a widened sidewalk and landscape buffer. Mountfort Street is a transition edge to the abutting residential zone; the street is small and the proposed building mitigates the scale through massing variation, plane changes, material changes, and a slightly widened sidewalk.

The revised zoning states in the instance of a conflict between building length and front yard setbacks, the building length shall rule – that determines the placement of the office building in relation to Newbury Street in this case which is 200' in length on Mountfort and cannot be brought within 10' of both Fore and Newbury Streets given the lot dimensions. Staff support the placement of the building set back from the residential block across the street to mitigate the scale of the new building.

The zoning is met regarding parking – all parking is provided interior to the block in structured parking with liner buildings.

Outstanding Zoning questions:

- Entries: Does Planning Board support the requested waivers from providing all required entries? Staff support the waiver for Fore and Mountfort Streets given the nature of the streets and the proposed uses in the buildings. On Newbury Street, however, staff feel the residential entries should be brought to the street or closer to the street. Staff support this waiver for the corner residential building given that a retail entry is provided on Hancock Street but not the third residential building.
- Height: The height bonus on Mountfort Street is contingent on meeting the green roof requirements. Staff will request some additional runoff calculations and finalization of the maintenance agreement.
- Lot Coverage: The total area of the building footprints is needed to evaluate lot coverage and green roof compliance.
- Parking: Staff have yet to complete the parking review including determining the correct number of required parking spaces. To be addressed in 2nd workshop.

C. SUBDIVISION STANDARDS

(14-497(a). Review Criteria)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's subdivision ordinance. Staff comments are below and in *Attachments 1-2*.

1. Water, Air Pollution

The project is not anticipated to result in undue air or water pollution.

2 & 3. Adequacy of Water Supply

Applicant to submit a revised application for water capacity to the Portland Water District (Attachment N).

4. Soil Erosion

No unreasonable soil erosion or reduction in the capacity of the land to hold water is anticipated. Site Plan (Plan P4) and Erosion Control Notes and Details (Plan P14) provide information about stabilizing the site during and after construction.

5. Impacts on Existing or Proposed Highways and Public Roads

The applicant has not provided a full traffic and transportation analysis. Tom Errico, the city's consulting traffic engineer, has requested the studies. The project will also likely require a TMP permit and a TDM plan. These items to be covered in the 2nd workshop.

6. Sanitary Sewer/Stormwater Disposal

No grease trap is proposed – this should be considered given the possibility of retail on Newbury Street. An updated wastewater capacity application needs to be submitted to the Department of Public Works.

The green roof is proposed to achieve a height bonus – that green roof will be required to meet Ch 32 and provide stormwater runoff detention. The applicant has provided stormwater management and utility plans as well as information for the green roof. The City's consulting civil engineer will review these plans further as part of the Site Plan review (Attachment 2, S, and P23).

7. Solid Waste

More information needed.

8. Scenic Beauty

This proposal is not deemed to have an adverse impact on the scenic beauty of the area – the project does not encroach on the Mountfort Street corridor views to the waterfront. The project is within 100’ of a historic landmark – as such, Newbury Street has been reviewed by the Historic Preservation Board and those comments appear below.

9. Comprehensive Plan

India Street Sustainable Neighborhood Plan

This newly adopted neighborhood plan includes the following goals and principles which are met by this proposal:

Goal – Vitality – the project adds 10 new residential units, a hotel, and a large office building bringing more people to the neighborhood.

Goal – Diversity of building types and residents – The residential units will potentially be rental properties with at least one workforce housing unit. The project brings a new office building and workers to the neighborhood. Another hotel is not contributing to this goal given the number of hotels already in this neighborhood.

Principle 7: Guided Growth – the project provides small-scale residential development on Newbury Street while filling the interior of the block with the larger scale buildings.

Principle 8: Form of Development – maintaining the pedestrian-scale block on Newbury Street, continuous sidewalks, and street-oriented buildings – these concepts are all included in the project.

Principle 13: Responsive to Climate Change – this will be the third project in the neighborhood to have a green roof and address stormwater runoff.

Incentives for Affordable Housing and Housing – Sustaining Portland’s Future

The proposed project is required under the newly adopted Division 30, Section 14-487, Ensuring Workforce Housing to provide at least 10% workforce housing units. Housing stock is placed in a multi-modal neighborhood with good connections to several neighborhoods, offices, and services. The applicant has yet to submit an IZ Conditional Use application.

10. Financial and Technical Capacity

As noted above, the applicant has provided evidence of financial and technical capacity (Attachment H).

11. Wetland/Water Body Impacts

Project is not located within a watershed of any pond or lake or within 250 feet of any wetland, great pond or river.

12. Groundwater Impacts

There are no anticipated impacts to groundwater supplies.

13. Flood-Prone Area

Per the FEMA flood maps, the site is not located in a flood zone.

14. Wetland/Water Body Impacts

No potential wetlands within the proposed subdivision.

15. Wetland/Water Body Impacts

No river, stream or brook within or abutting the proposed subdivision.

(14-497(c) Conformity with Code) Any proposed subdivision shall be in conformity with all relevant provisions of this Code. Project has been reviewed for conformity with the zoning code – see staff analysis below.

D. SITE PLAN STANDARDS

14-526 Site Plan Standards

Traffic - Access, Circulation, Loading and Servicing - To be addressed in 2nd workshop.

Sidewalks – This will be more thoroughly addressed in 2nd workshop. Staff have several revisions requested for the sidewalk design to meet the *City of Portland Technical Manual* standards especially regarding curb alignment, pedestrian crossings ramp, street trees, street lighting placement and fixture selection. Staff will work with the applicant on further revising these designs. The City's Transportation Planner had these preliminary comments:

- *Many of the configurations and designs of curb ramps at intersections, crosswalks, and driveways need to be resolved*
- *Suggest consideration of the modest narrowing of Hancock Street along the project frontage (between Middle and Newbury Streets) to widen the sidewalks to better mate the sidewalk width and design along the frontage of the Residence Inn between Middle and Fore Streets – for example, a reduction of 5' from 43' to 38' would still more than adequately allow on-street parking on both sides of Hancock Street.*
- *Suggest consideration of more widespread use of new granite curbing for entire project frontages rather than a mix of old and new along blocks to create a better quality streetscape – old curb could be consolidated and reset within a block(s) for a consistent quality but a mish-mash of curbing types should be avoided*
- *Several site details need to be updated to reflect the latest content of the Technical Manual*

Public Transit Access - No transit shelter is required.

Parking – To be addressed in 2nd workshop.

Snow Storage – Not required.

Transportation Demand Management – To be addressed in 2nd workshop.

Landscape Preservation / Site Landscaping and Screening – There are no significant landscape or natural features to preserve. The applicant shows landscape and fence screening between Franklin Street and the surface parking as well as the neighboring residential properties and the surface parking.

- Staff suggests that a wood fence is not the appropriate character facing a major, multi-modal street.
- Is the fence shown adequate screening for the neighboring residential properties? There is no screening between the surface parking and a neighboring porch, for example.

Landscape Plan – The applicant proposes substantial landscape improvements around the property and includes improvements to the Newbury Street frontage between the residential buildings and across from the Abyssinian on the recommendation of the Historic Preservation Board ([Plan P15](#)).

- Applicant made revisions based on City Arborist comments including the placement of street trees on the private property on Newbury and Mountfort Streets. Additional review from the City Arborist of the current proposal is needed for these open space landscape improvements.
- A well-defined edge is needed on the west edge of the Abyssinian green space – this should be achieved either with the residential building placement or with a landscape wall.
- Staff support the landscape buffer between the sidewalk and building on Fore Street.
- Street trees within the sidewalk furnishing zone should be shown in grates, size as large as possible.
- Ten (10) trees are required for the residential use, 12 are provided. In addition, for the commercial uses, street trees are required every 30-45' which is approximately 22 trees required. **A contribution to the Street Tree Fund will be required = 22 + 10 = 32 required; 12 provided; 20 trees x \$400 = \$8,000**

Water quality, Stormwater Management and Erosion Control - See comments from Civil Engineer ([Attachment 2](#)) – more information or revision is needed to evaluate the proposal in terms of impervious surface increase, green roof, and catch basin/stormwater design. The project proposes to achieve a height bonus by providing 50% pervious lot coverage and a green roof. Additional calculations are needed to show the runoff detention of the green roof meeting the expected public benefit in exchange for the height increase; design details are also required. The green roof must meet Chapter 32 and provide a Stormwater Maintenance Agreement.

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.

- This proposal includes many recessed entries and private open spaces making CPTED principles critical.
- The lighting levels are one strategy to ensure safety and visibility. The lighting on the alley between the residential properties and Shipyard should be brought up to Technical Manual standards.
- The entrances to the residential properties should be made more legible from the street – in some cases, the entrance should be on Newbury Street, in others, the path and canopy to those side entries should be more apparent.
- What strategies are employed on Fore Street garage entrance to prevent unwanted behavior/hidden corners?

Fire Prevention and Public Utilities – The water and sewer capacity letters are still outstanding. The Fire Department requests each building have its own address.

Massing, Ventilation and Wind Impact and Shadows: Generally addressed in the Design Review. The project is on the edge of the zone and should thoughtfully transition to the scale of the neighboring residential properties on Mountfort Street. The project is currently meeting the zoning height requirements – except for evidence showing eligibility for the bonus height on Mountfort/Fore streets which is still to be determined.

Historic Resources – The project is within 100’ of a historic landmark. The Abyssinian Meetinghouse. Therefore, the project has received advisory design review from the Historic Preservation Board.



Their feedback is reflected primarily on Newbury Street in the introduction of a gable roof, activation of ground floor spaces in residential buildings, introduction of a third residential building, and framing of the pocket park. Additionally, the material / color palette of the office building was reduced to provide consistency and better grounding.

The Historic Preservation reviewed the current, updated designs at their June 6 meeting. Feedback encourages the applicant to:

- further differentiate the spacing/ design of the three residential buildings (to read less like one development) – this could be through materials, entrance locations, plane changes
- make residential entrances more legible – either on the street or with canopies extended to street
- introduce a stronger edge to the proposed pocket park that reflects the scale of the Abyssinian building
- differentiate planes of the gabled and flat-roofed sections of the corner residential building
- reduce the “weight” of the ground floor retail – too opaque, heavy, office-front character, out of proportion with the overall building scale

Exterior Lighting including Street Lighting – Staff evaluated the photometric plan – the minimum and maximum light levels are met in most cases. Lighting for the alley between Shipyard and the residential buildings is low. Most of the building entrances for this project are recessed away from the street – for this reason, building and site lighting levels is very important for safety reasons. The Building lighting cut sheets do not all meet the requirement for full cutoff lights – reconsider the sconce selection. Street lights are required along all frontages in the ROW, including Fore Street. The lights need to meet the Technical Standards for street lighting and match the lights installed elsewhere in the India Street neighborhood (Eastern Waterfront medium) – in this case, lights should all be medium scale, black, LED, and 3000 K color temperature.

Noise and Vibration – The final submissions should clarify where the HVAC will be located and how it will be screened from the public ROW and neighboring residential properties even if the exact specifications are submitted later.

Construction Management Plan – Awaiting narrative from applicant. To be addressed in 2nd workshop.

E. DESIGN STANDARDS



HANCOCK STREET PERSPECTIVE

Portland, Maine

MAY 2018

ARCHETYPE
ARCHITECTS

The site is located within the IS-FBC zone with Newbury a UN street and the remaining three streets as UT. Preliminary design review concluded that the building designs generally meet overall intent of the zone with a few outstanding points regarding materials and character, residential building design, and scale and material placement on the office building. Design checklist see [Attachment 1](#).

Staff Analysis: The surrounding built context could be divided into the low-rise historic residential structures of the narrow Newbury Street and the newer, large-scale development on Hancock and Fore Street. The building is also a transition edge between the IS-FBC zone and the neighboring residential Munjoy South. The design priorities for new construction in this neighborhood are buildings that maintain the urban street wall, engage the public realm, and respect and

fit into the established context. The hotel and existing Shipyard building continue the more active frontage that is being established on Hancock Street. Generally, staff feel to be contextual, new design in this neighborhood should be simple and consistent and use massing and articulation to provide human scale. The three residential buildings on Newbury Street are contextually sensitive in scale and provides an active ground floor with commercial use, however, staff and HP Board review feel some further revision is needed to the proportion of the retail façade composition, that more plane changes and articulation is needed, and especially that entrances

should be more direct and legible from the street. Staff are especially interested in mitigating scale and impact of the large office building on the surrounding residential blocks. The design successfully creates interesting forms and massing, and maintains the street walls. The building is setback from the street edge on Newbury Street to provide buffer to the small-scale residential across the street. Staff continue to **consider material placement and especially the use of curtain wall in this context.** The main entry to the office is on Mountfort Street and is occurs at a massing indentation/plaza in the building but **could use additional emphasis.** Visual interest is brought through massing variation, façade plane changes of the bay windows, and varied roof lines. There is a regular pattern of vertical proportioned windows, consistent with the traditional patterns. Staff would like to study the roofline of the hotel and office building in relationship to Fore Street and the overall skyline to better evaluate that relationship to the context. The project also adds some publicly accessible open space on Newbury Street. The space directly across from the Abyssinian is an amenity for the neighborhood residents and visitors as well as providing a point from which to appreciate the Abyssinian Meetinghouse – **the Historic Preservation Board and staff feel that the western edge of that space should be better defined either by shifting residential building 3 over and removing the driveway, or at the very least with a landscape wall.**

Staff request Board feedback about:

- Overall character + compatibility with existing neighborhood on Newbury and Mountfort Street – appropriate for curtain wall on office building, scale of development
- Material selection, placement, and number of materials
- Residential Buildings Newbury Street - Fenestration, Articulation, Pedestrian comfort and scale, Entrance locations and legibility, Spacing on the street and in relationship with the open space
- Spacing of residential buildings, especially in relationship with the Abyssinian
- Landscape design approach on Newbury

VI. HOUSING REPLACEMENT DETERMINATION

The site of this application currently includes nine (9) residential units that are proposed to be demolished. Per the Housing Replacement Ordinance, the applicant is required to replace those nine (9) units or pay a replacement fee.

The purpose of Sec. 14-483 Housing preservation and replacement of the Land Use Code is:

- 1) To promote and facilitate an adequate supply of housing, particularly affordable housing for all economic groups;*
- 2) To limit the net loss of housing units in the city;*
- 3) To preserve housing in zones where housing is permitted for in the city for all residents in order to promote the health, safety, and welfare of its citizens.*

The applicant intends to replace the nine (9) existing residential units on this site within the proposed three (3) residential buildings (ten (10) units total) on Newbury Street. The applicant is subject to the performance guaranty for the nine (9) residential units to be demolished prior to issuance of demolition permit.

VII. INCLUSIONARY ZONING CONDITIONAL USE

Because the proposal includes ten (10) residential units, the applicant is required by Division 30, Section 14-487 to provide at least one (1) workforce housing unit (on-site or off-site) or pay the fee-in-lieu. The applicant has not submitted the IZ Conditional Use application as of this workshop; whether the applicant intends to provide the workforce housing unit or pay the fee-in-lieu is unknown at this time.

VIII. NEXT STEPS

Staff ask for Planning Board guidance on the following:

- Zoning waiver requests
- Whether retail space on Newbury Street is appropriate
- Design direction, especially for office building on Mountfort Street and relationship to residential Newbury

The final submission will need to address the Site Plan and Subdivision review standards, including the following:

- Provide proof of Right, Title, and Interest
- Resolution or compliance with the Loading & Access Easement
- License: Work with City to determine the license conditions for public access over sidewalks
- Submit an updated, stamped Survey
- Subdivision: Provide Plat for review
- Transportation: Trip generation analysis; Parking study
- Transportation: Information in support of waiver requests (garage dimensions, # of curb cuts)
- Transportation: TMP permit application, TDM plan draft
- Transportation: Provide more detailed use information in order to determine the parking requirements
- Site Design: Revise sidewalks/ROW design and materials, street lights, and street tree layouts per staff comment and per Technical Manual standards
- Zoning: Height bonus - Green roof calculations, diagram showing the 50% pervious lot area, details, and maintenance agreement
- Zoning: Resolve outstanding staff questions
- Design: Locations and screening details for HVAC
- Phasing: Will there be phasing as part of this project?
- Use/Parking: Clarify uses within the brewery and retail space on Hancock
- Utilities: Submit updated capacity letters for Wastewater and Water Supply
- Utilities: Determine how to achieve objectives for underground utilities
- Provide a Construction Management Plan narrative for review
- IZ Conditional Use: Submit an application for IZ Conditional Use
- Submit separate applications to DEP and verify compliance with CGP and PBR permits
- Indicate how you are meeting the DPE and MHPO recommendations for construction
- Address any Planning Board comment/concerns

ATTACHMENTS:

Attachments to Memorandum

1. Zoning and Design Checklist
2. Civil and Stormwater

Public Comments

PC1 Mike Curran 5.12.18

PC2 Mary Cadagin and Leon Wilson 5.15.18

PC3 Jeanne Oulette 5.20.18

Applicant's Submittal

- A. Cover and Cover Letter
- B. Table of Contents
- C. Level III Checklist
- D. Waiver Table
- E. Agent Authorization
- F. Maps
- G. Narrative 05-30-2018
- H. Financial and Technical Capacity Letter
- I. Photo Sheet
- J. Traffic Assessment with Attachments
- K. Stormwater Management Report
- L. Erosion Control Report

- M. Wastewater Application
- N. Utility Ability to Serve Letters
- O. Natural Resource Responses
- P. Title-Right-Interest and Easements
- Q. Fire Code Summary
- R. Zoning Analysis Table
- S. Neighborhood Meeting Documents
- T. Combined Light Fixture Cut Sheet

Plans

- P1 Cover Sheet
- P2 Existing Conditions Survey
- P3 Demolition Plan
- P4 Site Plan
- P5 Utility Insets
- P6 Grading
- P7 Site Details
- P8 Site and Lighting Details
- P9 Drainage & Utility Details
- P10 Focal Point and Detention Pond Details
- P11 Detention Pond and Drainage Details
- P12 Focal Point Details
- P13 Subslab Drainage
- P14 Erosion Control Notes and Details
- P15 Elevations
- P15 Landscape
- P16 Floor Plans
- P17 Perspectives and Renderings
- Lighting Plan
- Average Grade Diagram

Development Review Checklist

IS-FBC

Level I / Level II / **Level III** / Master Plan
 Project Name: Shipyards
 Address: 86 Newbury Street
 Description: Alteration / **Addition** / New Construction
 Date Received: 5/30/18 **Prelim** / Final
 Planner: Caitlin Cameron

Subdistrict **UN** / **UT** / UA

	Complies	More Info	Does Not Comply	N/A	Comments
PURPOSE					
General Guiding Principles	☒	☒	☒	☐	Most principles met – more information needed about landscape and building interface with the street. Newbury and Mountfort Streets need more design iteration to develop a consistent street character with blocks across the street.
Subdistrict Intent	☒	☐	☐	☐	UT Hancock, Fore, Mountfort; UN Newbury
GENERAL DEV. STANDARDS					
(a) Prohibited Uses	☒	☐	☐	☐	
(b) Siting Standards					
Mid-Block Permeability	☐	☐	☐	☒	
Frontage Req. – Additional Building Length	☒	☐	☐	☐	UT Mountfort = 200' with massing variation UT Hancock = 114' Hotel with 2 modules
Setbacks	☒	☐	☐	☐	
Small Lot < 35'	☐	☐	☐	☒	
Side Yard less than 5'	☐	☐	☐	☒	
Special corner treatment	☐	☐	☐	☒	
Attached Buildings	☐	☐	☐	☒	
Landscaping & Screening					
Surface Parking	☐	☐	☐	☒	
1 st Lot Layer - Height	☐	☐	☐	☒	
1 st Lot Layer – Perm.	☐	☐	☐	☒	
Other Lot Layer - Height	☐	☐	☐	☒	

	Complies	More Info	Does Not Comply	N/A	Comments
(c) Height Standards					
Height Bonus - Eligible?	☒	☐	☐	☐	UT eligible streets – 1 bonus story allowed; Height not to exceed 77' from average grade
Height Bonus – Conditions Green Roof + Pervious = 50% lot	☐	☒	☐	☐	Staff request additional info – diagram showing how 50% pervious lot area is met, Ch 32 compliance and calculations, details, and green roof maintenance agreement
(d) Parking Standards	☐	☒	☐	☐	Staff have not completed the parking requirement review.
SUBDISTRICT DIMS REQ.					
Siting Standards					
Orientation	☒	☐	☐	☐	Buildings on Hancock and Mountfort streets have a principal façade oriented to the street. Office building oriented to Mountfort Street. Hotel oriented to Hancock Street. Residential buildings are oriented to Newbury Street but lack principal entries.
Corner Condition	☒	☐	☐	☐	UN is dominant subdistrict on Newbury Street; UN/UT streets, applicant is allowed to decide building orientations.
Lot Coverage	☐	☒	☐	☐	TBD but appears to be under 90% required
Frontage Requirements					
Building Length	☒	☐	☐	☐	UN – residential buildings all 50' UT Fore – less than 100' Shipyard building to remain as existing length
Additional Bldg Length	☒	☐	☐	☐	UT Mountfort – 200' with massing variation UT Hancock – less than 200' with 2 modules with active doors.
Fenestration Req. (UA)	☐	☐	☐	☒	
Setbacks					
Principal Building					
Front Yard	☒	☐	☐	☐	5' max for UN street; 10' max for UT streets; staff suggest extending sidewalks into front yard where feasible. Front yard max of 10' is exceeded on Newbury Street for office

					building because building has met 200' max building length.
Side Yard	☒	☐	☐	☐	At least 10' on all side yards.
Side Yard	☒	☐	☐	☐	
Exceptions?	☐	☐	☐	☒	
Rear Yard	☐	☐	☐	☒	No rear yards
	Complies	More Info	Does Not Comply	N/A	Comments
Building Entries					
Frequency	☐	☐	☒	☐	Newbury = 1 required per building; 2 buildings provided (waiver request) Mountfort = 2 required; 1 provided (waiver request) Fore = 1 required; 0 provided (waiver request) Hancock = 1 required for residential building; 1 provided; 2 required for Hotel, 2 provided
Principal Entry Orientation	☒	☐	☐	☐	Each street has a principal entry
Principal Entry Elevation	☐	☒	☐	☐	More information needed; all entries appear to be at grade
Height Standards					
Principal Building					
Height	☒	☐	☐	☐	Newbury = UN 45' max; Hancock, Mountfort, Fore = UT 65' max
Stories	☒	☒	☐	☐	3 stories on Newbury; 7 stories on Mountfort/Fore (more info needed for bonus story); 6 stories on Hancock
Stepbacks (UT, bonus)	☒	☐	☐	☐	15' stepbacks provided for bonus floor
Accessory Building(s)	☐	☐	☐	☒	
Parking Standards					
Surface Parking Location	☐	☐	☐	☒	No surface parking
Garage Door Setback	☒	☐	☐	☐	No doors, opening set back from front façade on Hancock and Fore streets
Garage Door Opening	☒	☐	☐	☐	Opening on Hancock is 40' but not a door

IS-FBC: Building Design Standards (BDS)

	Complies	More Info	Does Not Comply	N/A	Comments
BUILDING DESIGN STANDARDS (BDS)					Review (5/22/18 and 6/5/18) Caitlin Cameron, Deb Andrews, Christian Roadman; HP Advisory review on 5/16/18 and 6/6/18
1. Neighborhood Context					
Intent	☒	☐	☒	☐	Be mindful of the transitional nature of the site – especially on Newbury and Mountfort streets. The large office building needs to be contextual with the small-scale, residential streets and blocks that surround it. The façade composition and material placement can be used to transition this office use and larger scale. Newbury Street residential buildings will be good scale for transition from residential buildings across the street. Hancock Street is mostly mid-rise buildings – hotel is appropriate scale and has active frontage.
Guidelines	☐	☒	☐	☐	Generally, staff are satisfied by the proposal. Staff and HP board had additional suggestions for the residential buildings – more variation between each building in façade planes, entries and articulation of entries, expression of the gable roof versus the flat roof.
2. Massing & Proportion					
Intent	☒	☐	☐	☐	Office building uses massing variation to moderate the scale in relationship with the smaller scale residential buildings surrounding. The residential buildings could use more variation in the massing – perhaps a recessed plane on the front at entries, plane change for flat roof vs. gable roof.
Guidelines	☒	☐	☐	☐	

Standard 2.1	☒	☐	☐	☒	2 modules on Hancock for hotel building
3. Articulation & Composition					
Intent	☒	☒	☐	☐	Generally met but more information needed for office building facades and the residential buildings.
Guidelines	☒	☒	☐	☐	Façade plane changes, overhanging cornices, massing variation. For the residential buildings with retail below – retail treatment is too heavy or weighty with office front rather than storefront treatment; should become more transparent and less “applied” and out of proportion.
Standard 3.1: 3 required	☒	☒	☐	☐	
Standard 3.2	☐	☒	☐	☐	
Standard 3.3: Blank Wall	☒	☐	☐	☐	
4. Fenestration					
Intent	☒	☐	☐	☐	Regular pattern of windows, consistency
Guidelines	☒	☐	☐	☐	
Standard 4.1 (UA only)	☐	☐	☐	☒	
Standard 4.2	☒	☐	☐	☐	
Standard 4.3	☐	☒	☐	☐	What is VT of glass?
Standard 4.4	☐	☒	☐	☐	

	Complies	More Info	Does Not Comply	N/A	Comments
5. Building Materials					
Intent	☐	☐	☐	☐	More info needed for residential buildings; hotel building has appropriate mix of brick and industrial references; scale back the use of the curtain wall on office building in relationship to the residential blocks.
Guidelines	☐	☒	☐	☐	
6. Building Entries					
Intent	☐	☒	☐	☐	Most facades include active entries.
Guidelines	☐	☐	☒	☐	Some revisions requested regarding residential entries.
Standard 6.1	☒	☐	☒	☐	Principal entry for hotel on Hancock, for office on Mountfort, for residential buildings on Newbury. Fore Street does not have an entrance and would require a waiver; 3 rd residential building does not have an entrance on the street. Office entry is not robust enough – needs more emphasis.
Standard 6.2 (UA only)	☐	☐	☐	☒	
Standard 6.3	☐	☒	☐	☐	
Standard 6.4	☒	☐	☐	☐	Met on the hotel/retail façade; Brewery; office building
Standard 6.5	☒	☐	☐	☐	
Standard 6.6	☒	☐	☐	☐	Slight setback
Standard 6.7: Frequency	☒	☒	☐	☐	See zoning checklist and waiver requests; HP and staff review find that the residential buildings would benefit from entries on the street or that are much more legible from the street. In the case of the third building without a retail use, for example, why not bring the entrance to the street.
7. Roof Lines					
Intent	☒	☒	☐	☐	More information requested regarding any roof mechanical systems – placement and design integration

Guidelines	☐	☒	☐	☐	Applicant responded to HP board request to vary the residential roof forms and introduce a front-end gable to relate to the buildings across the street. Staff feel that flat roofs are appropriate for multi-family buildings.
Standard 7.1	☐	☒	☐	☐	More information requested regarding rooftop systems.
Standard 7.2	☒	☐	☐	☐	
8. Structured Parking					
Intent	☒	☐	☐	☐	The impact of the garage is minimized because it is internal to the lot and concealed by active building uses.
Guidelines	☒	☒	☐	☐	The structured parking is buried behind other buildings. More information is requested regarding the parking deck materials/design on Fore Street.
Standard 8.1	☒	☐	☐	☐	
Standard 8.2	☒	☐	☐	☐	
Standard 8.3	☒	☐	☐	☐	
Standard 8.4	☒	☐	☐	☐	



PLAN CORRECTIONS REPORT PL-000045-2018 FOR CITY OF PORTLAND

PLAN ADDRESS:	86 Newbury St Portland, ME 04101	PARCEL:	020 C009001
APPLICATION DATE:	04/06/2018	SQUARE FEET:	0.00
EXPIRATION DATE:		VALUATION:	\$0.00
DESCRIPTION: Proposed Shipyard Brewing Redevelopment to include a four to six story building with a varied footprint and floor area totaling approx 168,000 sq. ft. The development will accommodate a mix of office and industrial uses with limited retail space, a hotel, residential units and structured parking.			

CONTACTS	Name	Company	Address
Agent/Representative	Lucas Anthony	Gorrill Palmer	707 Sable Oaks Drive, Suite 30 So. Portland, ME

Corrections Required

City Arborist Jeff Tarling

Civil Engineering - Third Party Reviewer Lauren Swett

v.1.00 - Not Resolved

Correction: General

The Applicant has noted utility ability to serve letters are pending.

Corrective Action: Provide utility ability to serve letters to City when they are available.

Correction: General

Please provide additional information on the stormwater connection in Mountfort Street. Information on the proposed manhole, pipe sizes, inverts, etc. should be provided. Note that if the stormwater pipe from the site is greater than 8 inches in size, a manhole must be installed in the street to connect to the main. Direct-to-pipe connection methods are not allowed for larger pipes.

Corrective Action: Provide additional information on stormwater connection.

Correction: General

Provide a construction management plan narrative using the City's template which is available online:

<http://www.portlandmaine.gov/DocumentCenter/View/18030>

Corrective Action: Provide construction management plan narrative.

Correction: General

The post-development stormwater figure does not match the current site plan.

Corrective Action: Provide an updated stormwater figure, and confirm that the stormwater model matches the current site layout.

Correction: General

The Applicant has shown stormwater (foundation drain) connections to catch basins in the city street. Private connections to City catch basins are not allowed.

Corrective Action: Update grading and drainage plan to eliminate catch basin connections.

Correction: General

The HydroCAD model indicates that the increase in impervious surface is greater than 1,000 SF, while the application notes that the increase is de minimus.

Corrective Action: Clarify the increase in impervious surface area.

Correction: General

Applicant has provided a note on their detail sheet that "subsurface detention systems may be substituted with an engineer approved equal". Please note that the detention system must be a DEP-approved system.

Corrective Action: Update detail note.

Correction: General

A post-construction stormwater O&M plan and a stormwater agreement in accordance with Chapter 32 requirements is required.

Corrective Action: Provide project-specific stormwater O&M plan and agreement.

Correction: General

Note that with the level of impact to Mountfort Street, which is under moratorium, it appears that the most of street may need to be repaved.

Corrective Action: Clarify level of moratorium repair needed in Mountfort Street.

Correction: General

Applicant is proposing a green roof. Additional design and construction information should be provided, i.e. construction details, storage calculations, O&M plan, maintenance agreement.

Corrective Action: Provide additional information on green roof.

Fire	Pool Fire
Parking	John Peverada
Planning	Caitlin Cameron
Public Works Engineering	Keith Gray
Public Works Street Openings	Rhonda Zazzara
Public Works Water Resources	James Sloan
Public Works Water Resources Engineering	Brad Roland
Traffic - Third Party Reviewer	Tom Errico
Transportation/Planning	Bruce Hyman
Zoning	Pool Zoning
Historic Preservation	Pool Historic Preservation

Conditions Required

Relationships.
Responsiveness.
Results.



**Level III Site Plan
and Subdivision
Application for
86 Newbury Street
Redevelopment
Portland, Maine**

PREPARED FOR:
86 Newbury Street
Portland, Maine

April 2018

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

May 2, 2018

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

Re: Level III Site Plan Application
Proposed Shipyard Brewing Redevelopment
86 Newbury Street (Tax Map 020, Block C, Lot 9 – 127 Fore Street)

Dear Barbara,

On behalf of 86 Newbury Street, LLC, we are pleased to submit the enclosed Level III Site Plan Application for the proposed **Shipyard Brewery Redevelopment** at 86 Newbury Street. The planned four to six story building with a varied foot-print and gross floor area totaling approximately 174,000 sf will accommodate a mix of office and industrial (brewing and specialty pharmacy) uses with limited retail space, a hotel, residential units, and structured parking.

Separately from this Site Plan Application we plan to submit an Application for a Traffic Movement Permit for the project. We will coordinate with the City relative to methodology and peer review.

The site is approximately two acres in size and is currently home to the Shipyard Brewery, two apartment buildings (020 C005 and 020 C002) and some surface parking areas that serve the brewery and residential uses. The site occupies the majority of the block bound by Newbury, Mountfort, Fore and Hancock Streets in Portland. The site generally slopes in a southeasterly direction towards Fore Street. As indicated on the City of Portland zoning map, the property is zoned IS-FBC (India Street Form-Based Code Zone).

The development plan primarily includes 60,000 sf of *office*, 60,000 sf of *specialty pharmacy*, 40,000 sf of *technical fulfillment pharmacy*, 10,000 sf of *brewery*, 8,000 sf of *residential* within a 9-unit / four-story building at the corner of Hancock and Newbury Streets and a 105-room *hotel*. The parking for the proposal is supported by a 360 space three-level garage.

The existing Shipyard Brewing retail shop / tasting room will remain and be expanded in size slightly from 2,500 to 4,000 sf. The existing three-story Shipyard Brewery building will remain and be renovated to accommodate the Specialty Pharmacy, and 10,000 sf for Shipyard to retain some brewing operations on-site. The remaining Shipyard bottling and warehousing facility will be demolished along with the two existing residential buildings on Newbury and Mountfort Street. Shipyard is also pursuing plans to develop the brewery's Portland distribution center (at 182 Read Street) into a more comprehensive production facility that will produce Shipyard beer and its allied beverages.



The proposed redevelopment is planned to be constructed as one phase but is expected to be permitted in phases in order to accommodate the proposed schedule. The permit phasing is anticipated to be as follows:

1. Demolition of the two Existing Residential Structures (separate demolition permits to be submitted)
2. Renovation of the Existing Shipyards Brewery Building (separate building permit to be submitted)
3. Demolition of the balance of the site and construction of the proposed Office and Hotel (this Level III Site Plan)

Submitted via E-Plan you will find this Cover Letter/Project Summary along with a Level III Site Plan Application package and set of plans illustrating the proposal for Final Site Plan Review.

We appreciate the Planning Department's consideration of our proposal and look forward to meeting with City staff, 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 'Lucas Anthony', with a horizontal line extending from the end of the signature.

Lucas Anthony, P.E.
Project Manager

Copy: Mr. David Bateman, 86 Newbury Street, LLC

LSA/ceh/U:\3184_Shipyard Brewing\P Applications\Local\Level III Site Plan Application\E-PLAN) Electronic Filing Docs\ Cover Letter-Project Summary.doc



TABLE OF CONTENTS

Section	Location
Application Form	Attachment 1
Agent Authorization	Attachment 2
Project Narrative	Attachment 3
Architectural Narrative	Attachment 4
Average Grade Calculation	Attachment 5
Financial and Technical Capacity Letter	Attachment 6
Photos of Existing Site	Attachment 7
Traffic Memo	Attachment 8
Stormwater Management Report	Attachment 9
Erosion and Sedimentation Control Report	Attachment 10
Wastewater Application	Attachment 11
Utility Ability to Serve Letters	Attachment 12
Natural Resource Responses	Attachment 13
Title, Right and Interest	Attachment 14
Fire Code Standards Letter	Attachment 15
Floor Plans	Attachment 16
Building Elevations	Attachment 17

Portland, Maine



Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Submit each Tab as one PDF file and bookmark the items as noted below
Please confirm by electronically checking the boxes to the left

Tab 1 – General Application Documents

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

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

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

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

Tab 2 - TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ☒ ☐ ☐	Transportation Analysis- Traffic Impact (14-526 (a) 1) - Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts - Traffic Impact Study (Technical Manual, Section 1) if applicable
Yes NA Plan ☒ ☐ ☐	Access and Circulation (14-526 (a) 2 a) - Access and internal circulation, addressing ADA access - Access and egress impacts on traffic flows - Description and use of drive-up features, if applicable
Yes NA Plan ☒ ☐ ☐	Loading and Servicing (14-526 (a) 2 b) - Loading and servicing needs, route and travel way geometrics for deliveries - Turning templates for delivery vehicles, if applicable
Yes NA Plan ☒ ☐ ☐	Sidewalks (14-526 (a) 2 c) - Sidewalks and condition along street frontages and internal walkways - Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
Yes NA Plan ☒ ☐ ☐	Public Transit (14-526 (a) 3), if applicable - Existing available transit services - Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ☒ ☐ ☐	Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c) - Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements - Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
Yes NA Plan ☒ ☐ ☐	Bicycle Parking (14-526 (a) 4 b) - Address bicycle parking requirements and identify locations on-site - Construction details for bike racks (Technical Manual, Section 1)
Yes NA Plan ☒ ☐ ☐	Snow Storage (14-526 (a) 4 d) Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ☐ ☐ ☐	Traffic Demand Management (TDM) (14-526 (a) 5), if applicable Develop TDM with Trip Reduction Targets and Strategies Under separate cover

Tab 3 - ENVIRONMENTAL AND LANDSCAPE FEATURES			
Check list			Assess/Provide/Document:
Yes	NA	Plan	Preservation of Significant Natural Features (14-526 (b) 1), if applicable - Trees, plants, habitats listed on State or Federal list of endangered or threatened - High and moderate value waterfowl and wading habitat - Aquifers on Casco Bay Islands - Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) - Proposed preservation areas and protection measures - Documentation from environmental consultants, determinations from applicable state agencies
Yes	NA	Plan	Landscaping and Landscape Preservation (14-526 (b) 2 a) - Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) - Protection measures of existing vegetation during construction - Protection measures within Shoreland Zone, if applicable
Yes	NA	Plan	Site Landscaping (14-526 (b) 2 b) - Screening and buffering of service areas and between non-residential and residential uses - Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes	NA	Plan	Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable Landscaped islands within parking areas (Technical Manual, Section 4)
Yes	NA	Plan	Street Trees (14-526 (b) 2 b iii) - Existing Heritage or Feature Trees on site and measures to preserve - Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable
Tab 4 - ENVIRONMENTAL AND STORMWATER			
Check list			Assess/Provide/Document:
Yes	NA	Plan	Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a) - Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable - Erosion control plan and measures - Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable - Subsurface sanitary sewage disposal and groundwater protection

Tab 5 - PUBLIC INFRASTRUCTURE AND SAFETY			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	Consistency with City Master Plans (14-526 (c) 1) - Identify consistency with master plans - Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
☒	☐	☐	
Yes	NA	Plan	Public Safety and Fire Prevention (14-526 (c)) - Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) - Emergency vehicle access - Address consistency with public safety standards (Technical Manual, Section 3) - Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
☒	☐	☐	
Yes	NA	Plan	Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9) - Electrical services, including providing underground services - Identify existing and proposed connections for public utilities and required public utility upgrades - Sewer line connections are required, if there is a main within 200 feet - Proposed solid waste management facilities on-site and management for the site - Written evidence of the ability to serve from utility companies, as applicable
☒	☐	☐	
Tab 6 - SITE DESIGN			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	Massing, Ventilations and Wind Impact (14-526 (d) 1) - Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable - Bulk, location or height impacts on adjoining structures - Identify and locate HVAC equipment and venting away from public spaces and residential properties - Identify screening and manufacturing specifications for noise, if applicable
☒	☐	☐	
Yes	NA	Plan	Shadows (14-526 (d) 2), if applicable Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
☐	☒	☐	
Yes	NA	Plan	Snow and Ice Loading (14-526 (d) 3) Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
☒	☐	☐	
Yes	NA	Plan	View Corridors (14-526 (d) 4), if applicable Protection of designated view corridors (Portland Design Manual, Appendix 1)
☐	☒	☐	

Yes NA Plan ☒ ☐ ☐	Historic Resources (14-526 (d) 5), if applicable - Identify developments within Historic Districts or affecting Designated Landmarks - Certificate of Appropriateness or other evidence - Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required - Address preservation and documentation of Archaeological Resources
Yes NA Plan ☒ ☐ ☐	Exterior Lighting (14-526 (d) 6) - Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) - Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes NA Plan ☒ ☐ ☐	Noise and Vibration (14-526 (d) 7) Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes NA Plan ☒ ☐ ☒	Signage and Wayfinding (14-526 (d) 8), if applicable - Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff - Proposed commercial and directional signage on site
Yes NA Plan ☒ ☐ ☐	Zone Related Design Standards (14-526 (d) 5) - Address Historic Preservation Design Review, if applicable - Address any applicable design review standards by zone - Address submission requirements from Design Manual, page 1, addressing neighborhood context - Description of exterior materials, color, finish, and samples
Tab 7 - Construction Management Plan	
Yes NA Plan ☐ ☐ ☐	Construction Management Plan Construction Management Document and Plan under separate cover

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

☒ GRADING and DRAINAGE PLAN including:
• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☒ EROSION CONTROL
• Must be in compliance with Technical Manual, Section 5
☒ LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping and buffers • Planting schedule
☒ RECORDING PLAT , if applicable
• IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☒ ARCHITECTURAL PLANS & RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans

Standard to be Waived: Cite Ordinance or Technical Manual Standard	Cite Standard Language: Cite specific language of applicable Ordinance or Technical Manual Standard	Waiver Being Sought: Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Chapter 14-526 (a) 4.a.iv. and Technical Manual Figure 1-27	Parking spaces and aisles shall meet applicable dimensional standards as detailed in Section 1 of the Technical Manual. Figure 1-27 of the Technical Manual, titled Standard Parking Spaces, shows a 24' aisle for 90 degree parking @ 9'x18'	We are requesting a two-way parking lot drive aisle wide of 20 feet within the parking structure.	The existing building to the north and no-build easement on the south are fixed and would not permit a 60 ft wide bay in the garage. The parking garage designer has indicated this dimension has been used widely in other locations.
Section 1.7.2.8 of the Technical Manual	No more than 2 driveways shall be permitted for ingress and egress purposes to any commercial, industrial or residential (with 10 or more parking spaces) site.	We are requesting 2 driveways to access the commercial portion of the site, and 2 driveways for residential.	The site currently has 7 curb-cuts, most are wider than current code allows. The site has frontage on 4 streets with connections to only 3 streets providing for more orderly and efficient ingress and egress and reduced non-conformity.
Section 1.7.2.7 of the Technical Manual	Along arterial and collector streets, access driveways to corner lots shall be located a minimum of 150' from the intersection.	We are requesting a waiver to allow the existing entrance on Fore Street to remain. It is approx. 100' from the Fore St/Mountfort St intersection.	Existing entrance to allow continued access for trash removal for the Residence Inn and access to the lower level of the garage. Necessary to permit continued use by delivery trucks.

86 Newbury Street, LLC

470 Fore Street, Suite 400
Portland, ME 04101

March 5, 2018

Re: **Agent Authorization**
Shipyard Redevelopment
Portland, Maine

To Whom It May Concern:

86 Newbury Street LLC ("Developer") is in the process of re-developing a site (the "Site") in the state of Maine, Cumberland County, located at the existing Shipyard Brewery property in Portland. On behalf of the Developer, I hereby authorize Gorrill Palmer, (the "Engineer") to act as agent for the purpose of obtaining permits and approvals related to the development of the Site.

In such capacity, the Engineer's authority is expressly limited to signing and delivering applications for permits and approvals that are related to the development of the Site, advancing nominal funds as are required to file such applications and representation at meetings and hearings for the applications. The Engineer is not authorized to negotiate on the Developer's behalf or to bind or obligate the Developer in any manner whatsoever, including without limitation accruing any obligations on the Developer's behalf to pay for or construct improvements without additional authorization in writing.

This authorization is effective as of the date of this correspondence, and will remain valid until revoked in writing.

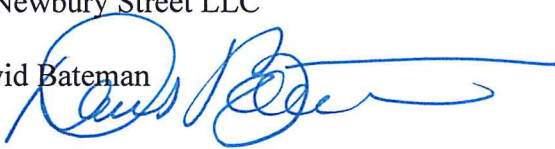
If you have any questions or if I can be of any further assistance, please contact me at (207) 772-2992.

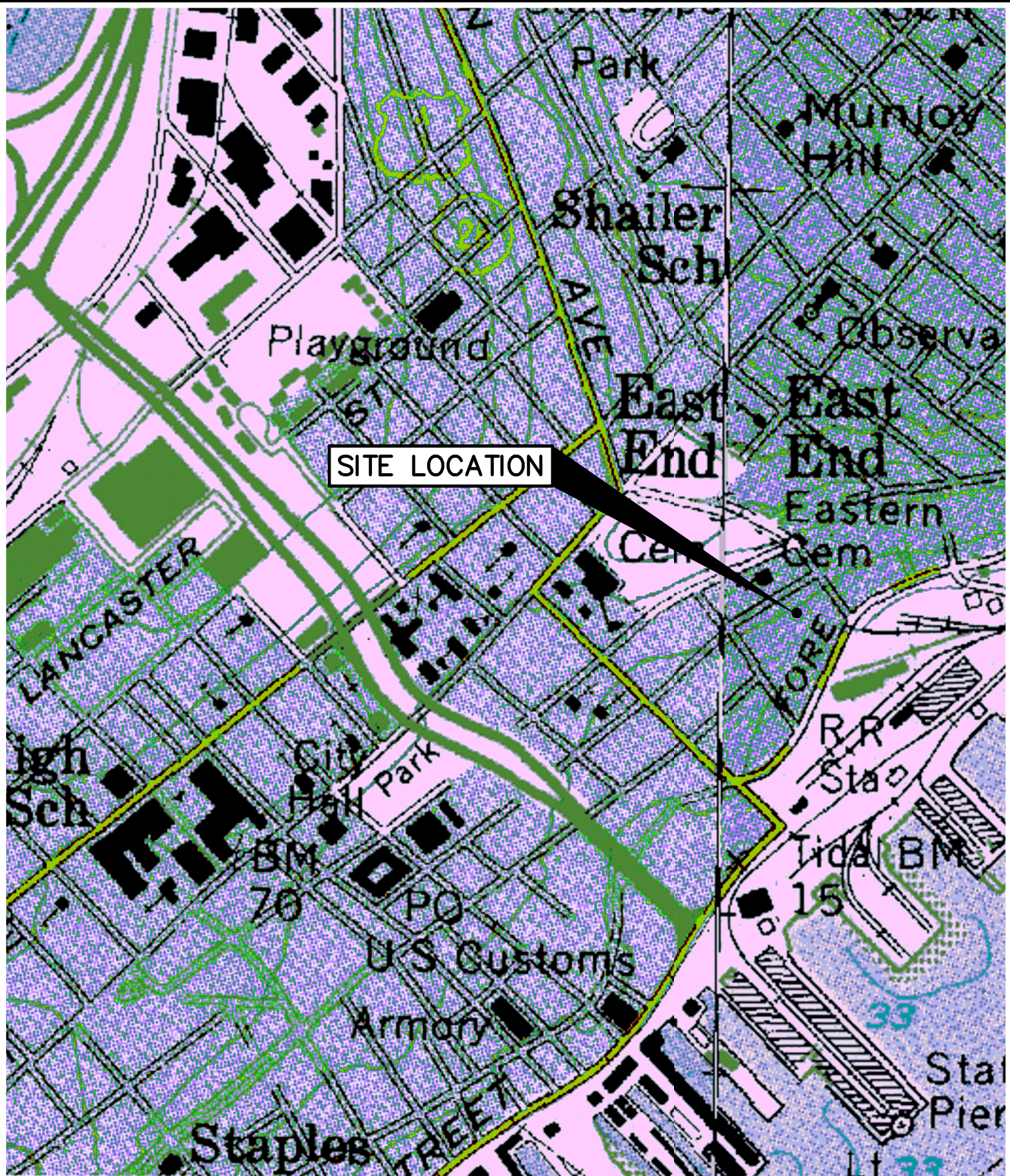
Very truly yours,

86 Newbury Street LLC

David Bateman

It's:


MEMBER



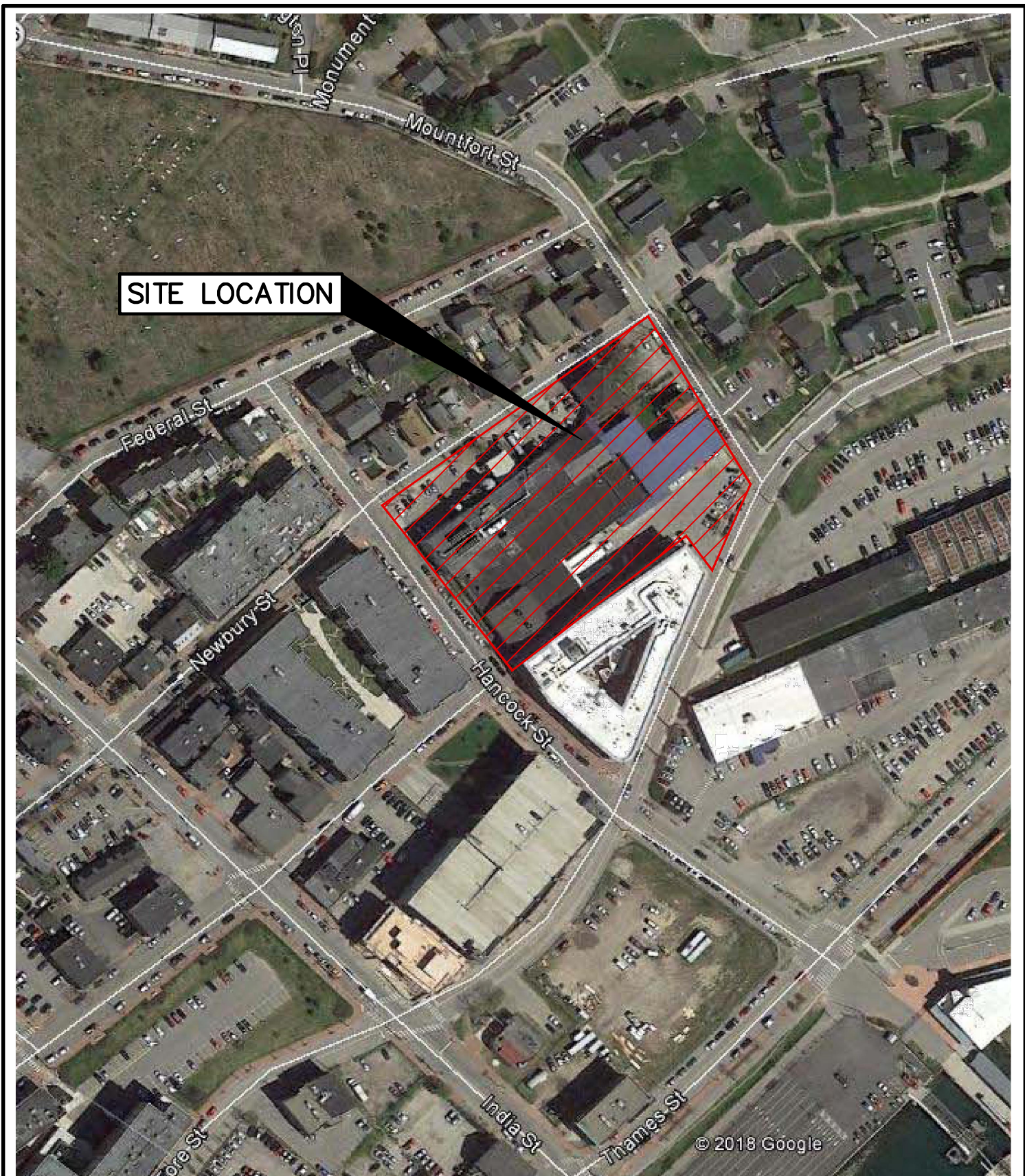
U.S.G.S. Location Map
 Shipyard Brewing Company - Portland, Maine
 U.S.G.S. Portland East/West, Maine -7.5 Minute Series (Topographic)

Design: BMG	Date: MARCH 2017
Draft: CG	Job No.: 3184
Checked: LSA	Scale: None
File Name: 3184-LOCATION.dwg	



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Figure
1



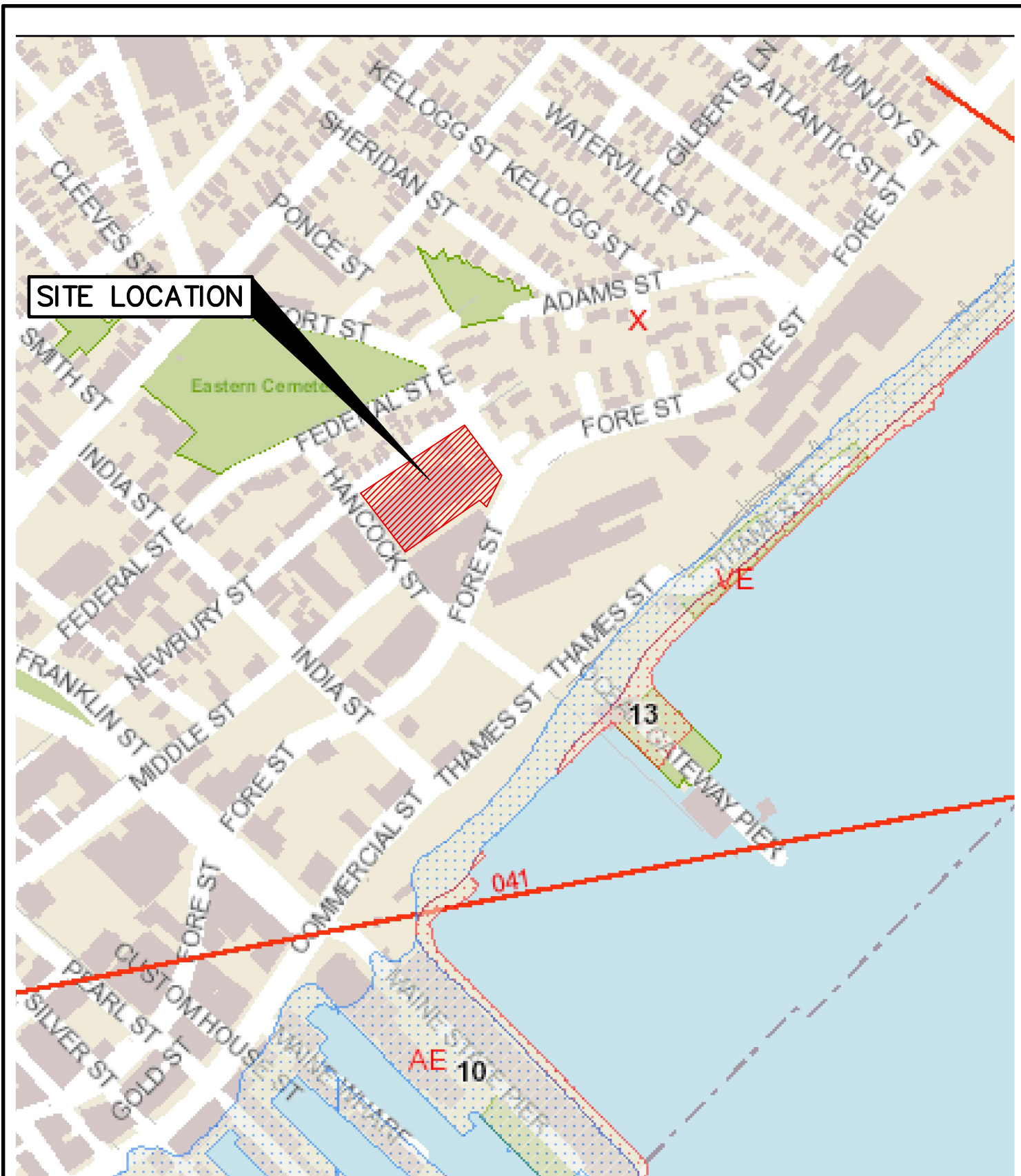
Aerial Location Map
Shipyard Brewing Company - Portland, Maine

Design: CH	Date: MARCH 2018
Draft: CH	Job No.: 3184
Checked: LSA	Scale: None
File Name: 3184-LOCATION.dwg	



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Figure
2



Flood Map- 1986 Effective
 Shipyard Brewing Company - Portland, Maine
 from Portland, Maine Flood Map Viewer

Design: CH	Date: MARCH 2018
Draft: CH	Job No.: 3184
Checked: LSA	Scale: None
File Name: 3184-LOCATION.dwg	



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NARRATIVE – Level III Site Plan

Project Description

The project site is approximately two acres in size and is currently home to the Shipyard Brewery, two apartment buildings and surface parking areas that serve the brewery and residential uses. The site occupies the block bound by Newbury, Mountfort, Fore and Hancock Streets in Portland. The parcel consists of Tax Map 20C Lots 1, 2, 5, 9, and 15. The site generally slopes in the southeasterly direction with slopes in the range of 3% to 7%. The property is zoned IS-FBC, India Street Form-Based Code Zone. Refer to Attachment 3 for the Location Map.

The proposed redevelopment project consists of approximately 175,000 sf of new mixed office, industrial and limited retail uses; comprised of 107,000 sf office space, 24,000 sf Specialty Pharmacy, 35,000 sf Technical Fulfillment. The project includes renovation of approximately 15,000 to accommodate the scaled down brewing operation and existing tasting room and retail space. The existing three-story Shipyard Brewery building will remain and be renovated and repurposed to accommodate the Specialty Pharmacy, while the current Shipyard bottling and warehousing facility will be demolished along with the two existing residential buildings on Newbury and Mountfort Street. In addition to the 175,000 sf of mixed uses described above, the proposed redevelopment includes a 105-room hotel (73,000 sf) and ten (10) residential units. All of the proposed uses are to be supported by structured parking provided within a four-level garage, with a total of 380 spaces. The residential buildings will have parking beneath the buildings.

As noted above, Shipyard Brewing will retain a presence at the site in the form of a scaled down brewing operation with the associated tasting room and retail store. The balance of the brewing, shipping receiving, and storage operations of Shipyard will be relocated to a site within the City of Portland.

The proposed construction is planned to occur in overlapping phases, with a brief description as follows:

1. Demolition of the two Existing Residential Structures (separate demolition permits to be submitted)
2. Renovation of the Existing Shipyard Brewery (separate Building Permit to be submitted)
3. Demolition of the balance of the site and construction of the proposed Office and Hotel (this Level III Site Plan)

Existing Conditions

The project site is currently the home of Shipyard Brewing and has existed as a mix of residential and industrial uses for over two centuries. The Shipyard facility occupies more than half of the block bound by Fore, Mountfort, Newbury and Hancock Streets, with the balance of the property occupied by the Residence Inn. Shipyard Brewing's operations at the site consist of brewing, bottling, warehousing, storage, shipping, receiving, office space, retail shop and a tasting room. The retail space and tasting room are located on the Hancock Street frontage, while the Newbury Street area is more industrial with an area for delivery and receiving of raw materials, silos for





storage, some surface parking and the entrance to the Shipyard offices. Further down Newbury Street, an existing three-story building which was constructed in 1893 houses six apartment units. On Mountfort Street, another 3-unit apartment building is located approximately halfway down the block. Fore Street provides the main entry to the shipping and receiving area of the Shipyard Brewery, along with some surface parking. Photos of the existing site area included in Attachment 7.

The Shipyard facility is made up of a number of buildings constructed over the years for various purposes. The existing 3-story building that fronts on Hancock Street and is home to the Shipyard retail store and tasting room was constructed between 1914 - 1920. This building will be renovated as part of the proposed development, while the balance of the buildings on site will be razed. The renovation of the building will be used for continued brewing operations for Shipyard on the lower floor while the upper floors will be renovated for pharmacy and fulfillment space. The retail store and tasting room will be housed next to the proposed hotel with a new storefront on Hancock Street.

The site is currently served by existing utilities including water, sewer, drainage, electric, gas, cable tv and telephone which are available on all four sides of the site. The site is mostly impervious and slopes generally from elevation 50' on Newbury Street to 25' on Fore Street (NGVD). The site is within Flood Zone C according to FEMA 23005I 0014 B, which is listed as an area of minimal flooding. With the exception of the 3-story building to be preserved, the balance of the site will be disturbed during construction.

At this time a geotechnical exploration has not been performed, however, surrounding conditions are known to exist of loose surficial fills on top of medium to soft glaciomarine clays overlying loose to medium dense glaciofluvial sands overlying loose to dense glacial till overlying bedrock at depths varying from 22 to 42 feet below the ground surface. Groundwater depths are anticipated to vary across the site depending on location but can be expected within six feet of the existing ground surface.

Evidence of Right, Title and Interest

The subject property is made up of one parcel, which is controlled by the Applicant- 86 Newbury Street, LLC. Evidence of the right to file this application is included in Attachment 14.

Evidence of State and/or Federal Permits

Traffic Movement Permit - Based on the traffic assessment memo (Attachment 8), this project will generate greater than 100 trips which will require a Traffic Movement Permit issued by the City under its delegated authority. This permit application will be submitted under separate cover from this Level III Site Plan Application.

DEP Permitting – The proposed construction will disturb over one acre; a Maine Construction General Permit (CGP) and Permit by Rule (PBR) applications will be filed with the Maine DEP.

Zoning Assessment

The project site is located in the India Street Form-Based Code Zone (IS-FBC) with frontage along the subdistricts *Urban Neighborhood* (UN) and *Urban Transitional* (UT). The zone places a primary emphasis on a building's physical form and its relationship to the street with the intent to establish a vibrant, walkable, and mixed-use urban district.



The proposed development is aligned with the zone's guiding principles and is designed to realize the objectives of the subdistricts and the overall IS-FBC. The zoning objectives for the portion of the site abutting Newbury Street (*Urban Neighborhood*) and Hancock, Mountfort and Fore Streets (*Urban Transitional*) are listed below for reference.

Section 14-275.7(a) Urban Neighborhood (UN) subdistrict: "The intent of this subdistrict is to maintain and promote a small-scale, less active urban fabric. Buildings may be more private in character and have smaller footprints with building types including, but not limited to, single-family, rowhouses, duplexes, triple-deckers, and double-triples. Building frontages may be less transparent and entries may be raised above sidewalk level with frontage types including raised, recessed doorways, porches, and stoops. The streetscape has variable setbacks and landscaping with many buildings within one block and streets tend to be narrow."

Section 14-275.7(b) Urban Transitional (UT) subdistrict: "The intent of this subdistrict is to encourage higher density, mixed-use building types that accommodate any use. Building frontages are a mix of activity level, have larger footprints, and the most flexibility of height and scale. Building ground floor spaces tend to accommodate flexible and changing uses with frontage types including doorways, forecourts, arcades, and storefronts. The streetscape may be less active than the UA subdistrict with wide sidewalks, street trees, and setbacks and stepbacks providing relief from large building masses."

The project architect (Archetype Architects) has prepared a narrative that addresses the design of the buildings relative to the IS-FBC along with the average building grade calculations. See below for the Architect's narrative. A Zoning Assessment Table is provided as Attachment 18.

In general, the proposed development conforms to the key zoning requirements of the IS-FBC in the following manner:

- (a) Prohibited uses. - The development's proposed uses are not listed among the IS-FBC's prohibited uses
- (b) Siting standards – The proposed development will comply with the following:
 - 1. Mid-block permeability. Not required within the location of the proposed development based on the IS-FBC Regulating Plan.
 - 2. Frontage requirements. The proposed development conforms to the minimum street frontage. Building length and massing requirements and structured parking exceptions are covered under the Architects Narrative.
 - 3. Setbacks. With the exception of Newbury Street and the UN subdistrict, the proposed building conforms to the required setbacks, with more details outlined in the project architect's plans.
 - 4. Landscape and screening. There is no surface parking proposed, all parking is within the proposed parking structure and beneath the proposed residential buildings. Public spaces and the streetscapes along Newbury and Mountfort, have been designed with plantings and street trees to enhance the space and the pedestrian environment.
 - 5. Building additions. The proposed development will be reviewed as a Level III Site Plan.
- (c) Height standards. - The proposed development includes bonus stories as part of the height bonus provision in the IS-FBC. Please refer the Floor Plans provided by the Architect provided within Attachment 16. The Applicant is proposing a green roof in order to qualify for the bonus story.



- (d) Parking standards. - The proposed 380 space four-level garage conforms to the standards in the City of Portland Design Manual, and more details can be found in the Architect's plans. Parking requirements for proposed uses are outlined in a table included on the Site Plan (Sheet C100).

Architectural

The site is bordering four distinct streets and includes the Urban Neighborhood (UN) subdistrict and the Urban Transitional (UT) subdistrict within the India Street Form Based Code (IS-FBC) Zone. The designs were based upon the intent of each district criteria. Therefore, the project presents an architecture which is a reflection of the district as outlined in the IS-FBC.

The UT zone runs along Fore street then up both Mountfort and Hancock Streets. The architecture directly facing Fore Street is open and presents a full glass façade, as we move up Hancock and Mountfort the architecture modifies to reflect the transition to the UN zone. Per our critique from staff we have modified the Mountfort Street elevations to have more brick with punched openings, thus addressing the more residential nature of those streets.

After discussions with Planning Staff we have modified the Hancock Street face on the hotel to remove some of the asymmetry in favor of symmetry. Along Newbury Street we now have three apartment buildings which meet the intent of the UN with small scale less urban fabric. Each building is entered from Newbury Street thru a courtyard for residential access. Two of the buildings on the westerly end have small commercial space at street level. We have incorporated a back alley for vehicular access to the residential buildings. The alley will also allow for deliveries to the Pharmacy use which will be located in the former brewery building. In addition, the new window openings being installed in the existing Brewery have been modified per staff suggestion to be less horizontal. The remaining area to the east of these structures will be developed as a park and a court yard will be developed directly across the street from the historically significant Abyssinian Church.

Easements or Other Burdens

An existing loading and access easement that benefits the adjacent Residence Inn is shown on the Site Plan. The easement coincides with the existing driveway along Fore Street and is approximately 40 feet wide. The easement is intended to allow truck access to the Residence Inn dumpster enclosure which is at the rear of the building. The easement, and associated driveway will be impacted by the proposed redevelopment. The Applicant will attempt to negotiate an alternate arrangement with the owner of the Residence Inn to address the proposed impact to the access easement. There is also a 10-foot wide no-build easement benefiting adjacent Residence Inn property that runs along the developments southeasterly boundary and is also shown on the Site Plan. A copy of the recorded document containing both easements can be found in Attachment 14A.

Proposed Waivers

A breakdown of the requested waivers is included in the Waiver Table in Attachment 1B of this application.

Financial and Technical Capacity

Please see Attachment 6 for a summary of the Applicant's technical experience and financial capacity.



The Applicant has retained a highly-qualified team of professionals to undertake planning, permitting and design tasks on this project. Services will be provided by the following companies:

Architect	David Lloyd Archetype, PA 48 Wharf Street Portland, ME 04101 (207) 772-6022 lloyd@archetypepa.com
General Contractor	Joe Dillavou Allied Cook Construction PO Box 1396 Portland, ME 04104 (207) 772-2888 jdillavou@alliedcook.com
Civil Engineer	Lucas Anthony, P.E. Gorrill Palmer 707 Sable Oaks Drive, Suite 030 South Portland, ME 04106 (207) 772-2515 lanthony@gorrillpalmer.com
Traffic and Transportation Consultants	Randy Dunton, P.E. (Traffic Impact Study) Gorrill Palmer 707 Sable Oaks Drive, Suite 030 South Portland, ME 04106 (207) 772-2515 rdunton@gorrillpalmer.com Sarah Cushman (TDM) Cushman Transportation Consulting, LLC 94 Beckett Street, 2 nd Floor Portland, ME 04101 (207) 200-1910 sarah@sarahcushman.com
Surveyor	Randy R. Loubier, PLS Owen Haskell, Inc. 390 US Route 1, Unit 10 Falmouth, ME 04105 (207)774-0424 rloubier@owenhaskell.com
Landscape Architect	Chris Di Matteo, PLA Gorrill Palmer 707 Sable Oaks Drive, Suite 030 South Portland, ME 04106 (207) 772-2515 cdimatteo@gorrillpalmer.com
Geotechnical Consultant	William Peterlein, P.E.



	Summit Geoengineering Services 145 Lisbon Street, Suite 601 Lewiston, ME 04240 (207) 576-3313 bpeterlein@summitgeoeng.com
Electrical Engineer	Will Bennett Bennett Engineering 7 Bennett Drive Freeport, ME 04032 (207) 865-9475 will@bennettengineering.net

Construction Management Plan

A preliminary construction management plan has been prepared by the General Contractor and is included with this submittal. Similar to the site and architectural plans, the construction management plan will be refined as the project progresses and input from Staff and the Planning Board is incorporated.

Traffic Study and Access Conditions

A memo summarizing the Traffic Study for this project is provided in Attachment 8. An application for a Traffic Movement Permit will be submitted subsequently under separate cover.

As noted earlier in this narrative, the site is bordered by Fore, Mountfort, Newbury and Hancock Streets. The site has a total of seven (7) existing driveway openings, one on Fore, two on Mountfort, three on Newbury, and one on Hancock Street. The proposed redevelopment will reduce the number of driveways from seven to four. Two primary driveways will provide ingress/egress to the parking garage, while a more minor driveway located on Hancock Street is proposed to access the parking beneath the proposed residential buildings along Newbury Street.

Code allows for 2 driveways, as such we are requesting a waiver to code to allow 4 driveways. This waiver request reduces the existing non-conformities present on the site and may increase the number of on-street parking spaces. No driveways are proposed on Mountfort Street.

Significant Natural Features

The site contains no significant natural feature and is nearly 100% impervious consisting of buildings and paved areas. Letters from the Maine Department of Inland Fisheries and Wildlife, and the Maine Natural Areas Program state there are no significant natural features on the property. Letters are included in Attachment 13.

Stormwater Management Plan

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.II.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 will be met by implementation of erosion control measures as outlined in the Erosion and Sedimentation Control Report submitted with this application in Attachment 10. The General and Flooding Standards are addressed in the Stormwater Management Report for the project which is provided in Attachment 9.

Project's Consistency with Portland's Comprehensive Plan

The proposed development is located within one of the City's priority growth areas, a district that has recently been re-zoned to utilize Portland's first form-based zoning code. The proposed mix of uses is consistent with the objectives of the India Street Form-Based Code Zone and the Future Land Use Plan city wide. The proposed development increases economic development at the City's core, *reinforcing the center*, while not sacrificing housing accommodations.

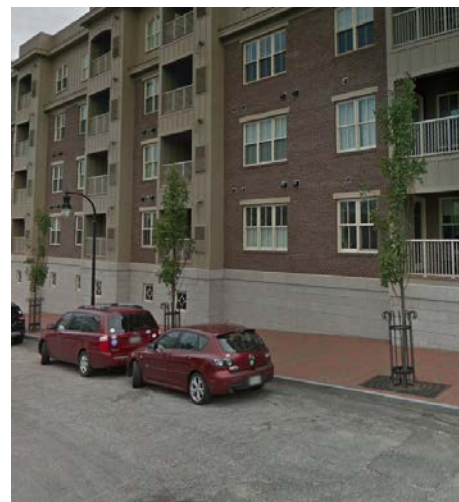
The Comprehensive Plan or "Portland's Plan 2030", is organized around six interconnected themes which constitute the vision statement for the City. The following briefly summarizes the goals of this project relative to these six themes:

Equitable – The project includes 12 housing units to replace the existing units to be removed. A portion of those meeting the City's Inclusionary Zoning Standards, are planned to be affordable workforce housing units.

Sustainable – The site in its current condition has no provisions for the treatment of stormwater runoff. The proposed development will provide measures to improve water quality of the runoff from non-roofed impervious areas. In addition, the building will incorporate a green roof to further reduce impervious areas and runoff.

Dynamic – The mixed-use development will activate the Hancock Street frontage by relocating and enhancing the existing Shipyard Brewing tasting room and retail shop, while also incorporating the main entry to the new hotel. These uses will add pedestrian activity, and the sidewalk and streetscape improvements will complement the redevelopment that has occurred on the opposite side of Hancock Street and the broader area.

Secure – The proposed redevelopment constitutes an investment that will enhance the City's tax revenue base while retaining existing jobs and creating new ones both during and after construction. Shipyard Brewing will maintain a presence at the site, while relocating some operations to another location in Portland. The new office component of the project will retain existing jobs and create opportunity and space to allow the tenant to grow its workforce. The hotel use will serve Portland's already thriving tourism industry and provide new job opportunities at the same time.





Authentic – The proposed redevelopment represents a significant investment in the City but recognizes that blending in with the neighborhood is critical. Elements considered include: enhancing the walkability of the neighborhood by improving sidewalks and streetscapes on all four streets and respecting the transitional nature of the existing uses along Newbury Street by using indigenous, local materials in the architecture. Further, the plan maintains Shipyard’s tasting room and brewing presence at this historical, authentic location for the company.

Connected – The site’s location relative to the Eastern Waterfront, Commercial Street and the Old Port, Ocean Gateway and other new and exciting nearby development, along with the existing transportation infrastructure will provide great connections for all modes of travel. With new sidewalk improvements, bike infrastructure, a close connection to the METRO system and the ferry, and marine transportation, this site is ideally located and will cater to all these modes of travel and can lessen visitors, guests and employees dependency on car use.

Utility Capacity to Serve

Letters were sent to the Portland Water District, Central Maine Power, Fairpoint, Spectrum and Unifil requesting confirmation of their ability to serve the project. Responses are provided in Attachments 12A-E. Outstanding responses will be forwarded to the City upon receipt.

NFPA I and Fire Department Technical Standards

A fire code summary is provided in Attachment 15. Existing fire hydrants are located near the northwest corner of the parcel at the intersection of Hancock Street and Newbury Street, north of the parcel on Newbury Street, and the southeast corner of the parcel at the intersection of Mountfort Street and Fore Street.

Conformity with Applicable Design Standards

The following narrative discusses the projects compliance with the design standards of Section 14-526 of the City Land Use Code as noted below:

A. Transportation Standards

1. Impact on Surrounding Street Systems

The project is projected to generate in excess of 100 trip ends during the peak hour which will require a Traffic Movement Permit. This permit will be submitted under separate cover from this Site Plan Application.

2. Access and Circulation

a. Site Access and Circulation

- i. The project is designed to provide safe and reasonable access and internal circulation for the entire site and will be designed to comply with the standards set forth in Section I of the Technical Manual.
- ii. Points of access are located to avoid conflicts with existing turning movements and traffic flows. The existing driveway on Fore Street does not meet the required distance to the intersection at Mountfort Street. Given this, the Applicant is requesting a waiver to allow the driveway to remain in its current location in order to allow access to the ground floor parking



and truck access to the loading dock. The existing distance is 120 feet, while the required is 150 feet.

iii. The project does not propose drive up features.

b. Loading and Servicing

i. The project is designed to provide a safe loading and service area that does not impede site access, vehicle circulation, pedestrian movements, or parking. Loading will occur within the site parking garage and be accessed, as it is today, from the existing driveway on Fore Street. As noted on the elevations, the floor height of 14' feet for the ground floor level parking will allow enough clearance for ambulances.

c. Sidewalks

i. The project provides sidewalks on all building frontages.

ii. Existing sidewalks within the area of work will be repaired or replaced in conformance with Chapter 25 of the City Code and Section I of the Technical Manual.

iii. The project is designed to provide continuous internal walkways between existing and planned public sidewalks, street crossings, and building entrances.

3. Public Transit Access

a. The project will result in the construction of at least 20,000 square feet of gross floor area for commercial use and is further than 0.25 miles from an existing transit shelter. The nearest Public Transit is the Metro M8 Local Service bus route which has stops at Casco Bay Lines and Franklin Towers. The Breez Express Service has a stop at India and Congress Street. Both of these locations are slightly over 0.25 miles away, as such the Applicant is willing to coordinate with Greater Portland Transit (Metro) to locate a bus stop at the property.

b. See above

c. See above

4. Parking

a. Location and Required Number of Vehicle Parking Spaces

i. Off-street parking as proposed will meet the applicable zoning requirements. 323 spaces are required by code and the proposed parking garage will have approximately 360 spaces. Excess spaces are anticipated to be offered for monthly lease which would help to satisfy the demand for parking in the Eastern Waterfront area.

ii. A TDM is being prepared and will be submitted under separate cover.

iii. The project is anticipated to exceed the minimum parking requirement by more than 10%. However; given the demand for parking in the Eastern Waterfront area the Applicant anticipates that the additional spaces can be leased on a monthly basis to help satisfy some of area-wide parking demand.

iv. Parking spaces meet applicable dimensional standards. A waiver is requested for the drive aisle width in the parking garage, see Waiver Table in Attachment I B.

v. Parking is provided within the proposed parking structure and will be constructed of permanent and durable hard surface that is not subject to ponding or erosion.

b. Location and Required Number of Bicycle Parking Spaces

i. The project provides secure bicycle parking in conformance with Section I of the Technical Manual.



- a. The project meets the requirement for two bicycle parking spaces for every five dwelling units by providing a minimum of two bike parking spaces, which will be located within the ground floor parking area under the residential building.
 - b. The project provides for two bicycle parking spaces for every ten vehicle parking spaces for the first one hundred required vehicle parking spaces, plus one bicycle parking space for every twenty-required motor vehicle parking space over one hundred required vehicle parking spaces. Based on the current parking count, 33 spaces would be required. The Applicant plans to meet this requirement through the use of exterior bike racks and an interior bike storage room for office commuters.
 - c. The project creates more than ten required vehicle parking spaces. The bicycle parking spaces standard is met by the number of required spaces from Section 14-526.a.4.b.i.b above.
- c. Motorcycle and Scooter Parking
- i. The site plan accommodates access and parking for two-wheeled motorized vehicles. As detailed design proceeds, an area within the parking garage will be designated for two-wheeled vehicles.
- d. Snow Storage
- i. Limited area onsite is available for snow storage, as such it is anticipated that the site will be managed with a maintenance contract that provides for the removal of snow from the site.
 - ii. With a maintenance contract in place, it is not anticipated that encroachment by snow storage on parking requirements, pedestrian walkways, or stormwater management systems would occur for any extended periods of time.

5. Transportation Demand Management

- a. A TDM plan will be submitted under separate cover which complies with the City of Portland TDM standards as described in Section I of the Technical Manual.

B. Environmental Quality Standards

I. Preservation of Significant Natural Features

- a. The project site does not contain any significant natural features according to the Maine Natural Areas Program. The Maine Department of Inland Fisheries and Wildlife indicated that there may be State Endangered bat species and bat species of Special Concern occupying the structure(s) on site. The Department recommends that construction or demolition work on bat-occupied portions of the structure not occur between June 1 and August 15, when young bats are unable to fly. The site does not contain habitat for waterfowl and wading birds, does not contain aquifers, wetlands, watercourses, significant vernal pools, or floodplains.
- b. The project does not contain areas set aside for preservation.

2. Landscaping and Landscape Preservation

- a. Landscape Preservation
 - i. The project site contains only one tree of any size. The tree is not in a location or elevation that would allow it to be preserved.
 - ii. The project will include street trees as specified in Section 4 of the Technical Manual to the extent possible, however, none are in a condition that warrants preservation. There is no significant vegetation on site that warrants preservation. As noted above, one tree exists on Newbury Street that is not in a location that would allow preservation and also is in conflict



with the existing overhead utilities. Given the proposed excavation work in the vicinity of the tree it would not be possible to preserve the tree.

- iii. See above, no trees are proposed for preservation.
- iv. The landscaping proposed for this site will provide well in excess of the required replacement for the one tree to be removed.
- v. Project is not located within the Shoreland Zone.

b. Site Landscaping

i. Landscaped Buffers

- a. Loading and servicing areas, dumpsters, and storage areas and utility structures will be appropriately screened from view from public sidewalks, streets and adjacent properties.
- b. Understory planting within the setbacks will be provided to meet the requirements of this section.
- c. The residential component of the project will incorporate a landscape buffer of at least 10 feet wide and 6 feet tall, between the residential and commercial uses. An area is currently reserved on the plans and will be designed to meet the requirements of this section as the project design development progresses.
- d. See item c. above.

ii. Parking Lot Landscaping

- a. No surface parking is proposed, all parking will be within the proposed parking structure.

iii. Street Trees

- a. Street trees are proposed in general accordance to Section 4 of the Technical Manual.

3. Water Quality, Stormwater Management and Erosion Control

- a. A site specific Stormwater Management Plan has been prepared and is included in Attachment 9.
- b. The project complies with the standards of Section 5 of the Technical Manual, please refer to the storm.
- c. The project is not located within the watershed of an Urban Impaired Stream.
- d. The project is not a level I minor residential development. However, basic erosion control standards are met.
- e. The project is not anticipated to pose a risk of groundwater contamination either during or post-construction as described in Sections 5 and 9 of the Technical Manual. The project will be served by a public sewer system.
- f. The project proposes to connect to public sanitary system as shown on the plans.

C. Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans

- a. The development has been designed to be consistent with the City's Zoning Ordinance and Master Plan relative to offsite infrastructure including sewer, stormwater, sidewalks and streets.
- b. The project will include suitable easements, rights and improvements to connect or continue off-premises public infrastructure.

2. Public Safety and Fire Prevention

- a. The project design has not advanced to the stage where details have been developed that incorporate all public safety principles for Crime Prevention through Environmental Design (CPTED). The site will be designed with the intent to enhance the security of public and private spaces and to reduce the potential for crime through the following:
 - i. The project allows for natural surveillance that promotes visibility of public space and areas.



- ii. The project allows for controlled access that promotes authorized and appropriate access to the site.
- iii. The project promotes a sense of ownership and responsibility through environmental design.
- b. The project will be designed for adequate emergency vehicle access to the site in accordance with City standards for street widths and turning radii as described in Section I of the Technical Manual.
- c. The project is consistent with City public safety standards, Section 3 of the City of Portland Technical Manual. The site is proposed to be served by the Portland Water District with buildings to be sprinklered. Fire hydrants are located to the southeast of the parcel at the corner of Mountfort and Fore Street, to the north of the parcel on Newbury Street, and to the northwest of the parcel at the intersection of Newbury and Hancock Street.

3. Availability and Adequate Capacity of Public Utilities

- a. The project is not anticipated to overburden sanitary sewers and storm drains, water lines, or other public infrastructure and utilities. Water and sewer usage are expected to be reduced given the proposed relocation of Shipyard's brewing operations to another site in the City of Portland. Letters from the various utilities indicating their ability to serve the project are included in Attachment 12.
- b. Electrical service for the project will be underground. There is existing overhead electrical along Newbury, Mountfort and Fore Streets, which includes services to surrounding properties not owned by the Applicant. Due to the extreme cost to retrofit the properties, existing electrical service on aforementioned streets will remain overhead.
- c. The plans shall be designed meet all the provisions within Section 2 and 9 of the Technical Manual for installation of new or upgrades to existing sanitary sewers, storm drains, water lines, or other utilities.
- d. The project is within 200 feet of a public sanitary collection and treatment system. The project will connect to the nearest available public sewer.
- e. All sanitary sewer and stormwater utilities proposed as part of the project will be designed to City standards.
- f. The project will incorporate dumpsters or a compactor that will be screened from public sidewalks, streets, and adjacent properties. Details of this are forthcoming as detailed design proceeds and is dependent on negotiation with the adjacent Residence Inn.

D. Site Design Standards

I. Massing, Ventilation and Wind Impact

- a. The bulk, location, and height of the proposed buildings and structures is not anticipated to result in health or safety problems from a reduction in ventilation to abutting structures or changes to the existing wind climate. Please refer to the Architects narrative for additional details.
- b. The bulk, location, and height of the proposed buildings and structures minimize, to the extent feasible, any substantial diminution in the value or utility to neighboring structures under different ownership. Please refer to the Architects narrative for additional details.
- c. HVAC venting mechanisms direct exhaust away from public spaces and residential properties directly adjacent to the site.



2. Shadows

- a. The development will not result in shadows that fall on publicly accessible open space. There are no public open spaces directly adjacent to the site.

3. Snow and Ice Loading

- a. Project buildings and structures will be designed to prevent significant amounts of accumulated snow and ice from loading or falling onto adjacent properties and public ways.

4. View Corridors

- a. The project is not located within a Viewing Protection Corridor as identified on the View Corridor Protection Plan with the Design Manual.

5. Historic Resources

- a. The site is not located within the historic preservation district, nor have any buildings been identified designated as landmarks. The Applicant has received correspondence from the Maine Historic Preservation Commission (MHPC) which identified two of the existing buildings as the William Mundy House and the William Mundy Block, respectively. The Commission has requested additional information on the two buildings. The two buildings are not identified as local Historic Landmarks as shown on the “Historic Districts with Historic Landscapes, Cemeteries & Individual Landmarks City of Portland Peninsula Effective April 15, 2009”. Therefore, at this time, a Certificate of Appropriateness is not required.
- b. The Maine Historic Preservation Commission identified the National Register Listed Abyssinian Meeting House as being adjacent to the project. The project location is adjacent to, but not within the India Street Historic District.
- c. At this time, no state or local archaeological resource is known to exist on the site. As noted in the letter from the MHPC, a Phase I Archeological Survey is recommended for the area surrounding the two existing residential structures and the associated nearby parking area.

6. Exterior Lighting

- a. Site Lighting
 - i. All exterior site lighting, including lighting of building entrances will be full cut off with no light emitted above the horizontal plane or spilled onto adjacent properties and streets. The project lighting plan will be designed to conform to the applicable standards of Section 12 of the Technical Manual.
 - ii. Exterior lighting along Newbury and Hancock Streets which abut residential uses will be employ house-side shielding.
- b. Architectural and Specialty Lighting
 - i. Architectural and specialty lighting of features such as architectural details, monuments, public art, or other site features will be designed to illuminate specific details or attributes only and meet the standards of Section 12 of the Technical Manual.
 - ii. No up-lighting is proposed.
- c. Street Lighting
 - i. Street lighting will be provided as shown on the plans and will utilize fixtures as required by City Technical standards



7. Noise and Vibration

- a. HVAC and Mechanical Equipment
 - i. All heating, Ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment will be designed by a professional to meet all state and federal emissions requirements, and will:
 - 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.
 - ii. Emergency generators, if provided, will not be activated for more than one hour per week for routine maintenance and testing. Noise levels will not exceed City standards except in designated emergencies or for emergency generator testing. Emergency generator testing will only occur during the permitted hours of 9:00 a.m. and 5:00 p.m., Monday through Friday.

8. Signage and Wayfinding

- a. All signage will be designed to meet the applicable requirements of Division 22 of the City Code and the following provisions:
 - i. Not applicable, the project is not located on a Historic Landmark or within a Historic District or Historic Landscape District.
 - ii. The size, scale, proportions, design, materials, placement and source and intensity of illumination of all permanent or freestanding building signs shall be designed to complement the building and its immediate context as follows:
 - a. Signage will be designed to conceal architectural features such as window sills, lintels or cornices from view.
 - b. Signs will be designed and sized to fit the scale and proportions of the building and the feature or area of the building to which it is affixed.
 - c. Freestanding signs will be designed to not adversely affect visibility at intersections or access drives.
 - d. Sign lighting will be downwardly directed, internally illuminated and/or shielded to avoid glare and light spillover towards the sky.
 - e. Signs will not be affixed to rooftop mechanicals, mechanical penthouses or other rooftop appurtenances unless those appurtenances have been screened and integrated into the architecture of the development.
 - iii. On-site directional traffic signage will be designed to enable users to safely and easily navigate the site and not adversely affect visibility.

9. Zoning Related Design Standards

- a. Development is not located in zones specified in Section 14-526(d)9.
- b. A Master Development Plan is not proposed.

Bateman Partners, LLC was created specifically to develop and manage real estate, which the principals have done since 1979. The principles have developed projects in southern Maine in excess of \$200 million dollars from 1979 through 2017. Many of these projects Bateman Partners, LLC and / or its principals still own and / or manage.

The Principals of Bateman Partners, LLC initially developed both elderly and family subsidized housing in conjunction with the New Hampshire and Maine State Housing Authorities. The focus of development eventually spread to market rate housing and commercial office buildings as the City of Portland grew throughout the 1980's. Recreational developments included the Falmouth Country Club and its adjacent residential subdivision, as well as Diamond Cove, a 193-acre island resort community.

Over the last seven years Bateman Partners, LLC has used their combined knowledge to develop over 60,000 SF of medical office, 300 units of affordable housing as well as multiple single family home subdivisions. The Principals of Bateman Partners are David Bateman, Nathan Bateman, and Aaron Bateman.

David Bateman is the president of Bateman Partners, LLC. David is a trained architect with extensive experience in the field of design and construction. David is responsible for all day-to-day management of the Bateman Partners, LLC entities and their assets

David has extensive experience in the following specific areas:

- Feasibility and market analysis
- Project design and master planning
- Local, State and federal approvals and permitting
- Project financing
- Equity syndication
- Contract negotiation
- Construction supervision and estimating
- Project management
- Sales and Marketing

Since 1979 David has been responsible for the acquisition, development, and management of real estate projects with a combined development cost in excess of \$200 million dollars.

David's personal goal has been to provide Maine with innovative projects, which improve the quality of life for its residents. Whether it be pioneering the concept of "scattered site" family housing, (a method which blends subsidized housing into existing neighborhoods), creating Maine's first elderly congregate care facility, or through traditional commercial and resort developments, the basic commitment to quality of life has never been compromised.

Nathan Bateman is the Vice President of Bateman Partners, LLC. Nathan holds a bachelors degree with a focus of Finance and Entrepreneurial studies from Babson College. Nathans responsibilities include all the day-to-day management of the Bateman Partners, LLC entities and their assets. Nathan's responsibilities also include creating feasibility studies for potential projects, obtaining local and state approvals, securing financing and overall project management.

Nathan is also the Vice President and co-owner of both Phoenix Management and Phoenix Property Services located in Saco, Maine.

Aaron Bateman is the Treasurer of Bateman Partners, LLC. Aaron holds a bachelors degree with a focus in Finance from Babson College. Aaron's role at Bateman Partners is that of Asset management and financial planning.

Aaron is also the President and co owner of Phoenix Management and Phoenix Property Services located in Saco, Maine. Aaron has grown both of these companies over the last 10 years from an employee base of 3 to a staff of 40 employees that manages over 1,000 units of housing, 250,000 SF of commercial buildings and multiple home owner and condo associates. www.phoenixmanagementcompany.com

REAL ESTATE PROJECTS DEVELOPED BY DAVID BATEMAN AND BATEMAN PARTNERS, LLC

Subsidized and Market Rate Housing Projects	Development Costs
- Summer Street / 32 units of elderly and family housing Located in Biddeford, Maine	1.40 M
- Presidential Housing / 45 units of elderly housing Located in Biddeford, Maine	2.00 M
- Central Block / 24 units of elderly housing Located in Farmington, New Hampshire	1.10 M
- Bay View Apartments / 71 unit market rate rental complex Portland, Maine	2.40 M
- Bethel Housing / 20 units of elderly housing Located in Bethel, Maine	.98 M
- Pleasant Street / 45 units of elderly and family housing Located in Saco, Maine	2.40 M
- Lincoln Street / 21 units of scattered site family housing Located in Saco, Maine	1.60 M
- Pierson Lane / 68 units of scattered site family housing Located in Biddeford, Maine	4.90 M
- Front Street / 36 units of elderly housing	1.90 M

Located in Sanford, Maine	
- Falls I / 61 units of family housing	3.40 M
Located in Saco, Maine (moderate income)	
- Cummings Mill / 48 Luxury Apartments	5.60 M
Located in the historic Cummings Mill, South Berwick, Maine	
- Forest Green Associates, L.P. / 40 units of family housing	4.60 M
Located in Biddeford, ME	
- York Manor Associates, L.P. / 45 units of elderly housing	3.20 M
Located in Biddeford, ME	
- Sullivan School / 34 units of family housing	4.60 M
Located in Berwick, ME	
- Drowne School Associates, L.P. / 38 Unit elderly housing	4.50 M
Located in Cumberland, ME	
- Boiler House Lofts / 36 units of family housing	7.20 M
Located in Saco, ME	
- Eliot Commons / 38 Units of market rate senior housing	4.80 M
Located in Eliot, ME	
	56.58 M

Commercial, Subdivisions and Master Plan Projects

- Marineast Complex / 87 market rate rental town homes 10,000 sq'. Commercial building South Portland, Maine	6.00 M
- Safford House / historic rehabilitation 9,000 sq'. commercial office building Portland, Maine	.83 M
- Harbor Plaza / 60,000 sq'. commercial office building and 200 car parking facility Portland, Maine	7.50 M
- Lowell St. Medical Building / 30,000 sq'. medical building with offices and ambulatory clinic facility Portland, Maine	1.80 M
- Ocean View Retirement Complex / 70 unit congregate care facility Falmouth, Maine (Phase I)	4.50 M
- Falmouth Country Club / 18 hole championship golf course and related private club facilities Falmouth, Maine	4.73 M
- Falmouth on the Green Subdivision / 122 lot residential subdivision encompassing 450 acres, which surround the Falmouth Country Club Falmouth, Maine	5.70 M
- Diamond Cove McKinley Estates / 197 acre resort development Located on Great Diamond Island Portland, Maine	16.00 M
- Portland Harbor Hotel / 100 room boutique Hotel located in the "Old Port" Commercial Area of Portland, Maine	13.00 M
- OHM Properties, LLC 6,000 sq' medical office building Located in Falmouth, ME	1.50 M

- 468 Fore Street / 16,000 sq' of office, retail and hotel facility. This facility supports the existing Portland Harbor Hotel Located in Portland, ME	5.70 M
- 74 County Road, LLC / 10,336sq' medical office building for Mercy Hospital Located in Gorham, ME	2.80 M
- Tidewater LLC / 50 Lot Single Family Home Subdivision Located in Falmouth, ME	8.00 M
- Tidewater Village / Road and Utility upgrades to support 4 Commercial building pad sites in Falmouth, ME	2.00 M
- Clearwater II, LLC / 20,000 sq' Mixed use building consisting of 7 residential condos and 5 commercial / medical condos	5.00 M
- 385 Route One, LLC / 10,500 sq' Medical office building for Mercy Hospital Located in Yarmouth, ME	3.00 M
-7 West Falmouth Crossing, LLC / 6,120sq' medical office for Mercy Hospital located in Falmouth, ME	2.00 M
- The Inn at Diamond Cove / 22 unit Condo Hotel Located on Great Diamond Island, Portland ME	9.50 M
- Village Green Cumberland / 58 unit single family home subdivision Located in Cumberland, ME	6.50 M
- 1 Independence Drive / 15,000 sq.' medical building for New England Cancer Specialists Located in Kennebunk, ME	4.10 M
- 185 Fore Street / 9 Unit mixed use condo project Located in Portland, ME	7.50 M
- 179 Foreside Road / 8 Lot Subdivision that included providing a Beach to the Town of Cumberland / Located in Cumberland, ME	8.70 M
- 16 Middle Street / 50,000 sq.' Office Building Located in Portland, ME	9.00 M
- Eliot Commons / 38 Units of market rate senior housing Located in Eliot, ME	4.80 M
	135.36 M

Projects Currently Under Development / Construction

- Tidewater Farm / 40 unit elderly housing project Located in Falmouth, ME	8.00 M
- Fisherman's Wharf Hotel / 100 Room Hotel Located in Portland, ME	25.00 M
- Fisherman's Wharf Office Building / 60,000 SF Office and Retail Located in Portland, ME	22.00 M
- Fisherman's Wharf Parking Garage / 511 Car Parking Garage Located in Portland, ME	13.50 M
- 86 Newbury Street Garage / 277 Car Parking Garage Located in Portland, ME	10.00 M
- 86 Newbury Street Hotel / 132 Room Hotel Located in Portland, ME	27.5 M
- 86 Newbury Street Office Building / 120,000 SF Office building Located in Portland, ME	36.5 M
- 105 Topsham Medical building / 47,000 sq.' medical building Located in Topsham, ME	11.5 M
	154.00 M

86 Newbury Street Photo Sheet



Photo 1: Looking North from at intersection of Middle and Hancock Streets



Photo 2: Looking south from Newbury Street



Photo 3: Looking west from Mountfort Street



Photo 4: Looking west at corner of Mountfort and Fore Streets

**Preliminary Traffic Assessment
Shipyards Redevelopment – Portland, Maine
(JN 3184)**

Date: April 18, 2018
Subject: Preliminary Traffic Assessment
Proposed Shipyards Redevelopment, Portland, Maine
To: File
From: Randy Dunton / Emily Tynes, Gorrill Palmer

Introduction

Gorrill Palmer (GP) has prepared this traffic assessment for the proposed redevelopment of 86 Newbury Street in Portland, Maine. The site is located between Fore Street, Newbury Street, Mountfort Street, and Hancock Street in Portland, Maine. The site is identified on City Tax Maps F10NE and G10SE, Lots 020 C009, 020 C002, 020 C005, 020 C015, and 020 C001.

The existing site has a single full movement access on the following streets: Hancock Street, Fore Street, Mountfort Street, and three full movement accesses on Newbury Street. The existing site has the following land uses:

- Manufacturing (brewing, bottling, storage, loading, and mechanical/boiler room): 63,045 sf
- Apartment: 8 dwelling units
- Office: 6,082 sf
- Retail: 1,250 sf
- Tasting Room: 1,250 sf

The redevelopment is proposed to include a multi-level parking garage with approximately 360 spaces and the following land uses:

- Manufacturing (online-order pharmacy, mechanical/boiler room): 111,525 sf
- Hotel: 105 rooms
- Office: 60,000 sf
- Retail: 2,000 sf
- Tasting Room: 2,000 sf
- Apartment: 9 dwelling units



The site is proposed to be accessed via four site accesses, two less than the current site. The first floor of the proposed parking garage will be accessed through an existing access on Fore Street, and the upper levels of the garage are proposed to be accessed via two new full movement entrances; one on Hancock Street and one on Mountfort Street. The existing northerly site access on Hancock Street is proposed to be used by the new residential units.

The following is a summary of the preliminary traffic evaluation for the proposed project:

Trip Generation

Proposed

The trip generation for the proposed site was calculated using the Institute of Transportation Engineers' (ITE) publication, *Trip Generation*, Seventh Edition. More recent editions of ITE are available, however, the Seventh Edition is the most recent edition accepted by MaineDOT. The trip generation for the proposed site has been based on the following uses and sizes:

- Manufacturing (online-order pharmacy, mechanical/boiler room): 111,525 sf
- Hotel: 105 rooms
- Office: 60,000 sf
- Retail: 2,000 sf
- Tasting Room: 2,000 sf
- Apartments: 9 dwelling units

The following summarizes the ITE Land Use Codes (LUCs) used to calculate the trip generation for the proposed site:

- LUC 140 – Manufacturing
- LUC 220 – Apartment
- LUC 310 – Hotel
- LUC 710 – General Office Building
- LUC 814 – Specialty Retail
- LUC 936 – Drinking Place

The following table summarizes the ITE trip generation for the proposed site. The trip generation calculations are attached.



ITE Trip Generation Summary

Building Use	Size	ITE Trip Generation				
		AM Adj St	AM Gen	PM Adj St	PM Gen	Sat Gen
Office	60,000 sf	125	125	120	120	33
Specialty Retail	2,000 sf	1	14	5	10	13
Drinking Place	2,000 sf	---	---	23	31	33
Hotel	105 rooms	59	55	62	64	76
Manufacturing	111,525 sf	81	87	83	84	31
Apartment	9 Units	5	5	6	6	5
Site Total		271	286	299	315	191

As shown in the table, during the peak hours of the generator, the site is forecast to generate 286 and 315 trip ends during the AM and PM peak hours of the generator respectively. A trip end is a trip into or out of the site, thus a round trip is equal to two trip ends.

Shared Use Reduction – Proposed Site

Since the project is a mixed use development with complementary uses, a shared use reduction can be applied to the site trip generation. GP has used the National Cooperative Highway Research Program (NCHRP) 684 Internal Capture Estimation Tool to estimate the traffic that will visit more than one destination without leaving the site. The NCHRP 684 spreadsheet uses the ITE forecast trip generation for each type of land use (office, retail, restaurant, residential, hotel, and other) and estimates the trips that will travel between two uses without leaving the site. This yields an internal trip capture percentage, which is the percentage of trip ends that will travel between two uses. For the purpose of this evaluation, GP classified the tasting room (drinking place) as a restaurant. The following tables summarize the AM and PM peak hour internal trip capture percentages for the proposed site:

AM Peak Hour Adjacent Street NCHRP 684 Internal Trip Capture

Land Use	ITE Trip Generation		Internal Capture %		Internal Capture Trip Ends		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
Office	113	12	3%	0%	3	0	3
Retail	1	0	0%	0%	0	0	0
Restaurant	0	0	0%	0%	0	0	0
Residential	1	4	0%	0%	0	0	0
Hotel	35	24	0%	13%	0	3	3
Other	61	20	N/A	N/A	0	0	0
Total	211	60	1%	5%	3	3	6

*These values are taken directly from the NCHRP spreadsheets (attached), which may not match exact calculations due to rounding in the spreadsheet.



AM Peak Hour Generator NCHRP 684 Internal Trip Capture

Land Use	ITE Trip Generation		Internal Capture %		Internal Capture Trip Ends		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
Office	113	12	4%	17%	5	2	7
Retail	7	7	29%	29%	2	2	4
Restaurant	0	0	0%	0%	0	0	0
Residential	2	3	0%	0%	0	0	0
Hotel	30	25	0%	12%	0	3	3
Other	61	26	N/A	N/A	0	0	0
Total	213	73	3%	10%	7	7	14

*These values are taken directly from the NCHRP spreadsheets (attached), which may not match exact calculations due to rounding in the spreadsheet.

PM Peak Hour Adjacent Street NCHRP 684 Internal Trip Capture

Land Use	ITE Trip Generation		Internal Capture %		Internal Capture Trip Ends		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
Office	18	102	0%	0%	0	0	0
Retail	2	3	50%	67%	1	2	3
Restaurant	15	8	13%	38%	2	3	5
Residential	4	2	50%	0%	2	0	2
Hotel	34	28	3%	4%	1	1	2
Other	29	54	0%	0%	0	0	0
Total	102	197	6%	3%	6	6	12

*These values are taken directly from the NCHRP spreadsheets (attached), which may not match exact calculations due to rounding in the spreadsheet.

PM Peak Hour Generator NCHRP 684 Internal Trip Capture

Land Use	ITE Trip Generation		Internal Capture %		Internal Capture Trip Ends		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
Office	18	102	0%	0%	0	0	0
Retail	6	4	67%	50%	4	2	6
Restaurant	22	9	9%	56%	2	5	7
Residential	4	2	50%	50%	2	1	3
Hotel	38	26	3%	4%	1	1	2
Other	42	42	N/A	N/A	0	0	0
Total	130	185	7%	5%	9	9	18

*These values are taken directly from the NCHRP spreadsheets (attached), which may not match exact calculations due to rounding in the spreadsheet.

The NCHRP 684 spreadsheet does not have information for the Saturday peak hour of the generator. To estimate a reduction for a Saturday the AM and PM trip capture percentages were



averaged and applied to the Saturday peak hour of the generator. This resulted in a Saturday internal trip capture of approximately 4% of total trips which results in a reduction of 8 trip ends (4 entering and 4 exiting).

The following table summarizes the reduced trip generation for the proposed site due to shared use trips:

Reduced Trip Generation Summary

Building Use	Trip Generation				
	AM Adj St	AM Gen	PM Adj St	PM Gen	Sat Gen
ITE Total	271	286	299	315	191
Shared Use Reduction	-6	-14	-12	-18	-8
Reduced Site Total	265	272	287	297	183

As shown in the table, the proposed site with the shared use reduction is forecast to generate 272 trip ends and 297 trip ends during the AM and PM peak hours of the generator respectively.

Other Modes of Transportation Reduction – Proposed Site

Since the site is located in an urban environment, it is expected that a portion of site traffic will use alternative modes of transportation to get to and from the site. These other modes could include options such as transit, biking, or walking. A trip generation reduction due to other modes of transportation has been applied to the proposed site trip generation with the shared use reduction. The other modes reduction has been evaluated separately for the non-residential site uses and the proposed hotel.

Residential: The other modes reduction for residential land uses is based on information from the 2009-2013 American Community Survey (ACS) Five-Year Estimate by Census Tract for the City of Portland. Rick Harbison, Planner and GIS Specialist for the Greater Portland Council of Governments, used this data to create maps (attached) that show the estimated percentage of workers living in each Portland Census Tract that use each mode of transportation to travel to work. The site is located on the southeast corner of Census Tract 5, which is a predominantly commercial area. Census Tracts 2 and 3 border the site, so the reduction was calculated by dividing the estimated number of people walking, bicycling, and taking the bus to work in the three Census Tracts by the estimated total number of working people in the same three Census Tracts. This calculation yields a reduction of 35.8%. This methodology was approved by the City as part of the nearby 58 Fore Street redevelopment project.

Non-Residential: The other modes reduction for non-residential land uses was based on 2010 Consensus Transportation Planning Products (CTPP) means of transportation to work data for Census Tract 5, where the site is located. This data indicates that the ratio of cars to workers



is 85% in the area (calculations attached), indicating that approximately 15% of employees use modes of transportation other than a car to commute to work. A reduction of 15% was applied to the non-residential uses. It should be noted that the methodology used to calculate this reduction was approved by the City of Portland as part of the nearby 58 Fore Street redevelopment project.

Hotel: There is limited data available for hotels, so a conservative reduction of 10% was used for the hotel trip generation. It should be noted that this hotel other modes reduction was approved by the City of Portland as part of the nearby 58 Fore Street redevelopment project.

The following table summarizes the other modes of transportation reduction for the site trip generation:

Other Modes of Transportation Reduction Summary

Trip Generation	AM Adj St	AM Gen	PM Adj St	PM Gen	Sat Gen
Site Trip Generation					
Residential Trip Gen	5	5	4	3	5
Non-Residential Trip Gen	204	215	223	232	106
Hotel Trip Gen	56	52	60	62	72
Subtotal	265	272	287	297	183
Other Modes Reduction					
Residential Reduction	2	2	1	1	2
Non-Residential Reduction	31	32	33	35	16
Hotel Reduction	6	5	6	6	7
Total Reduction	39	39	40	42	25
Reduced Trip Generation	226	233	247	255	158

As shown in the table, the forecast trip generation for the proposed site, including the shared use reduction and the other modes reduction, is 233 trip ends during the AM peak hour of the generator and 255 trip ends during the PM peak hour of the generator.

Trip Generation Credit

When determining the need for a MaineDOT Traffic Movement Permit (TMP), MaineDOT allows a trip generation credit to be taken for on-site uses that have been operational within the last 10 years. All of the existing land uses on the site are eligible for credit. The trip generation credit for the existing site has been calculated using ITE *Trip Generation*, Seventh Edition. The following LUCs were used to calculate the trip generation for the existing site:



- LUC 140 – Manufacturing
- LUC 220 – Apartment
- LUC 710 – General Office Building
- LUC 814 – Specialty Retail
- LUC 936 – Drinking Place

The following table summarizes the ITE trip generation for the existing site

ITE Trip Generation Summary

Building Use	Size	ITE Trip Generation				
		AM Adj St	AM Gen	PM Adj St	PM Gen	Sat Gen
Manufacturing	63,045 sf	46	49	47	47	18
Office	6,082 sf	20	20	19	19	5
Apartment	8 dwelling units	4	4	5	5	4
Specialty Retail	1,250 sf	1	9	3	6	8
Drinking Place	1,250 sf	---	---	14	19	21
Site Total		71	82	88	96	56

As shown in the table, the site is forecast to generate 82 trip ends during the AM peak hour of the generator and 96 trip ends during the PM peak hour of the generator.

Shared Use Reduction – Existing Site

Consistent with the proposed trip generation calculations, the existing site is a mixed use development with complementary uses and therefore a shared use reduction can be applied to the overall site trip generation. GP used the same NCHRP 684 spreadsheets as those used for the proposed site to calculate the shared use reduction for the existing site. The following tables summarize the AM and PM peak hour internal trip capture percentages for the existing site. Detailed calculations are attached.

AM Peak Hour Adjacent Street NCHRP 684 Internal Trip Capture

Land Use	ITE Trip Generation		Internal Capture %		Internal Capture Trip Ends		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
Office	18	2	0%	0%	0	0	0
Retail	1	0	0%	0%	0	0	0
Restaurant	0	0	0%	0%	0	0	0
Apartment	1	3	0%	0%	0	0	0
Other	35	11	N/A	N/A	0	0	0
Total	55	16	0%	0%	0	0	0

*These values are taken directly from the NCHRP spreadsheets (attached), which may not match exact calculations due to rounding in the spreadsheet.



AM Peak Hour Generator NCHRP 684 Internal Trip Capture

Land Use	ITE Trip Generation		Internal Capture %		Internal Capture Trip Ends		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
Office	18	2	6%	50%	1	1	2
Retail	5	4	20%	25%	1	1	2
Restaurant	1	3	0%	0%	0	0	0
Apartment	0	0	0%	0%	0	0	0
Other	34	15	N/A	N/A	0	0	0
Total	58	24	3%	9%	2	2	4

*These values are taken directly from the NCHRP spreadsheets (attached), which may not match exact calculations due to rounding in the spreadsheet.

PM Peak Hour Adjacent Street NCHRP 684 Internal Trip Capture

Land Use	ITE Trip Generation		Internal Capture %		Internal Capture Trip Ends		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
Office	3	16	0%	0%	0	0	0
Retail	1	2	0%	50%	0	1	1
Restaurant	9	5	11%	0%	1	0	1
Apartment	3	2	0%	0%	0	0	0
Other	16	31	N/A	N/A	0	0	0
Total	32	56	3%	2%	1	1	2

*These values are taken directly from the NCHRP spreadsheets (attached), which may not match exact calculations due to rounding in the spreadsheet.

PM Peak Hour Generator NCHRP 684 Internal Trip Capture

Land Use	ITE Trip Generation		Internal Capture %		Internal Capture Trip Ends		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
Office	3	16	0%	0%	0	0	0
Retail	3	3	33%	67%	1	2	3
Restaurant	13	6	8%	17%	1	1	2
Apartment	3	2	33%	0%	1	0	1
Other	24	23	N/A	N/A	0	0	0
Total	46	50	7%	6%	3	3	6

*These values are taken directly from the NCHRP spreadsheets (attached), which may not match exact calculations due to rounding in the spreadsheet.

The NCHRP 684 spreadsheet does not have information for the Saturday peak hour of the generator. To estimate a reduction for a Saturday the AM and PM trip capture percentages were averaged and applied to the Saturday peak hour of the generator. This resulted in a Saturday internal trip capture of approximately 3% of total trips which results in a reduction of 2 trip ends (1 entering and 1 exiting).



The following table summarizes the reduced trip generation for the existing site:

Reduced Trip Generation Summary

Building Use	Trip Generation				
	AM Adj St	AM Gen	PM Adj St	PM Gen	Sat Gen
ITE Total	71	82	88	96	56
Shared Use Reduction	0	-4	-2	-6	-2
Site Total	71	78	86	90	54

As shown in the table, the existing site is estimated to generate 78 trip ends during the AM peak hour of the generator and 90 trip ends during the PM peak hour of the generator including the shared use reduction.

Other Modes of Transportation Reduction – Existing Site

Since the site is located in an urban environment, it is expected that a portion of site traffic will use alternative modes of transportation. Consistent with the proposed site trip generation calculations, a trip generation reduction due to other modes of transportation has been applied to existing site trip generation (including the shared use reduction). The other modes reduction has been calculated for residential and non-residential uses.

Residential: The same 35.8% reduction that was applied to residential land uses for the proposed site was used.

Non-Residential: The same 15% reduction that was applied to non-residential land uses for the proposed site was used.

The following table summarizes the other modes of transportation reduction for the site:

Other Modes of Transportation Reduction Summary

Trip Generation	AM Adj St	AM Gen	PM Adj St	PM Gen	Sat Gen
Site Trip Generation					
Residential	4	4	5	4	4
Non-Residential	67	74	81	86	50
Site Total	71	78	86	90	54
Other Modes Reduction					
Residential Reduction	1	1	2	1	1
Non-residential Reduction	10	11	12	13	7
Total Reduction	11	12	14	14	8
Reduced Trip Generation	60	66	72	76	46



As shown in the table, the existing site is estimated to generate 66 trip ends and 76 trip ends during the AM and PM peak hours of the generator respectively. This trip generation represents the trip generation credit for the site.

Net Site Trip Generation

The net site trip generation is calculated by subtracting the credit for the existing site from the trip generation for the proposed site. The following table summarizes the net trip generation for the site:

Net Site Trip Generation Summary

Trip Generation	AM Adj St	AM Gen	PM Adj St	PM Gen	Sat Gen
Proposed	226	233	247	255	158
Existing	-60	-66	-72	-76	-46
Net Trip Generation	166	167	175	179	112

As shown in the table, the site is forecast to generate 167 trip ends during the AM peak hour and 179 trip ends during the PM peak hour. A trip end is defined as a trip into or out of the site, thus a round trip is equal to two trip ends. The site is forecast to generate over 99 trip ends during a peak hour, so a MaineDOT Traffic Movement Permit is required. Since the site is forecast to generate fewer than 200 trip ends during a peak hour, Section 7 (Traffic Impact Study) will not be required by MaineDOT. The City of Portland does, however, require a Traffic Impact Study for sites that generate over 99 trip ends, so a Traffic Impact Study will still need to be completed and submitted after the Scoping Meeting is held.

Trip Distribution and Assignment

Based on ITE's *Trip Generation*, the NCHRP 684 Internal Capture, and the other modes of transportation reduction, the following trip distribution is anticipated for the site:

- AM Peak Hour Adjacent Street: 132 in / 34 out
- AM Peak Hour Generator: 128 in / 39 out
- PM Peak Hour Adjacent Street: 55 in / 120 out
- PM Peak Hour Generator: 68 in / 111 out
- Saturday Peak Hour Generator: 60 in / 52 out

GP has assumed that all trips are primary in nature and made for the sole purpose of going to and from the site. This is likely a conservative assumption since specialty retail and drinking places typically generate pass-by trips, where someone visits the site on their way to or from another destination.



The trip assignment has been based on the location of the site driveways, existing traffic patterns identified from a combination of AADT values provided in MaineDOT's MapViewer tool, and turning movement counts completed for other projects at the intersections of Fore Street with Hancock Street and Fore Street with Mountfort Street. To refine the trip assignment for the TMP application and the Traffic Impact Study, it is recommended that turning movement counts are collected at the intersections of Hancock Street with Middle Street, Hancock Street with Newbury Street, and Mountfort Street with Newbury Street.

The preliminary AM and PM Trip Assignment is shown on the attached Figure 2.

Other Development

Approved projects that have been constructed but are not yet opened as well as projects for which applications have been filed are required to be included in the predevelopment traffic volumes for this project. Based on conversations with Portland City Staff, there are several projects in the vicinity of the site that should be considered. The trip generation for the following projects will need to be included in background traffic for this project:

- 167 Fore Street: Ocean Gateway Addition
- 158 Fore Street: AC Hotel
- 62 India Street: India Newbury Residential
- 20 Thames Street: Residential
- 50 India Street: cPort Credit Union
- 221 Congress Street: Residential
- 58 Fore Street: Mixed-use
- 0 Hancock Street: WEX
- 203 Fore Street: Portland II Hotel
- 56 Hampshire Street: Verdante at Lincoln Park

The trip generation for these projects will be included in the Traffic Impact Study to be completed after the scoping meeting.

Crash History

Gorrill Palmer obtained the crash data from MaineDOT for the period of 2014-2016, the most recent period available (attached).



In order to evaluate whether a location has a crash problem, MaineDOT uses two criteria to define a High Crash Location (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor (CRF) of 1.00 or more for a three-year period. A CRF compares the actual crash rate to the rate for similar intersections in the state. A CRF of less than 1.00 indicates a rate of less than average and:
2. A minimum of eight crashes over the same three-year period.

Based on the crash data provided by MaineDOT, there are no HCLs in the immediate vicinity of the site. It should be noted that there were two collisions involving bicyclists that occurred within the study area. These collisions will be reviewed in more detail in the Traffic Impact Study.

Sight Line Evaluation

The site is proposed to have the following accesses:

- Hancock Street garage access – new
- Hancock Street residential parking access – existing surface lot access
- Mountfort Street garage access – new
- Fore Street garage access – existing surface lot access

GP completed a site visit to evaluate the sight distances at the existing and proposed site accesses. The City of Portland requires that MaineDOT criteria be met. Basic sight line standards are as follows:

Standards for Sight Distance

Speed Limit (mph)	MaineDOT / City Requirement (ft)
25	200
30	250
35	305
40	360
45	425

The available sight distances have been evaluated in accordance with MaineDOT standards. The evaluation method is as follows:

Driveway observation point:	10 feet from edge of traveled way
Height of eye at driveway:	3 ½ feet above pavement
Height of approaching vehicle:	4 ¼ feet above pavement



The posted speed limit is 25 mph on all frontage roads, which requires a MaineDOT and City of Portland sight distance of 200 feet. The following table summarizes the measured sight distances available at the existing and proposed site accesses:

Sight Distance Summary

Site Access	Available Sight Distance (ft)		
	Required	Looking Left	Looking Right
Hancock Street Garage	200	200*	200*
Hancock Street Residential	200	200*	To Intersection
Mountfort Street	200	200*	200*
Fore Street	200	200*	200*

As shown in the table, the sight distance requirement could be met at all site accesses. The sight distances with a '*' indicate sight distances that can be met if on-street parking is removed or relocated on either side of the site access. The visibility of exiting vehicles is blocked by on-street parking for all site accesses. It should be noted that limited available sight distance due to on-street parking spaces is common throughout the City. The following describes each access in more detail:

Proposed Hancock Street garage entrance: to meet the sight distance requirements, looking left approximately eight spaces on the east side of Hancock Street to the south of the proposed access would need to be removed or relocated. Looking right, approximately three parking spaces on the east side of Hancock Street north of the proposed access would need to be removed to meet the requirements.

Existing Hancock Street surface lot entrance to be the residential parking entrance: to meet the sight distance requirements, looking left approximately two spaces on the east side of Hancock Street between the existing site access and the proposed garage access would need to be removed or relocated. Looking right, the sight distance is to the intersection, so no modification to on-street parking is required.

Proposed Mountfort Street garage entrance: to meet the sight distance looking left and looking right, approximately six on-street parking spaces on the west side of Mountfort Street between Fore Street and Newbury Street would need to be removed or relocated.

Existing Fore Street surface lot entrance proposed to be a garage entrance: to meet the sight distance looking left approximately three spaces on the north side of Fore Street to the east of the site access would need to be removed or relocated. Looking right, the hotel loading zone would need be relocated approximately 40 feet to the west, which would displace approximately two parking spaces.



For all four site entrances to meet the sight distance requirements, a total of approximately 25 on-street parking spaces would need to be removed or relocated. The internal site accesses have not been evaluated as part of this preliminary traffic assessment. We recommend checking the sight distances of the internal accesses during construction to ensure the sight distance requirements are met.

Available Pedestrian, Bicycle, and Transit Facilities

Being located in downtown, the site is surrounded by pedestrian, bicycle, and transit accommodations. As stated in the trip generation portion of this report, according to data from the 2010 CTPP, approximately 15% percent of people in this area of Portland commute by modes of transportation other than driving a vehicle. The streets in the immediate vicinity of the site have sidewalks on both sides, with marked crosswalks at most intersections. This site is also close to one end of the Eastern Promenade Trail, which is used by both pedestrians and bicyclists. This trail helps connect the site to the multimodal transportation network in the city.

Additionally, there are several bus stops within a half mile of the site. Many of these are METRO bus stops which helps connect the site to other areas of Portland as well as South Portland, Westbrook, Gorham, Yarmouth, Freeport, and Brunswick. METRO is currently upgrading their bus routes which could make transit a more desirable mode of travel. Taking METRO, riders can also connect to other bus services, such as the Lakes Region Explorer, which connects Portland to Bridgton.

Conclusion

The following is a summary of the conclusions and recommendations:

1. The proposed site is forecast to generate 233 trip ends during the AM peak hour of the generator and 255 trip ends during the PM peak hour of the generator.
2. The net trip generation increase for the site (after consideration of shared trips and other modes of transportation) is forecast to be 167 trip ends during the AM peak hour of the generator and 179 trip ends during the PM peak hour of the generator. Since the site is forecast to generate over 99 trip ends during a peak hour (net), a MaineDOT Traffic Movement Permit is required. The site is forecast to generate fewer than 200 trip ends during a peak hour, so Section 7 (Traffic Impact Study) will not be required by MaineDOT as part of the TMP application process, however, the City of Portland will require a Traffic Impact Study.
3. Based on the crash data provided by MaineDOT, there are no HCLs in the immediate vicinity of the site.



4. All site accesses require sight distances of 200 feet in both directions to meet the MaineDOT and City of Portland requirements. The existing sight distance at most site accesses is restricted by on street parking.
5. Being in downtown the site is located in an area with sidewalks on both sides of the street in the vicinity of the site, as well as crosswalks at most intersections and close access to the Eastern Promenade Trail. Additionally, there are several METRO bus stops within a half mile of the site that connect the site to other METRO routes, as well as other bus services, such as the Lakes Region Explorer.

JN: 3184
 Project Description: Shipyard Redevelopment
 Project Location: Portland, ME
 Date: 4/13/2018

Gorrill Palmer
 707 Sable Oaks Drive
 Suite 30
 South Portland, Maine 04106

**(Proposed) Hotel
 Land Use Code (LUC) 310**

Rooms: 105

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution	
				IN	OUT	IN	OUT
Weekday	T = 8.17 (X)	858	10	50%	50%	429	429
AM Peak Hour of Adj. Street Traffic	T = 0.56 (X)	59	20	60%	40%	35	24
PM Peak Hour of Adj. Street Traffic	T = 0.59 (X)	62	25	55%	45%	34	28
AM Peak Hour of Generator	T = 0.52 (X)	55	32	55%	45%	30	25
PM Peak Hour of Generator	T = 0.61 (X)	64	35	60%	40%	38	26
Saturday	T = 8.19 (X)	860	8	50%	50%	430	430
Saturday Peak Hour of Gen.	T = 0.72 (X)	76	9	55%	45%	42	34

* Percentages rounded to nearest 5%

JN: 3184
 Project Description: Shipyard Redevelopment
 Project Location: Portland, ME
 Date: 3/6/2018

Gorrill Palmer
 707 Sable Oaks Drive
 Suite 30
 South Portland, Maine 04106

**(Proposed) General Office Building
 Land Use Code (LUC) 710**

Square Feet 60,000

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends		Directional Split *		Directional Distribution		R ²
			Number of Studies	IN	OUT	IN	OUT	
Weekday	$\ln(T) = 0.77 \ln(X) + 3.65$	900	78	50%	50%	450	450	0.80
AM Peak Hour	$\ln(T) = 0.80 \ln(X) + 1.55$	125	217	90%	10%	113	12	0.83
PM Peak Hour	$T = 1.12 (X) + 78.81$	146	235	15%	85%	22	124	0.82
Saturday	$T = 2.14 (X) + 18.47$	147	17	50%	50%	74	73	0.66
Peak Hour of Generator	$\ln(T) = 0.81 \ln(X) - 0.12$	24	10	55%	45%	13	11	0.59

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends		Directional Split *		Directional Distribution		R ²
			Number of Studies	IN	OUT	IN	OUT	
Weekday	$T = 11.01 (X)$	661	78	50%	50%	331	330	---
AM Peak Hour	$T = 1.55 (X)$	93	217	90%	10%	84	9	---
PM Peak Hour	$T = 1.49 (X)$	89	235	15%	85%	13	76	---
Saturday	$T = 2.37 (X)$	142	17	50%	50%	71	71	---
Saturday Peak Hour of Gen.	$T = 0.41 (X)$	25	10	50%	50%	13	12	---

* Percentages rounded to nearest 5%

PM Peak Hour:	$T = 1.49/1.55$ (AM Peak)	120	15%	85%	18	102	---
SAT Peak Hour:	$T = 0.41/1.55$ (AM Peak)	33	50%	50%	17	16	---

JN: 3184
 Project Description: Shipyard Redevelopment
 Project Location: Portland, ME
 Date: 3/6/2018

Gorrill Palmer
 707 Sable Oaks Drive
 Suite 30
 South Portland, Maine 04106

**(Proposed) Manufacturing
 Land Use Code (LUC) 140**

Gross Floor Area 111,525

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution	
				IN	OUT	IN	OUT
Weekday	T = 3.82 (X)	426	62	50%	50%	213	213
AM Peak Adjacent Street	T = 0.73 (X)	81	50	75%	25%	61	20
PM Peak Adjacent Street	T = 0.74 (X)	83	54	35%	65%	29	54
AM Peak Hour of Generator	T = 0.78 (X)	87	50	70%	30%	61	26
PM Peak Hour of Generator	T = 0.75 (X)	84	50	50%	50%	42	42
Saturday	T = 1.49 (X)	166	2	50%	50%	83	83
Saturday Peak Hour of Gen.	T = 0.28 (X)	31	2	** 50%	50%	16	15

* Percentages rounded to nearest 5%

** Not Available (Assumption)

JN: 3184
 Project Description: Shipyard Redevelopment
 Project Location: Portland, ME
 Date: 3/6/2018

Gorrill Palmer
 707 Sable Oaks Drive
 Suite 30
 South Portland, Maine 04106

**(Proposed) Specialty Retail Center
 Land Use Code (LUC) 814**

Gross Floor Area (ft²): 2,000

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution	
				IN	OUT	IN	OUT
Weekday	T = 44.32 (X)	89	4	50%	50%	45	44
Peak Hour of Adjacent Street Traffic 7-9 AM**	T = 0.74 (X)	1	N/A	60%	40%	1	0
Peak Hour of Adjacent Street Traffic 4-6 PM	T = 2.71 (X)	5	5	45%	55%	2	3
AM Peak Hour of Generator	T = 6.84 (X)	14	4	50%	50%	7	7
PM Peak Hour of Generator	T = 5.02 (X)	10	3	55%	45%	6	4
Saturday	T = 42.04 (X)	84	3	50%	50%	42	42
Saturday Peak Hour of Gen.***	T = 6.63 (X)	13	3	50%	50%	7	6

**Based on ratio of AM/PM traffic for LUC 820, Shopping Center and applied to 814 PM rate.

***Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 820 - Shopping Center

* Percentages rounded to nearest 5%

JN: 3184
 Project Description: Shipyard Redevelopment
 Project Location: Portland, ME
 Date: 3/6/2018

Gorrill Palmer
 707 Sable Oaks Drive
 Suite 30
 South Portland, Maine 04106

**(Proposed) Drinking Place
 Land Use Code (LUC) 936**

Square Feet 2,000

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution	
				IN	OUT	IN	OUT
Weekday	---	---	---	---	---	---	---
PM Peak Hour of Adj. St.	T = 11.34 (X)	23	12	65%	35%	15	8
PM Peak Hour of Gen.	T = 15.49 (X)	31	8	70%	30%	22	9
Saturday	---	---	---	---	---	---	---
Sat. Peak Hour of Generator	T = 16.48 (X)*	33	---	***	65%	21	12

*Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 932 - High-Turnover (Sit-Down) Restaurant

** Percentages rounded to nearest 5%

***Directional split for this peak hour assumed based on other peak hours for this land use and the directional split for LUC 932 - High-Turnover

JN: 3184
Project Description: Shipyard Redevelopment
Project Location: Portland, ME
Date: 4/13/2018

Gorriall Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

(Existing) Apartment
Land Use Code (LUC) 220

Dwelling Units: 9

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Sample Size	Directional Split *		Directional Distribution	
				IN	OUT	IN	OUT
Weekday	T = 6.72 (X)	60	86	50%	50%	30	30
AM Peak Hour of Adj. Street Traffic	T = 0.51 (X)	5	78	20%	80%	1	4
PM Peak Hour of Adj. Street Traffic	T = 0.62 (X)	6	90	65%	35%	4	2
AM Peak Hour of Generator	T = 0.55 (X)	5	81	30%	70%	2	3
PM Peak Hour of Generator	T = 0.67 (X)	6	83	60%	40%	4	2
Saturday	T = 6.39 (X)	58	15	50%	50%	29	29
Saturday Peak Hour of Gen.	T = 0.52 (X)	5	14	** 50%	50%	3	2

* Percentages rounded to nearest 5%
** Not Available (Assumption)

JN:3184

Project Description:Shipyard Redevelopment

Project Location:Portland, ME

Date:3/6/2018

Gorrill Palmer

707 Sable Oaks Drive

Suite 30

South Portland, Maine 04106

Total Existing Site Trip Generation

Time Period	Hotel	General Office Building	Manufacturing	Specialty Retail	Drinking Place	Apartment	Total Site Trip Ends	Hotel		General Office Building		Manufacturing		Specialty Retail		Drinking Place		Apartment	Total Site		
								IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT				
AM Peak Adjacent Street	59	125	81	1	---	5	271	35	24	113	12	61	20	1	0	---	---	1	4	211	60
PM Peak Adjacent Street	62	120	83	5	23	6	299	34	28	18	102	29	54	2	3	15	8	4	2	102	197
AM Peak Hour of Generator	55	125	87	14	---	5	286	30	25	113	12	61	26	7	7	---	---	2	3	213	73
PM Peak Hour of Generator	64	120	84	10	31	6	315	38	26	18	102	42	42	6	4	22	9	4	2	130	185
Saturday Peak Hour of Gen.	76	33	31	13	33	5	191	42	34	17	16	16	15	7	6	21	12	3	2	106	85

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Shipyard			Organization:	
Project Location:	Portland			Performed By:	ET
Scenario Description:	Shipyard Redevelopment and Expansion			Date:	4/13/2018
Analysis Year:	2018			Checked By:	
Analysis Period:	Proposed AM Street Peak Hour			Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	60,000	sf	125	113	12
Retail	814	2,000	sf	1	1	0
Restaurant	936	2,000	sf	0	0	0
Cinema/Entertainment				0		
Residential	220	9	Dwelling Units	5	1	4
Hotel	310	105	rooms	74	35	24
All Other Land Uses ²	140	111,525	sf	81	61	20
Total				286	211	60

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	3	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	271	211	60
Internal Capture Percentage	2%	1%	5%
External Vehicle-Trips ³	265	208	57
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	3%	0%
Retail	0%	N/A
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	0%	13%

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Shipyard
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	113	113	1.00	12	12
Retail	1.00	1	1	1.00	0	0
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	1	1	1.00	4	4
Hotel	1.00	35	35	1.00	24	24

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	8	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	1	0		0
Hotel	18	3	2	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	5		0	0	0	0
Restaurant	16	0		0	0	1
Cinema/Entertainment	0	0	0		0	0
Residential	3	0	0	0		0
Hotel	3	0	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	3	110	113	110	0	0
Retail	0	1	1	1	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	1	1	1	0	0
Hotel	0	35	35	35	0	0
All Other Land Uses ³	0	61	61	61	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	12	12	12	0	0
Retail	0	0	0	0	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	4	4	4	0	0
Hotel	3	21	24	21	0	0
All Other Land Uses ³	0	20	20	20	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Shipyard			Organization:	
Project Location:	Portland			Performed By:	JAP
Scenario Description:	Shipyard Redevelopment and Expansion			Date:	4/13/2018
Analysis Year:	2018			Checked By:	
Analysis Period:	Proposed PM Street Peak Hour			Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	60,000	sf	120	18	102
Retail	814	2,000	sf	5	2	3
Restaurant	936	2,000	sf	23	15	8
Cinema/Entertainment				0		
Residential	220	9	Dwelling Units	6	4	2
Hotel	310	105	rooms	62	34	28
All Other Land Uses ²	140	111,525	sf	83	29	54
Total				299	102	197

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		1	0	1	0
Restaurant	0	1		0	1	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	1	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	299	102	197
Internal Capture Percentage	4%	6%	3%
External Vehicle-Trips ³	287	96	191
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	50%	67%
Restaurant	13%	38%
Cinema/Entertainment	N/A	N/A
Residential	50%	0%
Hotel	3%	4%

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Shipyard
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	18	18	1.00	102	102
Retail	1.00	2	2	1.00	3	3
Restaurant	1.00	15	15	1.00	8	8
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	4	4	1.00	2	2
Hotel	1.00	34	34	1.00	28	28

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		20	4	0	2	0
Retail	0		1	0	1	0
Restaurant	0	3		1	1	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	0	0		0
Hotel	0	4	19	0	1	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	6		4	0	2	6
Restaurant	5	1		0	1	24
Cinema/Entertainment	1	0	0		0	0
Residential	10	0	2	0		4
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	18	18	18	0	0
Retail	1	1	2	1	0	0
Restaurant	2	13	15	13	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	2	4	2	0	0
Hotel	1	33	34	33	0	0
All Other Land Uses ³	0	29	29	29	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	102	102	102	0	0
Retail	2	1	3	1	0	0
Restaurant	3	5	8	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	2	2	2	0	0
Hotel	1	27	28	27	0	0
All Other Land Uses ³	0	54	54	54	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Shipyards			Organization:	
Project Location:	Portland			Performed By:	ET
Scenario Description:	Shipyards Redevelopment and Expansion			Date:	4/13/2018
Analysis Year:	2018			Checked By:	
Analysis Period:	Proposed AM Generator Peak Hour			Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	60,000	sf	125	113	12
Retail	814	2,000	sf	14	7	7
Restaurant	936	2,000	sf	0	0	0
Cinema/Entertainment				0		
Residential	220	9	Dwelling Units	5	2	3
Hotel	310	105	rooms	55	30	25
All Other Land Uses ²	140	111,525	sf	87	61	26
Total				286	213	73

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	2		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	3	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	286	213	73
Internal Capture Percentage	5%	3%	10%
External Vehicle-Trips ³	272	206	66
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	4%	17%
Retail	29%	29%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	0%	12%

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Shipyard
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	113	113	1.00	12	12
Retail	1.00	7	7	1.00	7	7
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	2	2	1.00	3	3
Hotel	1.00	30	30	1.00	25	25

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	8	0	0	0
Retail	2		1	0	1	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	1	0		0
Hotel	19	4	2	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	5		0	0	0	0
Restaurant	16	1		0	0	1
Cinema/Entertainment	0	0	0		0	0
Residential	3	1	0	0		0
Hotel	3	0	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	5	108	113	108	0	0
Retail	2	5	7	5	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	2	2	2	0	0
Hotel	0	30	30	30	0	0
All Other Land Uses ³	0	61	61	61	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	2	10	12	10	0	0
Retail	2	5	7	5	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	3	3	3	0	0
Hotel	3	22	25	22	0	0
All Other Land Uses ³	0	26	26	26	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Shipyard			Organization:	
Project Location:	Portland			Performed By:	ET
Scenario Description:	Shipyard Redevelopment and Expansion			Date:	4/13/2018
Analysis Year:	2018			Checked By:	
Analysis Period:	Proposed PM Generator Peak Hour			Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	60,000	sf	120	18	102
Retail	814	2,000	sf	10	6	4
Restaurant	936	2,000	sf	31	22	9
Cinema/Entertainment				0		
Residential	220	9	Dwelling Units	6	4	2
Hotel	310	105	rooms	64	38	26
All Other Land Uses ²	140	111,525	sf	84	42	42
Total				315	130	185

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		1	0	1	0
Restaurant	0	3		0	1	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	0	0		0
Hotel	0	0	1	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	315	130	185
Internal Capture Percentage	6%	7%	5%
External Vehicle-Trips ³	297	121	176
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	67%	50%
Restaurant	9%	56%
Cinema/Entertainment	N/A	N/A
Residential	50%	50%
Hotel	3%	4%

¹ Land Use Codes (LUCs) from <i>Trip Generation Manual</i> , published by the Institute of Transportation Engineers.
² Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.
³ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.
⁴ Person-Trips
*Indicates computation that has been rounded to the nearest whole number.
Estimation Tool Developed by the Texas A&M Transportation Institute

Project Name:	Shipyard
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	18	18	1.00	102	102
Retail	1.00	6	6	1.00	4	4
Restaurant	1.00	22	22	1.00	9	9
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	4	4	1.00	2	2
Hotel	1.00	38	38	1.00	26	26

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		20	4	0	2	0
Retail	0		1	0	1	0
Restaurant	0	4		1	2	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	0	0		0
Hotel	0	4	18	0	1	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	6		6	0	2	6
Restaurant	5	3		0	1	27
Cinema/Entertainment	1	0	1		0	0
Residential	10	1	3	0		5
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	18	18	18	0	0
Retail	4	2	6	2	0	0
Restaurant	2	20	22	20	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	2	4	2	0	0
Hotel	1	37	38	37	0	0
All Other Land Uses ³	0	42	42	42	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	102	102	102	0	0
Retail	2	2	4	2	0	0
Restaurant	5	4	9	4	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	1	2	1	0	0
Hotel	1	25	26	25	0	0
All Other Land Uses ³	0	42	42	42	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

JN: 3184
Project Description: Shipyard Redevelopment
Project Location: Portland, ME
Date: 4/13/2018

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Total Proposed Site Trip Generation After Shared Use Reduction

Time Period	Hotel		General Office Building		Manufacturing		Specialty Retail		Drinking Place		Apartment		Total Site Trip Ends		Hotel		General Office Building		Manufacturing		Specialty Retail		Drinking Place		Apartment		Total Site	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
AM Peak Adjacent Street	56		122		81		1		---		5		265		35	21	110	12	61	20	1	0	---	---	1	4	208	57
PM Peak Adjacent Street	60		120		83		2		18		4		287		33	27	18	102	29	54	1	1	13	5	2	2	96	191
AM Peak Hour of Generator	52		118		87		10		---		5		272		30	22	108	10	61	26	5	5	---	---	2	3	206	66
PM Peak Hour of Generator	62		120		84		4		24		3		297		37	25	18	102	42	42	2	2	20	4	2	1	121	176
*Saturday Peak Hour of Gen.	72		31		31		12		31		5		183		40	32	16	15	16	15	7	5	20	11	3	2	102	81

* - NCHRP does not provide shared use reduction information for the Saturday Peak Hour of the Gen. so the average reduction of the other peak hours (4%) was used.

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About

Content

Legend

Contents

☒ Walked

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☐ Carpooled

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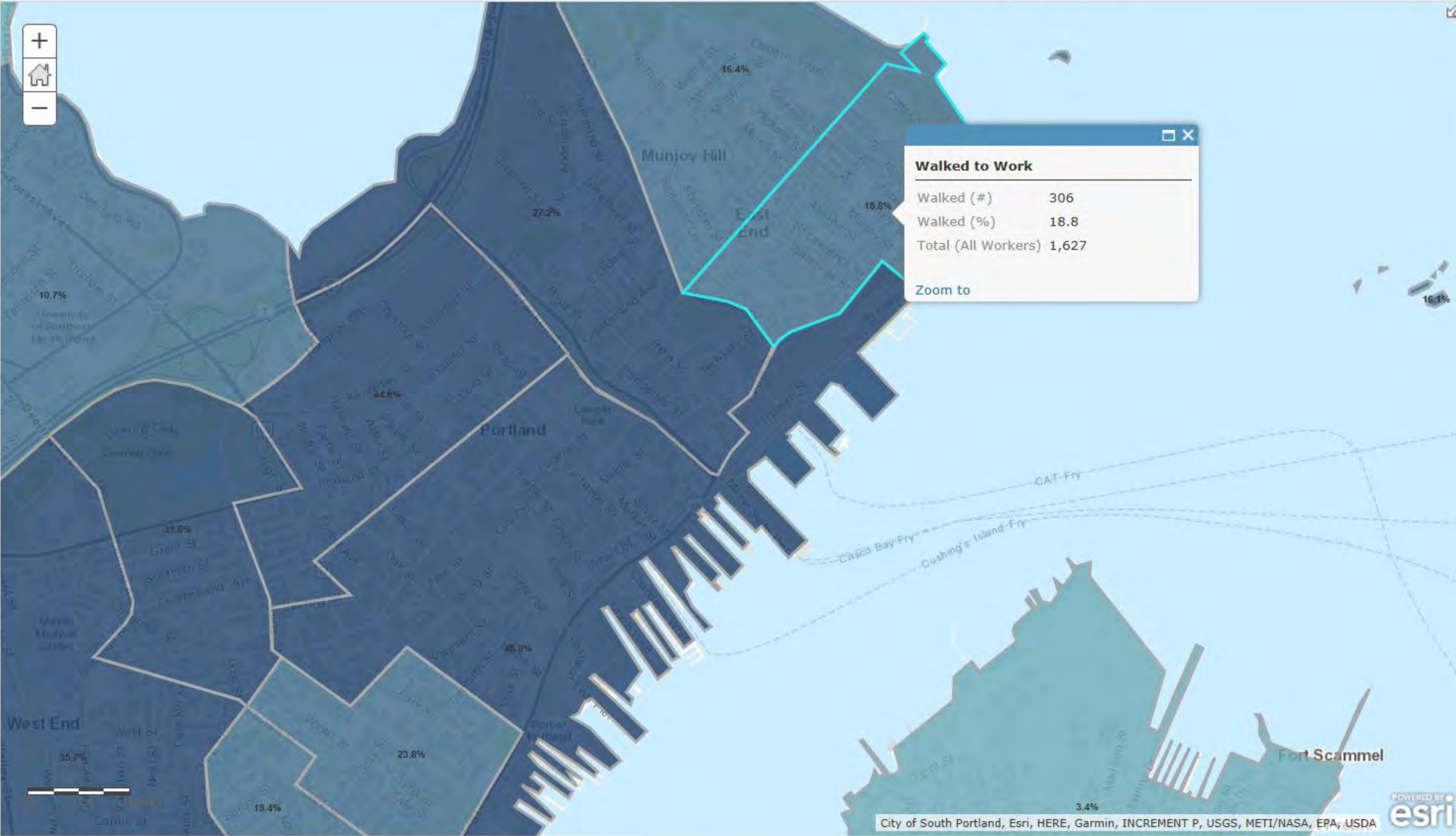
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Details

Basemap

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Contents

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☐ Public Transportation

☐ Carpooled

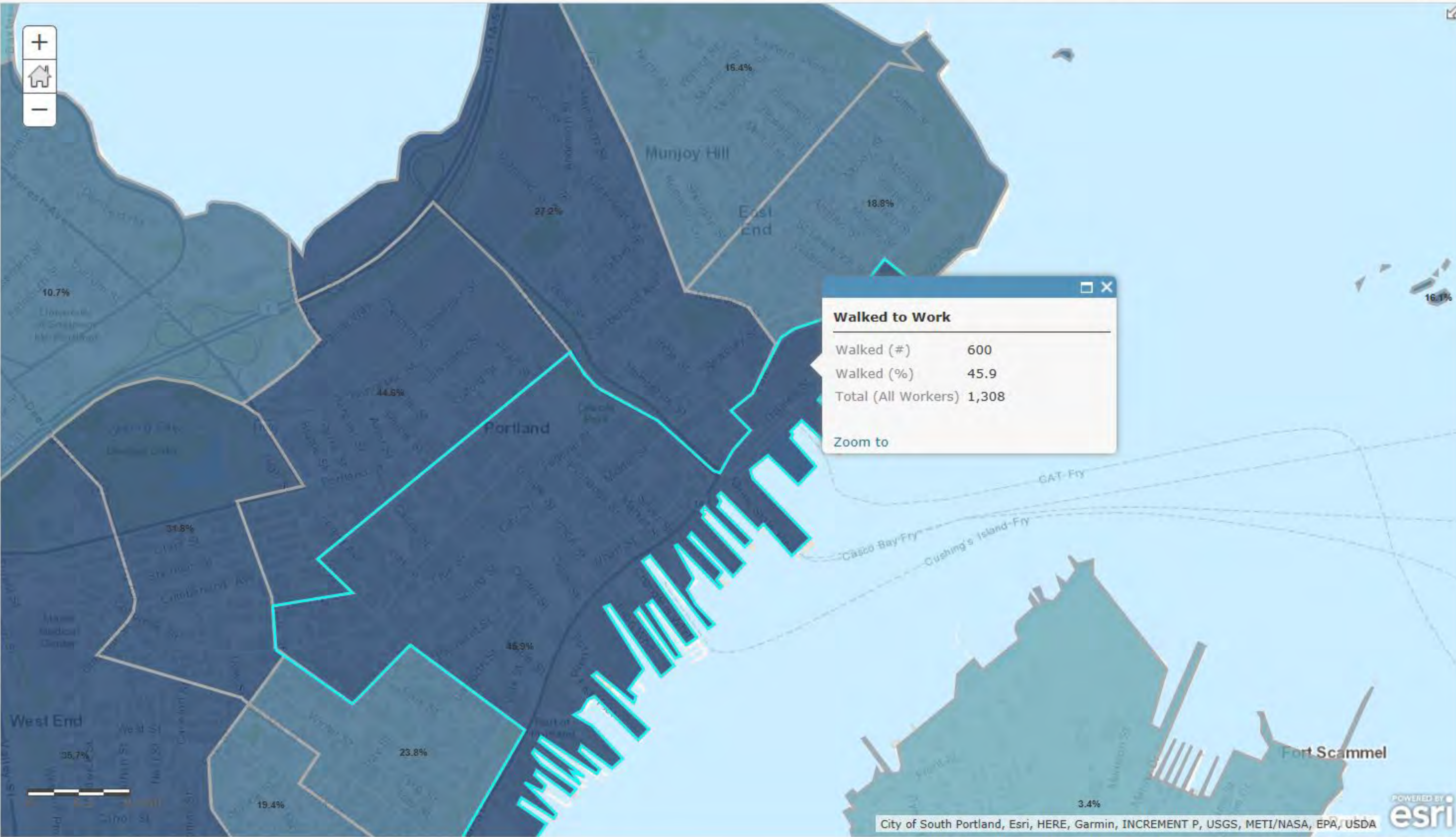
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Topographic

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Details

Basemap

Share

Print ▾

Measure

Find address or place



About

Content

Legend

Contents

☒ Walked

☐ Biked

☐ Public Transportation

☐ Carpooled

☐ Drove Alone



☐ Taxi/Motorcycle/Other

☐ Worked at Home

 Topographic

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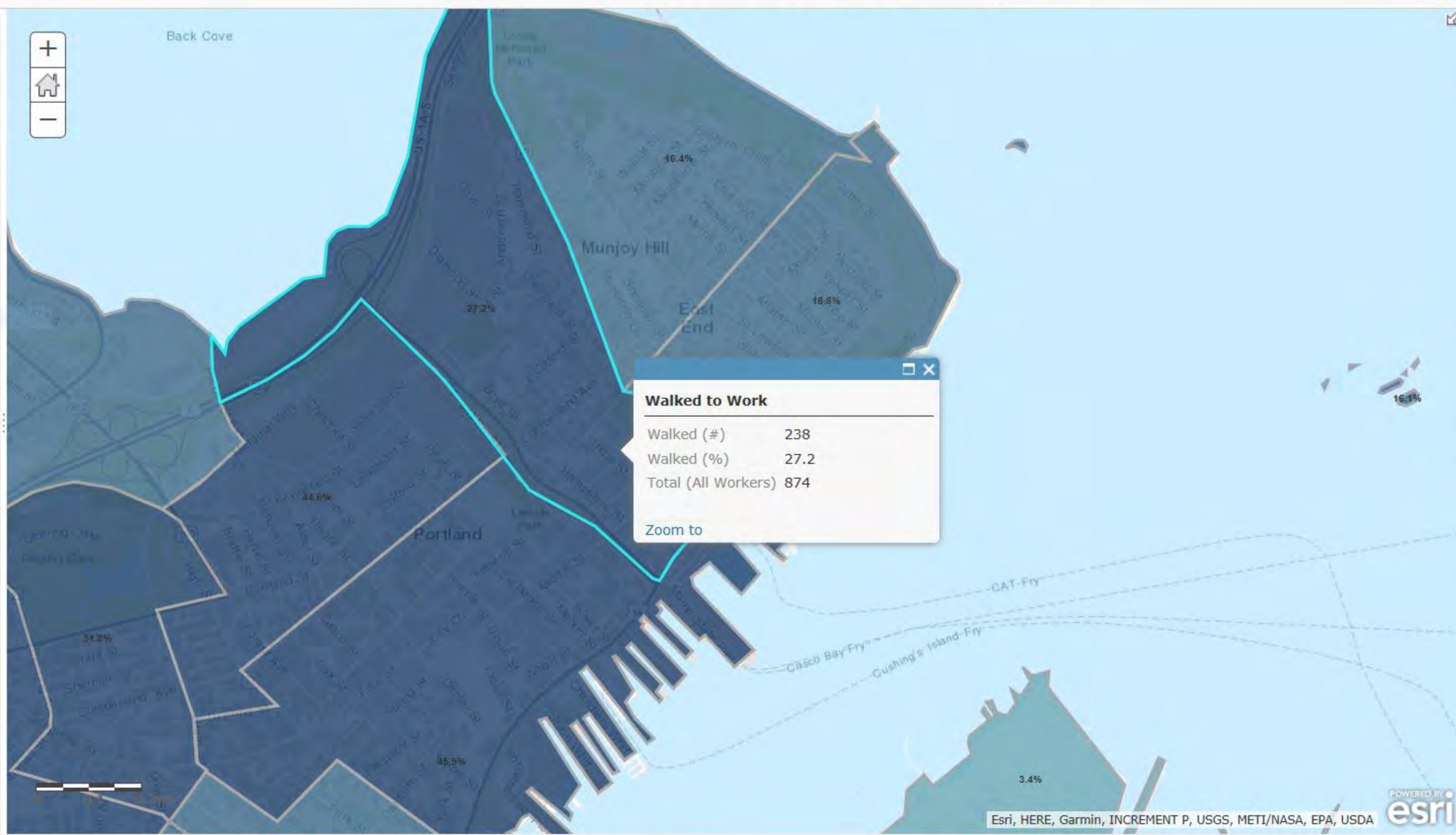
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Details

Basemap

Share

Print ▾

Measure

Find address or place

About

Content

Legend

Contents

☐ Walked

☒ Biked

☐ Public Transportation

☐ Carpooled

☐ Drove Alone

☐ Taxi/Motorcycle/Other

☐ Worked at Home

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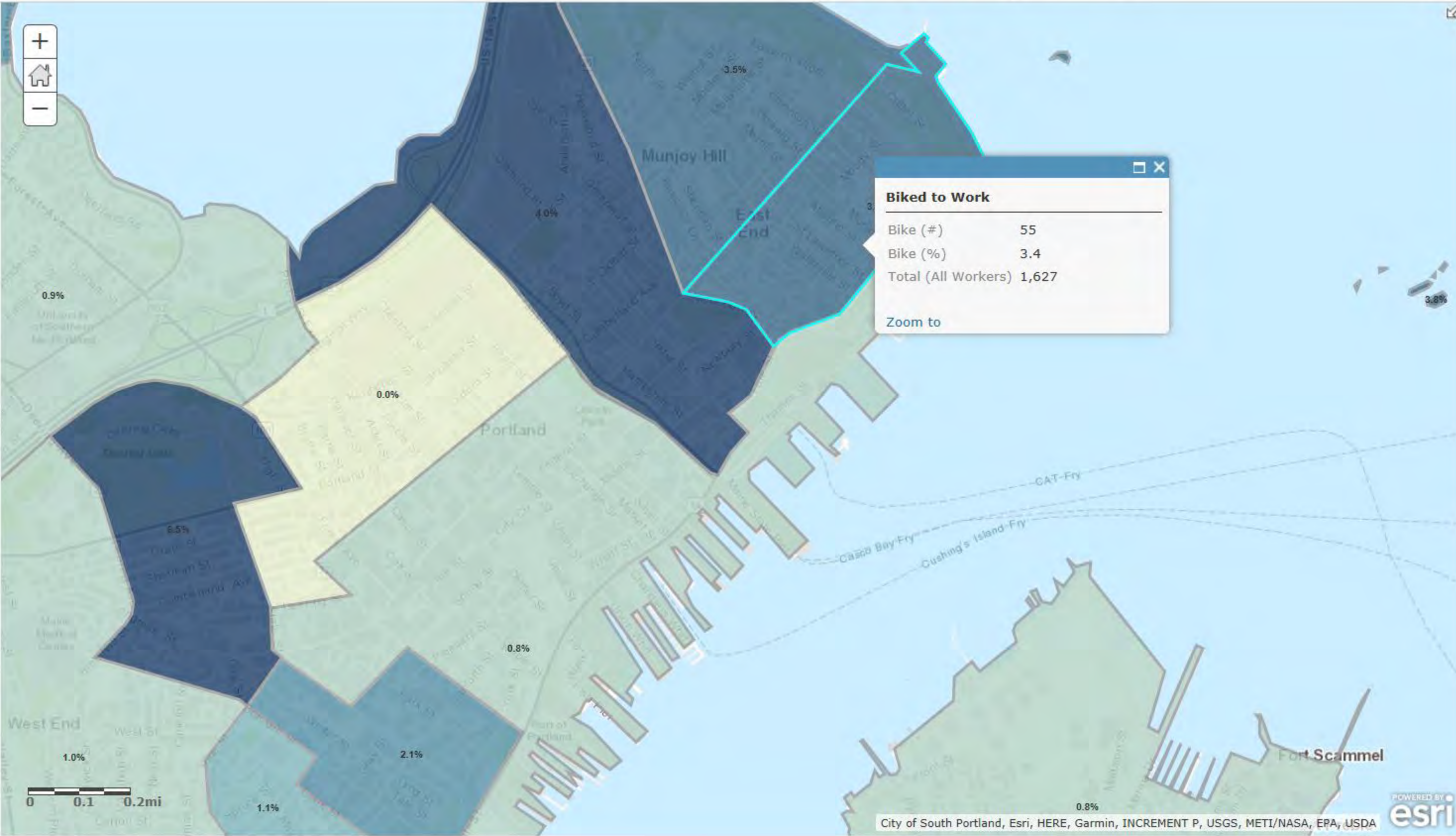
Help

Terms of Use

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Details

Basemap

Share

Print ▾

Measure

Find address or place

About

Content

Legend

Contents

☐ Walked

☒ Biked

☐ Public Transportation

☐ Carpooled

☐ Drove Alone

☐ Taxi/Motorcycle/Other

☐ Worked at Home

☒ Topographic

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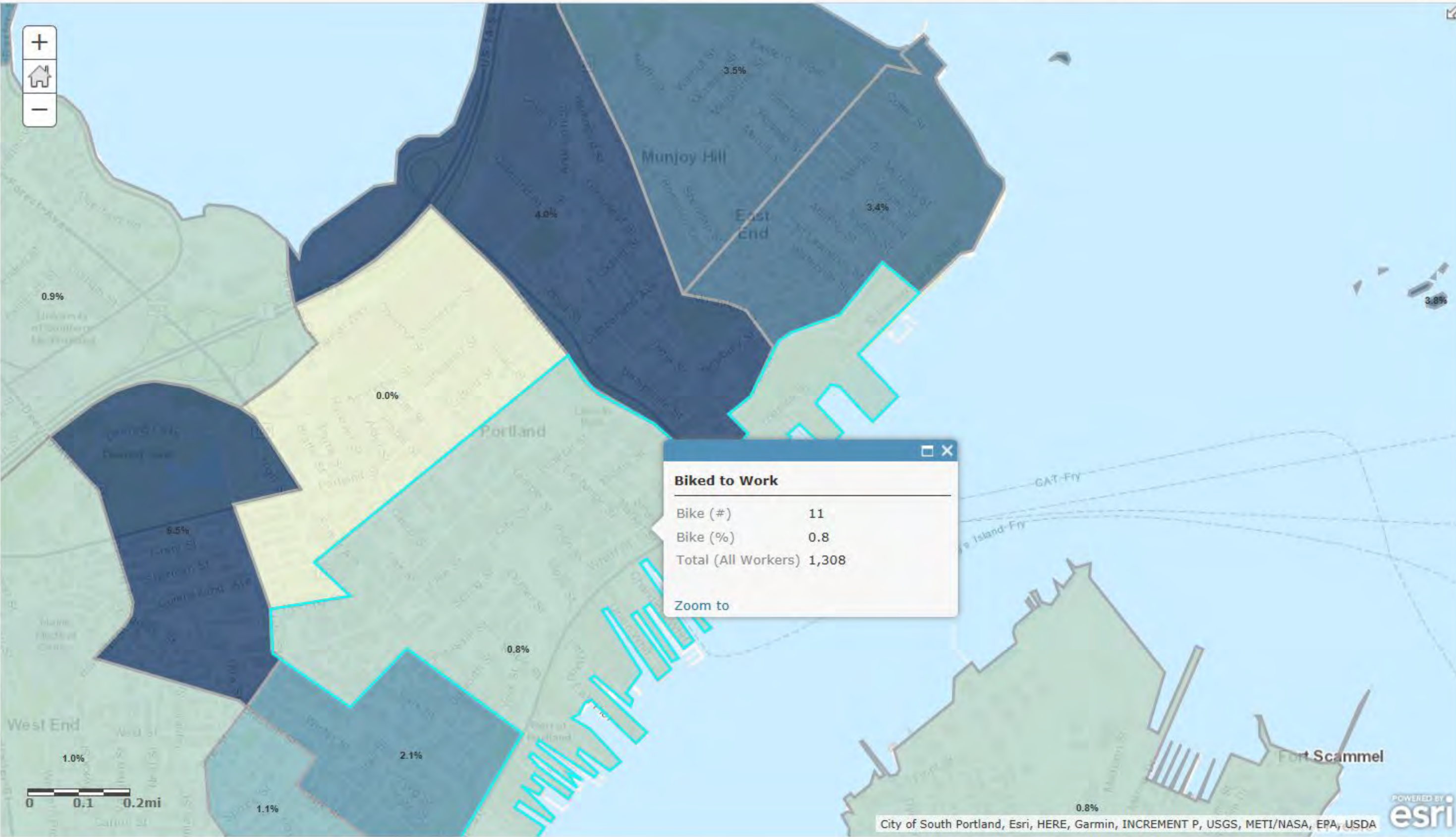
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Basemap

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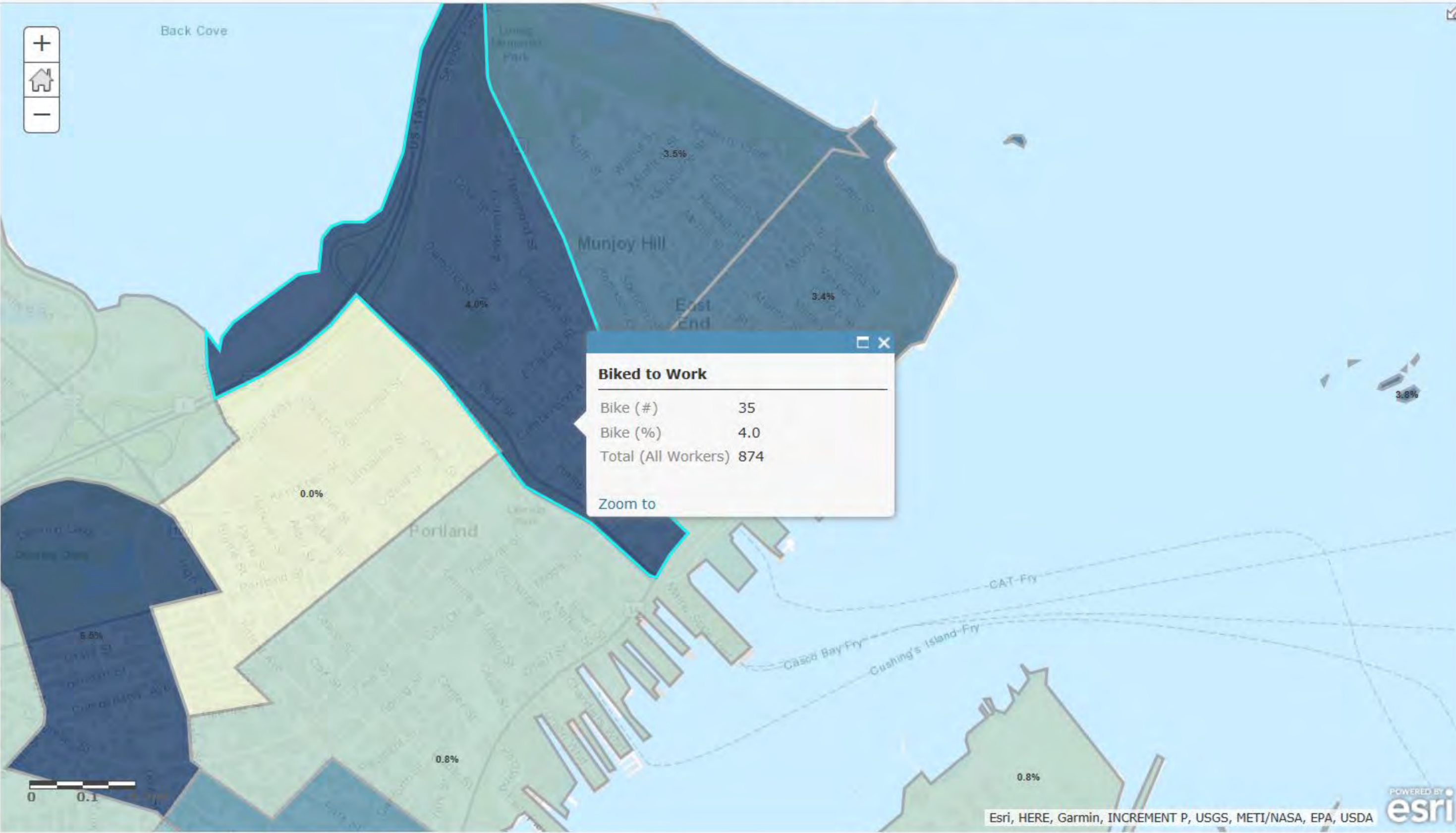
About

Content

Legend

Contents

- ☐ Walked
- ☒ Biked
- ☐ Public Transportation
- ☐ Carpooled
- ☐ Drove Alone
- ☐ Taxi/Motorcycle/Other
- ☐ Worked at Home
- ☒ Topographic



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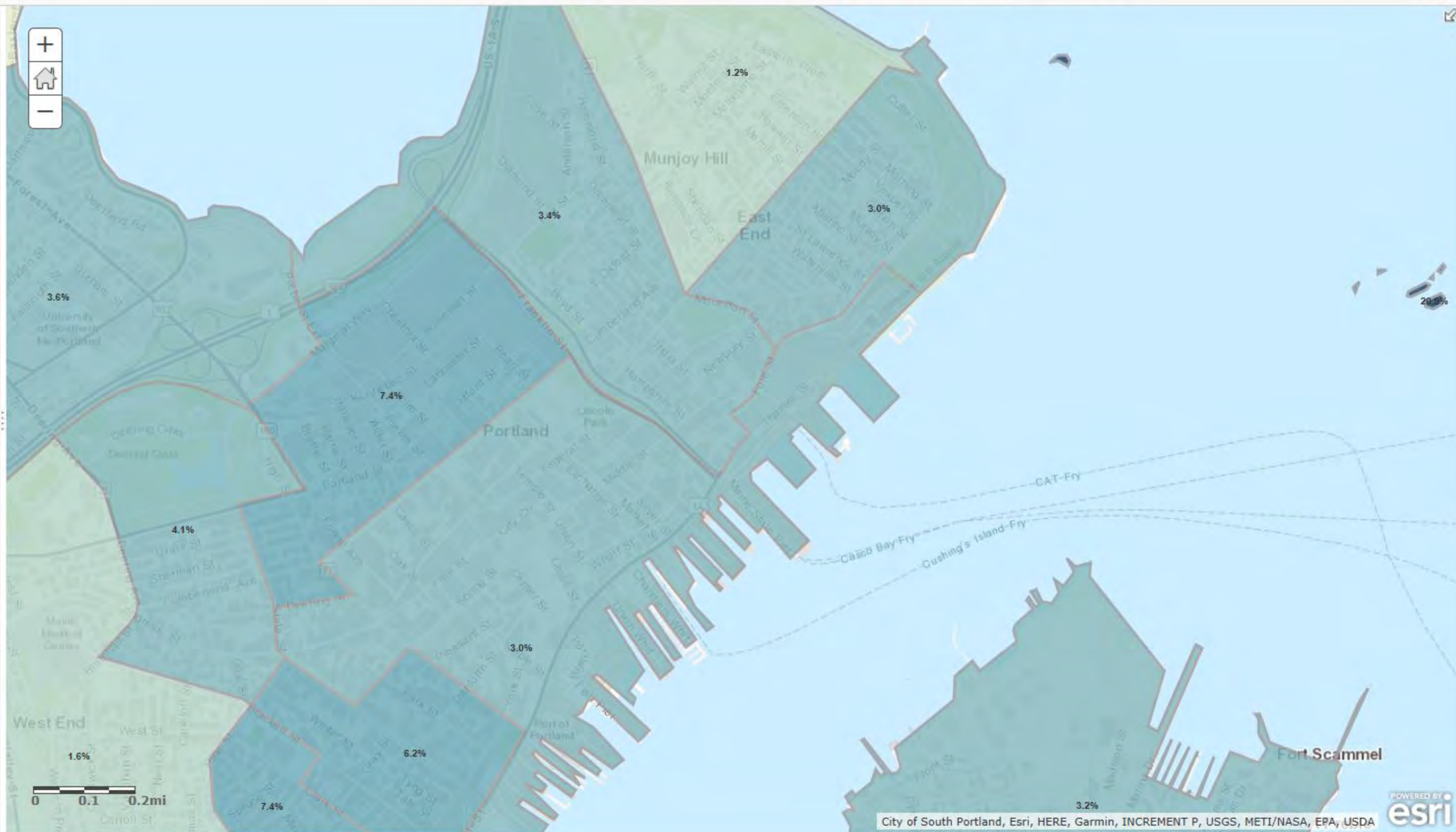
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☒ Topographic



Details

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About

Content

Legend

Contents

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☐ Biked

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☐ Carpooled

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☐ Worked at Home

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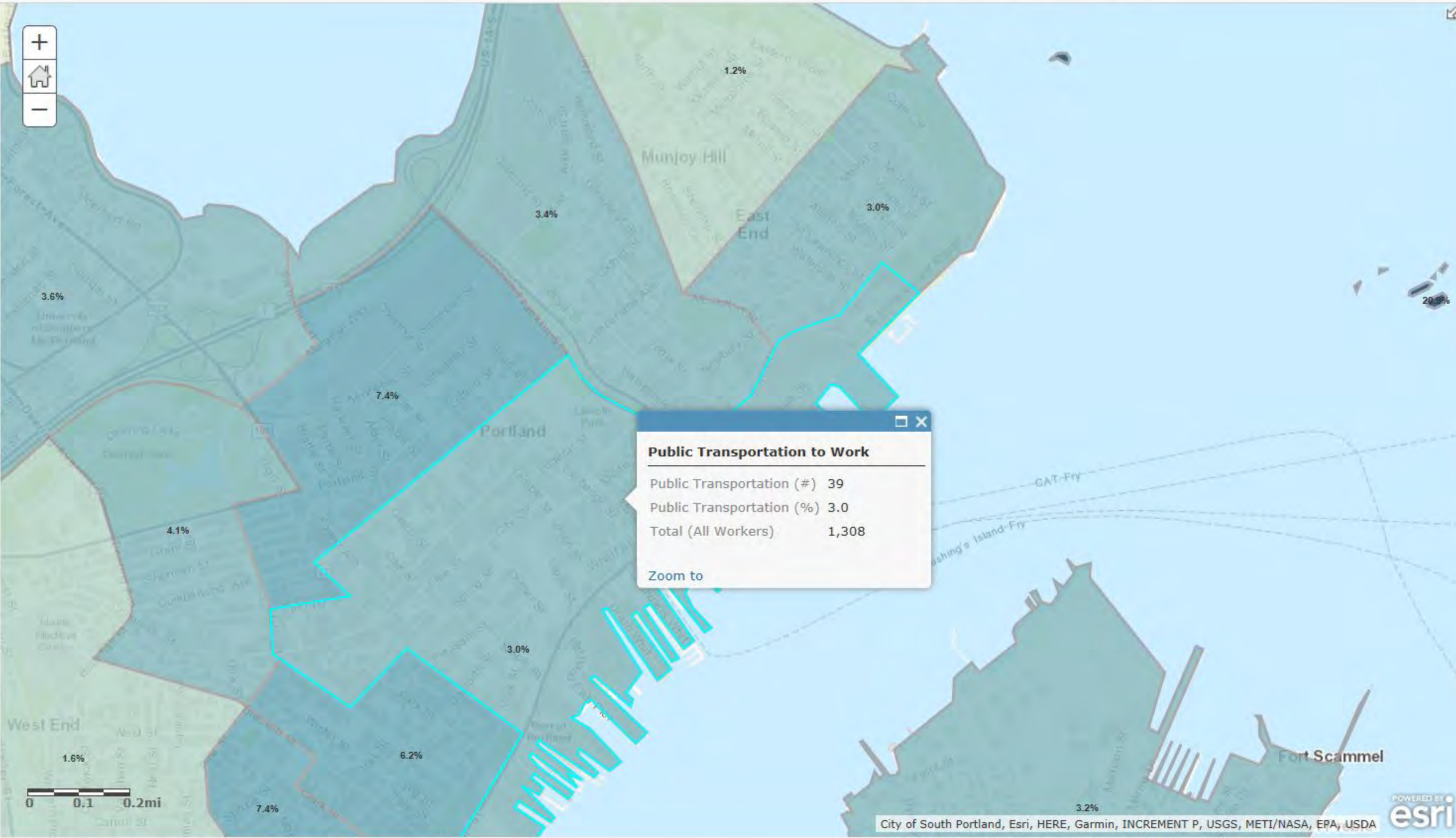
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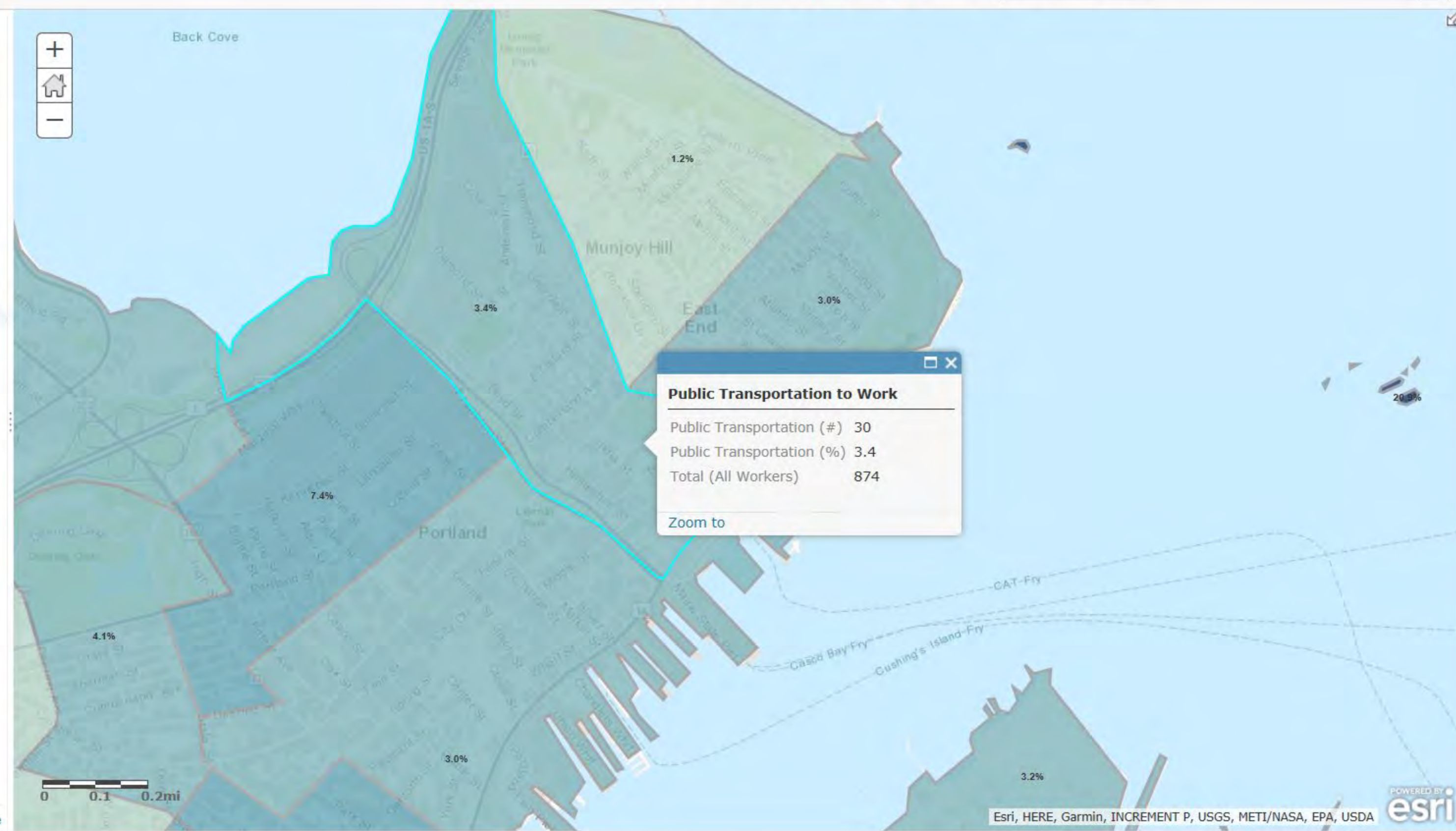
About

Content

Legend

Contents

- ☐ Walked
- ☐ Biked
- ☒ Public Transportation
- ☐ Carpooled
- ☐ Drove Alone
- ☐ Taxi/Motorcycle/Other
- ☐ Worked at Home
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Emily Tynes

From: Christine Grimando <cdg@portlandmaine.gov> on behalf of Christine Grimando
Sent: Thursday, December 1, 2016 2:44 PM
To: Randy Dunton
Cc: Tom Errico; Jeremiah Bartlett; David Senus; Mary McCrann; Emily Tynes; Bruce Hyman; Kevin Costello; Jeff Levine; Stuart O'Brien
Subject: Re: Trip Distribution - 58 Fore Street Project

Randy,

In the course of reviewing the TMP application materials for the other modes reductions, we've concluded that the 35.8% reduction discussed at the scoping meetings is appropriate to account for residential uses, and 10% for hotel use, but that trips for other, non-residential uses warrant a separate approach. For those work and non-work trips to the site, we propose an assumption of an 18% reduction based on 2010 CTPP data (<http://ctpp.transportation.org/Pages/5-Year-Data.aspx>) for Tract 3, which includes the eastern waterfront and downtown, and shows a drive to work alone rate of 78% and a total ratio of cars to workers of 82% when carpooling is accounted for.

If you have another way to calculate these reductions, we are open to discussing alternatives, as well. However, we would like to make sure the work and non-work trips reflect the fact that those workers and other visitors will be coming from a broad commuter/market area and therefore these trips are likely to have a lower reduction than home-based trips.

As Tom Errico's prior comments reflect, we expect to see these reductions linked to and supported by the robustness of the TDM plan.

Christine

Christine Grimando, AICP
Senior Planner
Planning & Urban Development Department
389 Congress Street
Portland, Maine 04101

A202105 - Means of Transportation (18) (Workers 16 years and over)

Current date: 4/4/2018 10:13:02 AM (Eastern Daylight Time)

Measures: Workers 16 and Over

WORKPLACE		Census Tract 3, Cumberland County, Maine
Means of Transportation 18	Output	
Total, means of transportation	Estimate	17,470
	Margin of Error	783
Car, truck, or van -- Drove alone	Estimate	13,640
	Margin of Error	788
Car, truck, or van -- In a 2-person carpool	Estimate	1,245
	Margin of Error	233
Car, truck, or van -- In a 3-person carpool	Estimate	80
	Margin of Error	59
Car, truck, or van -- In a 4-person carpool	Estimate	60
	Margin of Error	51
Car, truck, or van -- In a 5-or-6-person carpool	Estimate	15
	Margin of Error	19
Car, truck, or van -- In a 7-or-more-person carpool	Estimate	30
	Margin of Error	37
Bus or trolley bus	Estimate	280
	Margin of Error	99
Streetcar or trolley car	Estimate	0
	Margin of Error	119
Subway or elevated	Estimate	0
	Margin of Error	119
Railroad	Estimate	4
	Margin of Error	2
Ferryboat	Estimate	60
	Margin of Error	36
Bicycle	Estimate	280
	Margin of Error	119
Walked	Estimate	1,570
	Margin of Error	260
Taxicab	Estimate	15
	Margin of Error	20
Motorcycle	Estimate	15
	Margin of Error	22

A202105 - Means of Transportation (18) (Workers 16 years and over)

Current date: 4/4/2018 10:13:02 AM (Eastern Daylight Time)

Measures: Workers 16 and Over

WORKPLACE		Census Tract 5, Cumberland County, Maine
Means of Transportation 18	Output	
Total, means of transportation	Estimate	2,195
	Margin of Error	331
Car, truck, or van -- Drove alone	Estimate	1,800
	Margin of Error	284
Car, truck, or van -- In a 2-person carpool	Estimate	125
	Margin of Error	55
Car, truck, or van -- In a 3-person carpool	Estimate	0
	Margin of Error	119
Car, truck, or van -- In a 4-person carpool	Estimate	10
	Margin of Error	14
Car, truck, or van -- In a 5-or-6-person carpool	Estimate	10
	Margin of Error	18
Car, truck, or van -- In a 7-or-more-person carpool	Estimate	0
	Margin of Error	119
Bus or trolley bus	Estimate	25
	Margin of Error	44
Streetcar or trolley car	Estimate	0
	Margin of Error	119
Subway or elevated	Estimate	0
	Margin of Error	119
Railroad	Estimate	0
	Margin of Error	119
Ferryboat	Estimate	15
	Margin of Error	21
Bicycle	Estimate	4
	Margin of Error	18
Walked	Estimate	135
	Margin of Error	91
Taxicab	Estimate	0
	Margin of Error	119
Motorcycle	Estimate	0
	Margin of Error	119

JN: 3184
Project Description: Shipyard Redevelopment
Project Location: Portland, ME
Date: 4/13/2018

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Residential 35.8%
Non-Residential 15.0%
Hotel Reduction 10.0%

Total Proposed Site Trip Generation After Shared Use Reduction and Multimodal Reduction

Time Period	Hotel	General Office Building	Manufacturing	Specialty Retail	Drinking Place	Apartment	Total Site Trip Ends	Hotel		General Office Building		Manufacturing		Specialty Retail		Drinking Place		Apartment		Total Site	
								IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
AM Peak Adjacent Street	50	103	69	1	---	3	226	32	18	94	9	52	17	1	0	---	---	1	2	179	47
PM Peak Adjacent Street	54	102	71	2	15	3	247	30	24	15	87	25	46	1	1	11	4	1	2	82	165
AM Peak Hour of Generator	47	100	74	9	---	3	233	27	20	92	8	52	22	4	5	---	---	1	2	175	58
PM Peak Hour of Generator	56	102	71	3	20	2	255	33	23	15	87	36	35	2	1	17	3	1	1	103	152
Saturday Peak Hour of Gen.	65	27	26	10	27	3	158	36	29	14	13	14	12	6	4	17	10	2	1	87	71

JN: 3184
Project Description: Shipyard Redevelopment
Project Location: Portland, ME
Date: 3/6/2018

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

(Existing) Manufacturing
Land Use Code (LUC) 140

Gross Floor Area 63,045

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution	
				IN	OUT	IN	OUT
Weekday	T = 3.82 (X)	241	62	50%	50%	121	120
AM Peak Adjacent Street	T = 0.73 (X)	46	50	75%	25%	35	11
PM Peak Adjacent Street	T = 0.74 (X)	47	54	35%	65%	16	31
AM Peak Hour of Generator	T = 0.78 (X)	49	50	70%	30%	34	15
PM Peak Hour of Generator	T = 0.75 (X)	47	50	50%	50%	24	23
Saturday	T = 1.49 (X)	94	2	50%	50%	47	47
Saturday Peak Hour of Gen.	T = 0.28 (X)	18	2	50%	50%	9	9

* Percentages rounded to nearest 5%

** Not Available (Assumption)

JN: 3184
 Project Description: Shipyard Redevelopment
 Project Location: Portland, ME
 Date: 3/6/2018

Gorrill Palmer
 707 Sable Oaks Drive
 Suite 30
 South Portland, Maine 04106

**(Existing) General Office Building
 Land Use Code (LUC) 710**

Square Feet 6,082

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R ²
				IN	OUT	IN	OUT	
Weekday	$\ln(T) = 0.77 \ln(X) + 3.65$	154	78	50%	50%	77	77	0.80
AM Peak Hour	$\ln(T) = 0.80 \ln(X) + 1.55$	20	217	90%	10%	18	2	0.83
PM Peak Hour	$T = 1.12 (X) + 78.81$	86	235	15%	85%	13	73	0.82
Saturday	$T = 2.14 (X) + 18.47$	31	17	50%	50%	16	15	0.66
Peak Hour of Generator	$\ln(T) = 0.81 \ln(X) - 0.12$	4	10	55%	45%	2	2	0.59

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R ²
				IN	OUT	IN	OUT	
Weekday	$T = 11.01 (X)$	67	78	50%	50%	34	33	---
AM Peak Hour	$T = 1.55 (X)$	9	217	90%	10%	8	1	---
PM Peak Hour	$T = 1.49 (X)$	9	235	15%	85%	1	8	---
Saturday	$T = 2.37 (X)$	14	17	50%	50%	7	7	---
Saturday Peak Hour of Gen.	$T = 0.41 (X)$	2	10	50%	50%	1	1	---

* Percentages rounded to nearest 5%

PM Peak Hour:	$T = 1.49/1.55$ (AM Peak)	19	15%	85%	3	16	---
SAT Peak Hour:	$T = 0.41/1.55$ (AM Peak)	5	50%	50%	3	2	---

JN: 3184
Project Description: Shipyard Redevelopment
Project Location: Portland, ME
Date: 3/6/2018

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

(Existing) Apartment
Land Use Code (LUC) 220

Dwelling Units: 8

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Sample Size	Directional Split *		Directional Distribution	
				IN	OUT	IN	OUT
Weekday	T = 6.72 (X)	54	86	50%	50%	27	27
AM Peak Hour of Adj. Street Traffic	T = 0.51 (X)	4	78	20%	80%	1	3
PM Peak Hour of Adj. Street Traffic	T = 0.62 (X)	5	90	65%	35%	3	2
AM Peak Hour of Generator	T = 0.55 (X)	4	81	30%	70%	1	3
PM Peak Hour of Generator	T = 0.67 (X)	5	83	60%	40%	3	2
Saturday	T = 6.39 (X)	51	15	50%	50%	26	25
Saturday Peak Hour of Gen.	T = 0.52 (X)	4	14	**	50%	2	2

* Percentages rounded to nearest 5%
** Not Available (Assumption)

JN:3184
Project Description:Shipyard Redevelopment
Project Location:Portland, ME
Date:3/6/2018

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

(Existing) Specialty Retail Center
Land Use Code (LUC) 814

Gross Floor Area (ft²): 1,250

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution	
				IN	OUT	IN	OUT
Weekday	T = 44.32 (X)	55	4	50%	50%	28	27
Peak Hour of Adjacent Street Traffic 7-9 AM	T = 0.74 (X)	1	N/A	60%	40%	1	0
Peak Hour of Adjacent Street Traffic 4-6 PM	T = 2.71 (X)	3	5	45%	55%	1	2
AM Peak Hour of Generator	T = 6.84 (X)	9	4	50%	50%	5	4
PM Peak Hour of Generator	T = 5.02 (X)	6	3	55%	45%	3	3
Saturday	T = 42.04 (X)	53	3	50%	50%	27	26
Saturday Peak Hour of Gen.***	T = 6.63 (X)	8	3	50%	50%	4	4

**Based on ratio of AM/PM traffic for LUC 820, Shopping Center and applied to 814 PM rate.

***Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 820 - Shopping Center

* Percentages rounded to nearest 5%

JN: 3184
 Project Description: Shipyard Redevelopment
 Project Location: Portland, ME
 Date: 3/6/2018

Gorrill Palmer
 707 Sable Oaks Drive
 Suite 30
 South Portland, Maine 04106

**(Existing) Drinking Place
 Land Use Code (LUC) 936**

Square Feet 1,250

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split **		Directional Distribution		
				IN	OUT	IN	OUT	
Weekday	---	---	---	---	---	---	---	
PM Peak Hour of Adj. St.	T = 11.34 (X)	14	12	65%	35%	9	5	
PM Peak Hour of Gen.	T = 15.49 (X)	19	8	70%	30%	13	6	
Saturday	---	---	---	---	---	---	---	
Sat. Peak Hour of Generator	T = 16.48 (X)*	21	---	***	65%	35%	14	7

*Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 932 - High-Turnover (Sit-Down) Restaurant

** Percentages rounded to nearest 5%

***Directional split for this peak hour assumed based on other peak hours for this land use and the directional split for LUC 932 - High-Turnover (Sit-Down) Restaurant during Saturday Peak Hour of the Generator

JN: 3184
Project Description: Shipyard Redevelopment
Project Location: Portland, ME
Date: 3/6/2018

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Total Existing Site Trip Generation

Time Period	Manufacturing	General Office Building	Apartment	Specialty Retail	Drinking Place	Total Site	Manufacturing		General Office Building		Apartment		Specialty Retail		Drinking Place		Total Site	
						Trip Ends	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT		
AM Peak Adjacent Street	46	20	4	1	---	71	35	11	18	2	1	3	1	0	---	---	55	16
PM Peak Adjacent Street	47	19	5	3	14	88	16	31	3	16	3	2	1	2	9	5	32	56
AM Peak Hour of Generator	49	20	4	9	---	82	34	15	18	2	1	3	5	4	---	---	58	24
PM Peak Hour of Generator	47	19	5	6	19	96	24	23	3	16	3	2	3	3	13	6	46	50
Saturday Peak Hour of Gen.	18	5	4	8	21	56	9	9	3	2	2	2	4	4	14	7	32	24

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Shipyard			Organization:	
Project Location:	Portland			Performed By:	JAP
Scenario Description:	Shipyard Redevelopment and Expansion			Date:	3/6/2018
Analysis Year:	2018			Checked By:	
Analysis Period:	Existing AM Street Peak Hour			Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	6,082	sf	20	18	2
Retail	814	1,250	sf	1	1	0
Restaurant	936	1,250	sf	0	0	0
Cinema/Entertainment						
Residential	220	8	dwelling units	4	1	3
Hotel						
All Other Land Uses ²	140	63,045	sf	46	35	11
Total				71	55	16

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	71	55	16
Internal Capture Percentage	0%	0%	0%
External Vehicle-Trips ³	71	55	16
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	0%	N/A
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Shipyard
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	18	18	1.00	2	2
Retail	1.00	1	1	1.00	0	0
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	1	1	1.00	3	3
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	1	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	1	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		0	0	0	0
Restaurant	3	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	0	0		0
Hotel	1	0	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	18	18	18	0	0
Retail	0	1	1	1	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	1	1	1	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	35	35	35	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	2	2	2	0	0
Retail	0	0	0	0	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	3	3	3	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	11	11	11	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Shipyard			Organization:	
Project Location:	Portland			Performed By:	JAP
Scenario Description:	Shipyard Redevelopment and Expansion			Date:	3/6/2018
Analysis Year:	2018			Checked By:	
Analysis Period:	Existing PM Street Peak Hour			Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	6,082	sf	19	3	16
Retail	814	1,250	sf	3	1	2
Restaurant	936	1,250	sf	14	9	5
Cinema/Entertainment						
Residential	220	8	dwelling units	5	3	2
Hotel						
All Other Land Uses ²	140	63,045	sf	47	16	31
Total				88	32	56

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		1	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	88	32	56
Internal Capture Percentage	2%	3%	2%
External Vehicle-Trips ³	86	31	55
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	0%	50%
Restaurant	11%	0%
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Shipyard
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	3	3	1.00	16	16
Retail	1.00	1	1	1.00	2	2
Restaurant	1.00	9	9	1.00	5	5
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	3	3	1.00	2	2
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	1	0	0	0
Retail	0		1	0	1	0
Restaurant	0	2		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	0	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		3	0	1	0
Restaurant	1	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	0	1	0		0
Hotel	0	0	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	3	3	3	0	0
Retail	0	1	1	1	0	0
Restaurant	1	8	9	8	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	3	3	3	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	16	16	16	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	16	16	16	0	0
Retail	1	1	2	1	0	0
Restaurant	0	5	5	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	2	2	2	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	31	31	31	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Shipyard			Organization:	
Project Location:	Portland			Performed By:	JAP
Scenario Description:	Shipyard Redevelopment and Expansion			Date:	3/6/2018
Analysis Year:	2018			Checked By:	
Analysis Period:	Existing AM Generator Peak Hour			Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	6,082	sf	20	18	2
Retail	814	1,250	sf	9	5	4
Restaurant	936	1,250	sf			
Cinema/Entertainment						
Residential	220	8	dwelling units	4	2	2
Hotel						
All Other Land Uses ²	140	63,045	sf	49	34	15
Total				82	59	23

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	0	0	0
Retail	1		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	82	59	23
Internal Capture Percentage	5%	3%	9%
External Vehicle-Trips ³	78	57	21
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	6%	50%
Retail	20%	25%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	N/A	N/A

¹ Land Use Codes (LUCs) from <i>Trip Generation Manual</i> , published by the Institute of Transportation Engineers.
² Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.
³ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.
⁴ Person-Trips
*Indicates computation that has been rounded to the nearest whole number.
Estimation Tool Developed by the Texas A&M Transportation Institute

Project Name:	Shipyard
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	18	18	1.00	2	2
Retail	1.00	5	5	1.00	4	4
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	2	2	1.00	2	2
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	1	0	0	0
Retail	1		1	0	1	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	1		0	0	0	0
Restaurant	3	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	1	0	0		0
Hotel	1	0	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	1	17	18	17	0	0
Retail	1	4	5	4	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	2	2	2	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	34	34	34	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	1	1	2	1	0	0
Retail	1	3	4	3	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	2	2	2	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	15	15	15	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Shipyard			Organization:	
Project Location:	Portland			Performed By:	JAP
Scenario Description:	Shipyard Redevelopment and Expansion			Date:	3/6/2018
Analysis Year:	2018			Checked By:	
Analysis Period:	Existing PM Generator Peak Hour			Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	6,082	sf	19	3	16
Retail	814	1,250	sf	6	3	3
Restaurant	936	1,250	sf	19	13	6
Cinema/Entertainment						
Residential	220	8	dwelling units	5	3	2
Hotel						
All Other Land Uses ²	140	63,045	sf	47	24	23
Total				96	46	50

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		1	0	1	0
Restaurant	0	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	96	46	50
Internal Capture Percentage	6%	7%	6%
External Vehicle-Trips ³	90	43	47
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	33%	67%
Restaurant	8%	17%
Cinema/Entertainment	N/A	N/A
Residential	33%	0%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Shipyard
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	3	3	1.00	16	16
Retail	1.00	3	3	1.00	3	3
Restaurant	1.00	13	13	1.00	6	6
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	3	3	1.00	2	2
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	1	0	0	0
Retail	0		1	0	1	0
Restaurant	0	2		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	0	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		4	0	1	0
Restaurant	1	2		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	0	2	0		0
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	3	3	3	0	0
Retail	1	2	3	2	0	0
Restaurant	1	12	13	12	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	2	3	2	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	24	24	24	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	16	16	16	0	0
Retail	2	1	3	1	0	0
Restaurant	1	5	6	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	2	2	2	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	23	23	23	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

JN: 3184
Project Description: Shipyard Redevelopment
Project Location: Portland, ME
Date: 3/6/2018

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Total Existing Site Trip Generation After Shared Use Reduction

Time Period	Manufacturing	General Office Building	Apartment	Specialty Retail	Drinking Place	Total Site Trip Ends	Manufacturing		General Office Building		Apartment		Specialty Retail		Drinking Place		Total Site	
							IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
AM Peak Adjacent Street	46	20	4	1	---	71	35	11	18	2	1	3	1	0	---	---	55	16
PM Peak Adjacent Street	47	19	5	2	13	86	16	31	3	16	3	2	1	1	8	5	31	55
AM Peak Hour of Generator	49	18	4	7	---	78	34	15	17	1	1	3	4	3	---	---	56	22
PM Peak Hour of Generator	47	19	4	3	17	90	24	23	3	16	2	2	2	1	12	5	43	47
*Saturday Peak Hour of Gen.	18	5	4	7	20	54	9	9	3	2	2	2	3	4	14	6	31	23

* - NCHRP does not provide shared use reduction information for the Saturday Peak Hour of the Gen. so the average reduction of the other peak hours (3%) was used.

JN: 3184
Project Description: Shipyard Redevelopment
Project Location: Portland, ME
Date: 3/6/2018

Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Non-Residential 15.0%
Residential 35.8%

Total Existing Site Trip Generation After Shared Use Reduction and Multimodal Reduction

Time Period	Manufacturing	General Office Building	Apartment	Specialty Retail	Drinking Place	Total Site Trip Ends	Manufacturing		General Office Building		Apartment		Specialty Retail		Drinking Place		Total Site	
							IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
AM Peak Adjacent Street	39	17	3	1	---	60	30	9	15	2	1	2	1	0	---	---	47	13
PM Peak Adjacent Street	40	16	3	2	11	72	14	26	3	13	2	1	1	1	7	4	27	45
AM Peak Hour of Generator	42	15	3	6	---	66	29	13	14	1	1	2	3	3	---	---	47	19
PM Peak Hour of Generator	40	16	3	3	13	76	20	20	3	13	1	2	1	2	10	3	35	41
Saturday Peak Hour of Gen.	15	4	3	6	17	46	8	7	3	1	1	2	3	3	12	5	27	19

JN:	3184	Gorrill Palmer
Project Description:	Shipyard Redevelopment	707 Sable Oaks Drive
Project Location:	Portland, ME	Suite 30
Date:	3/6/2018	South Portland, Maine 04106

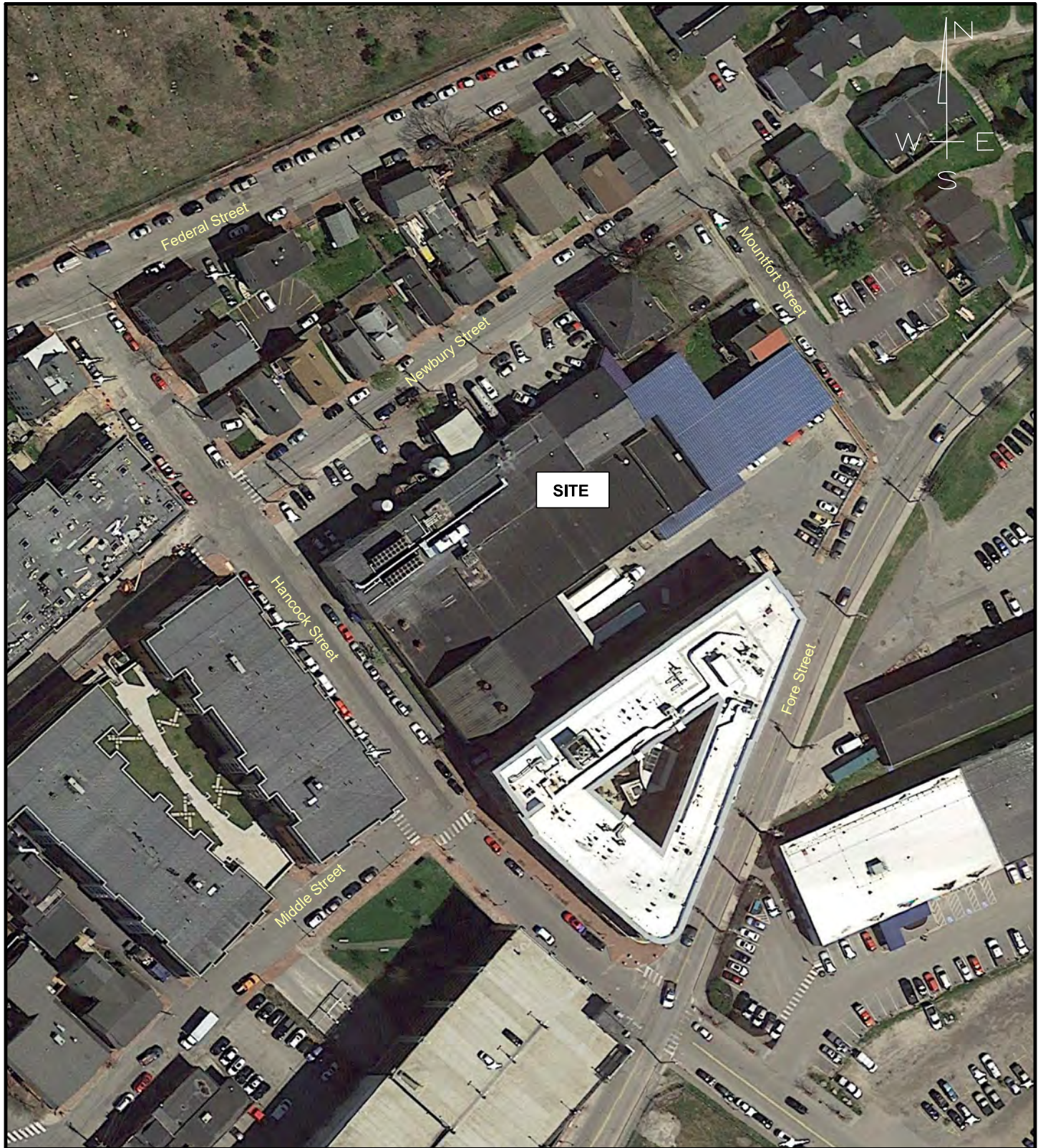
Net Site Trip Generation After Shared Use Reduction and Other Modes Reduction

Time Period	Total Site	Total Site	
	Trip Ends	IN	OUT
AM Peak Adjacent Street	166	132	34
PM Peak Adjacent Street	175	55	120
AM Peak Hour of Generator	167	128	39
PM Peak Hour of Generator	179	68	111
Saturday Peak Hour of Gen.	112	60	52

Location Map

F000000

1



SHIPYARD REDEVELOPMENT PORTLAND, MAINE

D000000 JP
Dr00000
C00000d ET

S00000 O000
D00000 APRIL 2018
F000000 3184000 AFFd000



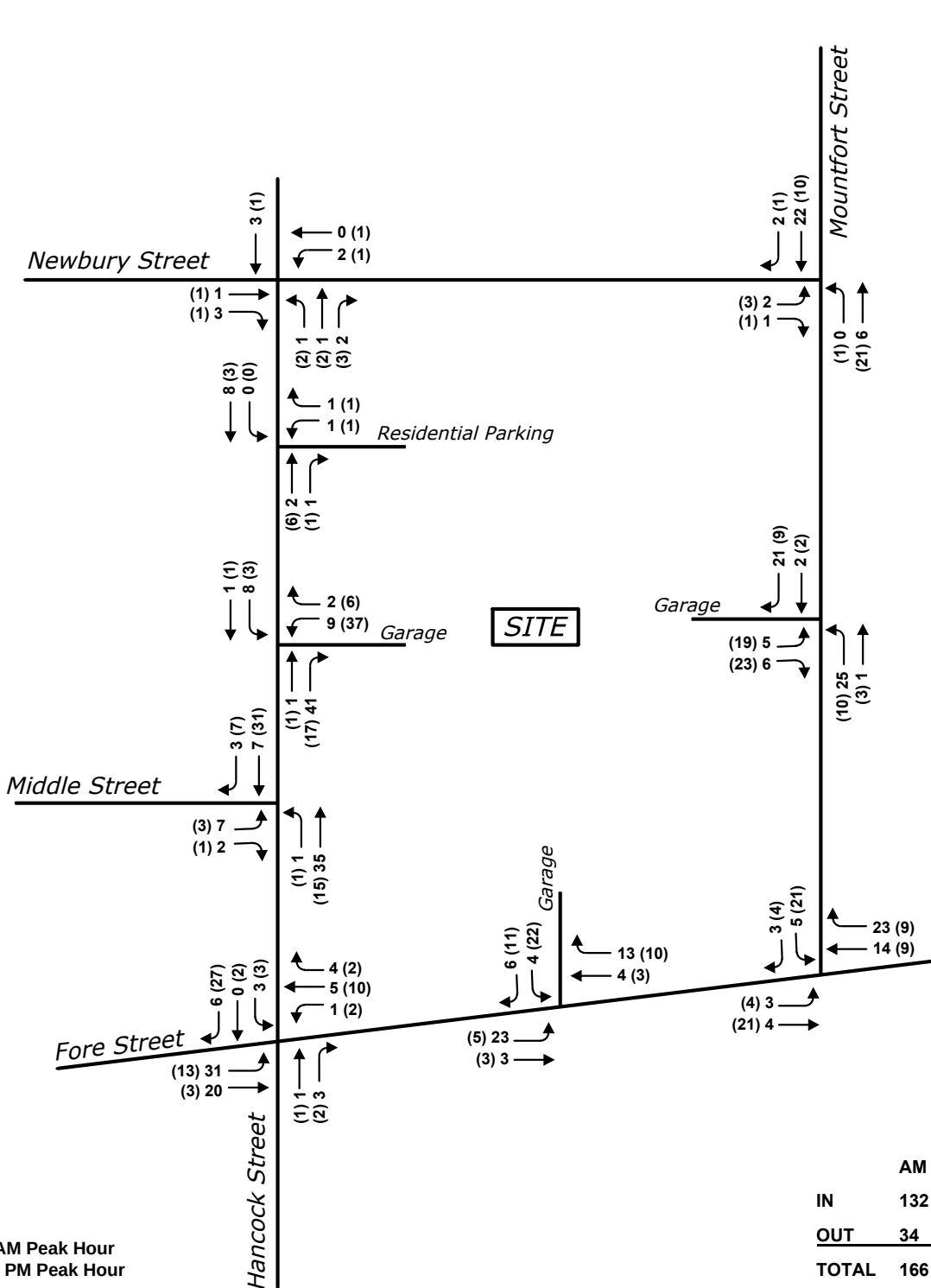
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Trip Assignment

FORM 0000

2



SHIPYARD REDEVELOPMENT PORTLAND, MAINE

D 000000 JP
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 C 000000 ET
 S 000000 O 0000
 D 0000 APRIL 2018
 F 000000 3184 0000 AFF'd 0000



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PORTLAND NODE MAP



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0.095
Miles
1 inch = 0.07 miles

Date: 3/8/2018
Time: 10:04:34 PM

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☒ Crash Summary I
 ☐ Section Detail
 ☒ Crash Summary II
 ☐ 1320 Public
 ☐ 1320 Private
 ☐ 1320 Summary

REPORT DESCRIPTION

Fore St area in Portland

REPORT PARAMETERS

Year 2014, Start Month 1 through Year 2016 End Month: 12

Route: 0560286	Start Node: 18836 End Node: 18822	Start Offset: 0 End Offset: 0	☐ Exclude First Node ☐ Exclude Last Node
Route: 0560524	Start Node: 18798 End Node: 18820	Start Offset: 0 End Offset: 0	☐ Exclude First Node ☒ Exclude Last Node
Route: 0560344	Start Node: 18797 End Node: 71558	Start Offset: 0 End Offset: 0	☒ Exclude First Node ☒ Exclude Last Node
Route: 0560344	Start Node: 71558 End Node: 71560	Start Offset: 0 End Offset: 0	☒ Exclude First Node ☐ Exclude Last Node
Route: 0561110	Start Node: 18797 End Node: 18798	Start Offset: 0 End Offset: 0	☐ Exclude First Node ☒ Exclude Last Node
Route: 0560531	Start Node: 18804 End Node: 18803	Start Offset: 0 End Offset: 0	☐ Exclude First Node ☒ Exclude Last Node
Route: 0560531	Start Node: 18803 End Node: 18802	Start Offset: 0 End Offset: 0	☒ Exclude First Node ☒ Exclude Last Node
Route: 0561000	Start Node: 18804 End Node: 18822	Start Offset: 0 End Offset: 0	☒ Exclude First Node ☒ Exclude Last Node
Route: 0560505	Start Node: 18817 End Node: 18818	Start Offset: 0 End Offset: 0	☒ Exclude First Node ☒ Exclude Last Node

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary I

Nodes														
Node	Route - MP	Node Description	U/R	Total Crashes	K	Injury A	Crashes B	Crashes C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
18836	0560286 - 0.08	Int of FORE ST WATERVILLE ST	2	0	0	0	0	0	0	0.0	1.905	0.00	0.46	0.00
												Statewide Crash Rate:	0.14	
18820	0560286 - 0.28	Int of FORE ST MOUNTFORT ST	2	1	0	0	1	0	0	100.0	2.153	0.15	0.44	0.00
												Statewide Crash Rate:	0.14	
71558	0560286 - 0.37	Int of FORE ST HANCOCK ST	2	0	0	0	0	0	0	0.0	1.637	0.00	0.47	0.00
												Statewide Crash Rate:	0.14	
18822	0560286 - 0.45	Int of FORE ST INDIA ST	2	5	0	0	0	2	3	40.0	4.304	0.39	0.39	1.00
												Statewide Crash Rate:	0.15	
18798	0560524 - 0.14	Int of FEDERAL ST E MOUNTFORT ST	2	2	0	0	0	0	2	0.0	0.516	1.29	0.59	2.19
												Statewide Crash Rate:	0.14	
18802	0560524 - 0.17	Int of MOUNTFORT ST NEWBURY ST	2	1	0	0	0	0	1	0.0	0.486	0.69	0.60	1.15
												Statewide Crash Rate:	0.14	
18803	0560344 - 0.04	Int of HANCOCK ST NEWBURY ST	2	1	0	0	0	0	1	0.0	0.234	1.43	0.58	2.47
												Statewide Crash Rate:	0.14	
18818	0560344 - 0.09	Int of HANCOCK ST MIDDLE ST	2	0	0	0	0	0	0	0.0	0.533	0.00	0.59	0.00
												Statewide Crash Rate:	0.14	
71560	0560344 - 0.19	Int of HANCOCK ST THAMES ST	2	0	0	0	0	0	0	0.0	1.216	0.00	0.51	0.00
												Statewide Crash Rate:	0.14	
18797	0561110 - 0.20	Int of FEDERAL ST E HANCOCK ST	2	1	0	0	0	0	1	0.0	0.128	2.60	0.39	6.61
												Statewide Crash Rate:	0.14	
18804	0560531 - 0.11	Int of INDIA ST NEWBURY ST	2	2	0	0	0	0	2	0.0	2.061	0.32	0.47	0.00
												Statewide Crash Rate:	0.15	
18817	0561000 - 0.18	Int of INDIA ST MIDDLE ST	2	3	0	0	1	2	0	100.0	2.525	0.40	0.45	0.00
												Statewide Crash Rate:	0.15	
Study Years:	3.00	NODE TOTALS:		16	0	0	2	4	10	37.5	17.698	0.30	0.27	1.12

Crash Summary I

Sections																	
Start Node	End Node	Element	Offset Begin - End	Route - MP	Section U/R Length	Total Crashes	K	Injury A	Crashes B	Crashes C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF	
18820	18836	3131698	0 - 0.20	0560286 - 0.08	0.20	2	4	0	0	2	0	2	50.0	0.00367	363.70	446.98	0.00
Int of FORE ST		MOUNTFORT ST		RD INV 05 60286										Statewide Crash Rate: 171.12			
18820	71558	4047688	0 - 0.09	0560286 - 0.28	0.09	2	6	0	0	0	0	6	0.0	0.00186	1073.77	532.43	2.02
Int of FORE ST		MOUNTFORT ST		RD INV 05 60286										Statewide Crash Rate: 171.12			
71558	18822	4047689	0 - 0.08	0560286 - 0.37	0.08	2	1	0	0	0	0	1	0.0	0.00166	201.33	548.59	0.00
Int of FORE ST		HANCOCK ST		RD INV 05 60286										Statewide Crash Rate: 171.12			
18798	18802	194393	0 - 0.03	0560524 - 0.14	0.03	2	0	0	0	0	0	0	0.0	0.00015	0.00	1723.24	0.00
Int of FEDERAL ST E		MOUNTFORT ST		RD INV 05 60524										Statewide Crash Rate: 400.85			
18802	18820	194401	0 - 0.05	0560524 - 0.17	0.05	2	2	0	0	0	0	1	0.0	0.00020	3305.85	1671.22	1.98
Int of MOUNTFORT ST		NEWBURY ST		RD INV 05 60524										Statewide Crash Rate: 400.85			
18797	18803	194392	0 - 0.04	0560344 - 0	0.04	2	1	0	0	0	0	1	0.0	0.00005	7247.95	1167.68	6.21
Int of FEDERAL ST E		HANCOCK ST		RD INV 05 60344										Statewide Crash Rate: 400.85			
18803	18818	194403	0 - 0.05	0560344 - 0.04	0.05	2	1	0	0	0	0	1	0.0	0.00008	4151.10	1648.21	2.52
Int of HANCOCK ST		NEWBURY ST		RD INV 05 60344										Statewide Crash Rate: 400.85			
71558	18818	4047715	0 - 0.04	0560344 - 0.09	0.04	2	0	0	0	0	0	0	0.0	0.00018	0.00	1696.99	0.00
Int of FORE ST		HANCOCK ST		RD INV 05 60344										Statewide Crash Rate: 400.85			
71560	71558	4047714	0 - 0.06	0560344 - 0.13	0.06	2	0	0	0	0	0	0	0.0	0.00046	0.00	1429.64	0.00
Int of HANCOCK ST		THAMES ST		RD INV 05 60344										Statewide Crash Rate: 400.85			
18797	18798	194391	0 - 0.10	0561110 - 0.20	0.10	2	1	0	0	0	0	0	0.0	0.00005	7134.70	1189.87	6.00
Int of FEDERAL ST E		HANCOCK ST		RD INV 05 61110										Statewide Crash Rate: 400.85			
18803	18804	194402	0 - 0.08	0560531 - 0.11	0.08	2	1	0	0	0	0	1	0.0	0.00009	3742.80	1684.71	2.22
Int of HANCOCK ST		NEWBURY ST		RD INV 05 60531										Statewide Crash Rate: 400.85			
18802	18803	194400	0 - 0.08	0560531 - 0.19	0.08	2	1	0	0	0	0	1	0.0	0.00006	5165.40	1524.86	3.39
Int of MOUNTFORT ST		NEWBURY ST		RD INV 05 60531										Statewide Crash Rate: 400.85			
18804	18817	3122291	0 - 0.05	0561000 - 0.13	0.05	2	1	0	0	1	0	0	100.0	0.00103	324.59	713.45	0.00
Int of INDIA ST		NEWBURY ST		RD INV 05 61000										Statewide Crash Rate: 207.39			
18817	18822	3106813	0 - 0.05	0561000 - 0.18	0.05	2	0	0	0	0	0	0	0.0	0.00109	0.00	703.09	0.00
Int of INDIA ST		MIDDLE ST		RD INV 05 61000										Statewide Crash Rate: 207.39			
18817	18818	194423	0 - 0.08	0560505 - 0.39	0.08	2	0	0	0	0	0	0	0.0	0.00037	0.00	1498.45	0.00
Int of INDIA ST		MIDDLE ST		RD INV 05 60505										Statewide Crash Rate: 400.85			
Study Years:		3.00	Section Totals:		1.08		19	0	0	3	0	14	15.8	0.01098	576.78	405.31	1.42
			Grand Totals:		1.08		35	0	0	5	4	24	25.7	0.01098	1062.50	556.08	1.91

STORMWATER MANAGEMENT REPORT

12.1 Overview

Under the Stormwater Management Statute (38 M.R.S.A. §420-D) instituted by the Maine Department of Environmental Protection, a person may not construct, or cause to be constructed, a project that includes one acre or more of disturbed area without prior approval from the Department.

Section 5.II of the City of Portland Technical Manual states:

“Projects that require a Stormwater Permit pursuant to 38 M.R.S.A. Sec. 420-D (Stormwater Management Law) and projects that may substantially affect the environment and require a site location of development (Site Law) permit pursuant to 38 M.R.S.A. Sec 481-490 shall be reviewed for conformance with Chapter 500 under the City’s Delegated Review Authority or by the Maine Department of Environmental Protection.”

This Exhibit demonstrates the developer has made adequate provision for controlling Stormwater Runoff and is being submitted to be reviewed for conformance with Chapter 500 under the City’s Delegated Review Authority.

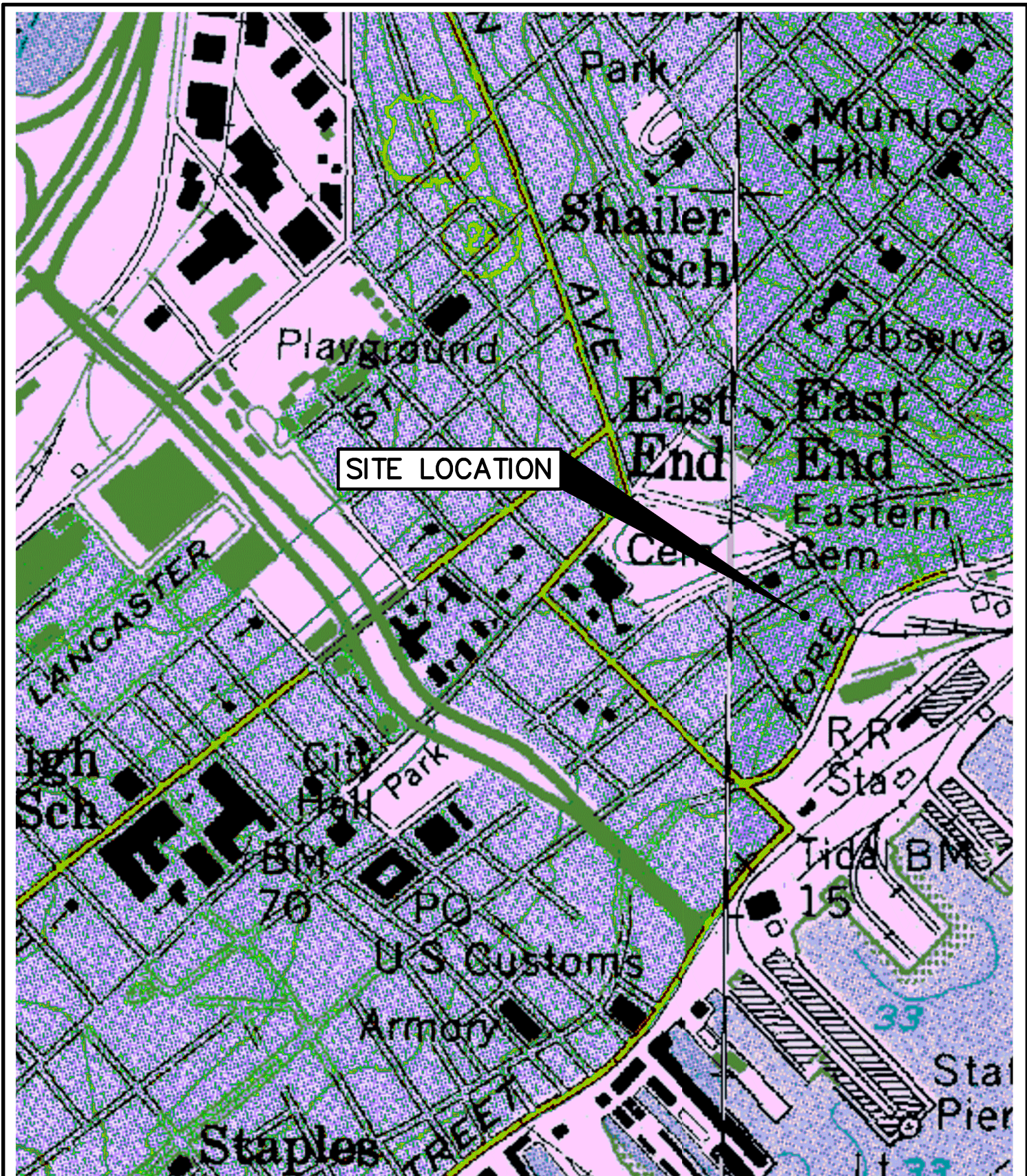
12.2 Introduction

86 Newbury Street, LLC has retained Gorrill Palmer to prepare plans and permit applications for a proposed multi-use redevelopment located at 86 Newbury Street. The site is shown on Portland Assessor’s Tax Map 20C Lots 1, 2, 5, 9, and 15. The properties are approximately 2.15 acres in size in total and located in the India Street Form-Based Code Zone (IS-FBZ). Figure 1 is a map showing the project location and follows this page. The subject properties are currently developed with the Shipyard Brewery and two residential structures. The Shipyard Brewery consists of three connected buildings and controls a majority of the subject properties with frontages on Mountfort, Newbury, Hancock, and Fore Streets. The two residential structures are located to the northeast of the project site and have frontages on Mountfort and Newbury Streets. The developer will seek a Maine Construction General Permit from the Maine Department of Environmental Protection (MDEP) as the project proposes to disturb greater than 1 acre of area. 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 this site.

12.3 Development Description

The project is a multi-use redevelopment consisting of 110,000 s.f. of manufacturing/industrial space, 60,000 s.f. of office space, 4,000 s.f. of retail space, a 105 room hotel, 9 unit residential building, and a four-level parking garage with associated utilities at 86 Newbury Street, Portland, Maine.

The project site is currently developed with 52,400 s.f. of the Shipyard Brewery, a 1,935 s.f. three story residential building, and a 765 s.f. residential building. The site also consists of 33,655 s.f. of impervious parking area, and 5,110 s.f. of vegetated area.



U.S.G.S. Location Map
 Shipyard Brewing Company - Portland, Maine
 U.S.G.S. Portland East/West, Maine -7.5 Minute Series (Topographic)

Design: BMG	Date: MARCH 2017
Draft: CG	Job No.: 3184
Checked: LSA	Scale: None
File Name: 3184-LOCATION.dwg	



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Figure
1

The project will require the removal of the existing residential buildings and the Shipyard bottling facility which is approximately 34,360 s.f. The three story 31,250 s.f., and two story 6,650 s.f. buildings which make up the remainder of the Shipyard Brewery are to remain.

Topography in the area of the proposed construction generally slopes in the westerly direction with slopes in the range of 3% to 11%. Casco Bay is located just southeast of the site.

Abutting land uses include:

- North – Residential (single family homes)
- West – Residential (condominiums)
- South – Commercial (Marriott Residence Inn)
- East – Residential (townhouse)

The development of the site will result in a redeveloped area with approximately 6,430 s.f. of non-roof impervious area and a total disturbed area of approximately 1.78 acres.

12.4 Surface Water

There are no lakes located on, adjacent to or downstream of the project site. Casco Bay, which outlets to the Atlantic Ocean, is located approximately 750 feet south of the site.

12.5 General Topography

Topography in the area of the proposed construction has slopes of 3% to 11%. Elevations on the site range from 48 feet on the northern boundary of the site to 22 feet along the southern boundary of the site.

12.6 Flooding

Based upon the FEMA maps, no areas within the site are located in a 100-year floodplain.

12.7 Natural Drainage Ways

The project as currently proposed does not include alteration of any natural drainage ways.

12.8 Alterations to Land Cover

Changes in land cover will include the removal of existing pavement and structures and the construction of new pavement, buildings, and landscaped areas.

12.9 Stormwater Management Control

The project site is not tributary to an Urban Impaired Stream. Section 5.II of the Technical Manual states,

“The City of Portland’s applicability requirements for all development within Portland, which are specified below, supersede the applicability thresholds specified within the Chapter 500 Rules.”

The City of Portland Technical Manual, Section 5.II.D states:

“Redevelopment Projects: All projects not subject to requirements of an existing Site Law or Stormwater Management Law Permit that include redevelopment of non-roof impervious area greater than 5,000 square-feet and are subject to City of Portland review shall provide stormwater quality treatment in accordance with the General Standards for no less than 50% of the redeveloped impervious area. The runoff from any upgradient area must be either directed away from the stormwater treatment measure or that measure must be sized to treat the runoff from the upgradient area.”

The site is not subject to requirements of an existing Site Law of Stormwater Management Law Permit. As the proposed project will redevelop in excess of 5,000 s.f. of existing non-roof impervious area, the project will be required to treat 50% of the non-roof developed area in accordance with MDEP General Standards through the City of Portland’s delegated authority.

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

The development currently proposes a proprietary Biofiltration System, hereafter referred to as “FocalPoint”, to provide water quality treatment.

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 redevelopment is required to treat 0% of the impervious and developed area. Since the project is a redevelopment project which results in the reduction of impervious area, the change in use does not have as high of an impact ranking as compared to existing conditions.

The City of Portland requires any redevelopment project which includes redevelopment of non-roof impervious area greater than 5,000 square-feet provide stormwater quality treatment in accordance with the General Standards for no less than 50% of the non-roof redeveloped impervious area.

The applicant proposes to treat 50.54% of the new, non-roof impervious area. This appears to be the most practicable treatment for the proposed redevelopment.

The four treatment measures listed in Chapter 500 and described in Volume III of the Stormwater BMP Manual are:

- Wetpond with detention above the permanent pool
- 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 such as grassed underdrained soil filters and biocells have shown to be very effective at removing a wide range of pollutants from stormwater runoff, particularly organic soil filter media. 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 media 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 and Quantity

The proposed development will be required to meet the Basic Standard, BMP Standard under the General Standard, and the Flooding Standard under the City Ordinance. Based upon review of the four recommended and approved methods for mitigating the increased frequency and duration of channel erosive flows, and to allow for cooling of the stormwater runoff, as required by the BMP Standards, the developer is proposing to use a FocalPoint.

12.9.3 Water Quality Sizing Requirements

The City of Portland requires the project to meet the Maine DEP General Standards. Under the City of Portland Redevelopment Standard, and upon discussion with the City Staff, the project is required to treat 50% of the non-roof developed area in accordance with MDEP General Standards through the City of Portland's delegated authority. The following strategy was utilized to provide the required treatment:

FocalPoint

Subcatchment 2AS is tributary to the proposed FocalPoint system. The tributary area consists of paved and landscaped area.

Test pits have not been excavated at the proposed location for the FocalPoint. A geotechnical report for an adjacent property prepared by S.W. Cole, indicated groundwater at depths of about 6 feet within the surficial fill soils perched atop relatively impervious glaciomarine clays. Due to the findings of the report, it is assumed that the seasonal high groundwater table will be less than one foot below the proposed filter bottom, therefore an impermeable linear is proposed under the FocalPoint to separate groundwater from surficial stormwater.

The Fore Street entrance to the proposed project and the adjacent existing alley way leading to Hancock Street, is not proposed to change surface type or have significant changes to the existing grade. Therefore, the non-roof impervious area at the Fore Street entrance is not included as redeveloped area requiring treatment.

The existing paved parking and loading area near the intersection of Hancock and Newbury Streets is proposed as a multi-unit residential building and is not included as non-roof impervious area requiring treatment.

The project proposes two courtyards which are elevated above roadway grade and surrounded by building walls. The courtyards serve as a roof to the parking garage on the lower level and are expected to see limited foot traffic. Since the courtyards are not expected to see conditions consistent with a roadside walkways such as calcium chloride, phosphorous, metals, or TSS levels, the courtyards are not included as non-roof impervious area requiring treatment.

The employee entrance courtyard is an impervious area adjacent to the roadway on Newbury Street. This area and a smaller impervious area that serves as an entrance off of Mountfort Street are included in the non-roof impervious area calculation. The required treatment is shown in Table I below.

Table I			
Required Treatment Summary			
Type	SF	Treatment Threshold	Area required to be treated (SF)
Non-Roof Impervious Area	6,430	50%	3,215

A FocalPoint Biofiltration System coupled with a Subsurface Chamber Treatment Row is proposed for stormwater quality treatment. The FocalPoint is designed to allow stormwater runoff to flow through a high performance engineered soil blend to capture pollutants. Stormwater runoff flows through the media and into an Open-Cell Underdrain system. Stormwater then flows to a subsurface Chamber Treatment Row sized to treat the 1 year – 24 hour storm event. The Chamber Treatment Row is coupled with additional subsurface chambers to provide storage for channel protection volume.

The proposed FocalPoint will treat stormwater runoff from impervious and landscaped area near the location of the employee entrance courtyard off Newbury Street as described above.

The FocalPoint system received approval by MDEP in February 2017. The proposed system was designed in accordance with MDEP approval letter dated February 2, 2017. A copy of the letter is included in Attachment A. A Maine - Chapter 500 Design Worksheet/Checklist provided by ACF Environmental is included in Attachment B – FocalPoint Calculations. A manufacturer's review letter provided by ACF Environmental is included in Attachment C.

The development will be required to provide the treatment volume for the 1 inch times the subcatchments impervious area plus 0.4 inch times the subcatchments landscaped

developed area. The FocalPoint system must convey the runoff from the tributary area for a 0.95 inch type III 24 hour storm as required by the MDEP. The FocalPoint system has been designed and has been modelled in HydroCAD to demonstrate the entire volume of a 1.6 inch type III 24 hour storm is treated prior to activation of the bypass/overflow such that the system qualifies for a full stormwater credit through the City of Portland. The filter media has an exfiltration rate of 100 inches/hour. The surface media must be 176 sq. ft./acre of impervious area and 176 sq. ft./acre of vegetated area multiplies by 0.4. The filter media depth shall be 1.5 feet. The ratio of the media volume stored above it is no less than 1 to 5. The runoff from the FocalPoint will enter a subsurface chamber storage system.

Runoff will enter the subsurface chamber storage system through an Isolator Row. The Isolator Row is required to convey the peak runoff from the 1 year type III 24 hour storm, without overflowing, at a rate of 0.227 cfs per chamber. The chamber system will provide storage for the water quality volume and release the flow over a 24-48 hour period. The subsurface chambers will be installed within a stone bed assumed to have 40% porosity.

Runoff from storms producing the water quality volume will be conveyed from the pond through the underdrain system. A valve will be placed on the underdrain to regulate the outflow through the underdrain. The valve will be field adjusted to maintain the outflow time between 24 and 48 hours. Yearly maintenance of the FocalPoint system will include monitoring the outflow after a rainfall event to ensure the outflow time is within the required parameters, and inspecting the system for accumulation of sediment within the Isolator Row. Prior to construction, the applicant will enter into an inspection and maintenance contract that will cover a five year time period. Larger storms will be conveyed from the subsurface system through an Outlet Control Structure (OCSI) with a weir set at the water quality elevation.

Subcatchment 2AS is tributary to the proposed FocalPoint. The tributary area consists of the adjacent courtyard/patio area and landscaped area. The following table presents the FocalPoints performance:

TABLE 2		
FocalPoint I		
	REQUIRED	PROVIDED
Impervious Area		3,250 sq. ft.
Vegetated Developed Area		900 sq. ft.
Water Quality Treatment Volume	301 cu. ft.	
Runoff 0.95 inch Type III Storm	0.06 cfs	
Runoff 1.6 inch Type III Storm	0.14 cfs	
FocalPoint mulch bed elevation		43.00
Max. stage over filter for 0.95" storm		46.11
Max. stage over filter for 1.6" storm		46.71
Rim of overflow structure		46.75
Filter surface area	14 sq. ft.	20 sq. ft.
Temporary Volume stored over filter (0.95" storm)		44 cu. ft.
Temporary Volume stored over filter (1.6" storm)		44 cu. ft.

Filter media ratio	> 1 to 5	> 1 to 5
1-Year Storm Peak Flow		0.26 cfs
Cultec Recharger 330XLHD Isolator Row Chambers required	2	2
Cultec Recharger 330XLHD required for Water Quality Volume	4	4
Total Cultec Recharger 330XLHD Chambers		27
Treatment Volume	301 cu. ft.	
Storage Base Elevation		40.00 ft.
Water Quality Volume Elevation		42.70 ft.

Four chambers are provided for the peak flow control as required to provide treatment for the water quality volume. Two of the chambers will make up the Isolator Row as required for the one year storm peak flow. The weir outlet for OCSI will be set at the water quality volume elevation. Runoff for the water quality volume will be released from the chambers by the underdrain. Larger storms will be conveyed to an additional 23 chambers which provide storage for flood control.

The FocalPoint filter storage tables are included in Attachment D.

The proposed stormwater system will be tied into the existing sewer system on Mountfort Street since there does not appear to be an existing drainage system in the area.

12.9.4 Conclusion – Overall Treatment

Table 3, below, presents a summary of the provided treatment by the FocalPoint system which satisfies the General Standard.

Table 3		
Treatment Summary		
Type	Impervious	Pervious
Non-roof area treated by FocalPoint	3,250 sq. ft.	900 sq. ft.
Non-roof area untreated	3,180 sq. ft.	3,650 sq. ft.
Total non-roof developed area	6,430 sq. ft.	4,550 sq. ft.
Percent Treated	50.54%	19.78%
Required Percent Treated per City Section 5.II.D	50%	0%

The proposed project will utilize one FocalPoint to mitigate runoff from the redevelopment as required by the BMP Standards and the City of Portland Standards. The redevelopment is required to control runoff from 50% of the non-roof impervious area. As proposed, the project is controlling 50.54% of the non-roof impervious area.

A Water Quality Map depicting the treated area is included in Attachment E.

12.9.5 Water Quantity Sizing Requirements

Section 5.III of the Technical Manual states,

“The City of Portland’s applicability requirements for all development within Portland, which are specified below, supersede the applicability thresholds specified within the Chapter 500 Rules.”

“As outlined in the Section 14-526 of the City of Portland Code of Ordinances, the developments specified below shall comply with the Urban Impaired Stream, Basic, General, and Flooding Standards of the most recent version of the Maine Department of Environmental Protection (Maine DEP) Chapter 500 Rules for Stormwater Management”

The City of Portland supersedes the applicability threshold for the Flooding Standard specified within the Chapter 500 Rules. Therefore, the project will meet the Flooding Standard. Water quantity sizing is discussed in sections 12.9.5 and 12.9.6 of this report.

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 off-site soils. The project site is comprised of hydrologic soil type D and what was identified as ‘Cut and Fill Land’, which was assumed to be soil type D. The off-site areas were modeled as hydrologic soil type D based on the Medium Intensity Soil Survey. An excerpt from the Medium Intensity Soil Survey follows this page.

The SCS TR-20 methodology, using the HydroCAD program, was employed by Gorrell Palmer to analyze predevelopment and post-development conditions. A 24-hour, SCS Type III storm distribution for the 2-, 10-, and 25-year storm frequency were used. The corresponding rainfall amount for each storm is 3.1”, 4.6”, and 5.8”, respectively. HydroCAD computations are provided in Attachment F.

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.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

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
Cu	Cut and fill land	0.7	28.9%
HIB	Hinckley loamy sand, 3 to 8 percent slopes	1.7	71.1%
Totals for Area of Interest		2.3	100.0%

Map Unit Descriptions

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

The predevelopment was analyzed as four subcatchments.

Subcatchment 1S consists of approximately 7,405 sq. ft. of onsite roof area, 13,983 sq. ft. of onsite parking area, 13,896 sq. ft. of offsite road area, and 5,358 sq. ft. of offsite sidewalk area.

Subcatchment 2S consists of approximately 3,746 sq. ft. of onsite roof area, 3,267 sq. ft. of onsite parking area, 5,097 sq. ft. of onsite vegetation, 3,006 sq. ft. of offsite road area, and 1,437 sq. ft. of offsite sidewalk area.

Subcatchment 3S consists of approximately 2,134 sq. ft. of onsite stone walkway, 38,507 sq. ft. of onsite roof area, and 9,932 sq. ft. of onsite parking area.

Subcatchment 4S consists of approximately 2,701 sq. ft. of onsite roof area, and 6,447 sq. ft. of onsite parking area.

Three points of interest (POI's) were analyzed corresponding to the subcatchments. The POI's are as follows:

- POI1 – Catch basin on Hancock Street
- POI2 – Catch basin on Mountfort Street
- POI3 – Property line on Fore Street.

POI1 is shown at the catch basin on Hancock Street across from Middle Street.

POI2 is shown at the catch basin on Mountfort Street as it is the closest point to the property line. The catch basin is tied into the existing sewer manhole on Fore Street. For the purposes of comparing flows to the post-development conditions, it is assumed that if the post-development flow at the sewer manhole is less than the predevelopment flow at the catch basin, the flooding standard will be satisfied.

POI3 consists of two watersheds. Watershed 3S drains to an existing catch basin onsite. The runoff is then piped subsurface to a sewer manhole in Fore Street. Watershed 4S consists of surficial flow where runoff exits the property at Fore Street. The runoff from Watershed 4S follows a curb line on Fore Street approximately 15 feet to a catch basin where the runoff enters the sewer system on Fore Street. Since the runoff from Watershed 3S and 4S merge just south of the site, they are modelled to the same POI3 at the property line on Fore Street for the purposes of comparing flows to the post-development conditions.

Table 4 below presents the peak flow rates at the points of interest in the predevelopment condition for the 2, 10, and 25 year 24 hour storm. HydroCAD calculations for pre-development conditions are included in Attachment F. A watershed map for the predevelopment conditions (Drawing WSI) is included in Attachment G.

Table 4 – Predevelopment Peak Flow Rates (cfs)			
Point of Interest	Peak Flow (cfs)		
	2 Year 3.1 inches	10 Year 4.6 inches	25 Year 5.8
	Pre	Pre	Pre
1	2.99	4.47	5.64
2	1.17	1.82	2.34
3	4.47	6.69	8.45

Post-development Conditions

Analysis for the post-development condition consist of determining post-development peak flows and limiting the post-development flows to predevelopment levels. Detention will be provided through attenuation of peak flows due to water quality storage as well as storage of the 25 year peak runoff volume within the subsurface chambers.

The post-development was analyzed as Five subcatchments.

Subcatchment 1S consist of approximately 10,948 sq. ft. of onsite roof area and 24,424 sq. ft. of road and onsite parking area.

Subcatchment 2S consists of approximately 8,102 sq. ft. of road area and 1,917 sq. ft. of landscaped area.

Subcatchment 2AS consists of approximately 3,250 sq. ft. of impervious courtyard area and 900 sq. ft. of landscaped area.

Subcatchment 2BS consists of approximately 7,579 sq. ft. of impervious roof area.

Subcatchment 3S consist of approximately 3,928 sq. ft. of impervious driveway area and 55,020 sq. ft. of impervious roof area.

3 points of interest (POI's) were analyzed corresponding to the subcatchments. The POI's are as follows:

- POI1 – Catch basin on Hancock Street
- POI2 – Catch basin on Mountfort Street
- POI3 – Property line on Fore Street.

POI2 consists of three watersheds. Watershed 2S is surficial runoff starting at the northeastern side of the property near the intersection of Newbury Street and Mountfort Street. The surficial runoff flows south to a catch basin near the intersection of Mountfort Street and Fore Street. The catch basin is tied into an existing sewer manhole on Fore Street. Watershed 2AS is the area treated by the FocalPoint. Runoff from this area is treated then stored in subsurface chambers. Runoff is then conveyed to an outlet control structure (OCS 2) and then the existing sewer line in Mountfort Street which is connected to the same sewer manhole on Fore Street as Watershed 2S. Watershed 2BS is impervious roof area which is conveyed to additional subsurface

storage chambers bypassing treatment via roof drain. Runoff from this watershed is stored in the subsurface chambers and held back by a weir in OCS2. When storage has been exceeded, runoff will overtop the weir in OCS 2 and be conveyed to the sewer in Mountfort Street similar to Watershed 2AS.

POI3 consists of Watershed 3S. Due to the addition of building roof area, Watershed 4S has been merged with Watershed 3S. POI3 is taken at the property line to show comparison to the predevelopment conditions.

HydroCAD calculations for post-development conditions are included in Attachment F. A watershed map for the post-development conditions (Drawing WS2) is included in Attachment G.

A comparison of predevelopment and post-development peak flow at the POI locations is presented in Table 5.

Table 5 – Comparison of Peak Flows (cfs)						
Point of Interest	Peak Flow (cfs)					
	2 – Year 3.1 inches		10 – Year 4.6 inches		25 – Year 5.8 inches	
	Pre	Post	Pre	Post	Pre	Post
1	2.99	2.66	4.47	3.98	5.64	5.03
2	1.17	0.84	1.82	1.26	2.34	1.59
3	4.47	4.32	6.69	6.46	8.45	8.17

As can be seen from Table 5, the peak flows at the Points of Interest is either less than or equal to predevelopment levels.

12.9.6 Conclusion – Overall Water Quantity

The peak flow to the Points of Interest has been reduced to be at or below predevelopment peak levels for the 2-year, 10-year, and 25-year storm meeting the Flooding Standard.

12.10 Construction BMPs

Additional water quality treatment will be provided during construction by best management practices (BMP). Standard BMP's to be employed include siltation fencing around the downslope construction perimeter, stabilized construction entrances, and siltation sacks.

12.11 Maintenance of Facilities

See the Erosion and Sedimentation Control report for this project.

12.12 Conclusion

Gorrill Palmer has been retained by 86 Newbury Street, LLC to prepare plans and permit applications for a proposed multi-use development, located at 86 Newbury Street in Portland, Maine. The proposed multi-use redevelopment will consist of 110,000 sq. ft. of

manufacturing/industrial space, 60,000 sq. ft. of office space, 4,000 sq. ft. of retail space, a 132 room hotel, and a three-level parking garage with associated utilities at 86 Newbury Street. A stormwater management plan pursuant to the regulations of MDEP Chapter 500 Stormwater Management Rules including General, Flooding, and Basic Standards is required by the City of Portland. The basic and flooding standards have been met through detention and implementation of erosion and sedimentation controls. A stormwater management plan to provide treatment of runoff that will provide for cooling of the runoff from impervious areas, sediment removal, and subsurface filtration treatment has been proposed in the Erosion and Sedimentation Control report which will meet the intent of the Chapter 500 Standards.

12.13 Attachments

Attached to this section are the following items:

- Attachment A – Maine Department of Environmental Protection FocalPoint Approval letter
- Attachment B – Maine Chapter 500 Design Worksheet/Checklist
- Attachment C – Manufacturer’s Review Letter
- Attachment D – FocalPoint Storage Tables
- Attachment E – Water Quality Map
- Attachment F – HydroCAD Calculations
- Attachment G – Pre/Post Watershed Map

ATTACHMENT A

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
FOCALPOINT APPROVAL LETTER



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

February 2, 2017

Stormwater Systems ACF-Convergent Water Technologies Alliance
23 Faith Drive
Gorham, ME 04038
ATTN: Robert Woodman and Scott Gorneau

Dear Mr. Woodman and Mr. Gorneau:

This letter replaces the May 16, 2016 approval from the Department of Environmental Protection (Department) that authorized the use of the FocalPoint system. The FocalPoint system (a high performance modular biofiltration system), when installed in series with a subsurface chamber-based treatment row, meets the requirements of the General Standards (Section 4.C.) of the Stormwater Management Rules (Chapter 500), provided that the system is filled with the FocalPoint engineered filter media; it is sized to meet the requirements of the General Standards (Section 4.B.); and it is installed, operated and maintained in accordance with the following provisions:

1. The FocalPoint system must be sized in accordance with the manufacturer's latest field test results with the goal of treating 90% of the annual runoff volume. To accomplish this, the system must be modelled in HydroCAD (or similar TR-55 modelling software) to demonstrate that the entire volume of a 0.95 inch Type III 24-hr storm is treated prior to activation of the bypass/overflow (typically set at 6" to 12" above the mulch surface). When sizing the FocalPoint system to meet Chapter 500, note that runoff from the entire contributing drainage area, including pervious areas, must be included in the modeled runoff values.
2. The surface area of the media within the FocalPoint must be a minimum of 174 square feet per 1 acre of impervious area treated (26 sq. ft. per 0.15 acres). The thickness of the media is to be no less than 1.5 ft. (18 inches) and the ratio of the surface area of the filter media bed in square feet to the ponding volume in cubic feet must be no less than 1 to 5.
3. The FocalPoint system consists of five components that include: 1) an open cell underdrain; 2) a wide aperture separation mesh wrap around the underdrain; 3) a layer of clean washed, 3/8" diameter bridging stone; 4) advanced high flow rate engineered media with an infiltration rate of 100 inches per hour; and 5) double shredded hardwood mulch. These components are built from the bottom up to create a mostly permeable profile that measures 3 feet from bottom of underdrain to top of mulch. The ponding

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

depth above the mulch surface is typically 6 to 12 inches and varies based on site conditions. An overflow outlet should be placed above the ponding depth.

4. The FocalPoint system requires the establishment of vegetation that is tolerant of wet and dry conditions. Plants that are not performing as desired should be replaced as needed. A list of appropriate plants for use in the FocalPoint system is provided at: <http://www.acfenvironmental.com/products/stormwater-management/filtration/focal-point/>.

5. The FocalPoint biofiltration system must be placed in-line with a subsurface chamber-based treatment row that is approved by the Department such that both the treated discharge and the bypass discharge from the FocalPoint system drain to the treatment row. The treatment row must be sized to treat the peak flow from a 1-year, 24-hour storm event. The treatment row structure must be continuous and without obstacle for cleaning, and must have access at both ends for the removal of accumulated sediment and debris. The treatment row must be underlain with a bottom surface consisting of 2 layers of woven geotextile (e.g., ACF S300) that extends 18 to 24 inches beyond all sides of the bottom of the structure.

6. Additional storage downstream of the FocalPoint and treatment row will be required to store at least the sum of 1.0 inch of runoff from the impervious areas and 0.4 inches of runoff from the lawn and landscaped areas that drain to the system unless attenuation of the channel protection volume is not required (i.e. direct discharge to a lake, tidal waters, or a major river). An external outlet control structure must control the flow out of a downstream storage system, sized for the entire channel protection volume, and drain in no less than 24 hours or more than 48 hours.

7. If required for flooding control, the storage system can be sized to provide for the storage and release of the peak flow with a regulated flow rate from 24-hour storms of the 2, 10, and 25-year frequencies such that the peak flows from the project site do not exceed the peak flow prior to undertaking the project.

8. The applicant must demonstrate that the design meets all the manufacturer's specifications and shall be reviewed by the manufacturer prior to submission to the Department for approval. Review and approval of the design by the manufacturer will be sufficient to demonstrate conformance with the manufacturer's specifications. The FocalPoint system must be installed by a manufacturer's certified installer or under the supervision of a manufacturer's representative.

9. Components of the system that are delivered in bulk (i.e., mulch, high flow media and clean washed bridging stone), should be contained in nylon super sacks to promote ease of storage and protection during on-site construction activities.

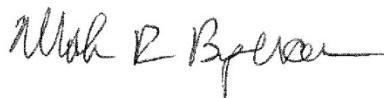
10. The FocalPoint and treatment row system should be inspected and maintained if necessary at least once every six months to maintain the established efficiency for pollutant removal. Prior to construction, a five-year binding inspection and maintenance contract must be provided prior to the Department for review and approval, and must be renewed before contract expiration. The contract will be with a professional with knowledge of erosion and stormwater control, including experience with the proposed system.

11. The overall stormwater management design must meet all Department criteria and sizing specifications and will be reviewed and approved by the Department prior to use.

12. This approval is conditional on full-scale, cold climate field testing results, performed in accordance with the Department's protocols, confirming that the pollutant removal efficiency and sizing of the FocalPoint system are appropriate. The "permit shield" provision (Section 14) of the Chapter 500 rules will apply, and the Department will not require the replacement of the system if, with proper maintenance, pollutant removals do not satisfy the General Standard Best Management Practices.

Questions concerning this decision should be directed to David Waddell at (207) 215-6932 or Jeff Dennis at (207) 215-6376.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark R. Bergeron", with a long horizontal flourish extending to the right.

Mark Bergeron, P.E.
Director
Bureau of Land Resources

cc: Don Witherill, Maine DEP

ATTACHMENT B

MAINE CHAPTER 500 DESIGN WORKSHEET/CHECKLIST

FOCALPOINT

HIGH PERFORMANCE MODULAR BIOFILTRATION SYSTEM

MAINE – CHAPTER 500 DESIGN WORKSHEET/CHECKLIST

1. FocalPoint Bed Area (min 174 square feet per acre of impervious area (e.g. 0.2 acres = 35 sf))

- Tributary Impervious area = 0.07 ac. (A)
- Tributary Pervious area = 0.02 ac. (B)
- Min FocalPoint bed area req'd = $(((A) \times 1.0) + ((B) \times 0.4)) \times 174$ = 14 sf.
- FocalPoint Bed Area provided * = 20 sf.
- Dimensions of Proposed FocalPoint = 4 ft x 5 ft

* see criteria 2. to determine if minimum size is appropriate.

2. A 0.95 inch Type III 24hr rainfall event shall be modelled to demonstrate the entire storm volume is treated prior to activation of the overflow (typically set at 6-12" above the mulch)

- Temporary storage depth provided = 6 inches (typ 6" to 12")
- Temporary storage volume provided at above depth = 44 cubic feet.
- Peak ponding depth from 0.95" 24hr storm event = 1.32 inches

3. Ratio of the surface area of the filter media (sf) to the temporary ponding volume (cf) shall be no less than 1:5

- Ratio of FocalPoint Bed Area : Temporary Storage Vol = 1 : 2.2

4. Subsurface Chamber Treatment Row must be sized to treat the peak flow from a 1 yr-24hr storm event.

- 1yr 24hr Peak Flowrate = 0.26 cfs
- Chamber model selected
 - Cultec 330 XLHD (1 chamber per 0.227 cfs) ☒
 - Cultec 150XLHD (1 chamber per 0.185 cfs) ☐
- Number of Chambers required = 2

5. Controlled release of the Channel Protection over 24-48 hrs

- Controlled release of the channel protection volume is being achieved by:
 - Expanded subsurface storage basin with OCS ☒
 - Surface detention basin with OCS ☐

6. The Design shall be reviewed by the manufacturer's representative prior to submission and installation will be overseen by the manufacturer's representative.

- The Design has been reviewed by ACF Environmental ☒
- Engineer will coordinate installation inspection with ACF ☒

ATTACHMENT C

MANUFACTURER'S REVIEW LETTER

ACF Environmental
2831 Cardwell Rd
Richmond, VA 23234



Benjamin Grondin
Design Engineer
Gorrill-Palmer
707 Sable Oaks Drive, Suite 30
South Portland, ME 04106

April 9, 2018

SUBJECT: Plan Review and Construction Oversight Commitment
Shipyard Redevelopment

Dear Benjamin,

Thank you for forwarding the check list, HydroCAD model and preliminary plans dated March 2018 for the Shipyard Redevelopment project in Portland, Maine to ACF environmental for review of the proposed FocalPoint biofiltration system.

Our team has reviewed the plans and take no exceptions to the location and application of the FocalPoint system for this project.

It appears that the system has been designed in accordance with the design criteria set forth by Maine DEP in the May 16, 2016 FocalPoint system approval letter and meets the system's specifications etc.

With regard to the installation, ACF Environmental will host a preconstruction meeting with the site contractor and will be on-site during the entire installation to ensure that the installation is being conducted in accordance with our standard installation procedures.

ACF Environmental will also provide the first year's maintenance on the FocalPoint bed area.

We look forward to a successful completion of this project.

Sincerely,

A handwritten signature in black ink, appearing to read 'W. Scott Gorneau', is written over a horizontal line.

W. Scott Gorneau, P.E.
National Manager – Stormwater Systems
ACF Environmental

ATTACHMENT D

FOCALPOINT STORAGE TABLES

Post_FocalPoint1

Prepared by Gorrill Palmer

HydroCAD® 10.00-16 s/n 01265 © 2015 HydroCAD Software Solutions LLC

Type III 24-hr 25YR Rainfall=5.80"

Printed 4/10/2018

Stage-Area-Storage for Pond P1: Cultec Chamber

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	
39.50	0	42.15	268	
39.55	3	42.20	272	
39.60	6	42.25	276	
39.65	8	42.30	279	
39.70	11	42.35	283	
39.75	14	42.40	286	
39.80	17	42.45	289	
39.85	19	42.50	292	
39.90	22	42.55	295	
39.95	25	42.60	298	
40.00	28	42.65	300	
40.05	34	42.70	303	← Water Quality Volume
40.10	40	42.75	306	
40.15	46	42.80	309	
40.20	52	42.85	312	
40.25	58	42.90	314	
40.30	64	42.95	317	
40.35	70	43.00	320	
40.40	76			
40.45	82			
40.50	88			
40.55	94			
40.60	100			
40.65	106			
40.70	112			
40.75	118			
40.80	124			
40.85	130			
40.90	136			
40.95	141			
41.00	147			
41.05	153			
41.10	159			
41.15	165			
41.20	170			
41.25	176			
41.30	182			
41.35	187			
41.40	193			
41.45	198			
41.50	204			
41.55	209			
41.60	214			
41.65	220			
41.70	225			
41.75	230			
41.80	235			
41.85	240			
41.90	245			
41.95	250			
42.00	254			
42.05	259			
42.10	263			

Post_FocalPoint1

Prepared by Gorrill Palmer

HydroCAD® 10.00-16 s/n 01265 © 2015 HydroCAD Software Solutions LLC

Type III 24-hr 25YR Rainfall=5.80"

Printed 4/10/2018

Stage-Area-Storage for Pond P2: Cultec Chamber

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	
37.50	0	40.15	1,538	
37.55	16	40.20	1,562	
37.60	32	40.25	1,585	
37.65	48	40.30	1,606	
37.70	64	40.35	1,626	
37.75	80	40.40	1,645	
37.80	96	40.45	1,663	
37.85	112	40.50	1,680	
37.90	128	40.55	1,696	
37.95	144	40.60	1,712	
38.00	160	40.65	1,728	
38.05	195	40.70	1,744	
38.10	230	40.75	1,760	
38.15	265	40.80	1,776	← Flooding Control Volume
38.20	300	40.85	1,792	
38.25	335	40.90	1,808	
38.30	370	40.95	1,824	
38.35	405	41.00	1,840	
38.40	439			
38.45	474			
38.50	509			
38.55	543			
38.60	578			
38.65	612			
38.70	646			
38.75	679			
38.80	713			
38.85	747			
38.90	780			
38.95	814			
39.00	847			
39.05	880			
39.10	914			
39.15	947			
39.20	980			
39.25	1,013			
39.30	1,045			
39.35	1,077			
39.40	1,109			
39.45	1,141			
39.50	1,172			
39.55	1,203			
39.60	1,233			
39.65	1,263			
39.70	1,293			
39.75	1,322			
39.80	1,351			
39.85	1,380			
39.90	1,408			
39.95	1,435			
40.00	1,462			
40.05	1,488			
40.10	1,514			

ATTACHMENT E
WATER QUALITY MAP

ATTACHMENT F

HYDROCAD CALCULATIONS

0.95 INCH STORM

FocalPoint1_0.95inch*Type III 24-hr 0.95inch Rainfall=0.95"*

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Page 1

Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points x 3

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Pond FP1: FocalPoint 20sf

Peak Elev=46.11' Storage=3 cf Inflow=0.06 cfs 160 cf

Primary=0.05 cfs 160 cf Secondary=0.00 cfs 0 cf Outflow=0.05 cfs 160 cf

1.6 INCH STORM

FocalPoint1_0.95inch*Type III 24-hr 1.6inch Rainfall=1.60"*

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Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points x 3

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

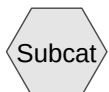
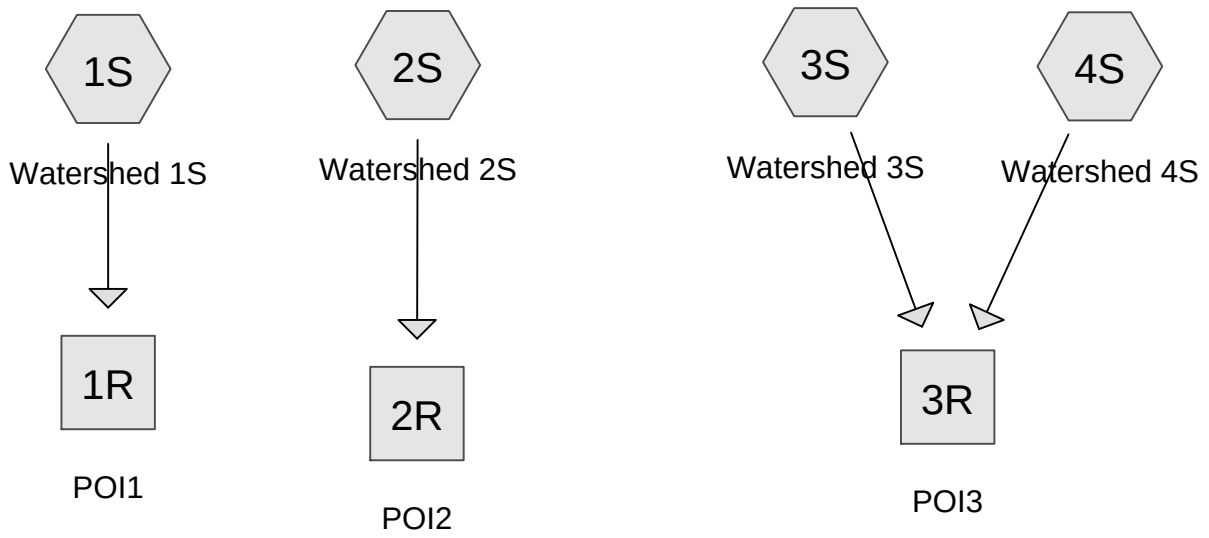
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Pond FP1: FocalPoint 20sf

Peak Elev=46.71' Storage=40 cf Inflow=0.14 cfs 355 cf

Primary=0.05 cfs 356 cf Secondary=0.00 cfs 0 cf Outflow=0.05 cfs 356 cf

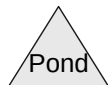
PRE-DEVELOPMENT



Subcat



Reach



Pond



Link

Routing Diagram for Pre_2018FEB22

Prepared by Gorrill Palmer, Printed 4/10/2018

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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: Watershed 1S	Runoff Area=40,642 sf 100.00% Impervious Runoff Depth>5.15" Flow Length=680' Tc=3.6 min CN=98 Runoff=5.64 cfs 0.400 af
Subcatchment2S: Watershed 2S	Runoff Area=0.380 ac 69.21% Impervious Runoff Depth>4.81" Flow Length=259' Tc=0.9 min CN=94 Runoff=2.34 cfs 0.152 af
Subcatchment3S: Watershed 3S	Runoff Area=50,573 sf 95.78% Impervious Runoff Depth>5.15" Flow Length=489' Tc=2.3 min CN=98 Runoff=7.17 cfs 0.498 af
Subcatchment4S: Watershed 4S	Runoff Area=9,148 sf 100.00% Impervious Runoff Depth>5.15" Flow Length=187' Tc=1.7 min CN=98 Runoff=1.29 cfs 0.090 af
Reach 1R: POI1	Inflow=5.64 cfs 0.400 af Outflow=5.64 cfs 0.400 af
Reach 2R: POI2	Inflow=2.34 cfs 0.152 af Outflow=2.34 cfs 0.152 af
Reach 3R: POI3	Inflow=8.45 cfs 0.588 af Outflow=8.45 cfs 0.588 af

Total Runoff Area = 2.684 ac Runoff Volume = 1.141 af Average Runoff Depth = 5.10"
6.18% Pervious = 0.166 ac 93.82% Impervious = 2.518 ac

Summary for Subcatchment 1S: Watershed 1S

Runoff = 5.64 cfs @ 12.05 hrs, Volume= 0.400 af, Depth> 5.15"

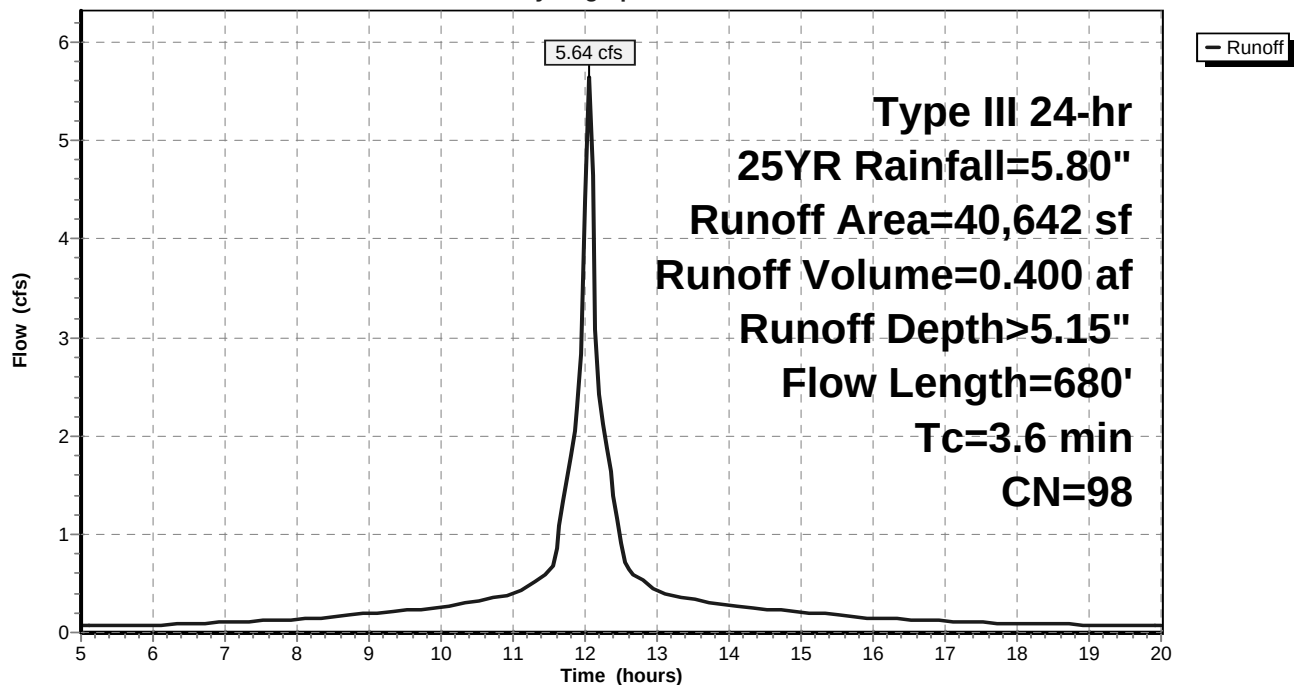
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
7,405	98	Roofs, HSG D
13,983	98	Paved parking, HSG D
13,896	98	Paved roads w/curbs & sewers, HSG D
5,358	98	Paved roads w/curbs & sewers, HSG D
40,642	98	Weighted Average
40,642		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	49	0.0612	1.84		Sheet Flow, Segment AB Smooth surfaces n= 0.011 P2= 3.10"
2.4	376	0.0159	2.56		Shallow Concentrated Flow, Segment BC Paved Kv= 20.3 fps
0.8	255	0.0686	5.32		Shallow Concentrated Flow, Segment CD Paved Kv= 20.3 fps
3.6	680	Total			

Subcatchment 1S: Watershed 1S

Hydrograph



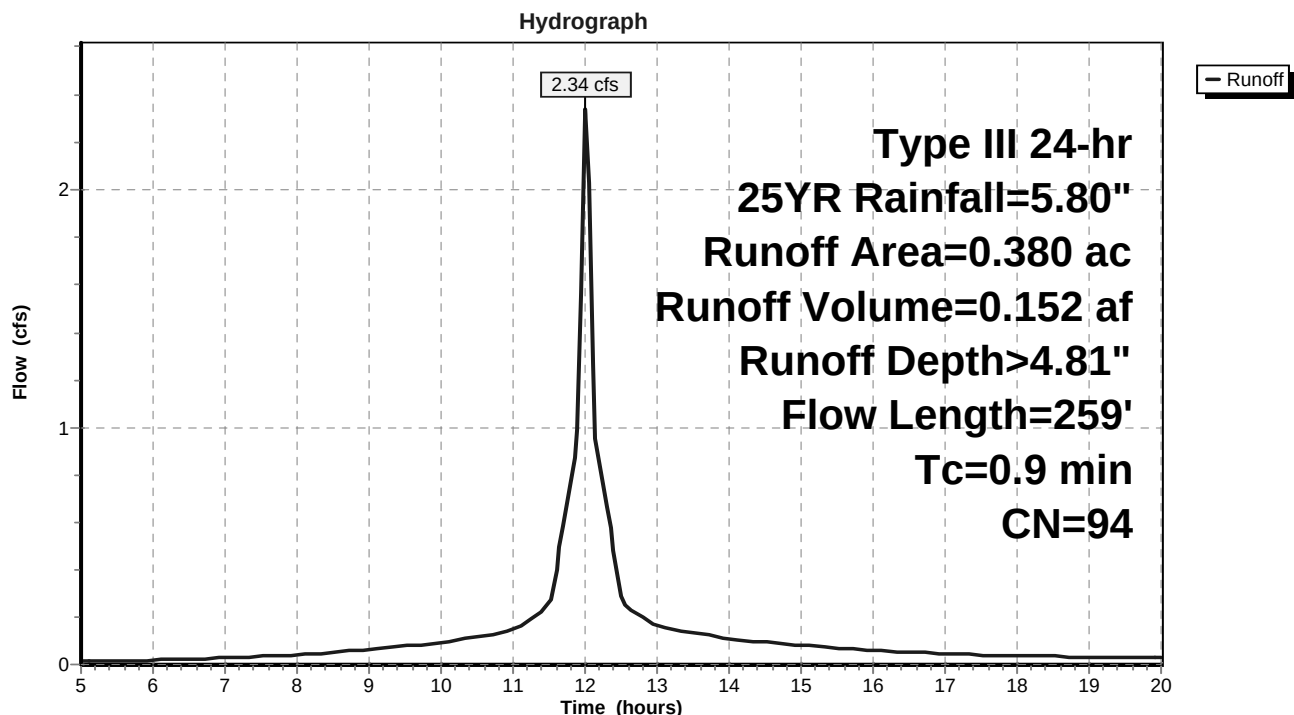
Summary for Subcatchment 2S: Watershed 2S

Runoff = 2.34 cfs @ 12.01 hrs, Volume= 0.152 af, Depth> 4.81"

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 25YR Rainfall=5.80"

Area (ac)	CN	Description
0.086	98	Roofs, HSG D
0.075	98	Paved parking, HSG D
0.069	98	Paved roads w/curbs & sewers, HSG D
0.033	98	Paved roads w/curbs & sewers, HSG D
0.117	84	50-75% Grass cover, Fair, HSG D
0.380	94	Weighted Average
0.117		30.79% Pervious Area
0.263		69.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	84	0.1250	2.72		Sheet Flow, Segment AB Smooth surfaces n= 0.011 P2= 3.10"
0.4	175	0.1038	6.54		Shallow Concentrated Flow, Segment BC Paved Kv= 20.3 fps
0.9	259	Total			

Subcatchment 2S: Watershed 2S

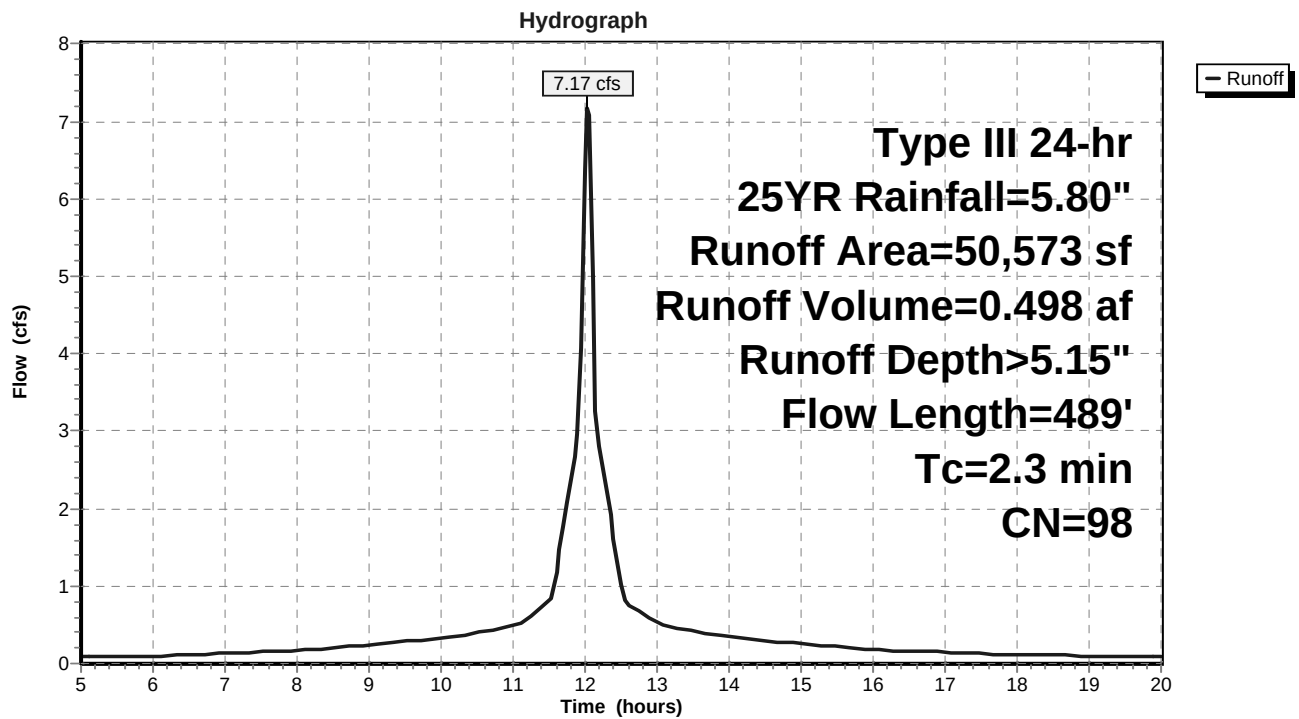
Summary for Subcatchment 3S: Watershed 3S

Runoff = 7.17 cfs @ 12.04 hrs, Volume= 0.498 af, Depth> 5.15"

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

Area (sf)	CN	Description
2,134	96	Gravel surface, HSG D
38,507	98	Roofs, HSG D
9,932	98	Paved parking, HSG D
50,573	98	Weighted Average
2,134		4.22% Pervious Area
48,439		95.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	54	0.7000	4.96		Sheet Flow, Segment AB Smooth surfaces n= 0.011 P2= 3.10"
0.4	77	0.0222	3.02		Shallow Concentrated Flow, Segment BC Paved Kv= 20.3 fps
0.1	25	0.0343	3.76		Shallow Concentrated Flow, Segment CD Paved Kv= 20.3 fps
0.7	121	0.0215	2.98		Shallow Concentrated Flow, Segment DE Paved Kv= 20.3 fps
0.1	35	0.0683	5.31		Shallow Concentrated Flow, Segment EF Paved Kv= 20.3 fps
0.8	177	0.0050	3.72	4.57	Pipe Channel, Segment FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
2.3	489	Total			

Subcatchment 3S: Watershed 3S

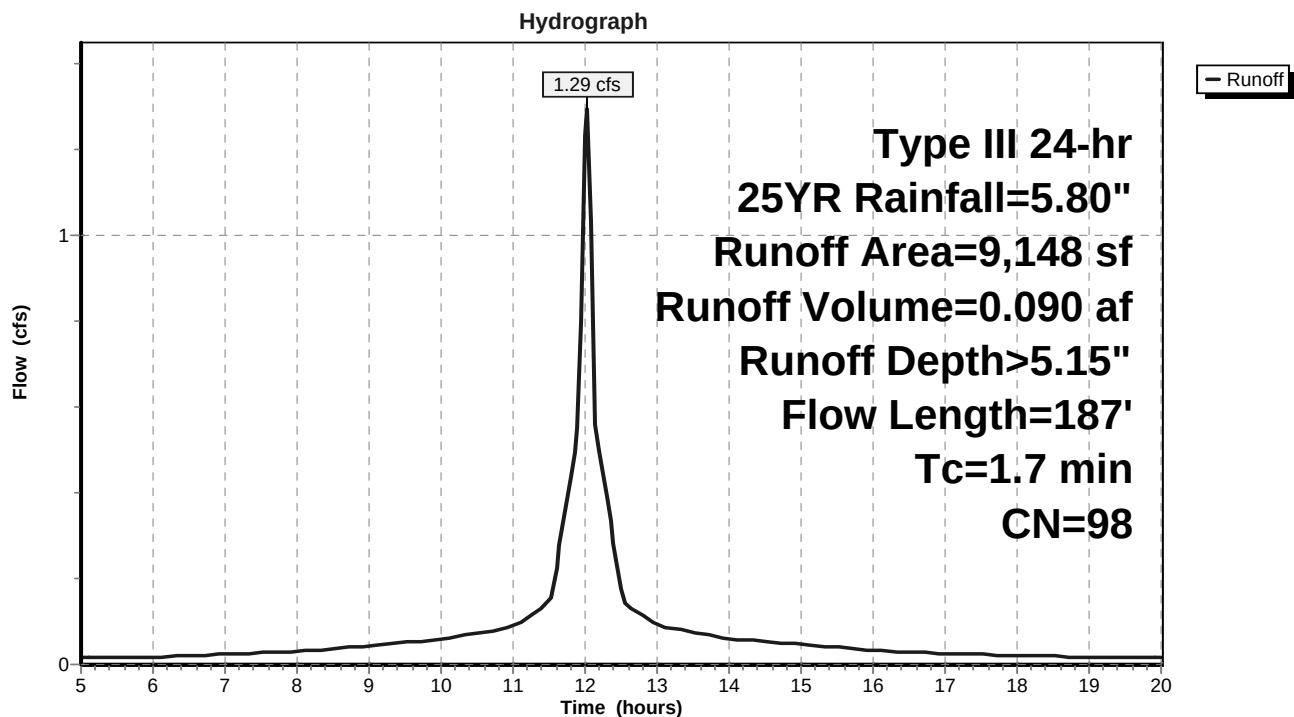
Summary for Subcatchment 4S: Watershed 4S

Runoff = 1.29 cfs @ 12.03 hrs, Volume= 0.090 af, Depth> 5.15"

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

Area (sf)	CN	Description
2,701	98	Roofs, HSG D
6,447	98	Paved parking, HSG D
9,148	98	Weighted Average
9,148		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	55	0.1000	2.29		Sheet Flow, Segment AB Smooth surfaces n= 0.011 P2= 3.10"
1.1	90	0.0228	1.40		Sheet Flow, Segment BC Smooth surfaces n= 0.011 P2= 3.10"
0.2	42	0.0357	3.84		Shallow Concentrated Flow, Segment CD Paved Kv= 20.3 fps
1.7	187	Total			

Subcatchment 4S: Watershed 4S

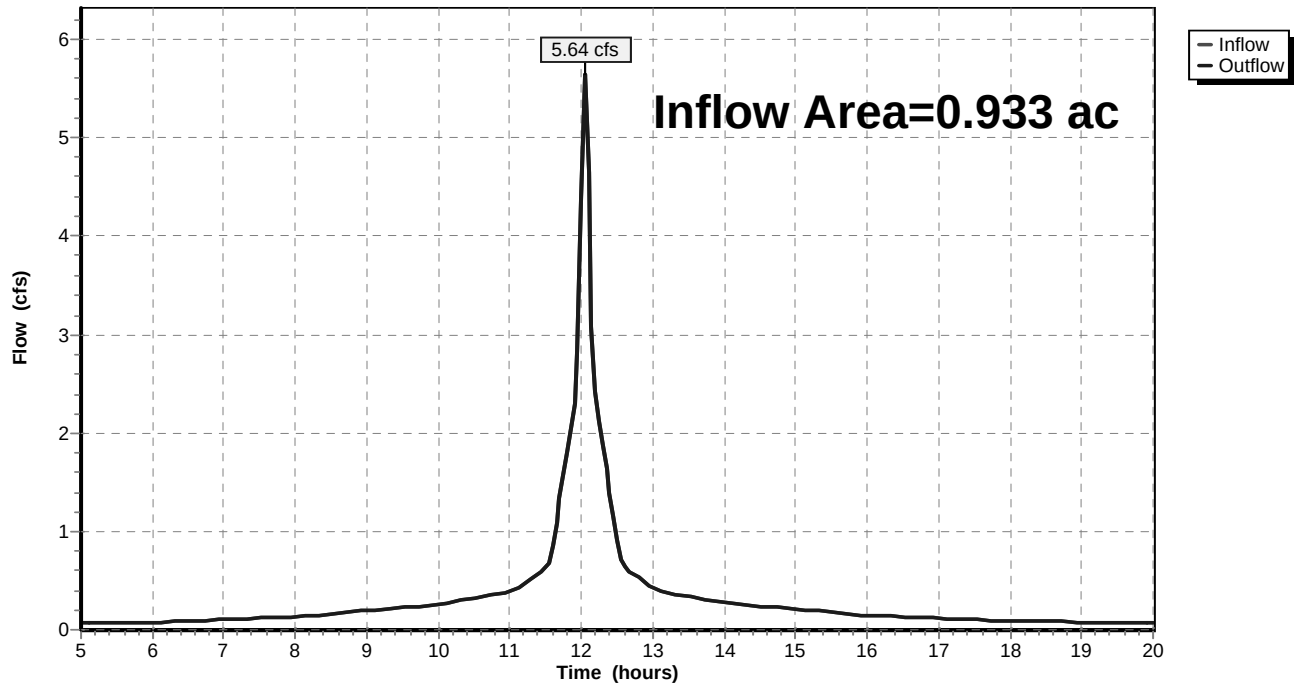
Summary for Reach 1R: POI1

Inflow Area = 0.933 ac, 100.00% Impervious, Inflow Depth > 5.15" for 25YR event
Inflow = 5.64 cfs @ 12.05 hrs, Volume= 0.400 af
Outflow = 5.64 cfs @ 12.05 hrs, Volume= 0.400 af, Atten= 0%, Lag= 0.0 min

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

Reach 1R: POI1

Hydrograph



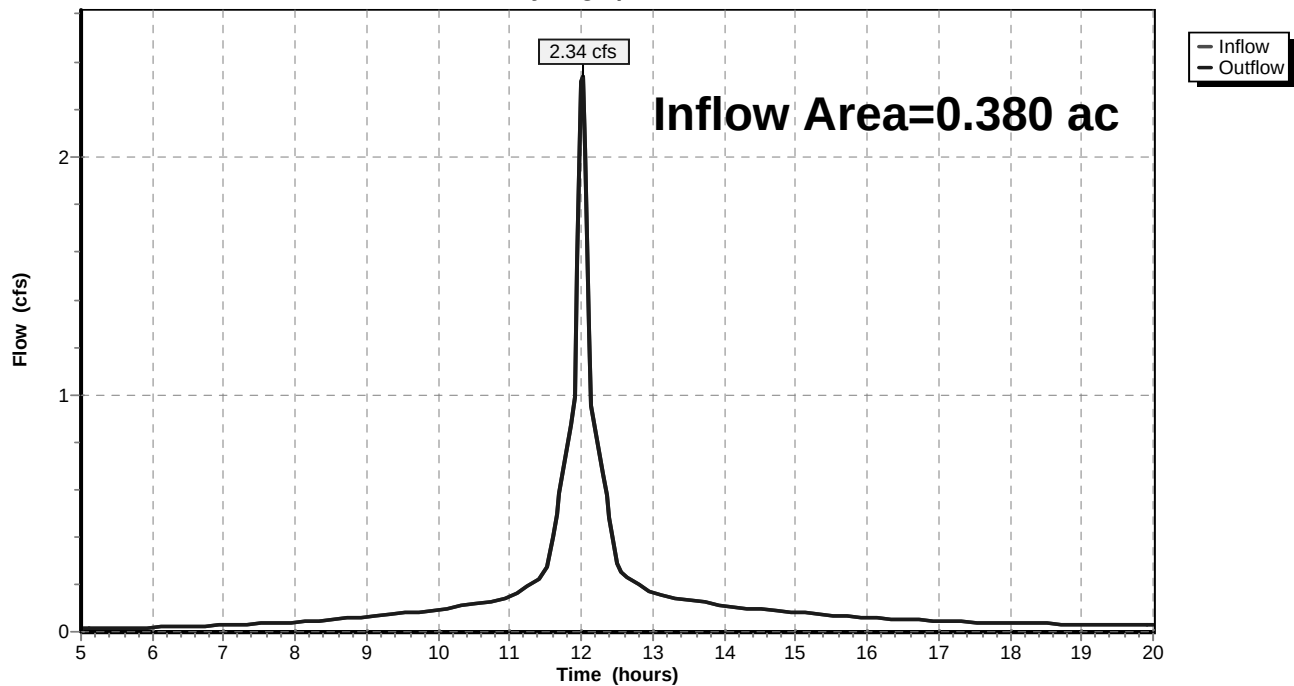
Summary for Reach 2R: POI2

Inflow Area = 0.380 ac, 69.21% Impervious, Inflow Depth > 4.81" for 25YR event
Inflow = 2.34 cfs @ 12.01 hrs, Volume= 0.152 af
Outflow = 2.34 cfs @ 12.01 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min

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

Reach 2R: POI2

Hydrograph



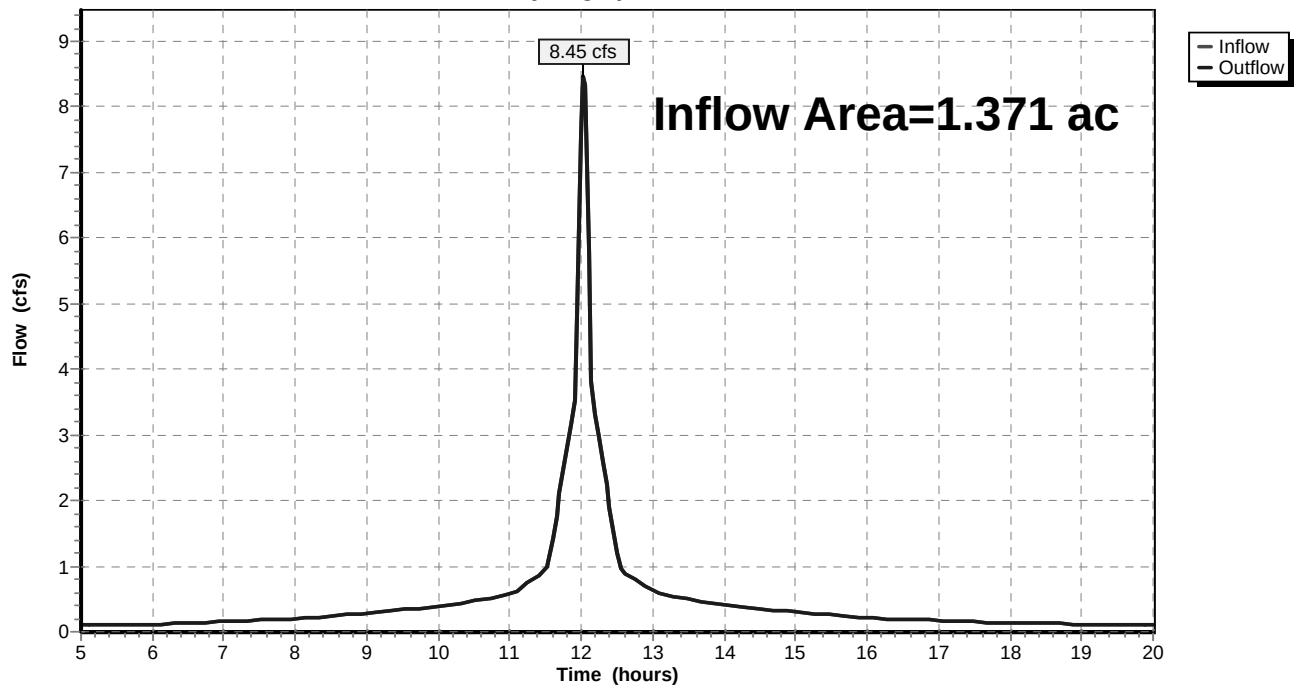
Summary for Reach 3R: POI3

Inflow Area = 1.371 ac, 96.43% Impervious, Inflow Depth > 5.15" for 25YR event
Inflow = 8.45 cfs @ 12.04 hrs, Volume= 0.588 af
Outflow = 8.45 cfs @ 12.04 hrs, Volume= 0.588 af, Atten= 0%, Lag= 0.0 min

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

Reach 3R: POI3

Hydrograph



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: Watershed 1S	Runoff Area=40,642 sf 100.00% Impervious Runoff Depth>2.68" Flow Length=680' Tc=3.6 min CN=98 Runoff=2.99 cfs 0.209 af
Subcatchment2S: Watershed 2S	Runoff Area=0.380 ac 69.21% Impervious Runoff Depth>2.32" Flow Length=259' Tc=0.9 min CN=94 Runoff=1.17 cfs 0.073 af
Subcatchment3S: Watershed 3S	Runoff Area=50,573 sf 95.78% Impervious Runoff Depth>2.68" Flow Length=489' Tc=2.3 min CN=98 Runoff=3.80 cfs 0.260 af
Subcatchment4S: Watershed 4S	Runoff Area=9,148 sf 100.00% Impervious Runoff Depth>2.68" Flow Length=187' Tc=1.7 min CN=98 Runoff=0.68 cfs 0.047 af
Reach 1R: POI1	Inflow=2.99 cfs 0.209 af Outflow=2.99 cfs 0.209 af
Reach 2R: POI2	Inflow=1.17 cfs 0.073 af Outflow=1.17 cfs 0.073 af
Reach 3R: POI3	Inflow=4.47 cfs 0.306 af Outflow=4.47 cfs 0.306 af

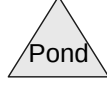
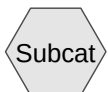
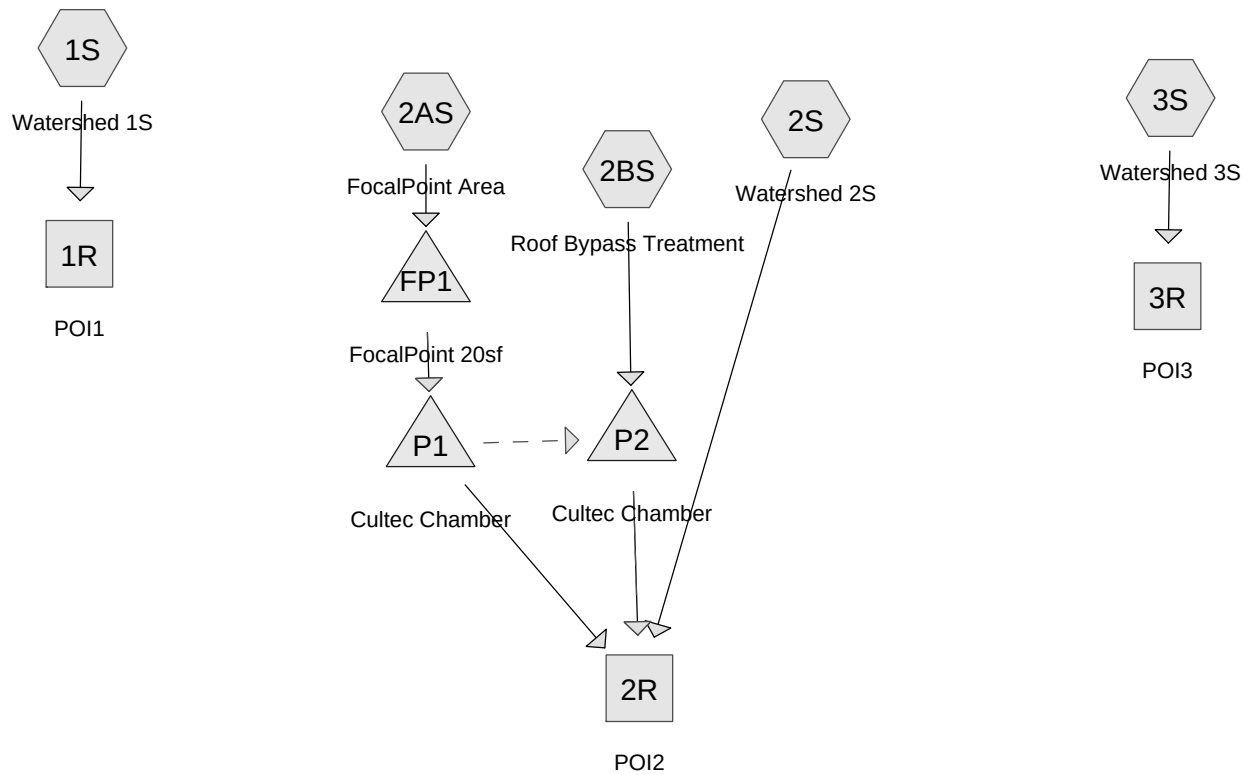
Total Runoff Area = 2.684 ac Runoff Volume = 0.588 af Average Runoff Depth = 2.63"
6.18% Pervious = 0.166 ac 93.82% Impervious = 2.518 ac

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: Watershed 1S	Runoff Area=40,642 sf 100.00% Impervious Runoff Depth>4.05" Flow Length=680' Tc=3.6 min CN=98 Runoff=4.47 cfs 0.315 af
Subcatchment2S: Watershed 2S	Runoff Area=0.380 ac 69.21% Impervious Runoff Depth>3.70" Flow Length=259' Tc=0.9 min CN=94 Runoff=1.82 cfs 0.117 af
Subcatchment3S: Watershed 3S	Runoff Area=50,573 sf 95.78% Impervious Runoff Depth>4.05" Flow Length=489' Tc=2.3 min CN=98 Runoff=5.67 cfs 0.392 af
Subcatchment4S: Watershed 4S	Runoff Area=9,148 sf 100.00% Impervious Runoff Depth>4.05" Flow Length=187' Tc=1.7 min CN=98 Runoff=1.02 cfs 0.071 af
Reach 1R: POI1	Inflow=4.47 cfs 0.315 af Outflow=4.47 cfs 0.315 af
Reach 2R: POI2	Inflow=1.82 cfs 0.117 af Outflow=1.82 cfs 0.117 af
Reach 3R: POI3	Inflow=6.69 cfs 0.463 af Outflow=6.69 cfs 0.463 af

Total Runoff Area = 2.684 ac Runoff Volume = 0.896 af Average Runoff Depth = 4.00"
6.18% Pervious = 0.166 ac 93.82% Impervious = 2.518 ac

POST DEVELOPMENT



Post_FocalPoint1

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Type III 24-hr 25YR Rainfall=5.80"

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Page 2

Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Watershed 1S

Runoff Area=35,372 sf 100.00% Impervious Runoff Depth>5.56"
Flow Length=680' Tc=3.6 min CN=98 Runoff=5.03 cfs 16,393 cf

Subcatchment2AS: FocalPoint Area

Runoff Area=4,150 sf 78.31% Impervious Runoff Depth=5.10"
Flow Length=60' Slope=0.0200 '/' Tc=0.8 min CN=94 Runoff=0.63 cfs 1,763 cf

Subcatchment2BS: Roof Bypass

Runoff Area=0.174 ac 100.00% Impervious Runoff Depth>5.56"
Flow Length=257' Slope=0.0050 '/' Tc=2.2 min CN=98 Runoff=1.13 cfs 3,512 cf

Subcatchment2S: Watershed 2S

Runoff Area=0.230 ac 80.87% Impervious Runoff Depth=5.21"
Flow Length=259' Tc=0.9 min CN=95 Runoff=1.53 cfs 4,352 cf

Subcatchment3S: Watershed 3S

Runoff Area=58,948 sf 100.00% Impervious Runoff Depth>5.56"
Flow Length=476' Slope=0.0050 '/' Tc=4.3 min CN=98 Runoff=8.17 cfs 27,319 cf

Reach 1R: POI1

Inflow=5.03 cfs 16,393 cf
Outflow=5.03 cfs 16,393 cf

Reach 2R: POI2

Inflow=2.28 cfs 9,629 cf
Outflow=2.28 cfs 9,629 cf

Reach 3R: POI3

Inflow=8.17 cfs 27,319 cf
Outflow=8.17 cfs 27,319 cf

Pond FP1: FocalPoint 20sf

Peak Elev=46.90' Storage=57 cf Inflow=0.63 cfs 1,763 cf
Primary=0.05 cfs 1,176 cf Secondary=0.58 cfs 588 cf Outflow=0.62 cfs 1,763 cf

Pond P1: Cultec Chamber

Peak Elev=42.83' Storage=311 cf Inflow=0.62 cfs 1,763 cf
Primary=0.03 cfs 1,305 cf Secondary=0.80 cfs 459 cf Outflow=0.83 cfs 1,763 cf

Pond P2: Cultec Chamber

Peak Elev=40.98' Storage=1,196 cf Inflow=1.92 cfs 3,971 cf
Primary=0.03 cfs 2,728 cf Secondary=1.28 cfs 1,244 cf Outflow=1.31 cfs 3,972 cf

Total Runoff Area = 116,068 sf Runoff Volume = 53,340 cf Average Runoff Depth = 5.51"
2.43% Pervious = 2,817 sf 97.57% Impervious = 113,252 sf

Post_FocalPoint1

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Type III 24-hr 25YR Rainfall=5.80"

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Page 3

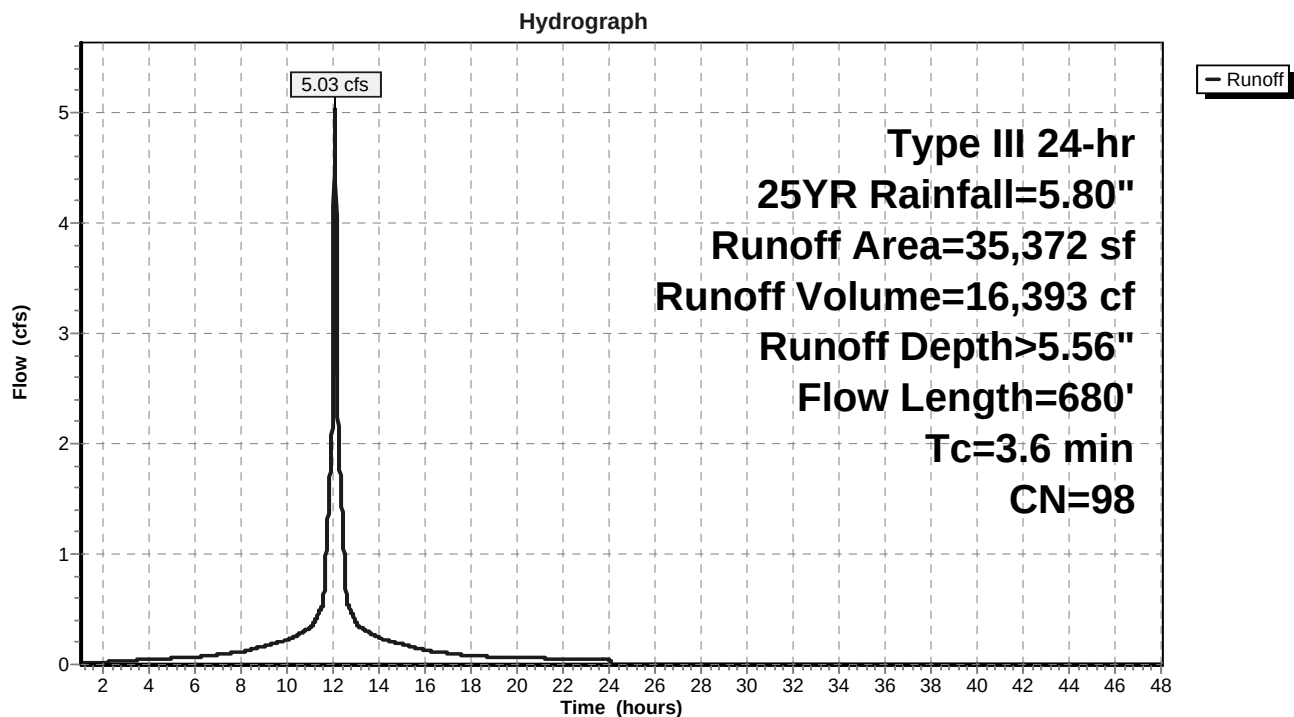
Summary for Subcatchment 1S: Watershed 1S

Runoff = 5.03 cfs @ 12.05 hrs, Volume= 16,393 cf, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
10,948	98	Roofs, HSG D
24,424	98	Paved roads w/curbs & sewers, HSG D
35,372	98	Weighted Average
35,372		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	49	0.0612	1.84		Sheet Flow, Segment AB Smooth surfaces n= 0.011 P2= 3.10"
2.4	376	0.0159	2.56		Shallow Concentrated Flow, Segment BC Paved Kv= 20.3 fps
0.8	255	0.0686	5.32		Shallow Concentrated Flow, Segment CD Paved Kv= 20.3 fps
3.6	680	Total			

Subcatchment 1S: Watershed 1S

Post_FocalPoint1

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Type III 24-hr 25YR Rainfall=5.80"

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Page 4

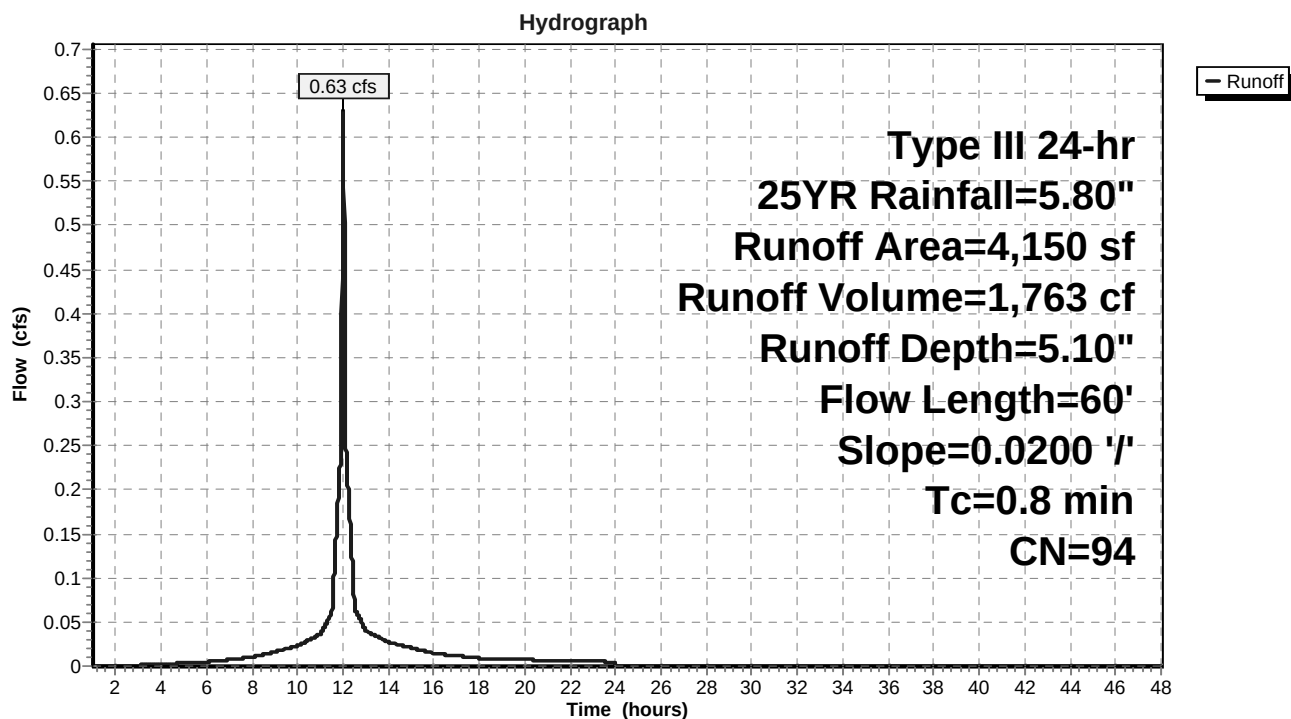
Summary for Subcatchment 2AS: FocalPoint Area

Runoff = 0.63 cfs @ 12.01 hrs, Volume= 1,763 cf, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
3,250	98	Paved roads w/curbs & sewers, HSG D
900	80	>75% Grass cover, Good, HSG D
4,150	94	Weighted Average
900		21.69% Pervious Area
3,250		78.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.22		Sheet Flow, Segment AB
					Smooth surfaces n= 0.011 P2= 3.10"

Subcatchment 2AS: FocalPoint Area

Post_FocalPoint1

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Type III 24-hr 25YR Rainfall=5.80"

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Page 5

Summary for Subcatchment 2BS: Roof Bypass Treatment

Runoff = 1.13 cfs @ 12.03 hrs, Volume= 3,512 cf, Depth> 5.56"

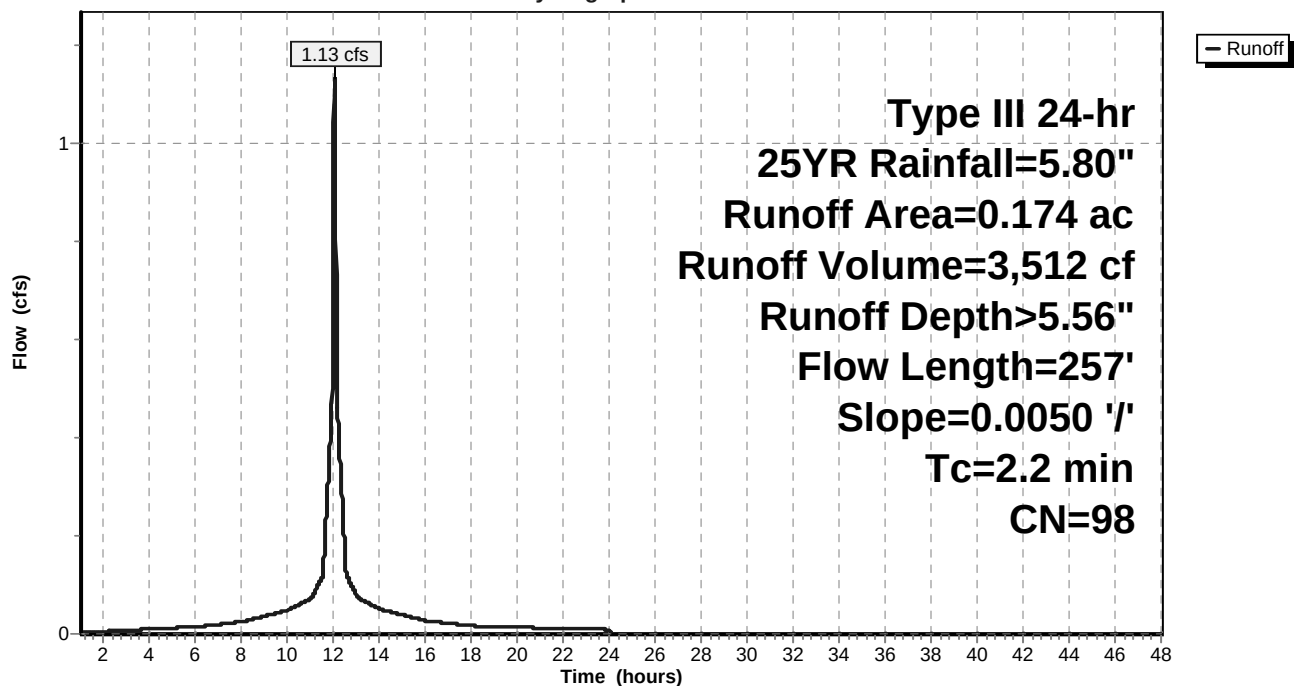
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (ac)	CN	Description
0.174	98	Roofs, HSG D
0.174		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	43	0.0050	0.66		Sheet Flow, Segment AB Smooth surfaces n= 0.011 P2= 3.10"
1.1	214	0.0050	3.18	1.11	Pipe Channel, Segment BC 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.010 PVC, smooth interior
2.2	257	Total			

Subcatchment 2BS: Roof Bypass Treatment

Hydrograph



Post_FocalPoint1

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Type III 24-hr 25YR Rainfall=5.80"

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Page 6

Summary for Subcatchment 2S: Watershed 2S

Runoff = 1.53 cfs @ 12.01 hrs, Volume= 4,352 cf, Depth= 5.21"

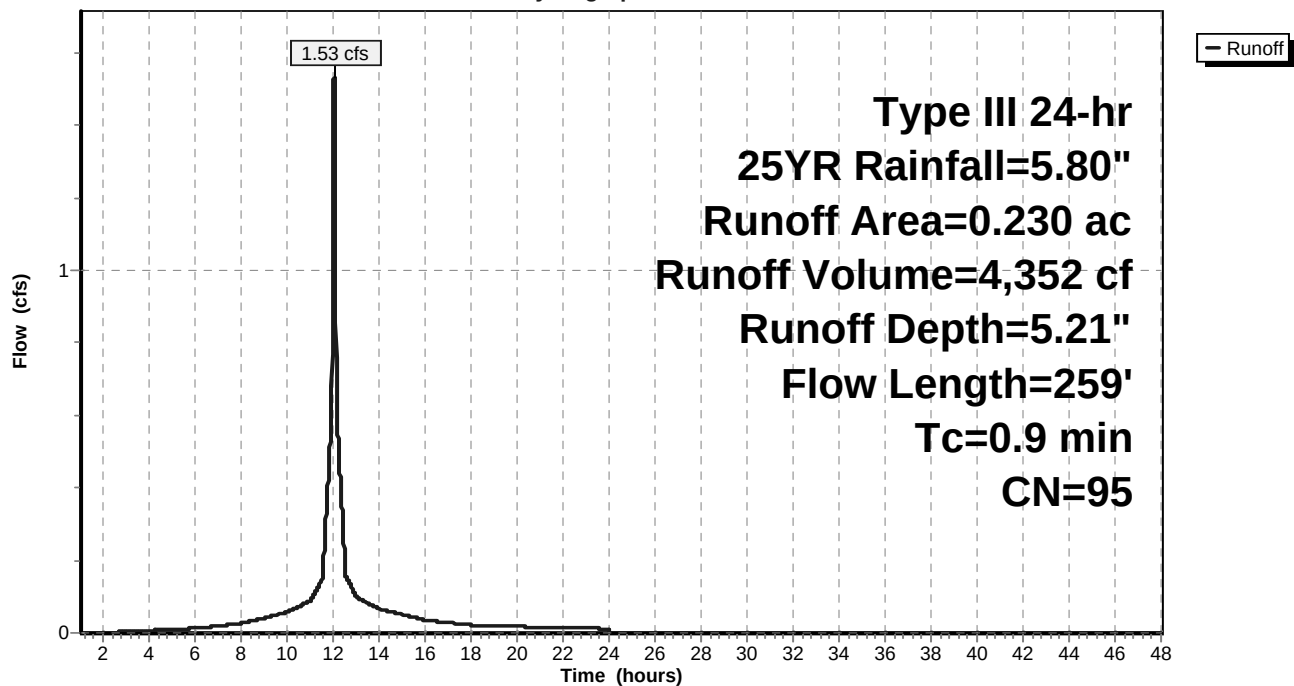
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (ac)	CN	Description
0.186	98	Paved roads w/curbs & sewers, HSG D
0.044	80	>75% Grass cover, Good, HSG D
0.230	95	Weighted Average
0.044		19.13% Pervious Area
0.186		80.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	84	0.1250	2.72		Sheet Flow, Segment AB
					Smooth surfaces n= 0.011 P2= 3.10"
0.4	175	0.1038	6.54		Shallow Concentrated Flow, Segment BC
					Paved Kv= 20.3 fps
0.9	259	Total			

Subcatchment 2S: Watershed 2S

Hydrograph



Post_FocalPoint1

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Type III 24-hr 25YR Rainfall=5.80"

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Page 7

Summary for Subcatchment 3S: Watershed 3S

Runoff = 8.17 cfs @ 12.06 hrs, Volume= 27,319 cf, Depth> 5.56"

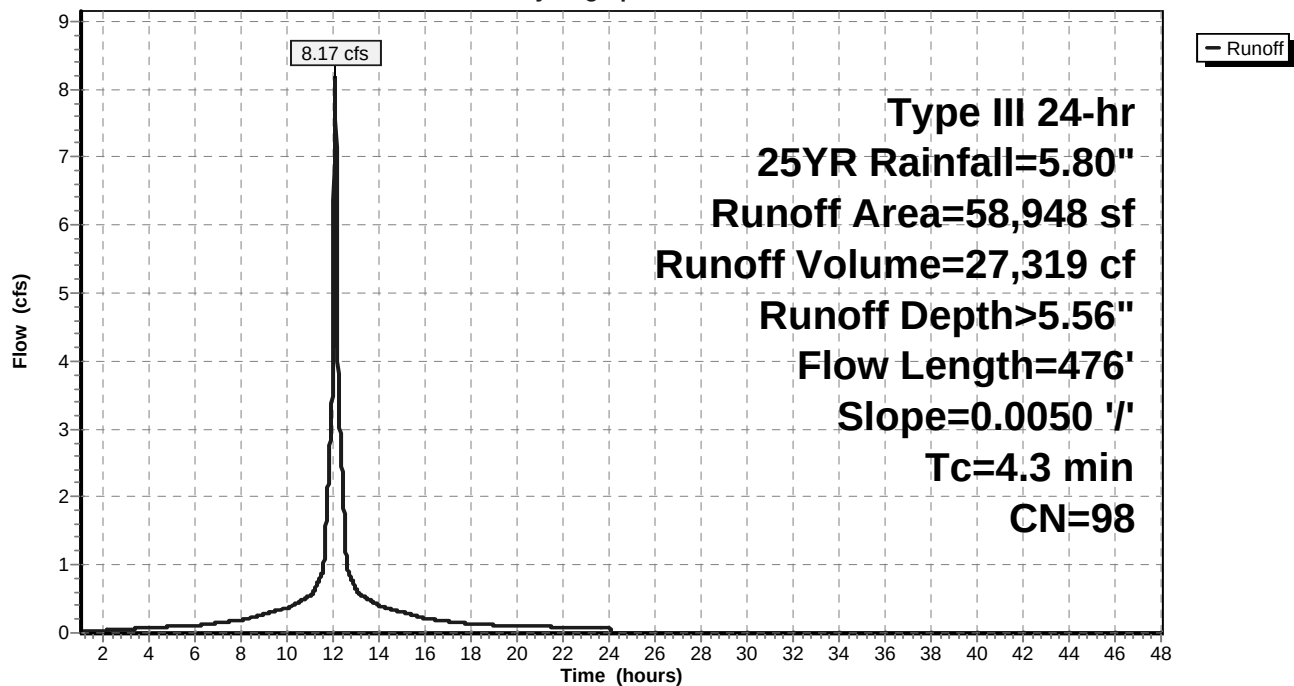
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25YR Rainfall=5.80"

Area (sf)	CN	Description
3,928	98	Paved parking, HSG D
55,020	98	Roofs, HSG D
58,948	98	Weighted Average
58,948		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.4	116	0.0050	0.80		Sheet Flow, Segment AB Smooth surfaces n= 0.011 P2= 3.10"
1.9	360	0.0050	3.18	1.11	Pipe Channel, Segment BC 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.010 PVC, smooth interior
4.3	476	Total			

Subcatchment 3S: Watershed 3S

Hydrograph



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Type III 24-hr 25YR Rainfall=5.80"

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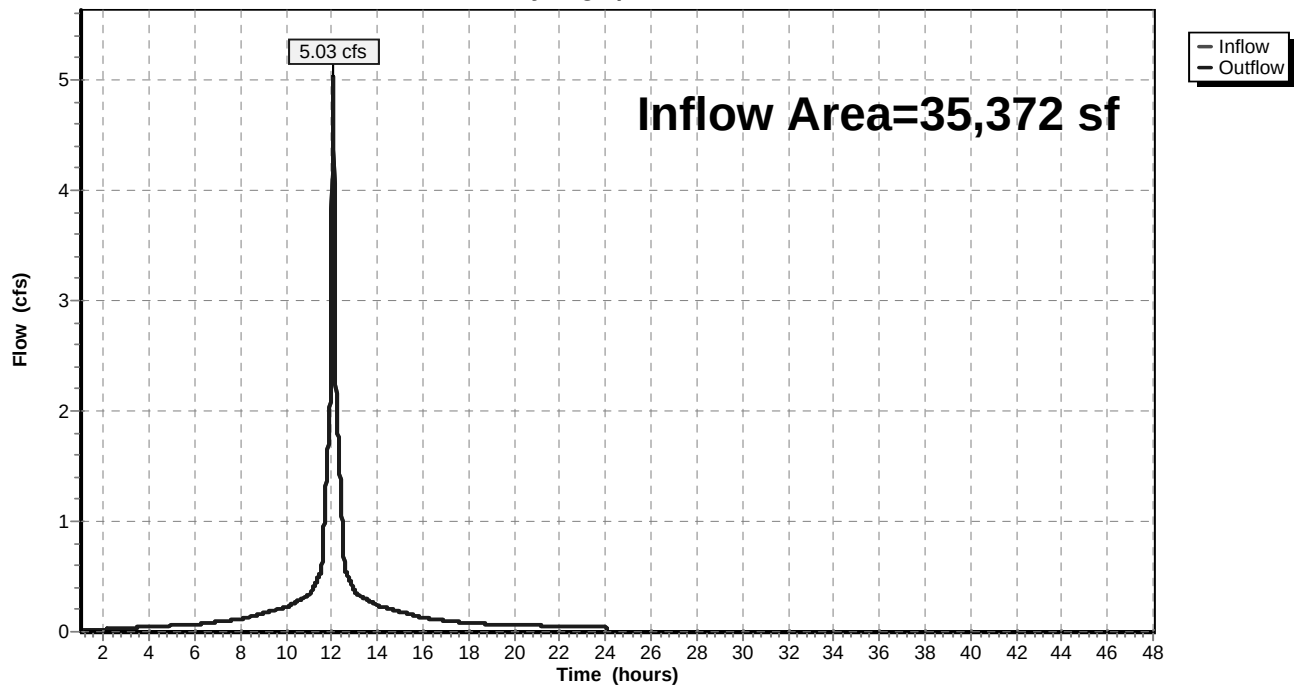
Summary for Reach 1R: POI1

Inflow Area = 35,372 sf, 100.00% Impervious, Inflow Depth > 5.56" for 25YR event
Inflow = 5.03 cfs @ 12.05 hrs, Volume= 16,393 cf
Outflow = 5.03 cfs @ 12.05 hrs, Volume= 16,393 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs / 3

Reach 1R: POI1

Hydrograph



Post_FocalPoint1

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Type III 24-hr 25YR Rainfall=5.80"

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Page 9

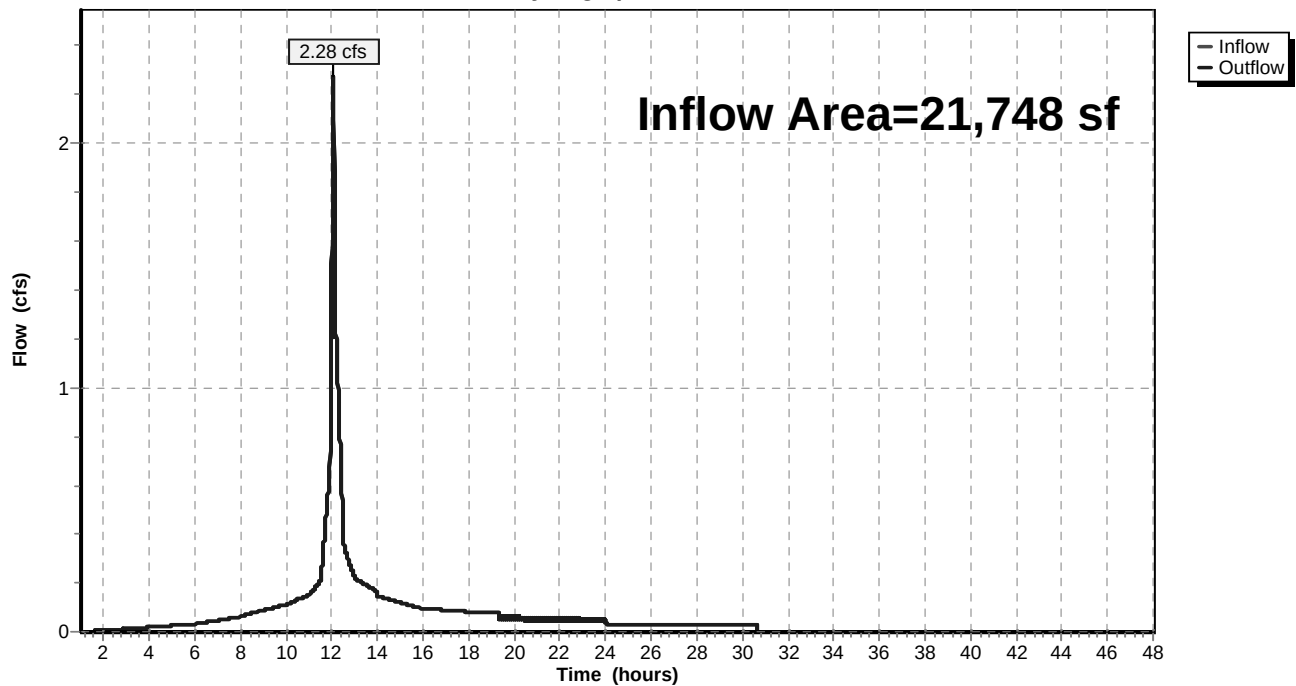
Summary for Reach 2R: POI2

Inflow Area = 21,748 sf, 87.05% Impervious, Inflow Depth > 5.31" for 25YR event
Inflow = 2.28 cfs @ 12.08 hrs, Volume= 9,629 cf
Outflow = 2.28 cfs @ 12.08 hrs, Volume= 9,629 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs / 3

Reach 2R: POI2

Hydrograph



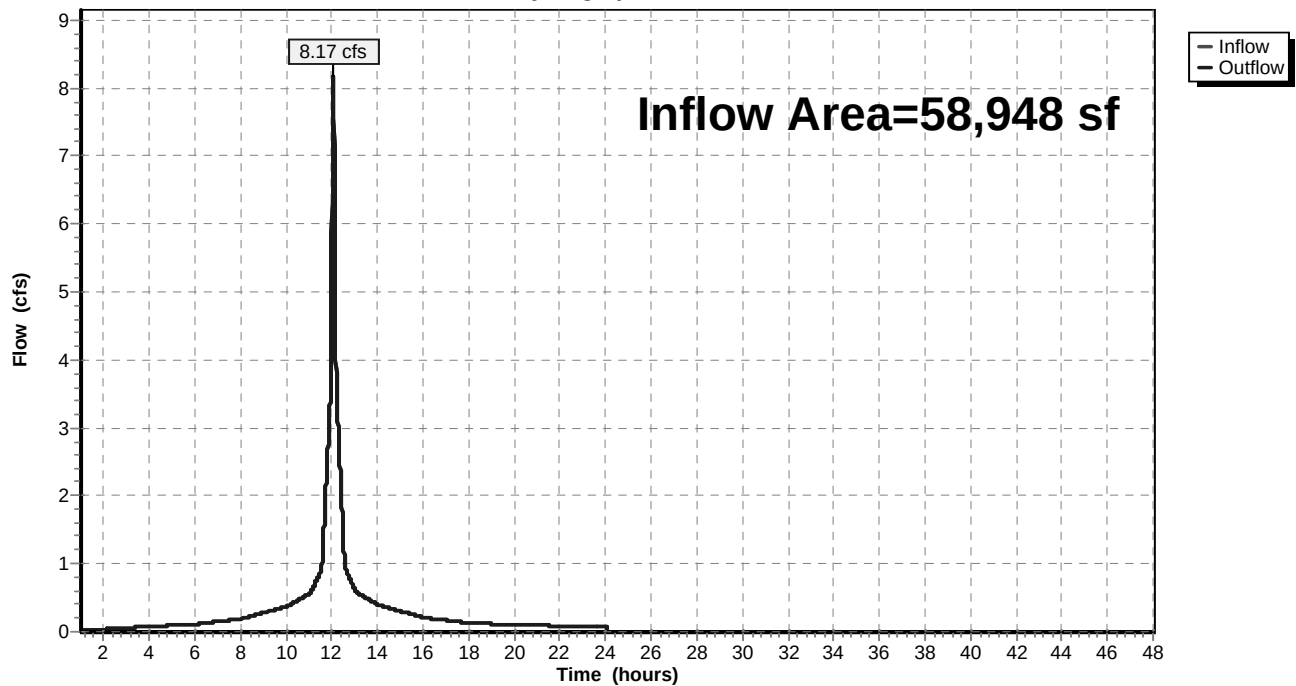
Summary for Reach 3R: POI3

Inflow Area = 58,948 sf, 100.00% Impervious, Inflow Depth > 5.56" for 25YR event
 Inflow = 8.17 cfs @ 12.06 hrs, Volume= 27,319 cf
 Outflow = 8.17 cfs @ 12.06 hrs, Volume= 27,319 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs / 3

Reach 3R: POI3

Hydrograph



Post_FocalPoint1

Type III 24-hr 25YR Rainfall=5.80"

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Page 11

Summary for Pond FP1: FocalPoint 20sf

Inflow Area = 4,150 sf, 78.31% Impervious, Inflow Depth = 5.10" for 25YR event
 Inflow = 0.63 cfs @ 12.01 hrs, Volume= 1,763 cf
 Outflow = 0.62 cfs @ 12.02 hrs, Volume= 1,763 cf, Atten= 1%, Lag= 0.3 min
 Primary = 0.05 cfs @ 11.22 hrs, Volume= 1,176 cf
 Secondary = 0.58 cfs @ 12.02 hrs, Volume= 588 cf

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 46.90' @ 12.02 hrs Surf.Area= 20 sf Storage= 57 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 3.1 min (767.7 - 764.6)

Volume	Invert	Avail.Storage	Storage Description
#1	43.75'	0 cf	4.00'W x 5.00'L x 2.25'H FocalPoint 45 cf Overall x 0.0% Voids
#2	46.00'	67 cf	Custom Stage Data (Prismatic) Listed below (Recalc) -Impervious
		67 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.00	20	0	0
46.50	75	24	24
47.00	96	43	67

Device	Routing	Invert	Outlet Devices
#1	Primary	43.75'	100.000 in/hr Exfiltration over Surface area Phase-In= 0.10'
#2	Secondary	46.75'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.05 cfs @ 11.22 hrs HW=46.00' TW=39.75' (Dynamic Tailwater)↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)**Secondary OutFlow** Max=0.57 cfs @ 12.02 hrs HW=46.90' TW=42.80' (Dynamic Tailwater)↑**2=Orifice/Grate** (Weir Controls 0.57 cfs @ 1.25 fps)

Post_FocalPoint1

Prepared by Gorrill Palmer

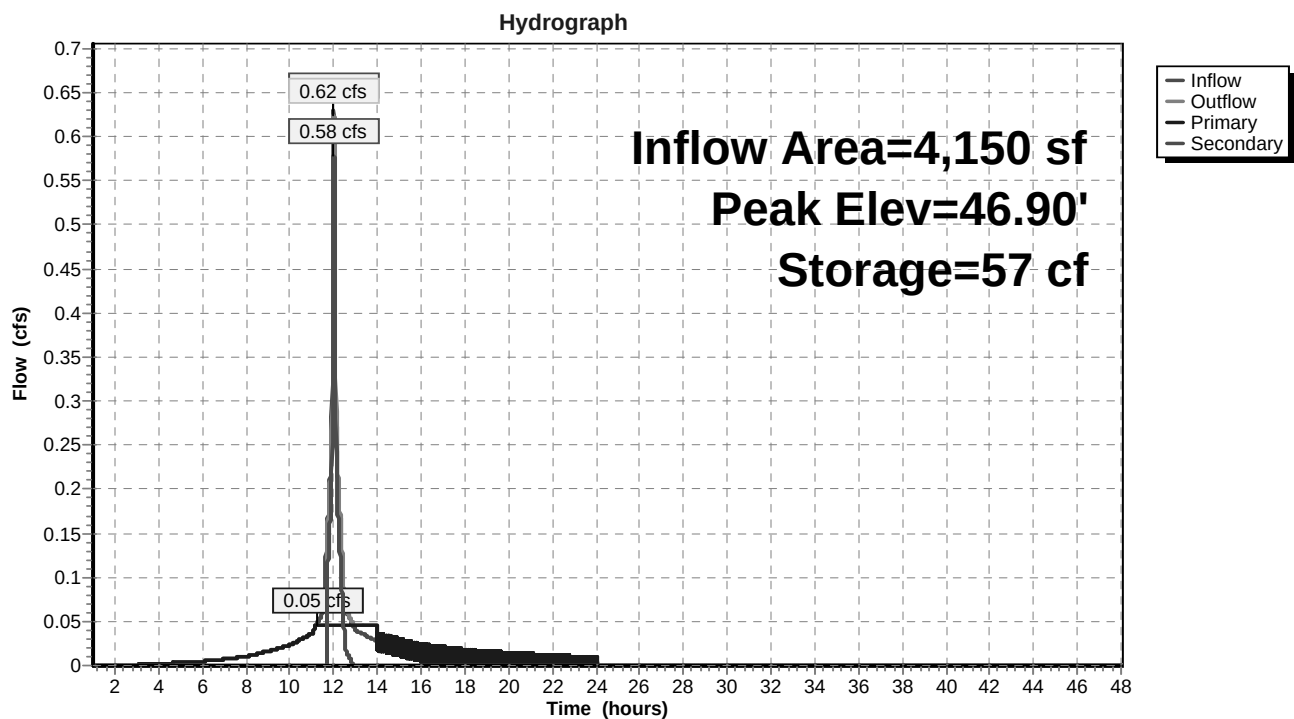
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Type III 24-hr 25YR Rainfall=5.80"

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Page 12

Pond FP1: FocalPoint 20sf



Post_FocalPoint1

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Type III 24-hr 25YR Rainfall=5.80"

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Page 13

Summary for Pond P1: Cultec Chamber

Inflow Area = 4,150 sf, 78.31% Impervious, Inflow Depth = 5.10" for 25YR event
 Inflow = 0.62 cfs @ 12.02 hrs, Volume= 1,763 cf
 Outflow = 0.83 cfs @ 12.02 hrs, Volume= 1,763 cf, Atten= 0%, Lag= 0.3 min
 Primary = 0.03 cfs @ 10.83 hrs, Volume= 1,305 cf
 Secondary = 0.80 cfs @ 12.02 hrs, Volume= 459 cf

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 42.83' @ 12.02 hrs Surf.Area= 139 sf Storage= 311 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 55.6 min (823.3 - 767.7)

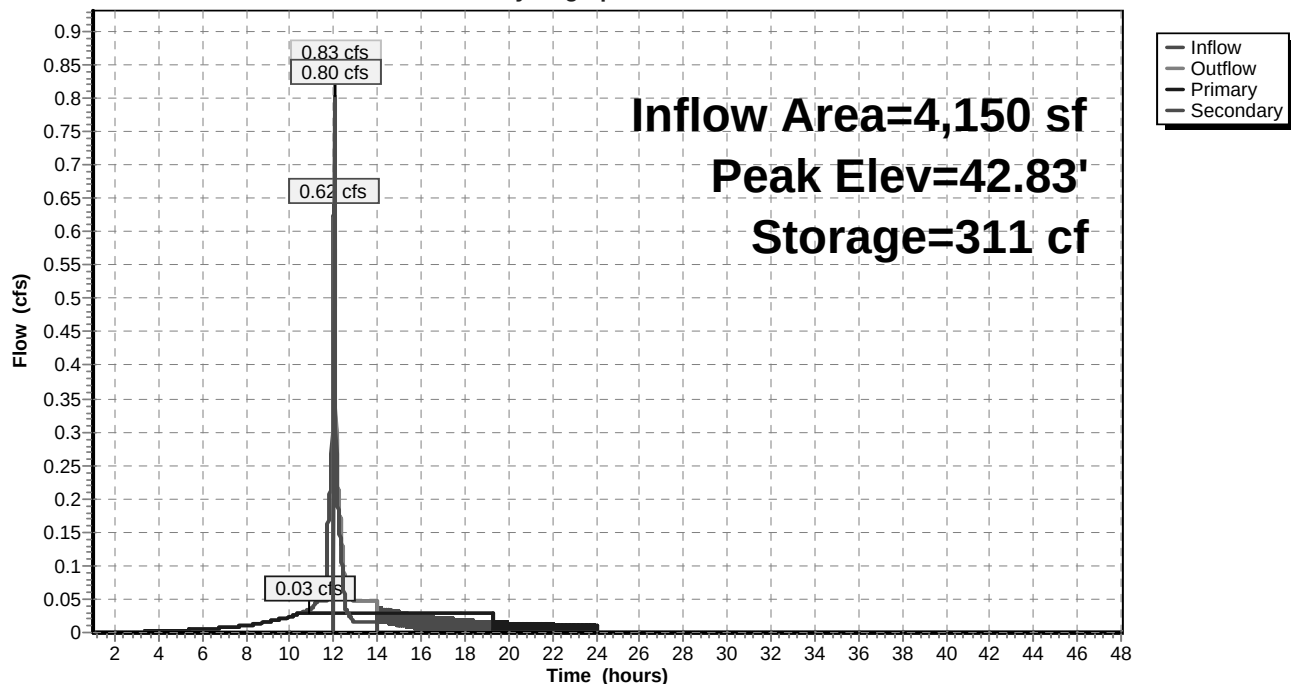
Volume	Invert	Avail.Storage	Storage Description
#1	39.50'	114 cf	4.83'W x 7.20'L x 3.54'H Prismaoid x 4 492 cf Overall - 209 cf Embedded = 284 cf x 40.0% Voids
#2	40.00'	209 cf	Cultec R-330XLHD x 4 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
		322 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	39.50'	0.03 cfs Exfiltration at all elevations
#2	Secondary	42.70'	6.0' long x 0.7' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32

Primary OutFlow Max=0.03 cfs @ 10.83 hrs HW=39.54' TW=0.00' (Dynamic Tailwater)↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)**Secondary OutFlow** Max=0.72 cfs @ 12.02 hrs HW=42.82' TW=39.96' (Dynamic Tailwater)↑**2=Broad-Crested Rectangular Weir** (Weir Controls 0.72 cfs @ 0.97 fps)

Pond P1: Cultec Chamber

Hydrograph



Post_FocalPoint1

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Type III 24-hr 25YR Rainfall=5.80"

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Page 15

Summary for Pond P2: Cultec Chamber

Inflow Area = 7,579 sf, 100.00% Impervious, Inflow Depth > 6.29" for 25YR event
 Inflow = 1.92 cfs @ 12.02 hrs, Volume= 3,971 cf
 Outflow = 1.31 cfs @ 12.08 hrs, Volume= 3,972 cf, Atten= 32%, Lag= 3.6 min
 Primary = 0.03 cfs @ 9.07 hrs, Volume= 2,728 cf
 Secondary = 1.28 cfs @ 12.08 hrs, Volume= 1,244 cf

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 40.98' @ 12.08 hrs Surf.Area= 522 sf Storage= 1,196 cf

Plug-Flow detention time= 229.9 min calculated for 3,971 cf (100% of inflow)
 Center-of-Mass det. time= 230.0 min (972.3 - 742.3)

Volume	Invert	Avail.Storage	Storage Description
#1	37.50'	426 cf	4.83'W x 7.20'L x 3.54'H Prismaoid x 15 1,847 cf Overall - 782 cf Embedded = 1,064 cf x 40.0% Voids
#2	38.00'	782 cf	Cultec R-330XLHD x 15 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
		1,208 cf	Total Available Storage

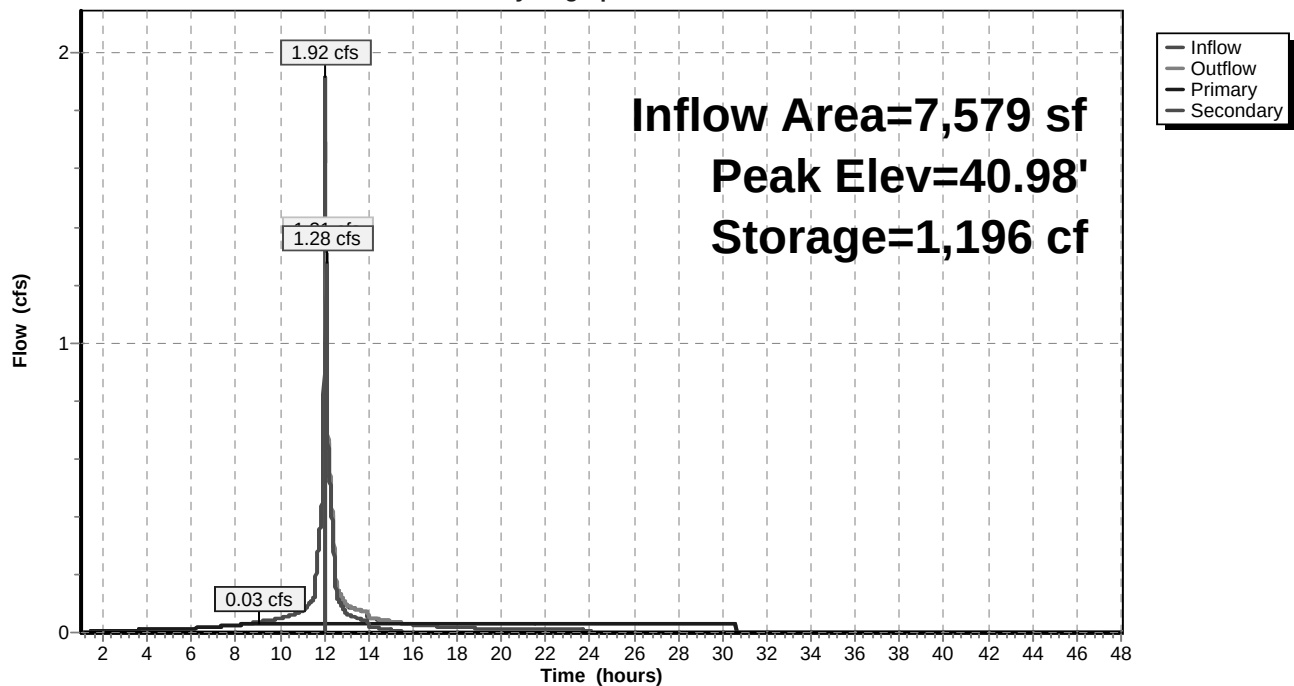
Device	Routing	Invert	Outlet Devices
#1	Primary	37.50'	0.03 cfs Exfiltration at all elevations
#2	Secondary	40.80'	6.0' long x 0.7' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32

Primary OutFlow Max=0.03 cfs @ 9.07 hrs HW=37.54' TW=0.00' (Dynamic Tailwater)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Secondary OutFlow Max=1.24 cfs @ 12.08 hrs HW=40.98' TW=0.00' (Dynamic Tailwater)
 ↑ **2=Broad-Crested Rectangular Weir** (Weir Controls 1.24 cfs @ 1.16 fps)

Pond P2: Cultec Chamber

Hydrograph



Post_FocalPoint1

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Type III 24-hr 2YR Rainfall=3.10"

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Page 1

Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Watershed 1S Runoff Area=35,372 sf 100.00% Impervious Runoff Depth=2.87"
Flow Length=680' Tc=3.6 min CN=98 Runoff=2.66 cfs 8,454 cf

Subcatchment2AS: FocalPoint Area Runoff Area=4,150 sf 78.31% Impervious Runoff Depth=2.45"
Flow Length=60' Slope=0.0200 '/' Tc=0.8 min CN=94 Runoff=0.32 cfs 846 cf

Subcatchment2BS: Roof Bypass Runoff Area=0.174 ac 100.00% Impervious Runoff Depth=2.87"
Flow Length=257' Slope=0.0050 '/' Tc=2.2 min CN=98 Runoff=0.60 cfs 1,811 cf

Subcatchment2S: Watershed 2S Runoff Area=0.230 ac 80.87% Impervious Runoff Depth=2.55"
Flow Length=259' Tc=0.9 min CN=95 Runoff=0.78 cfs 2,127 cf

Subcatchment3S: Watershed 3S Runoff Area=58,948 sf 100.00% Impervious Runoff Depth=2.87"
Flow Length=476' Slope=0.0050 '/' Tc=4.3 min CN=98 Runoff=4.32 cfs 14,088 cf

Reach 1R: POI1 Inflow=2.66 cfs 8,454 cf
Outflow=2.66 cfs 8,454 cf

Reach 2R: POI2 Inflow=0.84 cfs 4,785 cf
Outflow=0.84 cfs 4,785 cf

Reach 3R: POI3 Inflow=4.32 cfs 14,088 cf
Outflow=4.32 cfs 14,088 cf

Pond FP1: FocalPoint 20sf Peak Elev=46.84' Storage=51 cf Inflow=0.32 cfs 846 cf
Primary=0.05 cfs 666 cf Secondary=0.27 cfs 180 cf Outflow=0.31 cfs 847 cf

Pond P1: Cultec Chamber Peak Elev=42.19' Storage=271 cf Inflow=0.31 cfs 847 cf
Primary=0.03 cfs 847 cf Secondary=0.00 cfs 0 cf Outflow=0.03 cfs 847 cf

Pond P2: Cultec Chamber Peak Elev=39.51' Storage=766 cf Inflow=0.60 cfs 1,811 cf
Primary=0.03 cfs 1,812 cf Secondary=0.00 cfs 0 cf Outflow=0.03 cfs 1,812 cf

Total Runoff Area = 116,068 sf Runoff Volume = 27,326 cf Average Runoff Depth = 2.83"
2.43% Pervious = 2,817 sf 97.57% Impervious = 113,252 sf

Post_FocalPoint1

Prepared by Gorrill Palmer

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Type III 24-hr 10YR Rainfall=4.60"

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Page 2

Time span=1.00-48.00 hrs, dt=0.01 hrs, 4701 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Watershed 1S

Runoff Area=35,372 sf 100.00% Impervious Runoff Depth>4.36"
Flow Length=680' Tc=3.6 min CN=98 Runoff=3.98 cfs 12,863 cf

Subcatchment2AS: FocalPoint Area

Runoff Area=4,150 sf 78.31% Impervious Runoff Depth=3.91"
Flow Length=60' Slope=0.0200 '/' Tc=0.8 min CN=94 Runoff=0.49 cfs 1,354 cf

Subcatchment2BS: Roof Bypass

Runoff Area=0.174 ac 100.00% Impervious Runoff Depth>4.36"
Flow Length=257' Slope=0.0050 '/' Tc=2.2 min CN=98 Runoff=0.90 cfs 2,756 cf

Subcatchment2S: Watershed 2S

Runoff Area=0.230 ac 80.87% Impervious Runoff Depth=4.02"
Flow Length=259' Tc=0.9 min CN=95 Runoff=1.20 cfs 3,359 cf

Subcatchment3S: Watershed 3S

Runoff Area=58,948 sf 100.00% Impervious Runoff Depth>4.36"
Flow Length=476' Slope=0.0050 '/' Tc=4.3 min CN=98 Runoff=6.46 cfs 21,437 cf

Reach 1R: POI1

Inflow=3.98 cfs 12,863 cf
Outflow=3.98 cfs 12,863 cf

Reach 2R: POI2

Inflow=1.26 cfs 7,470 cf
Outflow=1.26 cfs 7,470 cf

Reach 3R: POI3

Inflow=6.46 cfs 21,437 cf
Outflow=6.46 cfs 21,437 cf

Pond FP1: FocalPoint 20sf

Peak Elev=46.87' Storage=55 cf Inflow=0.49 cfs 1,354 cf
Primary=0.05 cfs 958 cf Secondary=0.44 cfs 396 cf Outflow=0.49 cfs 1,354 cf

Pond P1: Cultec Chamber

Peak Elev=42.77' Storage=307 cf Inflow=0.49 cfs 1,354 cf
Primary=0.03 cfs 1,129 cf Secondary=0.30 cfs 225 cf Outflow=0.33 cfs 1,354 cf

Pond P2: Cultec Chamber

Peak Elev=40.87' Storage=1,173 cf Inflow=0.90 cfs 2,981 cf
Primary=0.03 cfs 2,529 cf Secondary=0.34 cfs 452 cf Outflow=0.37 cfs 2,981 cf

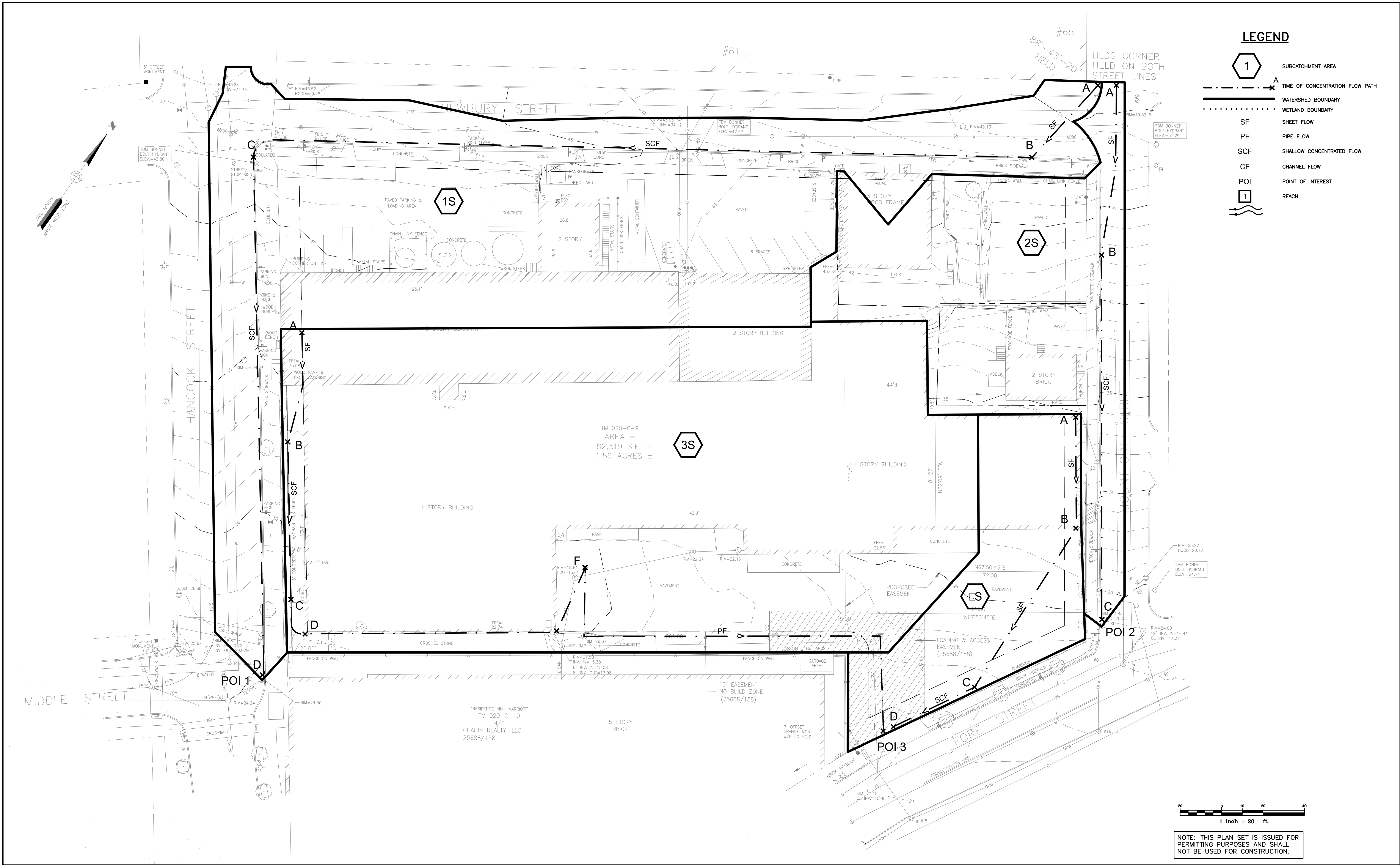
Total Runoff Area = 116,068 sf Runoff Volume = 41,769 cf Average Runoff Depth = 4.32"
2.43% Pervious = 2,817 sf 97.57% Impervious = 113,252 sf

ATTACHMENT G

PRE/POST WATERSHED MAP

PRE-DEVELOPMENT

G:\CAD Working\3184 Shipyard Brewing\DWG\3184-WS-PRE.dwg 4/6/2018 12:17 PM



Rev.	Date	Revision

Issued For	Date	By

Design: CEH	Draft:	Date: MAR 2018
Checked: LSA	Scale: 1"=20'	Job No.: 3184
File Name: 3184-WS-PRE.dwg		
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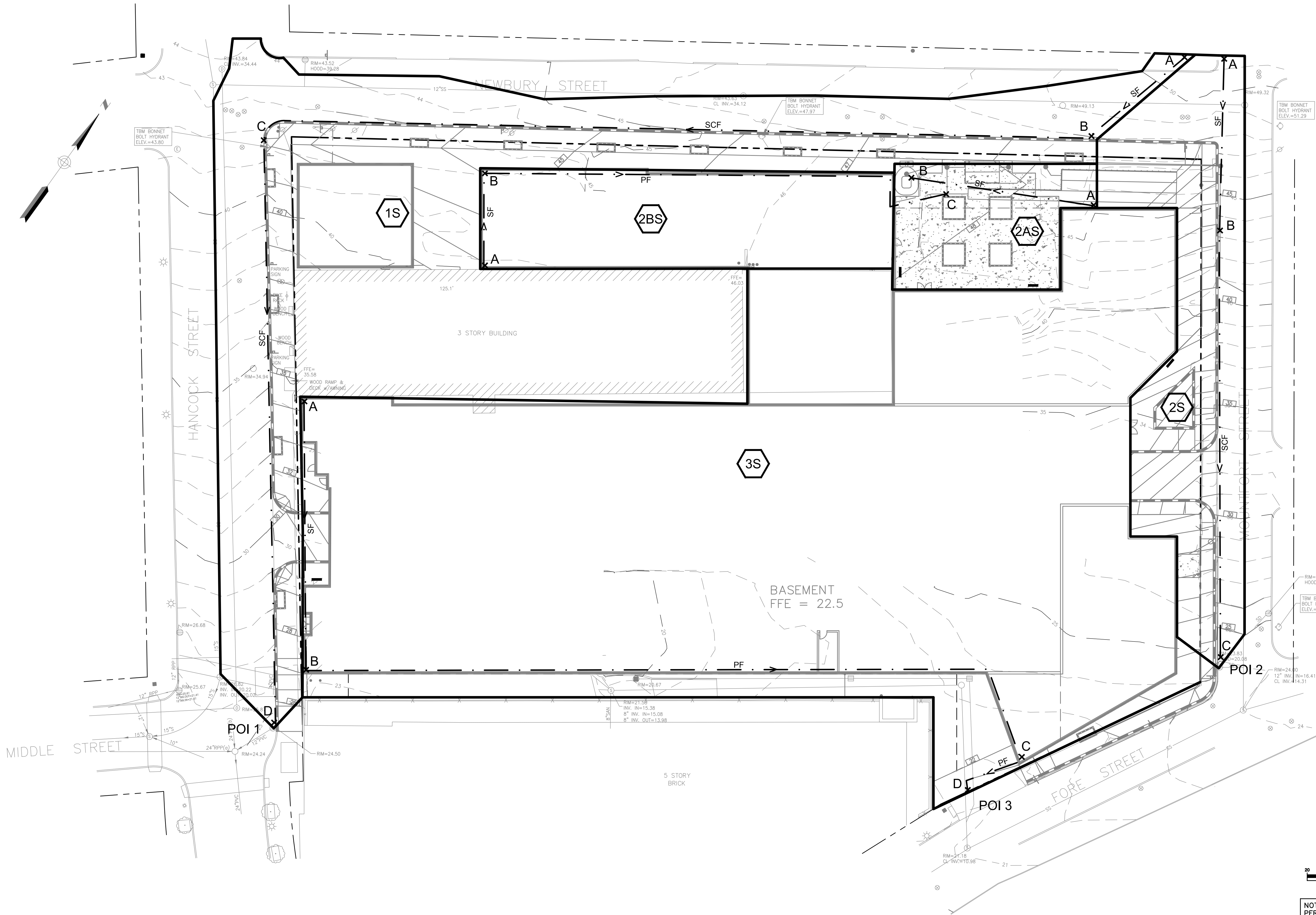
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Drawing Name:	Predevelopment Watershed Map
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.
WS1

POST DEVELOPMENT

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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

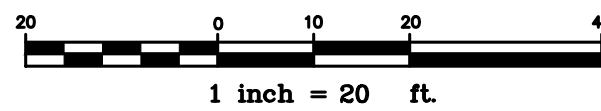
CHANNEL FLOW

POI

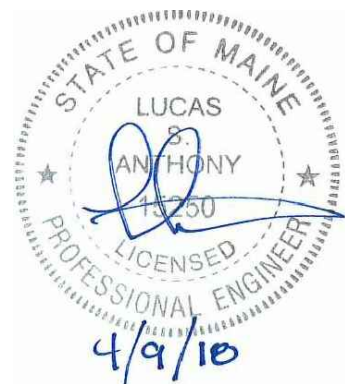
POINT OF INTEREST

1

REACH



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



Rev.	Date	Revision

SITE PLAN AND SUBDIVISION		4/10/18	LSA
Issued For		Date	By

Design: CEH	Draft:	Date: APR 2018
Checked: LSA	Scale: 1"=20'	Job No.: 3184
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Drawing Name:	Postdevelopment Watershed Map
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.

WS2

EROSION AND SEDIMENTATION CONTROL BASIC STANDARDS

I.1 Overview

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

I.2 Introduction

Gorrill Palmer has been retained by 86 Newbury Street, LLC. to prepare an Erosion and Sedimentation Control Report for the construction of a proposed six story multi-use building and parking structure. The development will consist of demolishing three existing buildings and the construction of a six story multi-use building and associated parking structure at 86 Newbury Street in Portland, Maine, currently the Shipyard Brewery. The parcel is bounded by Newbury, Fore, Mountfort, and Hancock Streets. The proposed development includes construction of one building with the following uses:

- Office
- Hotel
- Parking Structure
- Lab/Industrial
- Retail Space
- Residential

Figure 1 is a map showing the project location. 86 Newbury Street, LLC. is currently seeking a Maine Construction General Permit from the Maine Department of Environmental Protection (MDEP). 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

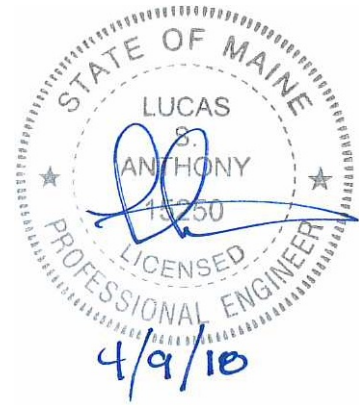
I.3.1 Existing Conditions and Soil Types

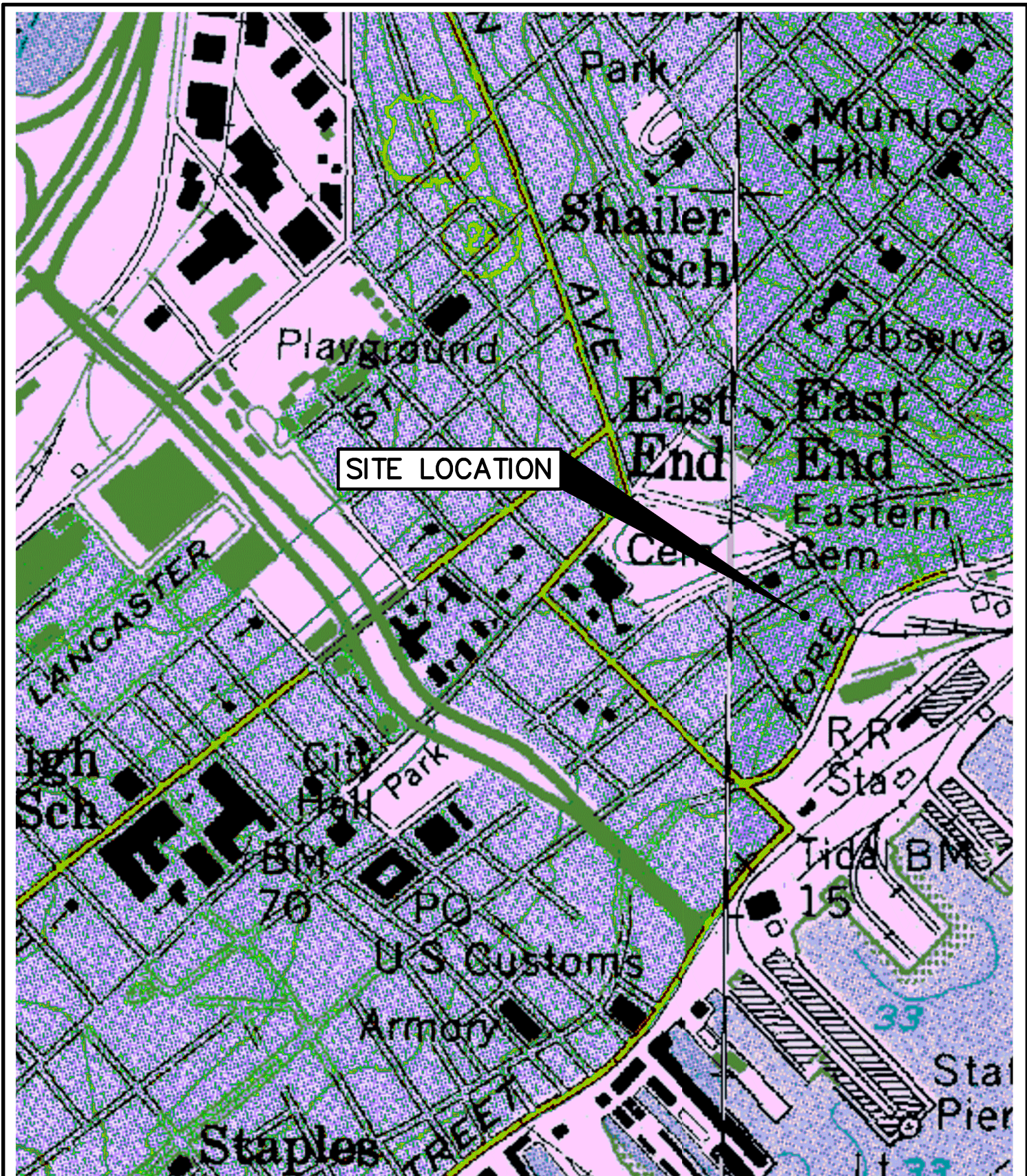
The site is approximately 2.1 acres in size and is currently developed with the Shipyard Brewery, two apartment buildings and parking areas. The total developed area is approximately 2.1 acres. Abutting land uses include:

- North –Residential (single family homes)
- West – Residential (condominiums)
- South – Commercial (Marriott Residence Inn)
- East — Residential (townhouses)

Topography in the area of the proposed construction generally slopes in the westerly direction with slopes in the range of 3% to 7%.

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





U.S.G.S. Location Map
 Shipyard Brewing Company - Portland, Maine
 U.S.G.S. Portland East/West, Maine -7.5 Minute Series (Topographic)

Design: BMG	Date: MARCH 2017
Draft: CG	Job No.: 3184
Checked: LSA	Scale: None
File Name: 3184-LOCATION.dwg	



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Figure
1

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

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
Cu	Cut and fill land	0.7	28.9%
HIB	Hinckley loamy sand, 3 to 8 percent slopes	1.7	71.1%
Totals for Area of Interest		2.3	100.0%

Map Unit Descriptions

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

indicative of the more erodible soils. The following table lists the soils found on site and their K values:

KVALUE		
Type	Subsurface	Substratum
Hinckley	0.17	0.17
Cut and Fill Land	NA	NA

The Hinckley soils have low susceptibility to erosion.

1.3.2 Existing Erosion Problems

Gorrill Palmer is not aware of any existing erosion problems onsite.

1.3.3 Critical Areas

Gorrill Palmer is not aware of any critical areas onsite.

1.3.4 Protected Natural Resources

The site does not contain any wetlands. Based upon the FEMA maps, the site is not located within a Zone A 100-year floodplain.

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 BMPS.

A. Dewatering

Water from construction trench dewatering 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.

The following standards must be met during construction

- (a) **Inspection and corrective action.** Inspect disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and within 24 hours after a storm event (rainfall), and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including standards and conditions in the permit, shall conduct the inspections.
- (b) **Maintenance.** If best management practices (BMPs) need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If additional BMPs or significant repair of BMPs are necessary, implementation must be completed within 7 calendar days prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.
- (c) **Documentation.** Keep a log (report) summarizing the inspections and any corrective action taken. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

The log must be made accessible to MDEP and City of Portland staff and a copy must be provided upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

C. Temporary Erosion Control Measures

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

1. A crushed stone-stabilized construction entrance shall be placed at the approved drive off Fore Streets and Newbury Streets.

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 50 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 50 feet of an undisturbed wetland, which have been rough graded and are not located within a building pad, parking area, or access drive 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 15th and April 15th 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. Hancock Street, Newbury Street, Mountfort Street, and Fore Street 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. Storm drain catch basin inlet protection shall be provided through the use of stone sediment barriers or approved sediment bags (such as Silt Sack). Installation details are provided in the plan set. The barriers shall be inspected after each rainfall and repairs made as necessary. Sediment shall be removed and the barrier restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the barrier. The barrier shall be removed when the tributary drainage area has been stabilized.

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

13. 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 50 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.

3. Catch basins shall be provided with sediment sumps and inlet hoods (the Snout) for all outlet pipes that are 18" in diameter or less.

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 project will commence in Fall of 2018 and be completed by Fall of 2019.

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 along Newbury Street and Fore Street.
2. Install perimeter silt fence and/or wood waste berms prior to commencement of demolition.
3. Perform demolition of existing site elements.
4. Foundation preparation area shall be excavated for installation of the building foundations. Building work will be on going through the remainder of the project.
5. Commence installation of drainage appurtenances.
6. Commence earthwork and grading to subgrade.
7. Commence earthwork for Subsurface Chambers.
8. Commence installation of water and sewer lines.
9. Continue earthwork and grading to subgrade as necessary for construction.
10. Complete installation of underground utilities to within 5' of the buildings.
11. Install light pole foundations and light poles.
12. Complete remaining earthwork operations.

13. Complete installation of drainage appurtenances.
14. Install sub-base and base gravel within walkways, and drives.
15. Install brick sidewalk.
16. Install base course paving for drives and concrete surfaces.
17. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
18. Install surface course paving for drives. Stripe per plan.
19. Once the site is stabilized and a 90% catch of vegetation has been obtained, remove all temporary erosion control measures.
20. 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 50 feet of an undisturbed wetland and 7 days for all other areas. Areas within 50 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 information 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 50 feet from any natural resources.

2. Natural Resource Protection

Any areas within 50 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 50 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 1st, 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 1st, loam or seed will not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until such time as the final treatment can be applied. If the date is after November 1st and if the exposed area has been 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:IV).

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:IV) 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, 86 Newbury Street, 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 for the stormwater facilities must comply with Chapter 32 of the City of Portland Code of Ordinances. An excerpt for the annual report requirements is provided below:

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.

Snow Storage:

Plowed snow stored on-site shall not be placed over the FocalPoint filter system. Snow shall be removed from the site by a private commercial waste hauler.

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.

Catch Basins:

Inspect catch basins 2 times per year (preferably in Spring and Fall) to observe 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 and hydrocarbons at the time of the inspection.

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 and Parking Surfaces: 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.

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.

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.

Subsurface Detention Chambers:

Inspect chambers per manufacturer's recommendation. At a minimum, inspect chambers two 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 three inches.

FocalPoint System:

A five year maintenance and inspection contract shall be obtained with a professional with knowledge of erosion and stormwater control including experience with the FocalPoint system. The contract shall be renewed before its expiration. At a minimum the system shall be inspected every six months. Remove sediment and provide maintenance as required based upon the inspection.

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 person(s) 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

The following procedures are hereby established as a minimum for compliance with this section. For further information on the procedures listed below, refer to MDEP 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 - Maintenance Log

ATTACHMENT A

SEEDING PLAN

SEEDING PLAN

Project: Shipyard Redevelopment

Site Location: 86 Newbury Street, Portland, Maine

☐ 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.		
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: Shipyard Redevelopment

Site Location: 86 Newbury Street, 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.		
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: Shipyard Redevelopment

Address: 86 Newbury Street
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:

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

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
MAINTENANCE LOG

STORMWATER INSPECTION LOG

86 NEWBURY STREET

Inspection and Maintenance Frequency and Corrective Measures:

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

Catch Basins:

Inspect catch basins 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 to debris. Remove any obstructions to flow; 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.

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.

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.

FocalPoint Units:

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. FocalPoint Unit Inspection
2. Foreign debris, silt, mulch & trash removal
3. Filter media evaluation and recharge as necessary

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:

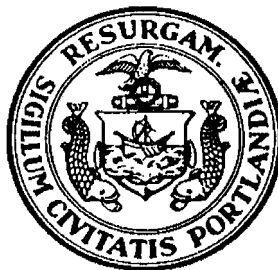
- (a) The owner or operator of a BMP shall hire a qualified post-construction stormwater inspector to at least annually, inspect the BMPs, including but not limited to any parking areas, catch basins, drainage swales, detention basins and pones, pipes and related structures, in accordance with all municipal 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 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 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

Shipyard Maintenance Log

Personnel:				
Date:				
Structure	Condition	Depth of Sediment	Inspection Comments	Maintenance Required
Ex. CB1				
Ex. CB2				
Ex. CB3				
OCS1				
OCS2				
Access Structure				
		Condition	Inspection Comments	Maintenance Required
FocalPoint				
Cultec Chambers				

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

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



Bradley Roland, P.E.
Water Resources Division

Date: 4/10/18

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

Site Address: 86 Newbury Street

Chart Block Lot Number: Map 20, Block C: 1, 2, 5, 9, 15

Proposed Use: Mixed-use office/hotel/commercial/residential

Previous Use: Commercial/residential

Existing Sanitary Flows: <500 est. GPD

Existing Process Flows: 100,000 GPD

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

Existing 15" main in Hancock, 12" in Newbury and 12" in Mountfort Streets

Site Category	Commercial (see part 4 below)	☒
	Industrial (complete part 5 below)	☐
	Governmental	☐
	Residential	☐
	Other (specify)	☐

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

2. Please, Submit Contact Information.

City Planner's Name: Caitlin Cameron Phone: 874-8901

Owner/Developer Name: 86 Newbury Street, LLC, attn: David Bateman

Owner/Developer Address: 470 Fore Street, Portland, ME 04101

Phone: 772-2992

Fax: _____ E-mail: david@batemanpartnersllc.com

Engineering Consultant Name: Gorrill Palmer, attn: Lucas Anthony

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

Phone: 772-2515

Fax: 772-2520 E-mail: lanthony@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: 7,203 average, 12,966 peak GPD

Peaking Factor/ Peak Times: 8am to 11am

Specify the source of design guidelines: (i.e. ☒ "Handbook of Subsurface Wastewater Disposal in Maine," ☐ "Plumbers and Pipe Fitters Calculation Manual," ☐ Portland Water District Records, Other (specify) _____

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values:

n/a

Size of External Grease Interceptor:

Retention Time:

Peaking Factor/ Peak Times:

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

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated:

n/a

GPD

Do you currently hold Federal or State discharge permits?

Yes

No

Is the process wastewater termed categorical under CFR 40?

Yes

No

OSHA Standard Industrial Code (SIC):

(<http://www.osha.gov/oshstats/sicser.html>)

Peaking Factor/Peak Process Times:

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

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

See attached calculations



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CALCULATED BY
CHECKED BY
SCALE

Shipyards Redevelopment
I OF I
CEH DATE 4/10/2018
LSA DATE 4/10/2018
None

Task: Compute Proposed Design Flow for Shipyards Redevelopment based on Tables 4A and 4C of the Maine Subsurface Wastewater Disposal Rules for comparison to the Existing Flow.
Facility Information (retail, number of units) provided by Archetype

Assumptions:

1 employee per	200	sf office	1 employee per	1000	sf laboratory/fulfillment
1 employee per	400	sf specialty retail	1 employee per	10	rooms of hotel

Proposed Use:

Office	60,000	SF
Fulfillment	40,000	SF
Laboratory	60,000	SF
Hotel	105	rooms
Specialty Retail	4,000	SF
Apartments	9	two bedrooms units

Wastewater Flow Per Use:

Office - place of employment with no showers	12	gpd/employee	
Laboratory/Fulfillment - place of employment with no showers	12	gpd/employee	
Hotel/Motel with Kitchen	60	gpd per bedroom	12 gpd per employee
Specialty Retail - place of employment with no showers	12	gpd/employee	
2 bedrooms or less	180	gpd/dwelling unit	

Calculations: See Below

Conclusion: The proposed Peak Design Flow is

12,966 gallons/day

Water Use Calculations Based on Facility Usage

Office

Number of employees	300	
Flow Rate	12	gpd/employee Per Table 4C
Subtotal	3,600	gallons/day

Fulfillment

Number of employees	40	
Flow Rate	12	gpd/employee Per Table 4C
Subtotal	480	gallons/day

Laboratory

Number of employees	60	
Flow Rate	12	gpd/employee Per Table 4C
Subtotal	720	gallons/day

Hotel

Number of Rooms	105	
Flow Rate	60	gpd/bedroom Per Table 4C
Number of employees	11	
Flow Rate	12	gpd/employee
Subtotal	6,426	gallons/day

Specialty Retail

Number of Employees	10	
Flow Rate	12	gpd/employee Per Table 4C
Subtotal	120	gallons/day

2 Bedrooms Units

Number of Units	9	
Flow Rate	180	gpd/unit Per Table 4A
Subtotal	1,620	gallons/day

Total Design Flow 12,966 gallons/day

Christi Holmes

From: Cough, Jamie <Jamie.Cough@cmpco.com>
Sent: Friday, March 16, 2018 8:49 AM
To: Christi Holmes
Subject: Ability to Serve - Shipyard Redevelopment CMP Process Outline for Three Phase and CT rated services
Attachments: Easement_Information_Worksheet.doc; Standard Easement Sample.pdf; January 2018 EDET.xlsx

Christi Holmes
Design Engineer
Gorrill Palmer
707 Sable Oaks Drive, Suite 30
South Portland, ME 04106
Sent via email to: cholmes@gorrillpalmer.com

RE: CMP Ability to Serve Letter for the Shipyard Brewery Site Development

Dear Ms. Holmes:

CMP has the ability to serve the proposed project in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Standards Handbook. If you have any questions on the process, or need help in completion of the documents, please contact me.

Project Description:

Description of Development Site

The site encompasses Tax Map 20, lots C001, C002, C005, C009 and C015 and is approximately 2 acres in size. The site is bounded by Newbury, Mountfort, Fore, and Hancock Streets.

The site's current uses include the Shipyard Brewery and two multi-unit residential buildings. Abutting land uses include:

- North – Residential (single family homes)
- West – Residential (condominiums)
- South – Commercial (Marriott Residence Inn)
- East – Residential (townhouses)

Project Description

The proposed development includes the following:

- Three-story, 277 space parking garage
- 2,500 sf retail/tasting room (existing Shipyard retail/tasting to remain)
- 132 room hotel
- 60,000 sf specialty pharmacy and fulfillment
- 60,000 sf office

Existing overhead electric is located on Newbury, Mountfort and Fore Streets. The Shipyard Brewery is currently served by a pad mount transformer.

Here is our typical three phase process for getting your service installed. If you have any questions, please let me know.

Service Milestones for Three Phase Services and CT Rated Single Phase Services

- Call 1-800-565-3181 to establish a new account (if needed) and an SAP work order. Please provide both of these to me.
- Submit Load information. Please complete this CMP spreadsheet using load information
- Submit the easement information worksheet. Please complete this CMP form and either email or fax back to us.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections if you have them.
- Preliminary meetings with CMP Advisor and Engineer to determine details of job (I will need to schedule with your electrician/contractor-please let me know who this is)
- Field planner design appointment to cost out job and develop CMP Invoice.
- Submit invoice for payment.
- Easements signed and payment received.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer delivery, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

Please complete the attached forms (specific instructions are on each form) and email them back to me at your earliest convenience.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements:

[CMP Handbook of Standard Requirements](#)

Your deposit amount will be based on an estimated two month bill, calculated from your completed load sheet.

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to <http://www.cmpco.com/YourAccount/puc324.html> and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If your project is under 660 KW you will be able to have a Customer Net Energy Billing contract. Information concerning Chapter 313 (Customer Net Energy Billing) can be accessed thru the Chapter 324 website or by clicking here: [Net Energy Billing](#).

If you have any questions, please contact me.

Attachments:

Excel Load Sheet
Easement Worksheet and Sample Standard Easement

Regards,

Jamie

Jamie Cough
Energy Services Advisor
Central Maine Power Company
162 Canco Road
Portland, ME 04103
207-842-2367 office
207-458-0382 cell
207-626-4082 fax



=====

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March 15, 2018

Christi Holmes
Gorrill Palmer
707 Sable Oaks Drive, Suite 30
South Portland, ME 04106

Re: Shipyard Redevelopment, Newbury Street, Portland

Dear Ms. Holmes:

Thank you for your interest in using natural gas for the above referenced project.

This is to confirm that natural gas can be made available from our distribution system to serve your proposed project.

Any improvements to the existing distribution system necessary to provide this service, as well as the design of the gas system in the project itself will be established as the overall design and scope of your project progresses. Please provide gas load requirements in order for the evaluation to be completed.

If you have any further questions or require additional information, please contact Scott Carpenter directly at (207) 541-2543 or at carpenterc@unitil.com.

Sincerely,
Kelly Fowler
Business Development Executive
Unitil Corporation
(o) 207-541-2505 (f) 207-541-2565

ME GAS CUSTOMER ENERGY SOLUTIONS
376 Riverside Industrial Parkway
Portland, ME 04103

T 207-541-2508 www.unitil.com

March 15, 2018

Jay Arnold
Portland Water District
225 Douglas Street
Portland, Maine 04104

Re: Proposed Shipyard Brewing Redevelopment
Newbury Street, Portland
Letter of Ability to Serve

Dear Jay,

86 Newbury Street, LLC has retained Gorrill Palmer to prepare plans and permit applications for the proposed Shipyard Brewing Redevelopment at 86 Newbury Street. The plans and proforma for the above referenced project have changed since we met last year. The project includes construction of a parking garage, office, hotel and specialty pharmacy and fulfillment facility. A portion of the Shipyard building is proposed to remain. Preliminary sketches are enclosed for your review. We are requesting an ability to serve letter from the District.

Description of Development Site

The site encompasses Tax Map 20, lots C001, C002, C005, C009 and C015 and is approximately 2 acres in size. The site is bounded by Newbury, Mountfort, Fore, and Hancock Streets.

The site's current uses include the Shipyard Brewery and two multi-unit residential buildings. Abutting land uses include:

- North –Residential (single family homes)
- West – Residential (condominiums)
- South – Commercial (Marriott Residence Inn)
- East — Residential (townhouses)

Project Description

The proposed development includes the following:

- Three-story, 277 space parking garage
- 2,500 sf retail/tasting room (existing Shipyard retail/tasting to remain)
- 132 room hotel
- 60,000 sf specialty pharmacy and fulfillment
- 60,000 sf office

Existing water mains are located in Newbury, Mountfort, Fore and Hancock Streets. Existing fire hydrants are located near the northwest corner of the parcel at the intersection of Hancock Street and Newbury Street, north of the parcel on Newbury Street, and the southeast corner at the intersection of



Mountfort Street and Fore Street. It is unknown at this time where the proposed development will be served, but likely will be served from two locations –Hancock and Mountfort Streets.

Anticipated Flows

The anticipated wastewater generation for the development was computed using the Maine Subsurface Waste Water Disposal Rules Table 4C. 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 vs the existing Shipyard usage.

<i>Anticipated Wastewater Generation</i>		
	Average Daily Wastewater Generation (gpd)	Peak Daily Wastewater Generation (gpd)
Proposed Development	6,929	12,473

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 at cholmes@gorrillpalmer.com.

Sincerely,

Gorrill Palmer

Christi Holmes
Design Engineer

Enclosure



JOB

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SCALE

Shipyards Redevelopment

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OF

I

CEH

DATE

3/14/2018

LSA

DATE

3/15/2018

None

Task: Compute Proposed Design Flow for Shipyards Redevelopment based on Table 4C of the Maine Subsurface Wastewater Disposal Rules for comparison to the Existing Flow.

Assumptions: Facility Information (retail, number of units) provided by Archetype
Table 4C of the Maine Subsurface Wastewater Disposal Rules

1 employee per	200	sf office	1 employee per	1000	sf laboratory/fulfillment
1 employee per	400	sf specialty retail	1 employee per	10	rooms of hotel

Proposed Use:

Office	60,000	SF
Fulfillment	30,000	SF
Laboratory	30,000	SF
Hotel	132	rooms
Specialty Retail	2,500	SF

Wastewater Flow Per Use:

Office - place of employment with no showers	12	gpd/employee	
Laboratory/Fulfillment - place of employment with no showers	12	gpd/employee	
Hotel/Motel with Kitchen	60	gpd per bedroom	12 gpd per employee
Specialty Retail - place of employment with no showers	12	gpd/employee	

Calculations: See Below

Conclusion: The proposed Peak Design Flow is

12,473 gallons/day

Water Use Calculations Based on Facility Usage

Office

Number of employees	300	
Flow Rate	12	gpd/employee Per Table 4C
Subtotal	3,600	gallons/day

Fulfillment

Number of employees	30	
Flow Rate	12	gpd/employee Per Table 4C
Subtotal	360	gallons/day

Laboratory

Number of employees	30	
Flow Rate	12	gpd/employee Per Table 4C
Subtotal	360	gallons/day

Hotel

Number of Rooms	132	
Flow Rate	60	gpd/bedroom Per Table 4C
Number of employees	13	
Flow Rate	12	gpd/employee
Subtotal	8,078	gallons/day

Specialty Retail

Number of Employees	6	
Flow Rate	12	gpd/employee Per Table 4C
Subtotal	75	gallons/day

Total Design Flow	12,473	gallons/day
--------------------------	---------------	--------------------



5 Davis Farm Rd
Portland, ME 04103
207- 878-0831 office
207-745-9363 cell
207- 797-1098 fax

April 16, 2018

To Whom It May Concern:

My name is Patrick Morrison and I am the engineer for the Westbrook area. This letter is to inform that Consolidated Communications has the capacity and willingness to serve the proposed redevelopment at Newbury ST in Portland, ME. Consolidated Communications currently has aerial copper facilities feeding the existing Shipyard Brewery at the site. We have fiber optics cable in the nearby area on Fore St. Please do not hesitate to contact me with any questions.

Sincerely,

Patrick Morrison

Consolidated Communications Outside Plant Engineer

207-878-0831 or 207-745-9363

March 15, 2018

Scott Derrig
Fairpoint Communications
5 Davis Farm Rd
Portland, ME 04103

Re: Proposed Shipyard Brewing Redevelopment
86 Newbury Street, Portland
Letter of Ability to Serve

Dear Scott:

The plans and proforma for the above referenced project have changed and we are requesting an updated ability to serve indication. The project includes construction of a parking garage, office, hotel and specialty pharmacy and fulfillment facility. A portion of the Shipyard building is proposed to remain. Preliminary sketches are enclosed for your review.

Description of Development Site

The site encompasses Tax Map 20, lots C001, C002, C005, C009 and C015 and is approximately 2 acres in size. The site is bounded by Newbury, Mountfort, Fore, and Hancock Streets.

The site's current uses include the Shipyard Brewery and two multi-unit residential buildings. Abutting land uses include:

- North –Residential (single family homes)
- West – Residential (condominiums)
- South – Commercial (Marriott Residence Inn)
- East — Residential (townhouses)

Project Description

The proposed development includes the following:

- Three-story, 277 space parking garage
- 2,500 sf retail/tasting room (existing Shipyard retail/tasting to remain)
- 132 room hotel
- 60,000 sf specialty pharmacy and fulfillment
- 60,000 sf office

Existing overhead service is located on Newbury, Mountfort and Fore Streets. It appears that the Shipyard Brewery is currently served by a pad mount transformer, and overhead service on the Newbury Street side of the building. It is unknown at this time where the proposed development will be served.



Ability to Serve

In support of the applications to the reviewing authorities, we are writing to request a letter indicating the ability of Fairpoint to serve the project. An email is sufficient and may be sent to cholmes@gorrillpalmer.com We will invite you to attend a utility coordination meeting as the project progresses.

If you require additional information, please contact me at 772-2515.

Sincerely,

Gorrill Palmer

A handwritten signature in black ink that reads "Christi Holmes".

Christi Holmes
Design Engineer

Enclosure

CEH/U:\3184_Shipyard Brewing\H Utilities\Fairpoint.doc

March 15, 2018

Mark Pelletier
Spectrum
118 Johnson Road
Portland, ME 04102

Re: Proposed Shipyard Brewing Redevelopment
86 Newbury Street, Portland
Letter of Ability to Serve

Dear Mark:

The plans and proforma for the above referenced project have changed and we are requesting an updated ability to serve indication. The project includes construction of a parking garage, office, hotel and specialty pharmacy and fulfillment facility. A portion of the Shipyard building is proposed to remain. Preliminary sketches are enclosed for your review.

Description of Development Site

The site encompasses Tax Map 20, lots C001, C002, C005, C009 and C015 and is approximately 2 acres in size. The site is bounded by Newbury, Mountfort, Fore, and Hancock Streets.

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- 60,000 sf specialty pharmacy and fulfillment
- 60,000 sf office

Existing overhead service is located on Newbury, Mountfort and Fore Streets. It appears that the Shipyard Brewery is currently served by a pad mount transformer, and overhead service on the Newbury Street side of the building. It is unknown at this time where the proposed development will be served.



Ability to Serve

In support of the applications to the reviewing authorities, we are writing to request a letter indicating the ability of Spectrum to serve the project. An email is sufficient and may be sent to cholmes@gorrillpalmer.com. We will invite you to attend a utility coordination meeting as the project progresses.

For additional information, please contact me at 772-2515.

Sincerely,

Gorrill Palmer

A handwritten signature in black ink that reads 'Christi Holmes'. The script is cursive and fluid, with the first name 'Christi' and last name 'Holmes' clearly distinguishable.

Christi Holmes
Design Engineer

Enclosure

CEH/U:\3184_Shipyard Brewing\H Utilities\Spectrum.doc



PAUL R. LePAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE 04333

Att. O

WALTER E. WHITCOMB
COMMISSIONER

April 3, 2017

Christi Holmes
Gorrill and Palmer
707 Sable Oaks Drive, Suite 30
South Portland, ME 04106

Via email: cholmes@gorrillpalmer.com

Re: Rare and exemplary botanical features in proximity to: Project 3184, Shipyard Brewing Redevelopment, Portland, Maine

Dear Ms. Holmes:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received March 31, 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. Based on the information in our files and the landscape context of this project, there is a low probability that rare or significant botanical features occur at this project location.

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.

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.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM



PHONE: (207) 287-8044
FAX: (207) 287-8040
WWW.MAINE.GOV/DACF/MNAP

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,

A handwritten signature in blue ink, appearing to read "Don Cameron", with a long, sweeping horizontal line extending to the right.

Don Cameron | Ecologist | Maine Natural Areas Program
207-287-8041 | don.s.cameron@maine.gov



STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

CHANDLER E. WOODCOCK
COMMISSIONER

April 8, 2017

Christi Holmes
Gorrill Palmer
P.O. Box 1237, 15 Shaker Road
Gray, ME 04039

RE: Information Request - Shipyard Brewing Company redevelopment, Portland

Dear Christi:

Per your request received March 31, 2017, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *Shipyard Brewing Company redevelopment Project* in Portland.

Our Department has not mapped any Essential or Significant Wildlife Habitats or fisheries habitats that would be directly affected by your project.

Endangered, Threatened, and Special Concern Species

Bats

Of the eight species of bats that occur in Maine, the three *Myotis* species are protected under Maine's Endangered Species Act (MESA) and are afforded special protection under 12 M.R.S §12801 - §12810. The three *Myotis* species include little brown bat (*M. lucifugus*, State Endangered); northern long-eared bat (*M. septentrionalis*, State Endangered); and eastern small-footed bat (*M. leibii*, State Threatened). The five remaining bat species are listed as Special Concern: big brown bat (*Eptesicus fuscus*); red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), silver-haired bat (*Lasionycteris noctivagans*), and tri-colored bat (*Perimyotis subflavus*). It is possible that some of these bat species could occupy the structure(s) in the project review area. Unless there is a threat to human health and safety, we recommend that construction or demolition work on bat-occupied portions of the structure not occur between June 1 and August 15, when young bats are still unable to fly and would likely die without parental care. For more information on preventing conflicts with bats, we recommend following the "Preventing Conflicts" guidelines found [here](https://www1.maine.gov/ifw/wildlife/human/lww_information/bats.html)¹.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

¹"Living with Wildlife: Bats." Maine Department of Inland Fisheries and Wildlife.
https://www1.maine.gov/ifw/wildlife/human/lww_information/bats.html

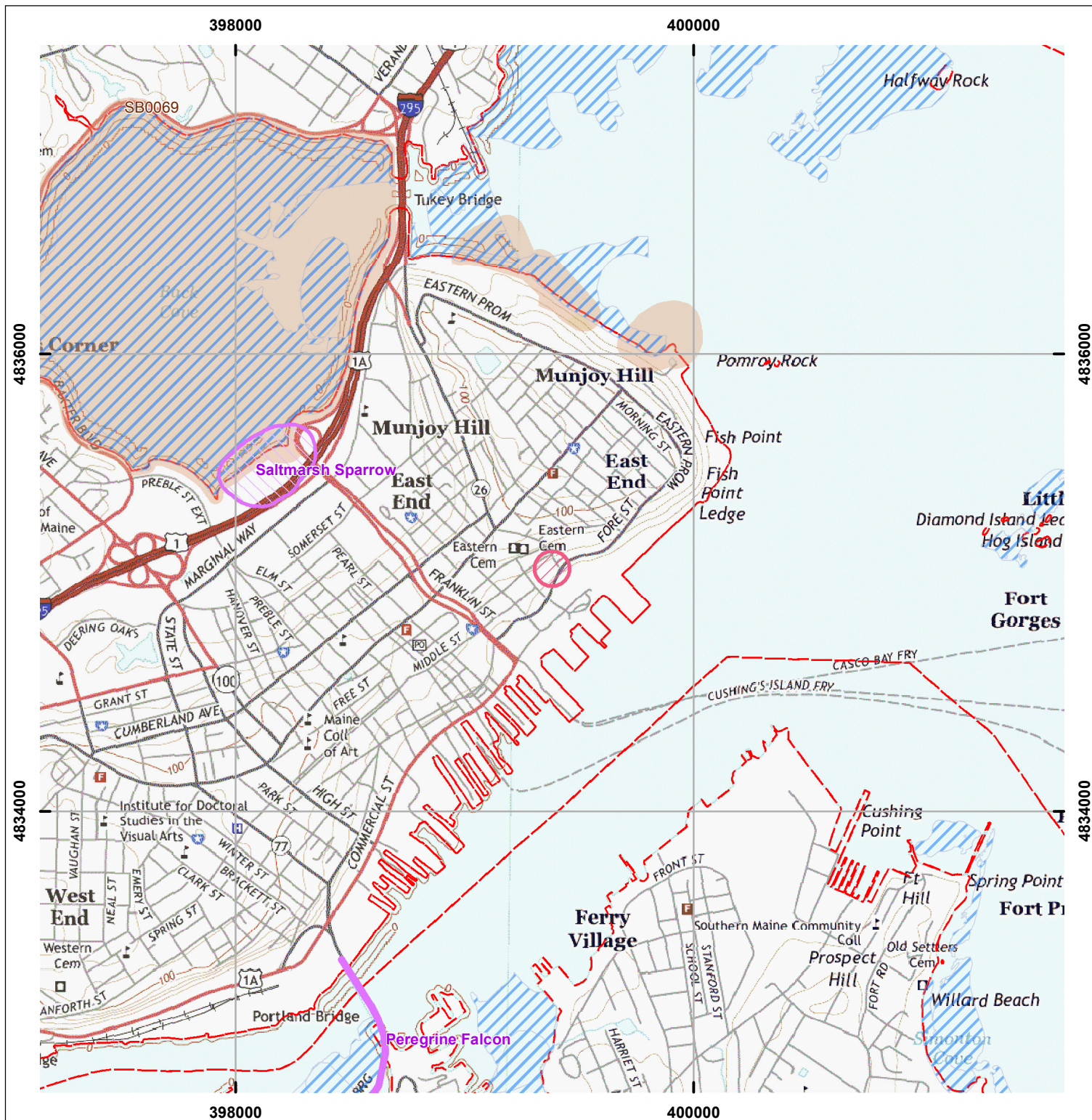
Letter to Christi Holmes
Comments RE: Shipyard Brewing Company redevelopment, Portland
April 8, 2017

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

A handwritten signature in blue ink, appearing to read "JPerry", with a stylized flourish at the end.

John Perry
Environmental Review Coordinator

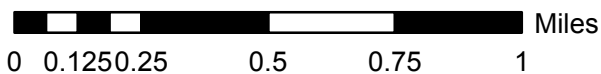


Environmental Review of Fish and Wildlife Observations and Priority Habitats

Project Name: Portland, Shipyard Brewing Company redevelopment (Version 1)



Maine Department of
Inland Fisheries and Wildlife



Projection: UTM, NAD83, Zone 19N

Date: 4/4/2017

- Shorebird Areas
- Tidal Waterfowl/Wading Bird
- ETSc Environmental Review Polygons





MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333



PAUL R. LEPAGE
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

April 24, 2017

Ms. Christi Holmes
Design Engineer
Gorrill Palmer
77 Sable Oaks Drive, Suite 30
South Portland, ME 04106

Project: MHPC #0430-17 86 Newbury Street LLC; Map 20; Lots C001, 002, 005, 009, 015
Proposed Shipyard Brewing Redevelopment

Town: Portland, ME

Dear Ms. Holmes:

In response to your recent request, I have reviewed the information received April 5, 2017 to initiate consultation on the above referenced project in accordance with the City of Portland's regulations.

The proposed project area is not only sensitive to historic archaeology but located near the National Register Listed Abyssinian Meeting House. The project is located near the adjacent India Street Historic District which is a local historic district. The two buildings that are proposed to be demolished as part of the project are the William Mundy House and the William Mundy Block. Information at our office includes historic photographs of the buildings from the 1924 Portland tax records and architectural survey forms from 2003 that have details of deed research completed at that time. At this time, additional information is needed on these two buildings in order for our office to make a determination of eligibility for the National Register of Historic Places. If possible, please provide our office with a detailed history of these two buildings including information on the various tenants of both buildings since their construction, where they worked and their ethnicity, as well as additional information on William Mundy and who he was in Portland's history. Please include interior photos of each building.

The block within which the proposed project is to occur has witnessed a long period of development that spans the 18th through 21st centuries. The earliest 18th-century occupation consisted of residences on Fore Street that overlooked Portland harbor and had access to a private wharf (see 1770s map). Subsequent development by the mid-19th century consisted of dwellings and shops on all street faces (1851, 1857 maps). The fact that the Abyssinian Meeting House is directly across the street from the project area suggests that the ethnic makeup of the neighborhood at that time may have included African Americans, the homes of which are archaeologically undocumented in Portland. In time industrial development occurred in the south and central portion of the block in the form of a sugar refinery (1871 map). Other commercial and industrial buildings followed, such that by the mid-20th century the block had been largely transformed to industrial production (machine shops among others). This trend has continued to the present with only a few domestic residences remaining on Newbury and Mountfort Streets.

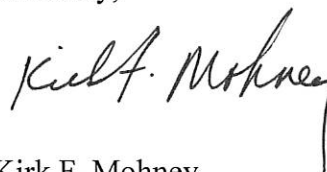
Such a progression of development is frequently assumed to have destroyed evidence of earlier occupation that would be of archaeological significance. It is often the case, however, that the history of occupation is surprisingly well preserved in the form of archaeological remains, even under existing buildings and in areas that have escaped deep excavation for cellars. Due to this fact much of the proposed project area maintains the potential to contain significant domestic and industrial archaeological resources associated with Euro-American and African American occupation in the form of foundations, cellars, trash pits, privies and deposits resulting from specific activities.

A Phase I Archaeological Reconnaissance Survey, therefore, is recommended for the proposed project area. This survey should consist of documentary and map research and assessment of existing structures to document the site's land use history and potential for preservation of intact archaeological resources. This work should be accompanied by Phase I shovel testing of available yard spaces where such testing is deemed to be warranted.

If the findings of the Phase I survey result in a recommendation for further investigation at the Phase II level, it is suspected that much of that investigation will consist of monitoring construction-associated excavation in close cooperation with the site contractor. The purpose of the monitoring is to identify and document archaeological resources before they are removed. This approach will save time, but will require that archaeologists be given time to document any findings.

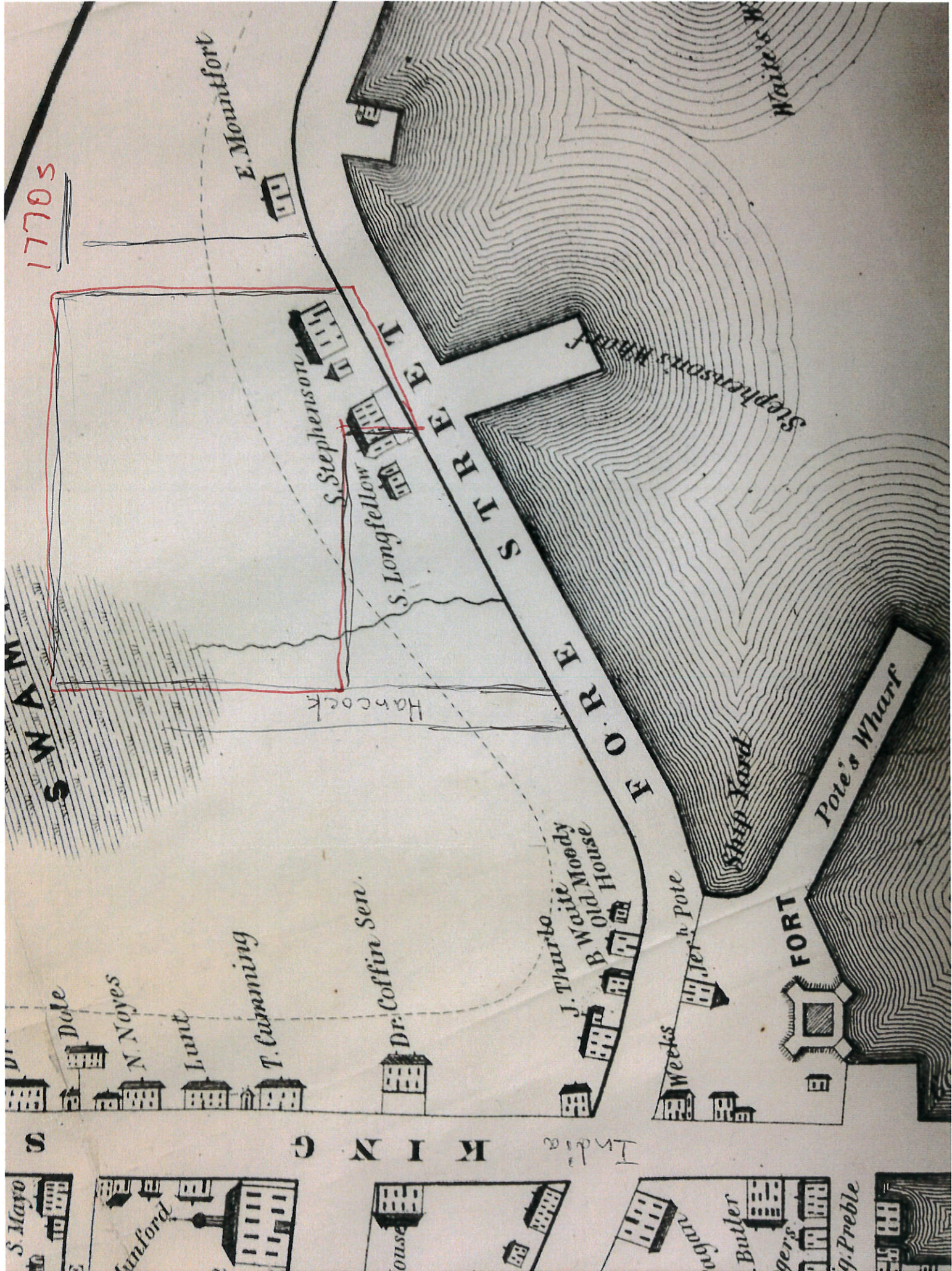
Once this information is received, we will forward a response regarding the results of our evaluation. Please contact Megan Hopkin at (207) 287-2992 or megan.m.hopkin@maine.gov if you have any questions regarding this request.

Sincerely,

A handwritten signature in black ink, reading "Kirk F. Mohney". The signature is written in a cursive style with a long, sweeping tail on the last name.

Kirk F. Mohney
State Historic Preservation Officer

Enc.

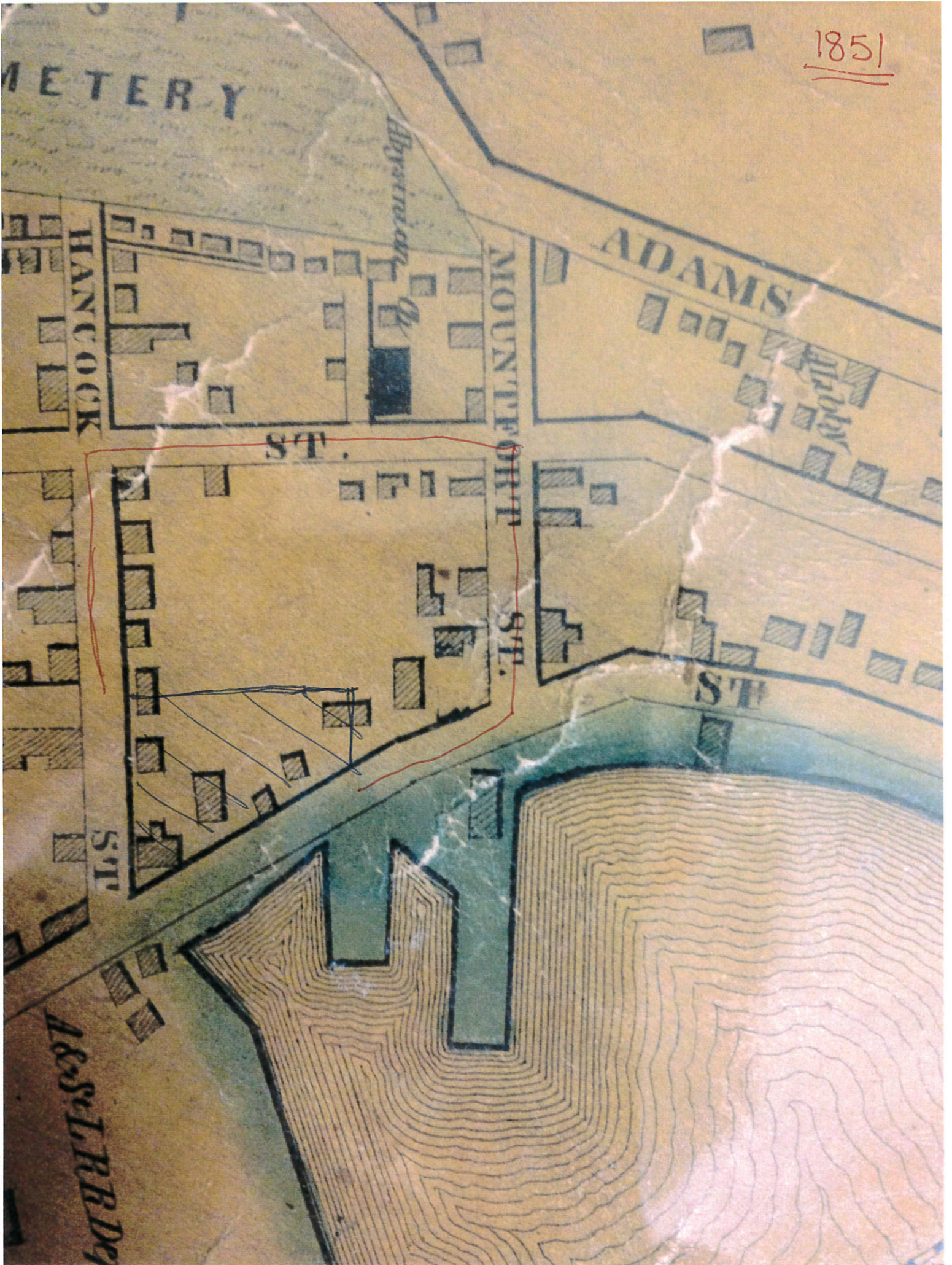


1770s

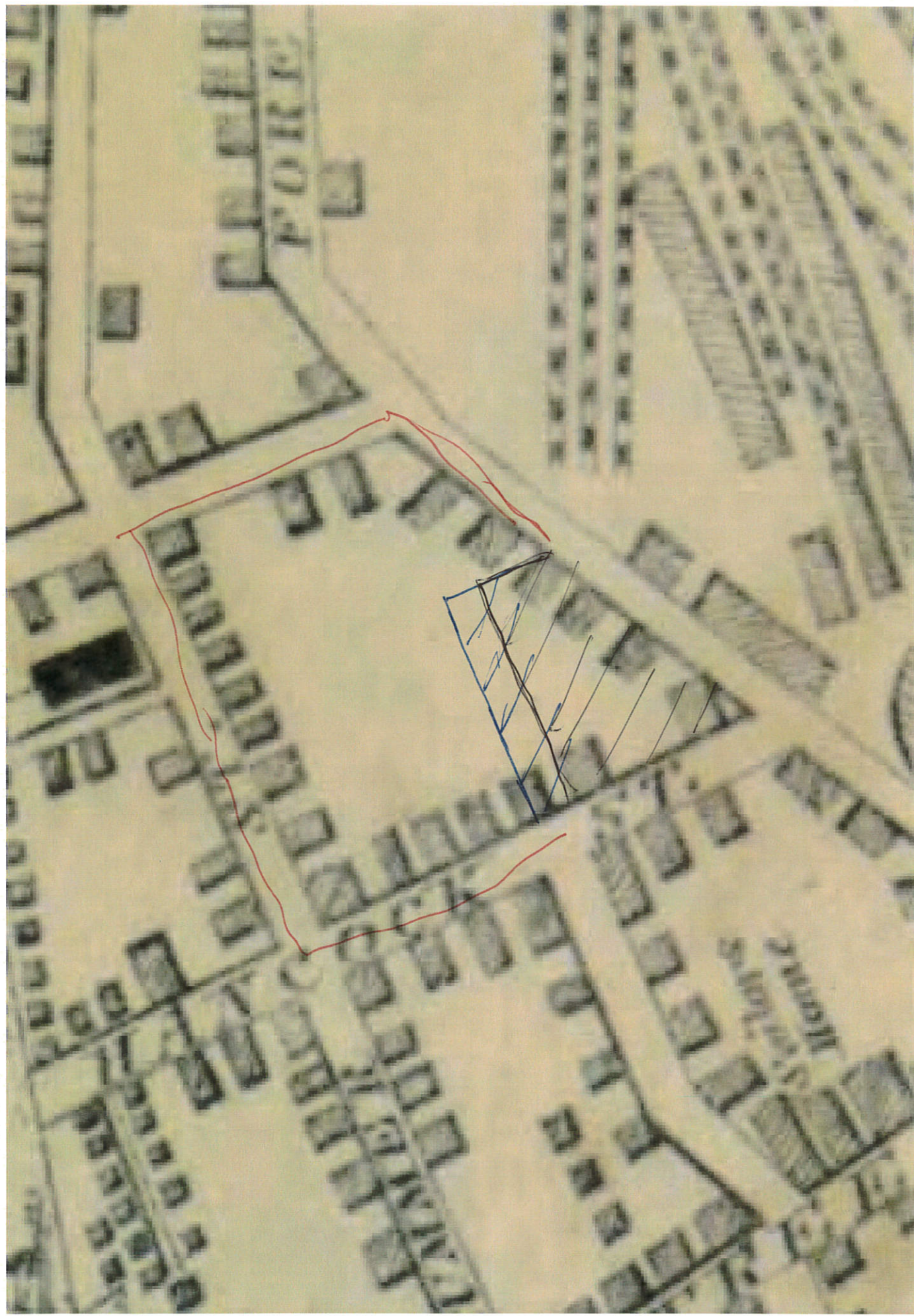
INDIA KING

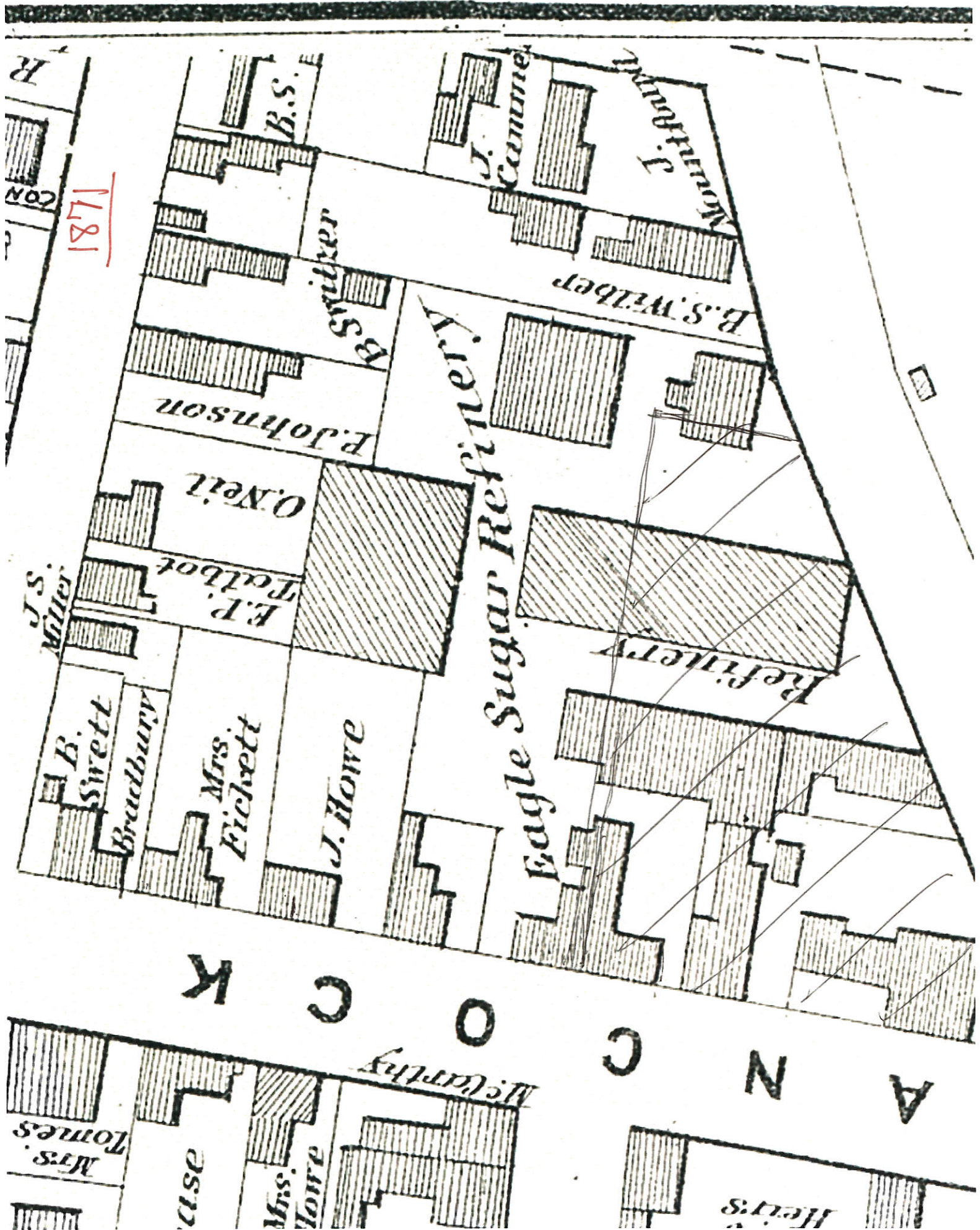
S. Mayo
Funford
house
Butler
gers
g. Preble
Weeks
Jer. h. Pote
Waite's Wharf
Stephen's Wharf
Ship Yard
Pote's Wharf
FORT
J. Thurlbo
B. Old House
Dr. Coffin Sen.
T. Cumming
Lunt
N. Noyes
Dole
S. Mayo
Funford
house
Butler
gers
g. Preble

1851



1857





1871
1881

A
N
C
O
C
K

Eagle Sugar Refinery

Refinery

B.S. Wilber

J. Cammer

Mountbarn

B.S. Wilber

P. Johnson

O. Neil

F.P. Talbot

J. S. Miller

A.B. Swett

Bradbury

Mrs. Eickert

J. Howe

Mrs. Tomes

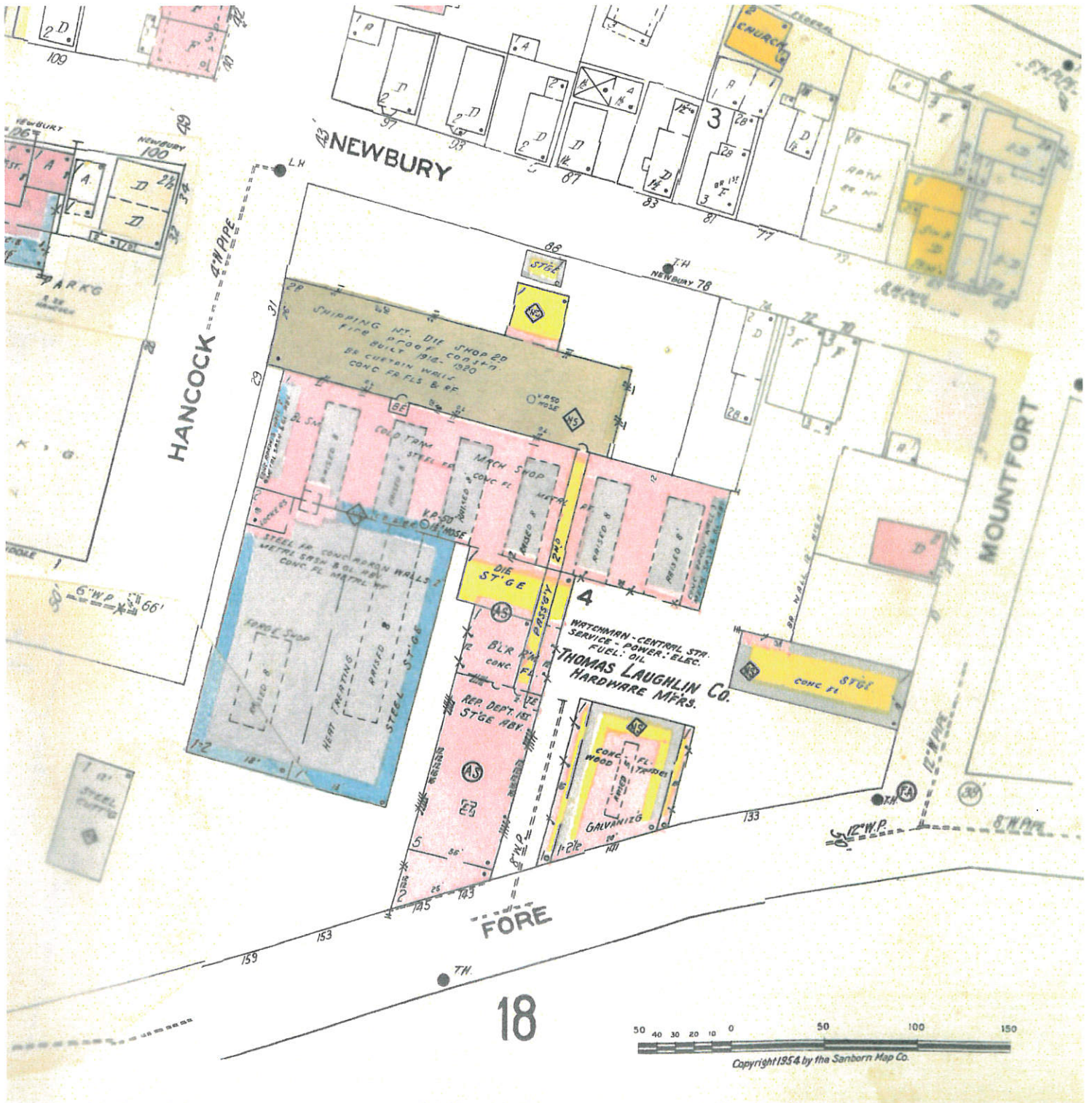
Case

Mrs. Lowe

McCarthy

Harris

1956



MHPC USE ONLY

1023

INVENTORY NO.

SURVEY MAP NAME _____

MAINE HISTORIC PRESERVATION COMMISSION

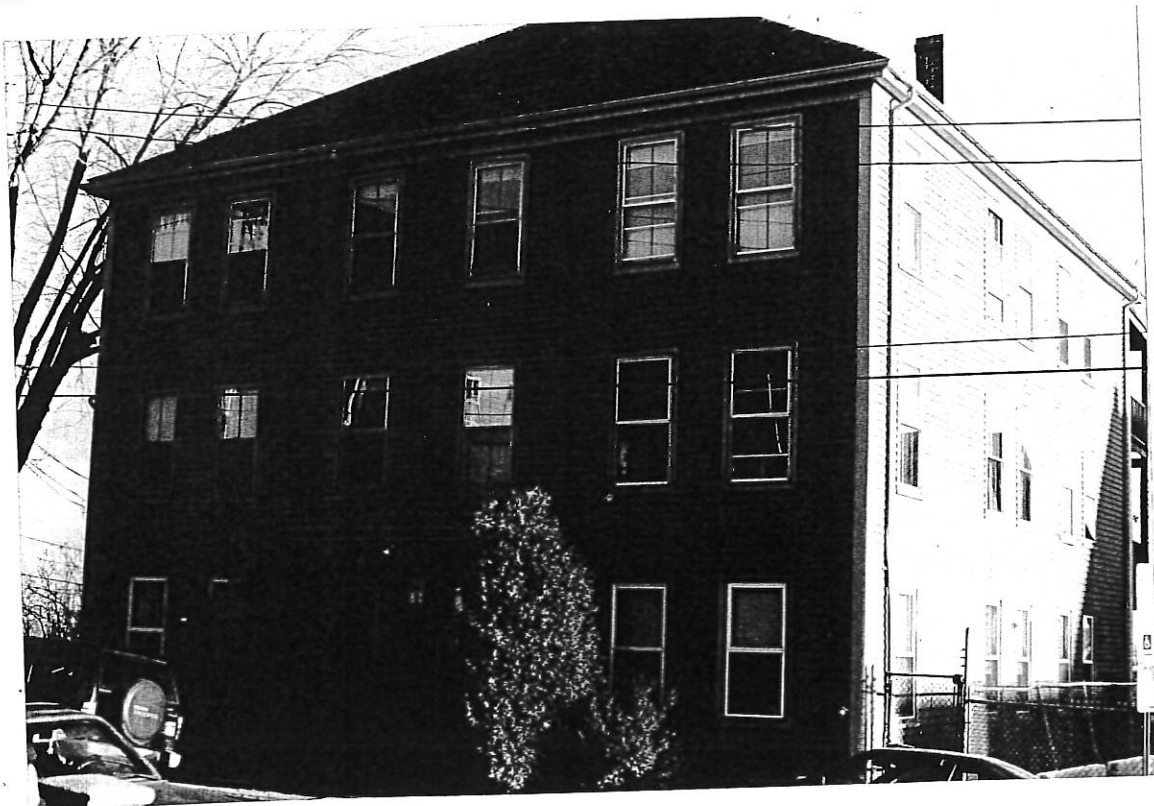
Historic Building/Structure Survey Form

1. PROPERTY NAME (HISTORIC): William Mandy Block
2. PROPERTY NAME (OTHER): _____
3. STREET ADDRESS: 70-72 Newbury Street
4. TOWN: Portland
5. COUNTY: Cumberland
6. DATE RECORDED: July 2001
7. SURVEYOR: Natasha Deprie
8. OWNER NAME: _____ ADDRESS: _____
9. PRIMARY USE (PRESENT):
- | | | | |
|--|---------------------------------------|--|--------------------------------------|
| ☐ SINGLE FAMILY | ☐ AGRICULTURE | ☐ COMMERCIAL/TRADE | ☐ FUNERARY |
| ☒ MULTI-FAMILY | ☐ GOVERNMENTAL | ☐ EDUCATION | ☐ HEALTH CARE |
| ☐ INDUSTRY | ☐ RELIGIOUS | ☐ HOTEL | ☐ LANDSCAPE |
| ☐ TRANSPORTATION | ☐ DEFENSE | ☐ SUMMER COTTAGE/CAMP | ☐ SOCIAL |
| ☐ RECREATION/CULTURE | ☐ UNKNOWN | | |
| ☐ OTHER | | | |
10. CONDITION: ☒ GOOD ☐ FAIR ☐ POOR ☐ DESTROYED, DATE 1/1

ARCHITECTURAL DATA

11. PRIMARY STYLISTIC CATEGORY:
- | | | | |
|--|---|---|--|
| ☐ COLONIAL | ☐ STICK STYLE | ☐ NEO-CLASSICAL REV. | ☐ FOUR SQUARE |
| ☐ FEDERAL | ☐ QUEEN ANNE | ☐ RENAISSANCE REV. | ☐ ART DECO |
| ☐ GREEK REVIVAL | ☐ SHINGLE STYLE | ☐ 19TH/20TH C. REVIVAL | ☐ INTERNATIONAL |
| ☐ GOTHIC REVIVAL | ☐ R. ROMANESQUE | ☐ ARTS & CRAFTS | ☐ RANCH |
| ☒ ITALIANATE | ☐ ROMANESQUE | ☐ BUNGALOW | ☐ VERNACULAR |
| ☐ SECOND EMPIRE | ☐ HIGH VIC. GOTHIC | OTHER <u>Colonial Revival</u> | |
12. OTHER STYLISTIC CATEGORY:
- | | | | |
|---|---|---|--|
| ☐ COLONIAL | ☐ STICK STYLE | ☐ NEO-CLASSICAL REV. | ☐ FOUR SQUARE |
| ☐ FEDERAL | ☐ QUEEN ANNE | ☐ RENAISSANCE REV. | ☐ ART DECO |
| ☐ GREEK REVIVAL | ☐ SHINGLE STYLE | ☐ 19TH/20TH C. REVIVAL | ☐ INTERNATIONAL |
| ☐ GOTHIC REVIVAL | ☐ R. ROMANESQUE | ☐ ARTS & CRAFTS | ☐ RANCH |
| ☐ ITALIANATE | ☐ ROMANESQUE | ☐ BUNGALOW | ☐ VERNACULAR |
| ☐ SECOND EMPIRE | ☐ HIGH VIC. GOTHIC | OTHER <u>Colonial Revival</u> | |
13. HEIGHT: ☐ 1 STORY ☐ 1 1/2 STORY ☐ 2 STORY ☐ 2 1/2 STORY ☒ 3 STORY ☐ 4 STORY ☐ 5 STORY ☐ OVER 5 ()
14. PRIMARY FACADE WIDTH (MAIN BLOCK; USE GROUND FLOOR): ☐ 1 BAY ☐ 2 BAY ☐ 3 BAY ☐ 4 BAY ☐ 5 BAY ☒ MORE THAN 5 6
15. APPENDAGES: ☐ SIDE ELL ☒ REAR ELL ☐ FRONT TOWER ☐ ADDED STORIES ☒ SKED BAY WINDOW ☐ CUPOLA ☐ DORMERS ☐ PORCH

PHOTOGRAPH:



16. PORCH: ATTACHED ☒ LESS THAN FULL WIDTH ☐ ENGAGED ☐ ONE STORY WRAPAROUND ☐ MORE THAN ONE SLEEP PORCH ☒ FULL WIDTH OTHER PORCH ☒
17. PLAN: ☐ HALL AND PARLOR ☐ 1/2 CAPE ☐ CENTRAL HALL ☐ SIDE HALL
☐ BACK HALL ☐ IRREGULAR ☐ OTHER
18. PRIMARY STRUCTURAL SYSTEM: ☐ TIMBER FRAME ☐ BRACED FRAME ☐ BRICK ☐ STONE ☐ BALLOON FRAME
☐ CONCRETE ☐ STEEL ☐ LOG ☐ PLANK WALL ☐ PLATFORM FRAME
☒ FRAME CONSTRUCTION - TYPE UNKNOWN ☐ OTHER
19. CHIMNEY PLACEMENT: ☒ INTERIOR ☐ INTERIOR FRONT/REAR ☐ CENTER ☐ INTERIOR END ☐ EXTERIOR
☐ OTHER
20. ROOF CONFIGURATION: ☐ GABLE SIDE ☐ GABLE FRONT ☒ HIP ☐ MANSARD ☐ FLAT
☐ GAMBREL ☐ PARAPET GABLE ☐ SHED ☐ CROSS ☐ GABLE
☐ COMPOUND ☐ OTHER
21. ROOF MATERIAL: WOOD ☐ METAL ☐ TILE ☐ SLATE ☐ ASPHALT ☐ ASBESTOS ☐
22. EXTERIOR WALL MATERIALS: ☒ CLAPBOARD ☐ BRICK ☐ FLUSH SHEATHING ☐ WOOD SHINGLE ☐ STONE
☐ LOG ☐ PRESSED METAL ☐ CONCRETE ☐ STUCCO ☐ ASPHALT
☐ GRANITE ☐ ASBESTOS ☐ TERRA COTTA ☐ BOARD AND BATTEN ☐ ALUMINUM/VINYL
☐ OTHER
23. FOUNDATION MATERIAL: ☐ FIELDSTONE ☒ BRICK ☐ WOOD ☐ CONCRETE ☐ GRANITE ☐ ORNAMENTAL CONC. BLOCK
☐ OTHER
24. OUTBUILDINGS/FEATURES: ☐ CARRIAGE HOUSE ☐ FENCE OR WALL ☐ CEMETERY ☐ BARN (CONNECTED)
☐ BARN (DETACHED) ☐ FORMAL GARDEN ☐ LANDSCAPE/PLANT MAT. ☐ ARCHAEOLOGICAL SITE
☐ GARAGE ☐ OTHER

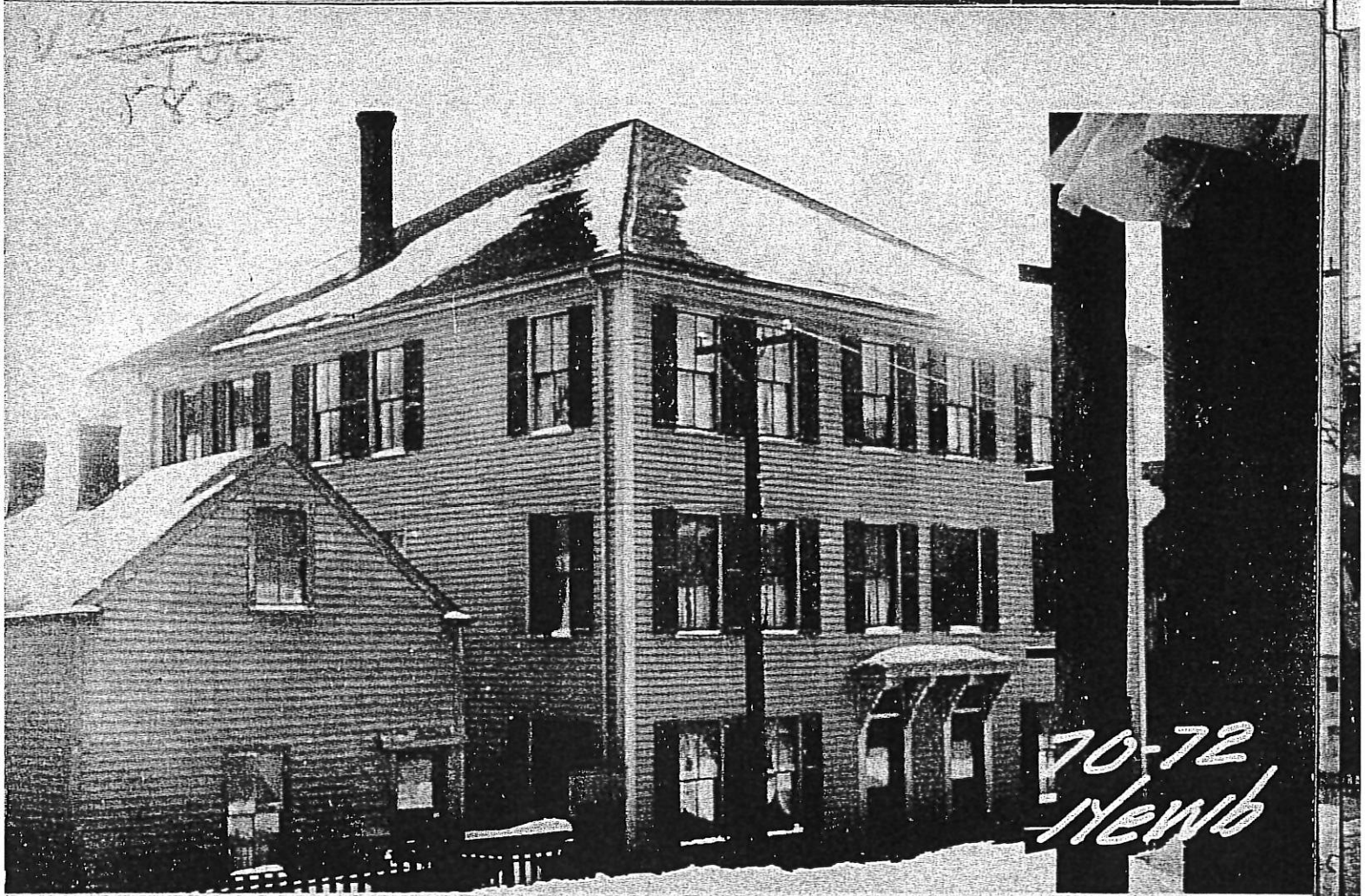
HISTORICAL DATA

25. DOCUMENTED DATE OF CONSTRUCTION: 1893 26. ESTIMATED DATE OF CONSTRUCTION: _____
27. DATE MAJOR ADDITIONS/ALTERATIONS: _____
28. ARCHITECT: _____ 29. CONTRACTOR: _____
30. ORIGINAL OWNER: William Mundy
31. SUBSEQUENT SIGNIFICANT OWNER: _____ DATES: _____
32. CULTURAL/ETHNIC AFFILIATION: ☐ ENGLISH ☐ FRENCH ACADIAN ☐ NATIVE AMERICAN ☐ SCOTTISH ☐ FRENCH CANADIAN
☐ EAST EUROPEAN ☐ IRISH ☐ OTHER
33. HISTORIC CONTEXT(S): ☐ COMMERCE ☐ INDUSTRY ☐ TRANSPORTATION ☐ AGRICULTURE ☐ MILITARY
☐ RELIGION ☐ CIVIC AFFAIRS ☐ RECREATION ☐ HABITATION ☐ EDUCATION
☐ ART, LIT. SCIENCE ☐ SOCIAL
34. COMMENTS/SOURCES: CPL marker - 1882 Revolver Attack - P. Morgan Est 3332 - 2 bldg. Arch
1914 map 70 Newbury 3332 - 1 bldg, Max W. Simons owner. Valuation 1893 Mundy, William
Land & W. Bld. S. Side Newbury St. # 68 & 72 Area - 3337 Value 500 (additions & corrections in pencil)
1894 Mundy, Mary Jane Land & W. Bld. S. Side Newbury St. # 68 & 72 Area 3332 4000 + 100 2000
[to Warren Coffey] CCR 611/158 (2/21/1894) Abstract of will of Wm Mundy, all real estate to wife Mary
Mundy, 615/246 (7/15/1894) Mary Mundy -> Warren Coffey
35. HISTORICAL DRAWINGS EXIST: ☐ YES ☐ NO LOCATION: _____

ENVIRONMENTAL DATA

36. SITE INTEGRITY: ☐ ORIGINAL ☐ MOVED DATE MOVED: _____
37. SETTING: ☐ RURAL/UNDISTURBED ☐ RURAL/BUILT UP ☐ SMALL TOWN ☐ URBAN ☐ SUBURBAN
38. QUADRANGLE MAP USED: _____ QUADRANGLE #: _____
39. UTM NORTHING: _____ 40. UTM EASTING: _____
41. FACADE DIRECTION (CIRCLE ONE): N S E W NE NW SE SW
- =====
- MHPC USE ONLY
- DATE ENTERED IN INVENTORY: 11/24/04 PHOTO FILE #: Carol binder
- NR STATUS: L ☐ HD ☐ E ☐ NE ☐ NO ☒ REVIEWER: CAM
- DATA SOURCE: ☒ HPF ☐ CLG ☐ R&C ☐ STAFF ☐ STATE SURVEY ☐ OTHER _____ LEVEL OF SURVEY: ☒ R ☐ I

Area		Multiplier	Coefficient
3332		121	4031
Year	Unit	Coefficient	Land Value
19	808	4031	3224



Surveyed by

APR 26 1924

(Remarks on other Side)

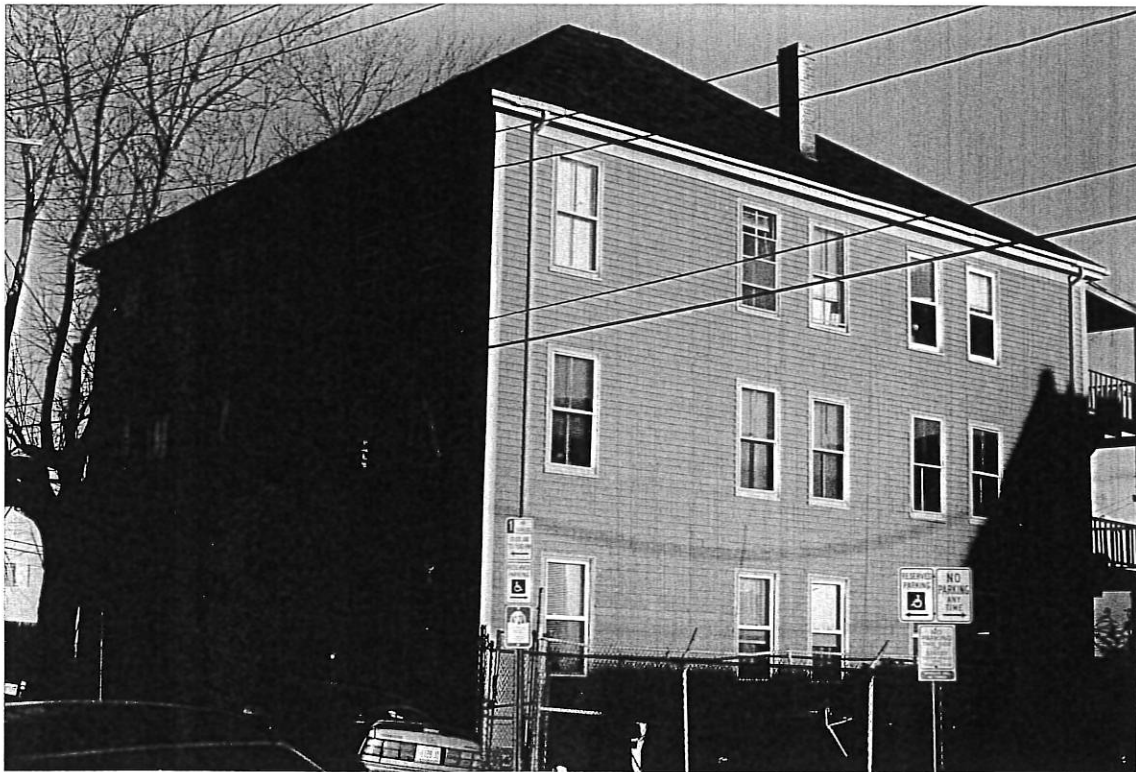
MHPC USE ONLY

1023

INVENTORY NO.

MAINE HISTORIC PRESERVATION COMMISSION
Historic Building/Structure Survey Form
Continuation Sheet

PROPERTY NAME: William Mundy Block
TOWN: Portland COUNTY: Cumberland
SURVEYOR: Martha Duprez DATE: July 2001
DATA FIELD # (From Survey Form): _____



K:\KIRK\ARCH-SVY.FRM\HPSFHD3.CTN

Bateman Investments, LLC

470 Fore Street, Suite 400
Portland, ME 04101

March 6, 2018

86 Newbury Street, LLC
470 Fore Street, Suite 400
Portland, ME 04101

RE: Signatory Authority

To Whom It May Concern:

This letter is to confirm that Bateman Investments, LLC is a member of 86 Newbury Street, LLC. 86 Newbury Street, LLC consists of two members, Bateman Investments, LLC and Shipyard Brewery Company, LLC (the property owner).

This letter further confirms that David H. Bateman, as member of Bateman Investments, LLC, has the authority to sign and submit this application on behalf of 86 Newbury Street, LLC to the City of Portland, Maine.

Signed,



Nathan Bateman
Manager
Bateman Investments, LLC

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

Doc#	File Date	Rec Time	Type Desc.
76174	12/14/2007	4:10PM	DEED
# of Pgs.	Book/Page	Doc. Status	
11	25688/158	Verified/Certified	
Town			
PORTLAND			
Grantor	Grantee	Street	Property Description
SHIPYARD BREWING CO LLC	CHAPIN REALTY LLC		
References			
Book/Vlm/Page	Description	Recorded year	
S/25903/232	MUNICIPAL MISCELLANEOUS	2008	

FINAL 12-13-07

SHORT FORM QUITCLAIM DEED WITH COVENANT

Shipyard Brewing Company Limited Liability Company, a Maine limited liability company with a mailing address of 86 Newbury Street, Portland, Maine, FOR CONSIDERATION PAID, grants to Chapin Realty LLC, a Delaware limited liability company, with a mailing address of 10 Morgan Drive, Lebanon, NH 03766, with Quitclaim Covenant, certain real property together with any improvements thereon, situated in the City of Portland, Cumberland County, and the State of Maine, more particularly shown as Lot 5 on the Plan entitled "Subdivision Plan on Fore Street, Portland, Maine, Made For Norwich Partners LLC," (the "Plan") by Owen Haskell, Inc., dated November 20, 2007, to be recorded herewith, as said Lot 5 is further described on Exhibit A, attached hereto and made a part hereof (the "Property").

The Property is conveyed subject to and with the benefit of the following:

1. No Build Zone 10' Easement.

a. The Grantor hereby grants to the Grantee, subject to the terms and provisions hereof, the right to use the area labeled "No Build Zone 10' Easement," as shown on the Plan, and as more particularly described on Exhibit B-1 and further shown on the Easement Plan attached as Exhibit B-2, a copy of which is attached hereto and incorporated herein, together with the right to install, maintain, replace, and repair subsurface structures or other subsurface improvements to be located by Grantee within such No Build Zone 10' Easement to serve the Property, (subject however to Grantor's right to install, maintain, replace and repair subsurface utility lines within the No Build 10' Easement) as well as the right on a temporary basis during any period of construction to use the No Build Zone 10' Easement for purposes of laying down materials or staging and to cross or occupy the No Build Zone 10' Easement with workers, vehicles and equipment in connection with any construction, maintenance and/or repair activities on the Property or the improvements to be constructed thereon.

b. Grantor covenants and agrees that Grantor shall not place or maintain on or about the No Build Zone 10' Easement, any structure, material, equipment, building, debris, or vehicles. Notwithstanding the foregoing, the Grantor reserves the right to install, maintain, replace and repair underground utility lines in the No Build Zone 10' Easement and the Grantor further reserves the right to and shall be allowed to temporarily use the No Build Zone 10' Easement area during any construction or maintenance activities of Grantor on its retained lands. Further, both the Grantor and Grantee shall have the right, but not the obligation, to install landscaping, including placement of surface materials such as brick, granite, or other stone materials, in that portion of the No Build Zone 10' Easement that abuts the northerly sideline of the Property.

c. Grantor hereby reserves all its rights in and interest to the portion of the No Build Zone 10' Easement that abuts the easterly boundary of the Property (the "Grantor's Access Easement") for its use as a passage for its vehicles and pedestrians as well as for the replacement of underground utilities and for building construction and maintenance activities, and for no other purposes. Grantor hereby covenants and agrees that the Grantor's use of the Grantor's

MAINE REAL ESTATE TAX PAID

Access Easement shall not block (other than temporarily during periods of construction and maintenance) or otherwise interfere with the Grantee's use and enjoyment of the No Build Zone 10' Easement.

2. Loading and Access Easement.

a. The Grantor hereby grants to the Grantee, subject to the terms and provisions hereof, the right to use the area labeled "Loading and Access Easement" on the Plan, and as more particularly shown and described on Exhibit C-1 and as further shown on the Easement Plan attached as Exhibit C-2, for the passage of vehicles (including, without limitation, trucks) and for the delivery and unloading of goods to the Property. The Grantor hereby grants to the Grantee the right to park its delivery vehicles for a reasonable period of time during the unloading of goods to the Property. Grantor reserves the right to use said Loading and Access Easement area for all uses, provided that the same does not unreasonably interfere with the Grantee's use of said Loading and Access Easement area for the purposes defined herein. In particular, Grantor reserves the right to place buildings in the air space above the Loading and Access Easement area so long as 14' of clearance (measured from the pavement) for vehicles is maintained in the Loading and Access Easement area and so long as no buildings or overhangs are placed within or in the air space above the No Build Zone 10' Easement area. Provided, the Grantor shall be permitted to place one or more steel support beams within the Loading and Access Easement (exclusive of the No Build Zone 10' Easement area) in an area to be agreed upon between the Grantor and the Grantee as long as same does not interfere with or prohibit the construction and operation of the Hotel or other structures to be constructed by the Grantee on the Property. If the Grantor elects to relocate the Loading and Access Easement in accordance herewith, Grantor shall provide Grantee, at its sole cost and expense, (i) a new plan that depicts the relocated Loading and Access Easement, which plan shall be subject to Grantee's approval, which approval shall be provided so long as Grantee is accorded reasonable alternative access therein, and (ii) an endorsement to Grantee's title policy insuring the relocated Loading and Access Easement if located on Grantor's land, it being the Grantor's responsibility to secure all consents that may be required to issue said endorsement.

3. The easements and covenants expressly set forth herein are for the benefit of and appurtenant to the Property conveyed to Grantee by this Deed and shall run with the land of both the Grantor and the Grantee. Unless an easement is expressly described herein, no rights or easements are implied or are intended to be reserved, conveyed or created, by "dedication", "estoppel" or any other similar theory, to benefit either the Property or Lot 6 on the Plan by virtue of any notation on or reference to the Plan.

4. All construction conducted by or on behalf of the Grantee within the aforesaid No Build Zone 10' Easement and/or the Loading and Access Easement shall be conducted in accordance with all applicable laws, regulations, by-laws, orders, permits and approvals of all public authorities having jurisdiction. Any Grantee, or its agents, employees or contractors, entering such the aforesaid No Build Zone 10' Easement and/or the Loading and Access Easement shall maintain statutory worker's compensation insurance and liability insurance (with completed operations and contractual liability endorsements) with a combined single limit of not less than One Million Dollars covering the Grantor and Grantor's mortgagee, and their successors and

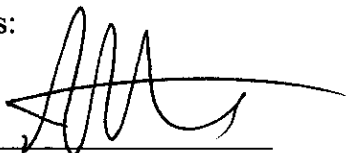
assigns, against all claims, suits, obligations, liabilities and damages, including reasonable attorneys' fees, based upon or arising out of actual or alleged personal injuries or property damage resulting from or occurring in the course of, on, or about and otherwise relating to the use of the aforesaid No Build Zone 10' Easement and/or the Loading and Access Easement granted herein. Any Grantee, or its agents, employees or contractors, prior to entering the aforesaid No Build Zone 10' Easement and/or the Loading and Access Easement, will upon request deliver to the Grantor and Grantor's mortgagee, and their successors or assigns a Certificate of Insurance providing such insurance is in full force and effect and all premiums have been paid.

5. Grantee shall save Grantor, Grantor's trustees, members, principals, beneficiaries, partners, officers, directors, employees, and agents harmless and indemnified against injury, loss or damage to any persons or property on or about the Loading and Access Easement area as a result of a claim or liability arising from the negligence or willful misconduct of Grantee, its employees, agents or contractors.)

(SIGNATURE PAGES FOLLOW)

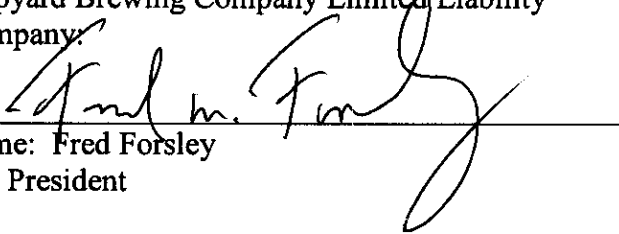
IN WITNESS WHEREOF, Shipyard Brewing Company Limited Liability Company has caused this instrument to be executed by Fred Forsley, its President thereunto, duly authorized, this fourteenth day of December, 2007.

Witness:

By: 

Name: Nathan H. Smith

Shipyard Brewing Company Limited Liability
Company:

By: 

Name: Fred Forsley

Its: President

CONTINUED ON NEXT PAGE

ACCEPTANCE OF GRANTEE

Grantee hereby accepts the conveyance of the Property and agrees to the covenants, conditions and agreements set forth herein.

CHAPIN REALTY, LLC
BY: NORWICH PARTNERS OF PORTLAND, LLC

By: _____

Its: _____

David Leatherwood
Managing Member

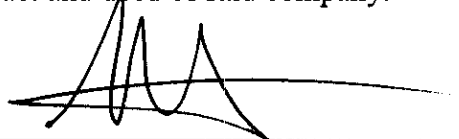
CONTINUED ON NEXT PAGE

State of Maine
County of Cumberland, ss.

December 14, 2007

PERSONALLY APPEARED the above named Fred Forsley, President of Shipyard Brewing Company Limited Liability Company as aforesaid, and acknowledges the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said company.

Before me,



Nathan H. Smith

Attorney at Law/ ~~Notary Public~~

EXHIBIT A

A certain parcel of land situated on the northeasterly side of Hancock Street and the northwesterly side of Fore Street in the City of Portland, County of Cumberland, State of Maine being bounded and described as follows:

Beginning on the northeasterly sideline of Hancock Street at its intersection with the southeasterly sideline of Middle Street as shown on a plan entitled "Subdivision Plan on Fore Street, Portland, Maine Made for Norwich Partners LLC" dated November 20, 2007 by Owen Haskell, Inc.;

Thence N 36° 26' 28" W along said sideline of Hancock Street a distance of 36.00 feet;

Thence N 54° 36' 24" E a distance of 271.00 feet;

Thence S 35° 23' 36" E a distance of 47.81 feet to the northwesterly sideline of Fore Street;

Thence S 22° 34' 01" W along said sideline a distance of 266.58 feet to the northeasterly sideline of Hancock Street Extension;

Thence westerly along said sideline and along a curve concave to the right having a radius of 15.00 feet an arc distance of 28.51 feet, said curve having a chord which bears S 77° 00' 30" W a distance of 24.41 feet;

Thence N 48° 33' 01" W along said sideline a distance of 91.29 feet;

Thence northwesterly along said sideline and along a curve concave to the right having a radius of 273.00 feet an arc distance of 55.15 feet to the southeasterly sideline of said Middle Street, said curve having a chord which bears N 42° 45' 45" W a distance of 55.06 feet;

Thence N 50° 24' 52" E along said sideline a distance of 6.06 feet to the Point of Beginning, containing 34,069 square feet, more or less.

EXHIBIT B-1

No Build Zone 10' Easement

A certain parcel of land situated on the northwesterly side of Fore Street in the City of Portland, County of Cumberland, State of Maine being bounded and described as follows:

Beginning on the northwesterly sideline of Fore Street at a point which bears N 22° 34' 01" E and a distance of 266.58 feet from the northeasterly sideline of Proposed Hancock Street Extension as shown on a plan entitled "Subdivision Plan on Fore Street, Portland, Maine made for Norwich Partners LLC" dated November 20, 2007 by Owen Haskell, Inc.;

Thence N 35° 23' 36" W a distance of 47.81 feet;

Thence S 54° 36' 24" W a distance of 251.00 feet;

Thence N 35° 23' 36" W a distance of 10.00 feet;

Thence N 54° 36' 24" E a distance of 261.00 feet;

Thence S 35° 23' 36" E a distance of 52.60 feet to the northwesterly sideline of said Fore Street;

Thence S 29° 22' 06" W along said sideline a distance of 7.48 feet;

Thence S 22° 34' 01" W along said sideline a distance of 3.82 feet to the point of beginning.

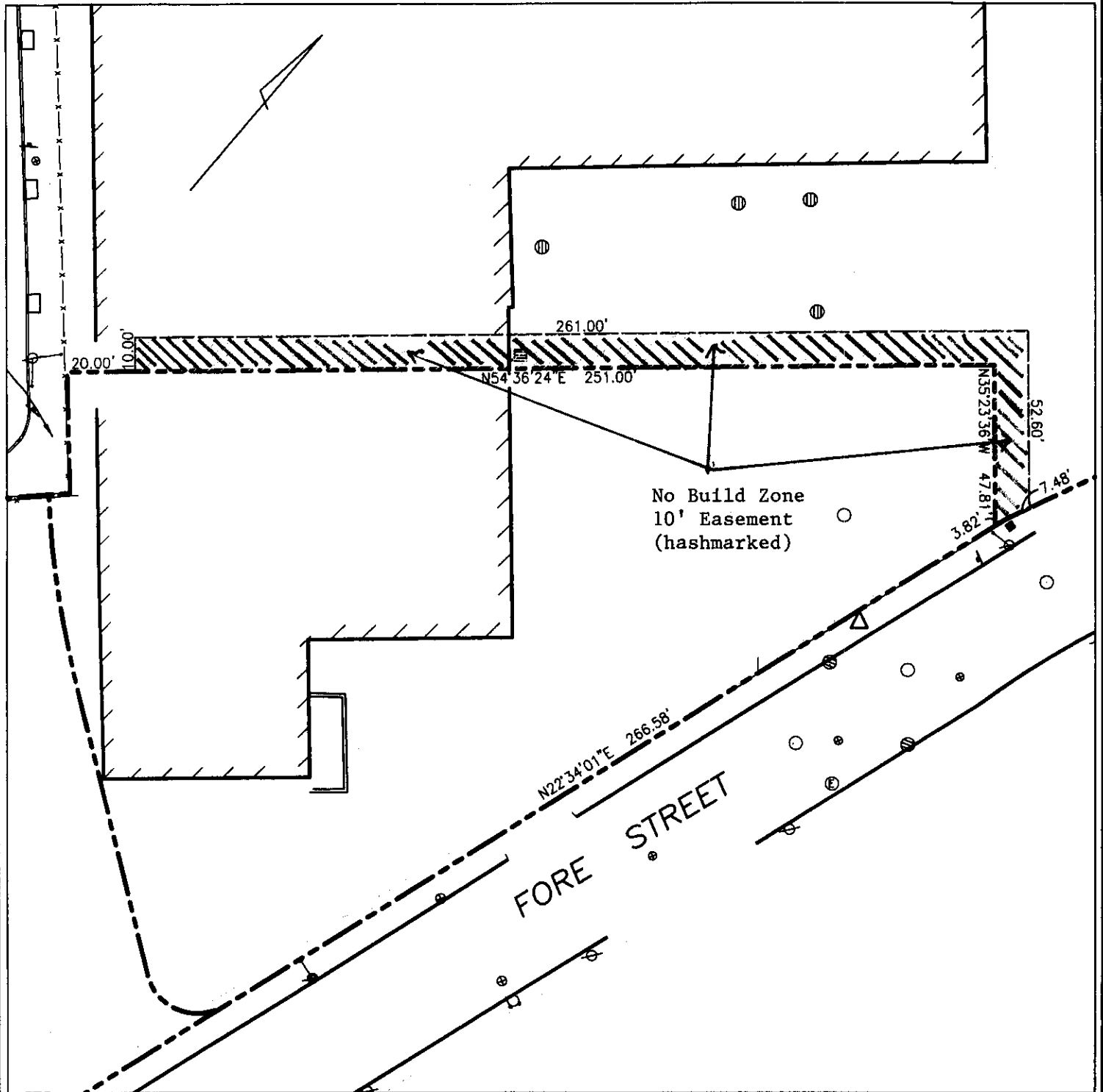


EXHIBIT B-2
NO BUILD ZONE



OWEN HASKELL, INC.

16 CASCO STREET, PORTLAND, ME 04101 (207) 774-0484
PROFESSIONAL LAND SURVEYORS

Drwn By	RWC	Date	2006-262 P
Trace By	RWC	DEC., 13, 2007	2006-262 P
Check By	JWS	Scale	Drwg. No.
Book No.	FILE	1" = 40'	2

EXHIBIT C-1

Loading and Access Easement

A certain parcel of land situated on the northwesterly side of Fore Street in the City of Portland, County of Cumberland, State of Maine being bounded and described as follows:

Beginning on the northwesterly sideline of Fore Street at a point which bears N 22° 34' 01" E and a distance of 266.58 feet from the northeasterly sideline of Proposed Hancock Street Extension as shown on a plan entitled "Subdivision Plan on Fore Street, Portland, Maine made for Norwich Partners LLC" dated January 7, 2007 by Owen Haskell, Inc.;

Thence N 35° 23' 36" W a distance of 47.81 feet;

Thence S 54° 36' 24" W a distance of 38.00 feet;

Thence N 35° 23' 36" W a distance of 20.00 feet;

Thence N 54° 36' 24" E a distance of 75.00 feet;

Thence S 35° 23' 36" E a distance of 49.87 feet to the northwesterly sideline of said Fore Street;

Thence S 29° 22' 06" W along said sideline a distance of 37.33 feet;

Thence S 22° 34' 01" W along said sideline a distance of 3.82 feet to the point of beginning.

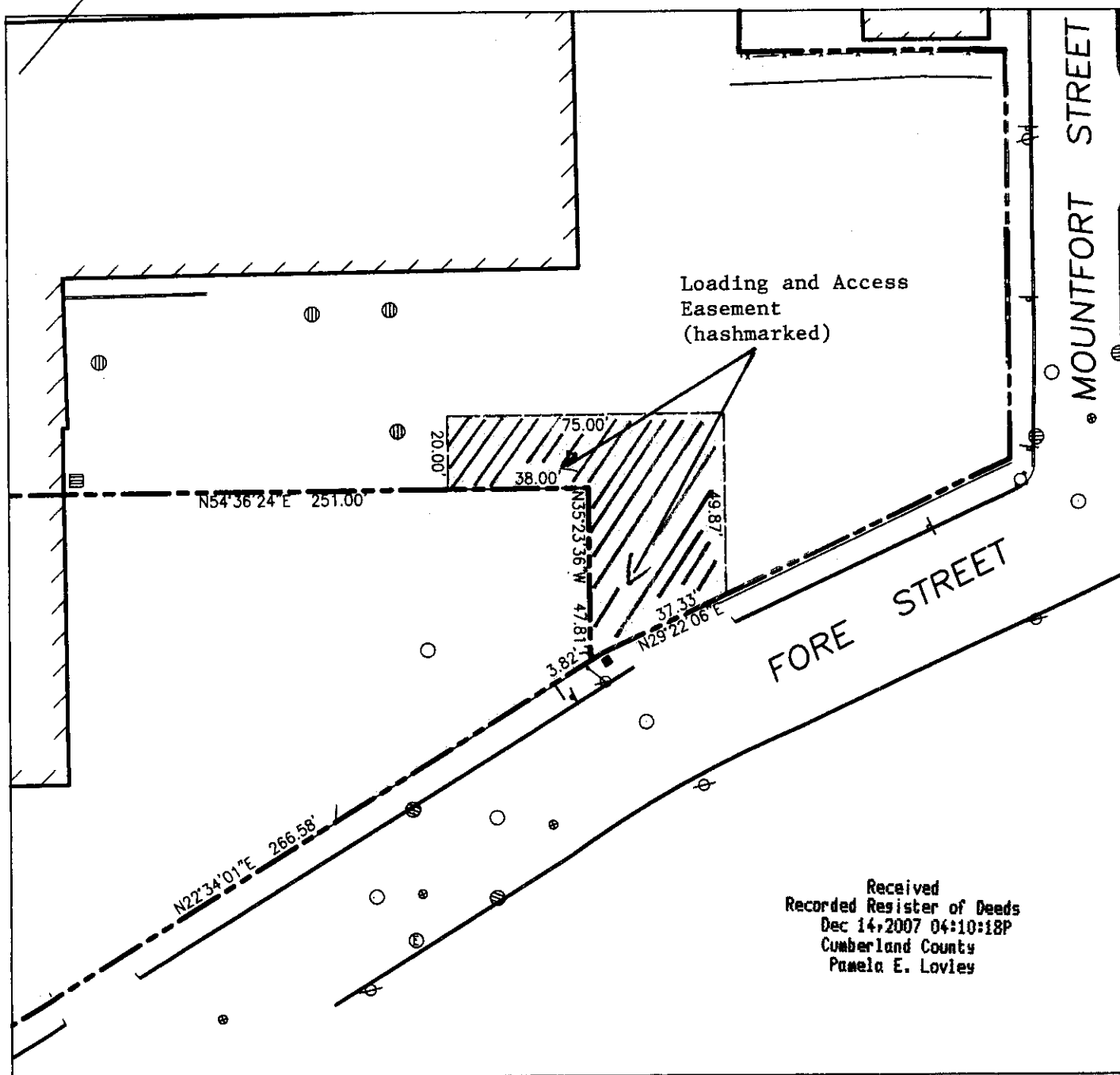


EXHIBIT C-2
LOADING AND ACCESS EASEMENT



OWEN HASKELL, INC.

16 CASCO STREET, PORTLAND, ME 04101 (207) 774-0424
PROFESSIONAL LAND SURVEYORS

Drwn By	RWC	Date	2006-262 P
Trace By	RWC	DEC. 12, 2007	2006-262 P
Check By	JWS	Scale	Drwg. No.
Book No.	FILE	1" = 40'	1



CODE SUMMARY PER NFPA I AND FIRE DEPT STANDARDS

In accordance with instructions in the City's Level III Site Plan Review packet, please find enclosed the drawings necessary for your review of the proposed redevelopment of the Shipyard Brewing site. As part of the building design, the architect will retain a third-party Fire Protection Engineer to review NFPA 101. We have listed each item in your checklist below, followed by our response.

1. Name, address, telephone number of applicant.

86 Newbury Street, LLC
Attn: David Bateman
470 Fore Street, Suite 400
Portland, ME 04101
207-772-2992

2. Name, address, telephone number of architect.

Archetype PA
Attn: David Lloyd
48 Union Wharf
Portland, ME 04101
207-772-6022

3. Proposed uses of the structures (NFPA and IBC Classification)

Building	IBC Code	NFPA Code	Sprinkler
Office	(B) Business	(B) Business	13
Specialty Pharmacy/Fulfillment	(B) Business	(B) Business	13
Retail	(M) Mercantile/(A) Assembly	(M) / (A)	13
Hotel	(RI) Hotel	Hotel	13

4. Square footage of all structures (total and per story)

Building	Footprint Area (SF)
Basement	53,422 SF
1 st Floor	68,051 SF
2 nd Floor	73,987 SF
3 rd Floor	62,192 SF
4 th Floor	60,301 SF
5 th Floor	39,698 SF
6 th Floor	37,432 SF



5. Elevation of all Structures

The maximum building height varies between 45'-0", 65'-0" and 77'-0", with the first-floor finish elevation of approximately 22.58 NGVD 1929. Architectural building elevations accompany this letter and they show the various locations of door openings, etc. around the building perimeter.

6. Proposed Fire Protection of all Structures

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

7. Hydrant Locations

There are numerous hydrants located nearby, including those located at the 3 intersections that form the edges of the site. In addition, there is a hydrant mid-block on Newbury street on the same side of the street as the project. There are at least 4 hydrants within 50 feet of the site and others within 500 feet of the site located within nearby streets.

8. Water Main Size and Location

The Portland Water District (PWD) has existing water mains nearby including an 8" main in Newbury Street that the District indicated will likely be replaced during the project due to its age. Within Hancock Street there is an existing 4" water main, that does not appear to directly feed any existing hydrants. There are also water mains within Hancock, Newbury Mountfort and Fore Street. It is anticipated that the proposed sprinkler system will connect to a minimum 8" water main.

9. Access to all Structures (2 sides min)

The proposed building will be accessible on 3 sides from public streets. On the south, or Fore Street side of the property an existing narrow alley will remain between the new building and existing Residence Inn.

10. Code Summary per NFPA I and Technical Standards

NFPA I – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access: The project site occupies the block defined by Fore, Mountfort, Newbury and Hancock Streets, all of which are public City Streets with the following widths.

Street	Width (curb to curb)
Fore Street	33 feet
Mountfort Street	23 feet
Newbury Street	30 feet
Hancock Street	42 feet

The building has a small amount of frontage along Fore Street, and as noted above an existing alley approximately 20 feet wide will exist between the adjacent Residence Inn and the proposed building.



City of Portland Technical Standards

3.3.3 - 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.)

Response to 3.3.3 – not applicable

3.4.1. Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

Response to 3.4.1 – not applicable

3.4.2. Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

Response to 3.4.2 – as depicted on the plans and as noted above the structure can be accessed fully on 3 sides along Mountfort, Newbury and Hancock Streets and can be partially accessed from Fore Street.

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

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

Response to 3.4.3 - The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access along the public streets for emergency vehicles.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Response to 3.4.4 – Fire Dept. access roads consisting of Public streets will be located within 50' of exterior doors.

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

Response to 3.4.5 – Access to the site from both Fore Street will provide approximately 14 feet of clearance height for ambulance access.

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

Response to 3.4.6 – Elevators will be a minimum of 80 x 24 inches.



3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Response to 3.4.7 - The applicant will work with the city's Public Services Division to assign street addresses and numbering to meet City Standards.

Portland, Maine



Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) IS-FBC (UN & UT subdistricts)

All Projects:

	Required	Proposed
Lot Size	none	2.15 ac
Area Per Dwelling Unit	none	tbd
Minimum Street Frontage	30 ft	122.92 ft
Front Yard Minimum	none	
Front Yard Maximum	5 ft (UN)	22 ft
Rear Yard	10 ft min.	10 ft
Yard Right	5 ft min. (UN)	n/a
Yard Left	5 ft min. (UN)	n/a
Side Street Setback	none	none
Step Back	10 ft after 45' ht	15 ft (UT)
Maximum Lot Coverage	90%	<90%
Minimum Lot Coverage	none	none
Maximum Height	45 ft (UN)	40 ft
Open Space	none	none
Maximum Impervious Area	none	none
Pavement Setback	none	none
Floor Area Ratio	none	none
Off Street Parking Spaces	323	360
Loading Bays	none	1
Other 1		
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Neighborhood Meeting Certification

I, Lucas Anthony of Gorrill Palmer, hereby certify that a neighborhood meeting was held on May 15, 2018 at the Residence Inn on Fore Street at 5:30pm.

I also certify that on Friday, May 4, 2018, 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.

Signed,



Lucas Anthony, Agent of Applicant

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes



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

May 1, 2018

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a Level III Site Plan and Subdivision Application located at Shipyard Brewing, 86 Newbury Street.

Meeting Location: Residence Inn, 145 Fore Street

Meeting Date: Tuesday, May 15, 2018

Meeting Time: 5:30pm-7:00 pm

(The City code requires that property owners within 500 feet (1000 feet for proposed industrial subdivisions and industrial zone changes) 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 (207) 772-2515.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Lucas Anthony', with a horizontal line extending from the end of the signature.

Lucas Anthony, Agent for Applicant

Note:

Under Section 14-32(C) and 14-524(a)d of the City Code of Ordinances, an applicant for a Level III development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting within 30 days of submitting a preliminary application or 21 days of submitting a final site plan application, if a preliminary plans were not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street Portland, ME 04101 or by email: to bab@portlandmaine.gov

NEIGHBORHOOD MEETING NOTES

Project: Shipyard Redevelopment

Client: 87 Newbury Street, LLC

GP Project No: 3184

Date/Location of Meeting: May 15, 2018; 5:00 pm at the Marriot Residence Inn on Fore Street

Development Team: Nathan Bateman -86 Newbury Street, LLC
David Lloyd, Mike Coyne - Archetype Architects
Lucas Anthony, Emily Tynes, Chris DiMatteo – Gorrill Palmer

Attendees: see attached sign in sheet

Distribution: City of Portland, Development Team, File

Presentation

Nathan Bateman started the meeting, introduced the team and gave an overview of the project. David Lloyd began the discussion stating that he would discuss the project and take questions after he was finished. David gave an overview of the site and its existing conditions and which buildings were to remain and which were to be demolished. David presented the overall floor plan and described the various uses proposed for the project; office, brewery and hotel with parking garage. David showed elevations views of the proposed architecture from Street Level on Hancock, Newbury, Montfort and Fore Street, describing glass façade along Montfort transitioning to brick curtain wall on Newbury and Hancock. David discussed the proposed green area on Newbury Street across from the Abyssinian Church and mentioned that the project would be presented to the Historic Preservation Board tomorrow night. David mentioned that Historic Preservation Staff had expressed the preference for additional residential uses along Newbury Street rather than additional open space / green area. David finished his presentation and opened the discussion up for questions.

Lucas Anthony and Chris DiMatteo took notes.

Questions

Please note that the following summary of questions and answers are abridged and were not recorded verbatim and aim to concisely represent the general intent of the questions, answers, and discussion that took place at the meeting.

Q: Why is the building 6 stories?

A: (David) It's allowed per code and needed to provide the space requested by the office tenant.

Q: Will the building be higher than the adjacent Residence Inn?



A: (David/Mike) The building will be 65 feet tall overall, and approximately 45 feet above Newbury Street. A bonus story is being proposed as allowed by code, a “green roof” is being provided to obtain the bonus story.

Q: What is the construction timeline?

A: (Nathan) The buildout is expected to take 21 months and they would like to start in August of 2018.

Q: Will the entire site be demolished at one time? Has the EPA been notified?

A: (Nathan) Yes, the building will be demolished in July. The site is subject to a VRAP (Voluntary Response Action Program) due to soil contamination at the site. Waste from demolition and excess soil will be disposed offsite. The first phase of demolition will start in July and take 1-2 months.

Q: How do trucks access the site during construction?

A: (Nathan): Trucks will access the site from Fore Street. Construction will happen in continuous phases with the parking garage the first phase after demolition. The City, as part of Site Plan Approval, reviews a Construction Management Plan prepared by the General Contractor, Allied Cook Construction.

Q: Is the hotel on top of the garage?

A: (David) Yes

Q: How high above the Residence Inn is the building?

A: (David) 1 story approximately but depends on where you are on the site. Proposed hotel is 2 stories above the Shipyards building.

Q: How will the impact to nearby retailers be mitigated? Parking during construction of nearby projects has been an impact to business.

A: (Nathan) The Construction Management Plan will designate parking for construction employees and the City will approve it.

Q: Will there be Public Parking in the garage?

A: (Nathan) Parking during the day will be for the office tenant, and nights and weekends the garage may be open to public parking, up to 60%. A 100% of the required parking is provided on-site.

Q: Will residents view from Newbury Street be blocked?

A:(David) The building on Newbury Street will be 4 stories tall, so yes.

Q: Will the project impact on-street parking? Noted that it is difficult for residents, especially in the summer months.

A: (Nathan) The project is closing a number of existing driveways with the intent to add on-street parking.

Q: What are the hours of Construction?

A: (David) 6 days a week from 7am to 5pm.

Q: Where are the entrances to the parking garage?

A: (David) On Fore Street for the lower level and on Hancock Street for the upper levels.



Q: Where are people coming from to get to the site?

A: (Emily) Not fully clear yet, we are performing the traffic study presently. Anticipated to add 160 AM peak and 170 PM peak trip ends.

Q: Is the traffic from the WEX building considered in the traffic study?

A: (David) Yes, that will be taken into account in the Traffic Study.

Q: The City should be responsible for the traffic problems.

A: (Nathan) The City is aware of the growth in the area and studying it, potentially via an area-wide Traffic Movement Permit.

Q: How is the City addressing the traffic from the recent projects nearby and the construction traffic over the past few years of growth?

A: (David) The City is looking at the growth and studying the traffic on an area wide scale.

Q: Where can I present my concerns on traffic?

A: (David) At the Planning Board.

Q: Are the residential units rentals or sales?

A: (Nathan) Rentals and they are replacing the existing residential units on-site.

Q: Is the parking garage for the project only?

A: (Nathan) Generally yes, we don't anticipate any extra parking.

Q: Do the residential buildings have parking?

A: (Nathan) Yes, under the building.

Q: Is the parking on the Shipyards property along Newbury Street going away?

A: (Nathan/David) Yes, with residential units getting parking spaces under the buildings.

Q: What else is happening on Newbury Street?

A: (David) Green Space will be provided in front of the proposed building and will be open to the general public with benches, landscaping, etc.

Q: Will the Shipyards Tasting Room remain?

A: (Nathan) Yes, it will remain and occupy additional retail space along Hancock as well. It will also be renovated and provided with a new Accessible Ramp to the lower level.

Q: Where will Shipyards Trucks enter the site?

A: (David) On Fore Street, not on Newbury.

Q: What is the construction sequence? Staging area should be on Fore Street away from Newbury Street.

A: (David) Allied Cook Construction will prepare a document outlining the process that will be available for public review.

Q: Will overhead power lines on Newbury remain? Would like to request underground.

A: (David) The power lines will remain overhead on Newbury Street.



Q: Will there be new overhead lines on Hancock?

A: (Nathan) No.

Q: Will there be a new building on top of the Shipyards Building?

A: (David) No

Q: Are there any Historic Properties?

A: (Nathan) No, we can legally demo the existing buildings. Newbury Street is not in the Historic District, but are within a 100 feet of the national registered Abyssinian Church.

Q: Will there be a parapet to block the rooftop mechanical equipment and other appurtenances?

A: (David) Not sure yet but will work with the City on architecture and design.

Q: What is the maximum height of the rooftop mechanical equipment?

A: (David) Not sure yet, but the City does allow overruns for stairs and elevators and rooftop mechanical equipment.

Q: Can you use traction elevators to reduce the overrun height? What will be the view?

A: (David) Not sure on equipment yet but elevators are generally in the middle of the building and the rooftop portion is not likely to be visible. Elevator shaft is dictated by building code.

Q: Relative to the bonus floor, where is the green roof?

A: (David) This is in design but will occupy at least 50% of the roof. The floor is required to be further setback from the façade by 15 feet.

Q: Can you add more parking on site?

A: (David) No.

Q: How big is the office, and do you have a tenant?

A: (David) Approximately 100k square feet and yes, a tenant is in place.

Q: Are the power lines on Newbury coming down?

A: (David) No

Q: Will there be beer taps in the hotel rooms?

A: (David) No

Q: Is there a Planning Board hearing scheduled?

A: (David) Not at this time.

Q: Is the pharmacy use a dispensary?

A: (Nathan) No, it's a mail order pharmacy.

Q: Will there be day parking for the Tasting Room?

A: (Nathan) It's not clear yet, but possibly.

Q: Is the hotel a chain?

A: (Nathan) Yes. Shipyards will offer food and beverages within the hotel.



Q: How many bedrooms are the residential units?

A: (Nathan) It will be a mix of 1 and 2-bedroom units, with a number of them priced at 80% of the Adjusted Median Income.

Q: How will the Shipyards building be renovated? Will the mural stay?

A: (Nathan) Popping out openings and allowing more light in, and the mural will stay.

Q: How can I get more information and a schedule?

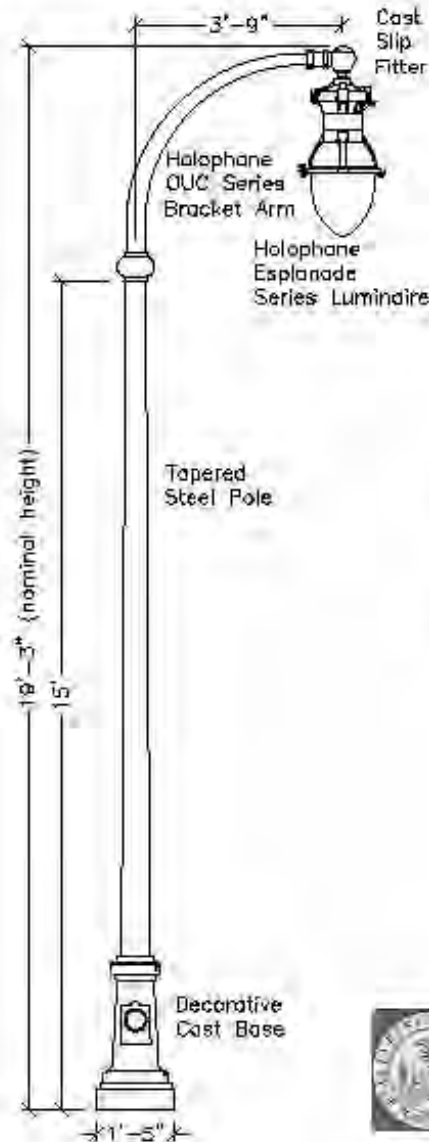
A: (David) Check the City website in the coming weeks.

The meeting adjourned.

The above questions and answers were interpreted and recorded from handwritten notes. Please note and relay any discrepancies or disputed information in the neighborhood meeting notes to our office so that they can be reviewed, revised, and resubmitted as necessary.

Name:	Address:	Tel #:	Email:
Franks Reali	391 Caprice	7318-8567	
Eugene Fetteroli	15 Middle St. APT. B-204	799-0696	
Lucy Casey 740 BROADWAY	15 Middle St	633.5807	
Mark Moen	69 Newbury	450-0735 899-2694	Bismark182@aol.
Liv Chase	52 Federal St.		livchase@yahoo.com
Ann + CHRISTOPHER STEED	113 Newbury #401	207.835.0573	Answer @ AOL.com C54K222-8 @ Yahoo.com
Melodie Cook	113 Newbury #402	207-780-8781	melodiesmail@earthlink.net
Erin Gilman Tom Heckerl	88 Hancock Unit A303	617-852-0216	ErinGILMAN@GMAIL.COM
Brent Heller	48 Hancock	2075187038	BrentHeller@gmail

[illegible]

**LUMINAIRE**

Holophane Lighting model ESU175MH12A4-R
Luminaire shall be furnished and installed by The Central Maine Power Company under the municipal lease agreement for street lighting.

Luminaires shall be manufacturer's standard black color.

LAMP

Holophane Lighting model S-M175/U 64471
Vertical mounted, 175 watt mogul base clear metal halide lamp.

BRACKET ARM

Holophane Lighting model OUC 6063-T8
Aluminum crossarm with a post-top fitting for a 3-1/2" by 8" tenon.
Bracket arm shall be manufacturer's standard black color.

SLIP FITTER

Holophane Lighting model BHLF200-SCA/4S (Boston Harbor Series)
2-3/8" O.D. with swivel cast fitter.
Slip fitter shall be manufacturer's standard black color.

LIGHTING POLE

Tapered steel pole shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts.

Lighting pole shall be manufacturer's standard black color.

DECORATIVE POLE BASE

Holophane Lighting model Cambridge Series
Decorative clamshell cast aluminum base.
Hardware shall be stainless steel.
Decorative pole base shall be manufacturer's standard black color.

APPLICATION

Street/Sidewalk lighting for two-way streets with parking on one side, or one-way streets.

Suggested layout:

- 80-100 ft on center (one side only)
- 150-200 ft on center (staggered pattern both sides)

City of Portland, Maine

Street & Sidewalk Lighting WATERFRONT COMMERCIAL DISTRICT Medium Scale Lighting Pole

08/25/07



DATE:
AUGUST 2009

CITY OF PORTLAND, MAINE
TECHNICAL STANDARDS MANUAL

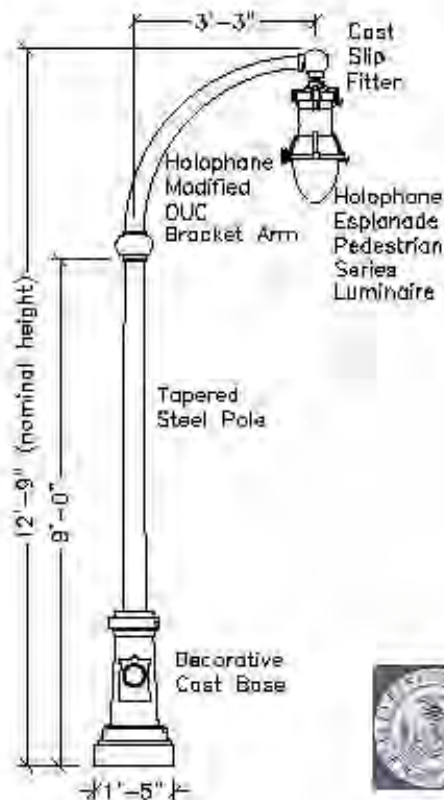
**MUNICIPAL STREET
LIGHTING STANDARDS
SECTION X**

FIGURE:

REVISED:

**EASTERN WATERFRONT DISTRICT MEDIUM
SCALE LIGHTING POLE**

X-5C

**LUMINAIRE**

Holophane Lighting model ESP70MH12A5-R
Luminaire shall be furnished and installed by The Central Maine Power Company under the municipal lease agreement for street lighting.
Luminaire shall be manufacturer's standard black color.

LAMP

Holophane Lighting model S-MP70/MED vertical mounted, 70 watt mogul base clear metal halide lamp.

BRACKET ARM

Holophane Lighting model OUC(modified) 6063-T6
Aluminum crossarm with a post-top fitting for a 3-1/2" by 8" tenon.
Bracket arm shall be manufacturer's standard black color.

SLIP FITTER

Holophane Lighting model BHLF200-SCA/AS (Boston Harbor Series)
2-3/8" O.D. with swivel cast fitter.
Slip fitter shall be manufacturer's standard black color.

LIGHTING POLE

Tapered steel pole shaft rated for a 90mph wind load with a 1.3 gust factor. Provide four hot-dipped galvanized steel L-type anchor bolts.
Lighting pole shall be manufacturer's standard black color.

DECORATIVE POLE BASE

Holophane Lighting model Cambridge Series
Decorative clamshell cast aluminum base.
Hardware shall be stainless steel.
Decorative pole base shall be manufacturer's standard black color.

APPLICATION

Sidewalk lighting or small area lighting.
Suggested layout:
60-80 ft on center (one side only)
100-175 ft on center (staggered pattern both sides)

City of Portland, Maine
Street & Sidewalk Lighting
WATERFRONT COMMERCIAL DISTRICT
Small Scale Lighting Pole



08/25/07

DATE:
AUGUST 2009

CITY OF PORTLAND, MAINE
TECHNICAL STANDARDS MANUAL

**MUNICIPAL STREET
LIGHTING STANDARDS
SECTION X**

FIGURE:

REVISED:

**EASTERN WATERFRONT DISTRICT SMALL
SCALE LIGHTING POLE**

X-5D

Surface washers · asymmetrical light distribution

Post construction: One piece extruded aluminum, 1/8" wall thickness internally welded to a die-cast base plate cover.

Enclosure: One piece die-cast aluminum housing connected to the post/pole by a two piece, die-cast aluminum knuckle. The knuckle has infinite adjustability from 0° to 90° and is secured by one stainless steel fastener. Fully gasketed using a one piece molded high temperature silicone gasket and provided with a pure anodized matte aluminum reflector. Molded 1/4" thick etched tempered glass secured by a one piece die-cast aluminum frame secured to the housing with four stainless steel captive fasteners. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Electrical: 15.6W LED luminaire, 18 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to order.

Anchor base: Pole Mount; Mounts to #79818 anchorage kit (supplied).

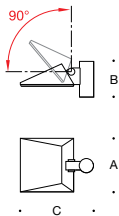
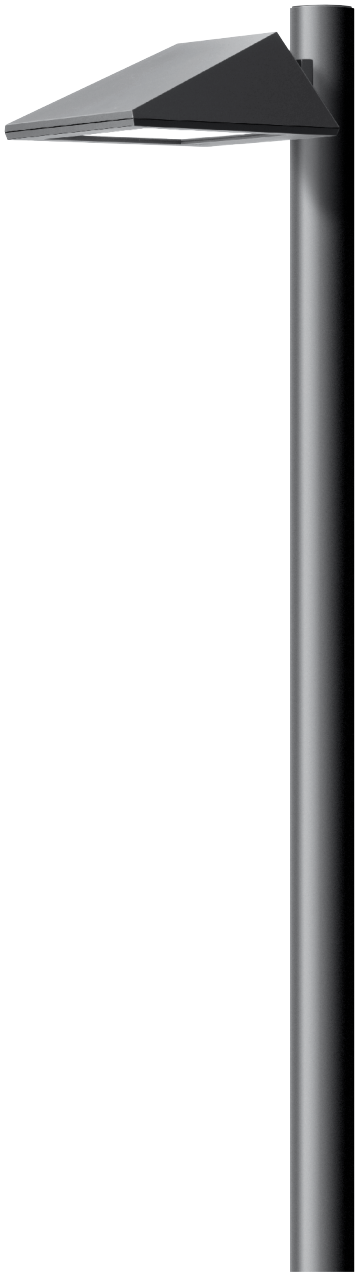
Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 35.5 lbs.

Luminaire Lumens: 1754

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:



Pole mounted · asymmetrical					
	Lamp	A	B	C	Anchorage
99868	15.6W LED	10 1/4	98 1/2	12 1/2	79818

DESCRIPTION

The TopTier™ parking garage, canopy and low-bay luminaire is an innovative solution that delivers an unparalleled combination of performance and visual comfort. The patented WaveStream™ optical technology blocks the line of sight from the LED light sources to the observer, while extracting the maximum amount of light on task. This approach results in a high level of uniformity and vertical footcandles that enhances safety in the application environment. The TopTier luminaire is UL/cUL listed for wet locations, IP66 and 3G vibration rated.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

One-piece, low copper die-cast aluminum housing provides a clean and symmetric housing. Formed aluminum top is sloped to prevent bird nesting. Metal electrical tray allows for easy electrical access for field servicing.

Optics

Unique optical distributions are accomplished using various combinations of reflective backing plates and WaveStream optical technology. The optical Waveguide is manufactured using precision injection molded acrylic. The optics contain features that form a repeatable and redundant pattern to direct light in a precisely prescribed distribution. The drive lane distribution is specifically designed for locations with one direction of travel to optimally direct light in the same direction of travel for maximum glare control. For additional glare control and visual comfort with the Wide distribution, specify the SG option which adds a Solite® glass lens that works in combination with the Waveguide lens and reflective backing plate.

Offered standard in 4000K (+/- 275K) CCT, optional 3000K, 5000K and 6000K. Minimum 70 CRI. Optional uplight feature provides a dedicated light engine (17W) to maintain consistent output across fixtures and reduces cave effect. Nominal uplight output is 800 lumens and ranges from 10%-30% total light output depending on the lumen package.

Electrical

LED driver(s) are mounted to metal electrical tray for optimal thermal performance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming driver(s), specify 5LTD for Fifth Light DALI driver(s). Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. Greater than 90% lumen maintenance expected at 60,000 hours, based off LM-80 test data and TM-21. Suitable for ambient temperature applications from -40°C (-40°F) to 40°C (104°F). For 50°C (122°F) applications, specify the HA high ambient option. IP66 rated against the ingress of dust and water.

Mounting

Standard fixture mounts to a square or octagonal 4" surface or recessed j-box via heavy-gauge quick mount bracket. Optional mounting methods include trunnion mount and wall mount. With the addition of a field supplied wet location j-box, the luminaire can be pendant mounted using the factory supplied decorative pendant mount kit or a suitable field supplied pendant.

Finish

Housing finished in white super durable TGIC polyester powder coat paint with 2.5 mil nominal thickness for superior protection against fade and wear. Optional colors include black, bronze, grey, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty

Five-year warranty.



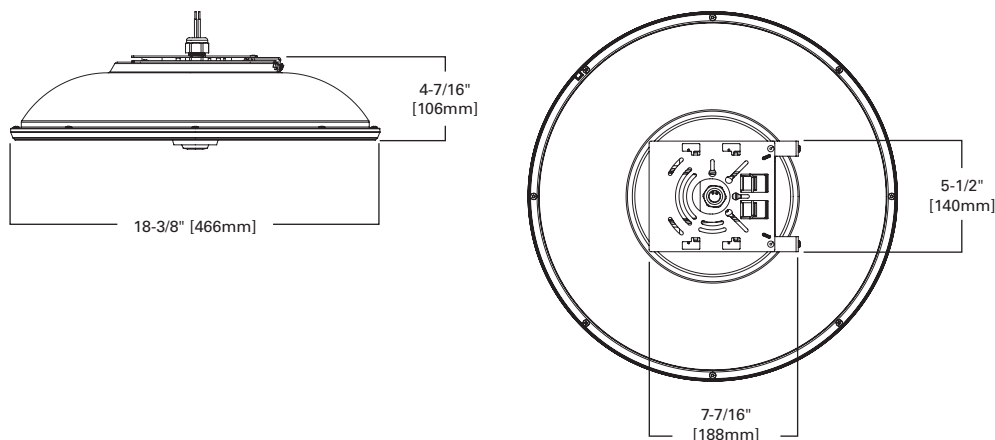
TT TOPTIER LED

Solid State LED

PARKING GARAGE/
CANOPY/
LOW-BAY LUMINAIRE

DIMENSIONS

SURFACE OR PENDANT MOUNT



CERTIFICATION DATA

UL/cUL Wet Location Listed
3G Vibration Rated
LM79 / LM80 Compliant
IP66 Rated
ISO 9001
DesignLights Consortium™ Qualified*

ENERGY DATA

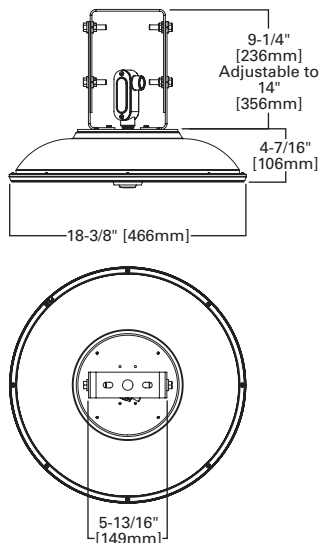
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60Hz, 347V/60Hz,
480V/60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

SHIPPING DATA

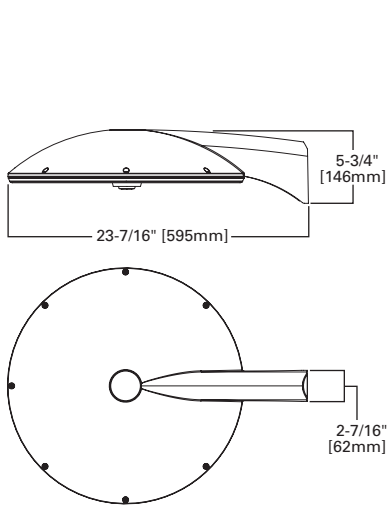
Approximate Net Weight:
16 lbs. (7.2 kgs.)

ADDITIONAL MOUNTING OPTIONS

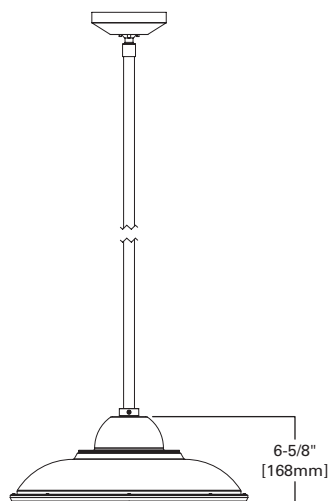
TRUNNION MOUNT



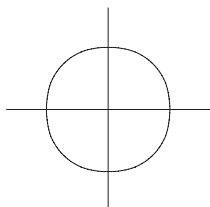
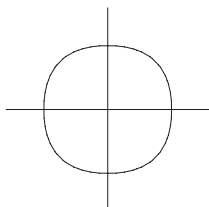
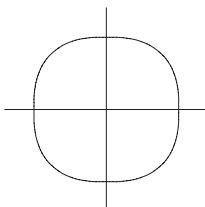
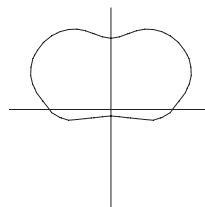
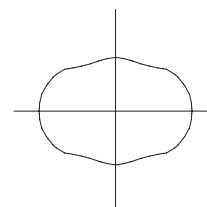
WALL MOUNT



DECORATIVE PENDANT MOUNT



OPTICAL DISTRIBUTIONS

CQ
(Concentrated)MQ
(Medium)WQ
(Wide)DL
(Drive Lane)RW
(Rectangular Wide)

LUMEN MAINTENANCE

Ambient Temperature	Lumen Maintenance				
	25,000 Hours	50,000 Hours	60,000 Hours TM-21 Rating	100,000 Hours	Theoretical L70 (Hours) Per TM-21 Data
C1 Lumen Package					
25°C	> 96%	> 95%	> 95%	> 93%	> 500,000
40°C	> 96%	> 94%	> 94%	> 93%	> 500,000
50°C	> 95%	> 94%	> 93%	> 93%	> 400,000
C2 Lumen Package					
25°C	> 96%	> 95%	> 95%	> 93%	> 500,000
40°C	> 95%	> 94%	> 93%	> 91%	> 500,000
50°C	> 95%	> 93%	> 92%	> 90%	> 400,000
C3 Lumen Package					
25°C	> 96%	> 93%	> 93%	> 89%	> 300,000
40°C	> 95%	> 91%	> 90%	> 85%	> 240,000
50°C	> 95%	> 90%	> 89%	> 83%	> 200,000
C4 Lumen Package					
25°C	> 96%	> 95%	> 95%	> 93%	> 500,000
40°C	> 95%	> 92%	> 92%	> 88%	> 300,000
50°C	> 94%	> 91%	> 90%	> 85%	> 250,000
C5 Lumen Package					
25°C	> 96%	> 93%	> 92%	> 88%	> 300,000
40°C	> 94%	> 90%	> 89%	> 83%	> 200,000
C6 Lumen Package					
25°C	> 95%	> 92%	> 90%	> 86%	> 250,000
40°C	> 95%	> 92%	> 91%	> 86%	> 250,000

POWER AND LUMENS

Lumen Package			C1	C2	C3	C4	C5	C6
Power (Wattage)			28	34	45	58	77	108
Current @ 120V (A)			0.26	0.31	0.41	0.52	0.69	0.95
Current @ 277V (A)			0.13	0.14	0.19	0.24	0.30	0.41
3000K CCT	Lumens	CQ Concentrated	3,293	3,997	5,256	5,486	7,107	9,084
	Lumens per Watt		118	118	117	95	92	84
	BUG Rating		B1-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1
	Lumens	MQ Medium	3,357	4,074	5,357	5,591	7,243	9,259
	Lumens per Watt		120	120	119	96	94	86
	BUG Rating		B2-U0-G1	B2-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2
	Lumens	WQ Wide	3,101	3,764	4,949	5,165	6,691	8,554
	Lumens per Watt		111	111	110	89	87	79
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3
	Lumens	RW Rectangular Wide	2,726	3,308	4,350	4,540	5,882	7,519
	Lumens per Watt		97	97	97	78	76	70
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3
	Lumens	DL Drive Lane / Type 4	2,440	2,938	4,152	--	--	--
	Lumens per Watt		73	71	62	--	--	--
	BUG Rating		B1-U0-G2	B1-U0-G2	B2-U0-G3	--	--	--
4000K CCT	Lumens	CQ Concentrated	3,848	4,670	6,141	7,273	9,423	12,046
	Lumens per Watt		137	137	136	126	123	111
	BUG Rating		B2-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2
	Lumens	MQ Medium	3,922	4,760	6,259	7,413	9,604	12,277
	Lumens per Watt		140	140	139	128	125	114
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	WQ Wide	3,623	4,397	5,782	6,848	8,872	11,342
	Lumens per Watt		129	129	128	118	115	105
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3
	Lumens	RW Rectangular Wide	3,185	3,865	5,082	6,019	7,799	9,969
	Lumens per Watt		114	114	113	104	101	92
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	DL Drive Lane / Type 4	3,235	3,895	5,506	--	--	--
	Lumens per Watt		98	95	83	--	--	--
	BUG Rating		B1-U0-G2	B1-U0-G2	B2-U0-G3	--	--	--
5000K CCT	Lumens	CQ Concentrated	3,645	4,424	5,817	7,204	9,334	11,932
	Lumens per Watt		130	130	130	124	121	110
	BUG Rating		B1-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2
	Lumens	MQ Medium	3,716	4,509	5,929	7,343	9,513	12,161
	Lumens per Watt		133	133	132	127	124	113
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	WQ Wide	3,433	4,166	5,478	6,783	8,788	11,235
	Lumens per Watt		123	123	122	117	114	104
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	RW Rectangular Wide	3,017	3,662	4,815	5,962	7,725	9,875
	Lumens per Watt		108	108	107	103	100	91
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	DL Drive Lane / Type 4	3,205	3,858	5,454	--	--	--
	Lumens per Watt		96	93	82	--	--	--
	BUG Rating		B1-U0-G2	B1-U0-G2	B2-U0-G3	--	--	--

NOTE: Nominal data with 70 CRI for 4000K and 5000K, 80 CRI for 3000K. Wattage values not valid for drive lane optic. For configurations that include the drive lane optic, glass, uplight or occupancy sensor options refer to the specific IES files for wattage, BUG rating and lumen output data.

CONTROL OPTIONS

0-10V

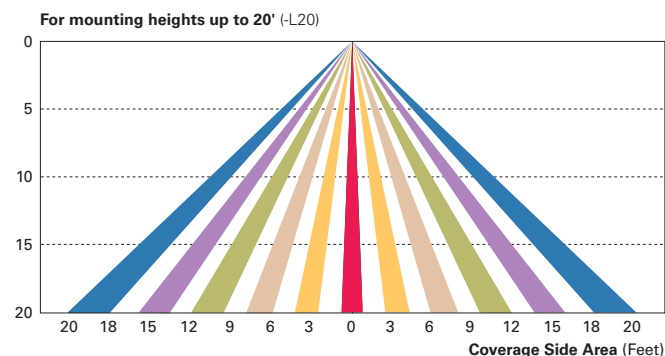
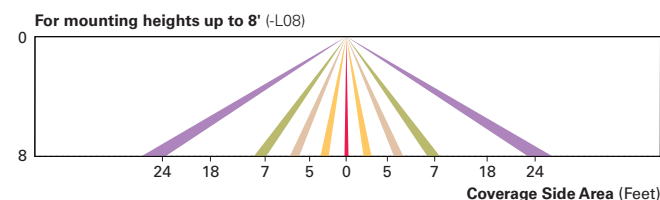
This fixture is offered standard with 0-10V dimming driver(s). External 0-10V dimming wire leads are provided for use with a lighting control panel or other control methods except when PER7, 5LTD, MS/DIM or LWR is specified.

Dimming Occupancy Sensor (MS/DIM-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes.

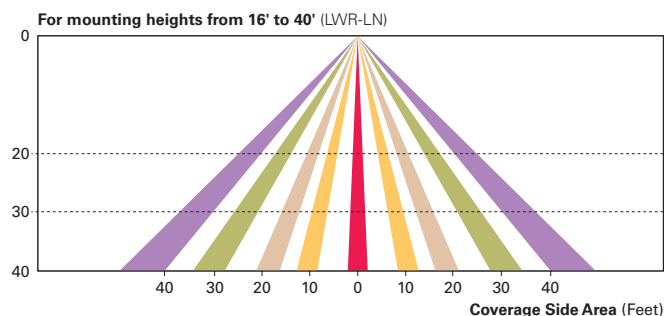
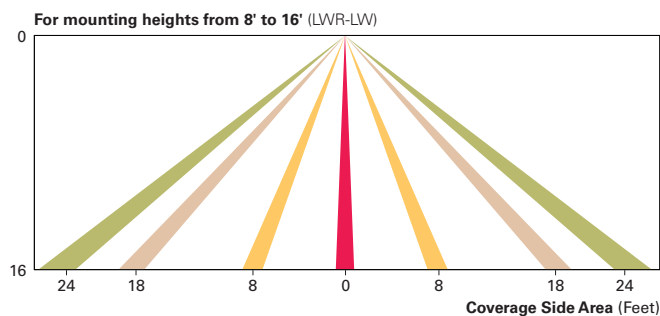
These occupancy sensors include an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting. The factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 8'-40'.

**LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)**

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



ORDERING INFORMATION

Sample Number: TT-C2-LED-E1-WQ-AP

Product Family	Lumen Package	Lamp Type	Voltage	Distribution	Mounting	Color
TT=TopTier ¹	C1=Nominal 3,500 Lumens C2=Nominal 4,500 Lumens C3=Nominal 6,000 Lumens C4=Nominal 7,500 Lumens C5=Nominal 9,500 Lumens C6=Nominal 12,000 Lumens	LED=Solid State Light Emitting Diodes	E1=Electrical (120-277V) 347=347V 480=480V ²	CQ=Concentrated MQ=Medium WQ=Wide RW=Rectangular Wide DL=Drive Lane / Type 4 ³	[BLANK]=Surface or Pendant Mount TMB=Trunnion Mount with Connection Box WM=Wall Mount DPM=Decorative Pendant Mount ⁴	[BLANK]=White AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic
Options (Add as Suffix)				Accessories (Order Separately)		
8030=80 CRI / 3000K 7060=70 CRI / 6000K 7050=70 CRI / 5000K UPL=Uplight ^{5,6} 30L=30" Wire Leads ⁷ HA=50°C High Ambient ⁸ CG=Clear Glass ⁹ SG=Solite ⁹ Glass ¹⁰ TR=Tamper Resistant Hardware X=Driver Surge Protection Only 5LTD=Fifth Light DALI Drivers ^{7,11} IBP=Integral Battery Pack ¹² ICP=Integral Cold Weather Battery Pack ¹² MS/DIM-L08=Dimming Occupancy Sensor (<9' Mounting) ^{13,14} MS/DIM-L20=Dimming Occupancy Sensor (9' - 20' Mounting) ^{13,14} LWR-LW=LumaWatt Wireless Sensor, Wide Lens 8' - 16' Mounting Height ^{14,15} LWR-LN=LumaWatt Wireless Sensor, Narrow Lens 16' - 40' Mounting Height ^{14,15}				FSIR-100=Wireless Configuration Tool for Occupancy Sensor MA1252= Replacement 10kV Circuit Module TT/WG=Wire Guard TT/BG-XX=Bird Guard ^{16,17} DPMS36-XX=36" Pendant Mount Stem ¹⁶ DPMS48-XX=48" Pendant Mount Stem ¹⁶ DPMS96-XX=96" Pendant Mount Stem ¹⁶		

- NOTES:**
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
 - Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
 - C1-C3 lumen packages only.
 - Order stem kit accessory.
 - Extended lead times apply.
 - Additional 17W. Provides 800 nominal lumens. Available in 3000K and 4000K with the C1-C4 lumen packages at a 25°C maximum ambient temperature. Not available with 347, 480, TMB, WM, HA, 5LTD, IBP or ICP.
 - Not available with TMB or DPM mounting.
 - HA not available with C5 and C6 lumen packages or 5LTD, IBP and ICP options.
 - Not available with CQ.
 - Standard with CQ, option available with WQ only.
 - Replace E1 with specific voltage (120, 208, 240, 277V available). Not available with C6 lumen package, HA, IBP, ICP or sensor options. Multiply published IES file by .95 when used with the C5 lumen package.
 - Replace E1 with specific voltage (120V and 277V available). 0°C minimum with IBP, -20°C minimum with ICP, 25°C maximum ambient temperature. Not available with WM, DPM, 5LTD or HA.
 - The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
 - Includes integral photocell.
 - LumaWatt wireless sensors are factory installed only requiring network components in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
 - Specify color in place of XX.
 - Designed for use with pendant mounting only.

DESCRIPTION

674 Luminous Wall Sconce features horizontal trim bars with a vertical fin detail and is ADA compliant. Design options, such as perforated metal, colored acrylic, and different trim bar configurations are available.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES**Material**

Painted solid aluminum with a matte white acrylic diffuser with a regressed aluminum perf shield. Wet location lamp and ballast housing with 1/8" clear acrylic diffuser.

Finish

Premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear.
Standard: Aluminum Paint (ALP).
Premium: Black Paint (BK), Bronze Metallic Paint (BM), Dark Platinum Paint (DP), Gold Metallic Paint (GM), Graphite Metallic Paint (GRM), Grey Paint (GY), White Paint or Custom Color (CC).

Optics

Refer to www.shaperlighting.com for complete photometrics.

Ballast

Integral electronic HPF multi-volt 120/277V (347V Canada), thermally protected with end-of-life circuitry to accommodate the specified lamp wattage.

Lamp/Socket

31": Two (2) 14W T5 linear miniature bi-pin fluorescent lamps.
43": Two (2) 21W T5 linear miniature bi-pin fluorescent lamps.
55": Two (2) 28W T5 linear miniature bi-pin fluorescent lamps.
Fluorescent socket injection molded plastic. Lamps furnished by others.

LED

31" L3:2000 nominal lumens at max 19W
43" L4:3000 nominal lumens at max 28W
55" L5:4000 nominal lumens at max 37W

Long-life LED system coupled with electrical driver to deliver optimal performance. Electronic drivers are available for 120-277 applications. A 0-10V dimming control is available (Standard) on all models.

Installation

Supplied with a mounting back for a standard 4" J-box or stucco ring.

Options

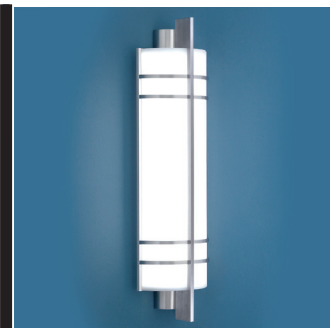
Modified Length - Contact factory,
Alternative Trim Bars or Perf
Accent Design - Contact factory,
Green Glass Acrylic (GGA).

Labels

U.L. and C.U.L. listed for wet location. ADA compliant.

Modifications

Shaper's skilled craftspeople with their depth of experience offer the designer the flexibility to modify standard exterior wall luminaires for project specific solutions. Contact the factory regarding scale options, unique finishes, mounting, additional materials/colors, or decorative detailing.

**674-WP SERIES**

Exterior Wall Luminaire
Luminous Sconce

**ARRA**

Shaper Lighting certifies that its products satisfy the requirements of Section 1605 of the American Recovery and Reinvestment Act (also known as the ARRA Buy American provision).

**AMERICAN
DISABILITIES
ACT (ADA)**

Shaper offers a large selection of ADA interior and exterior wall luminaires. ADA requires all fixtures below 68" to have a maximum projection of 4".

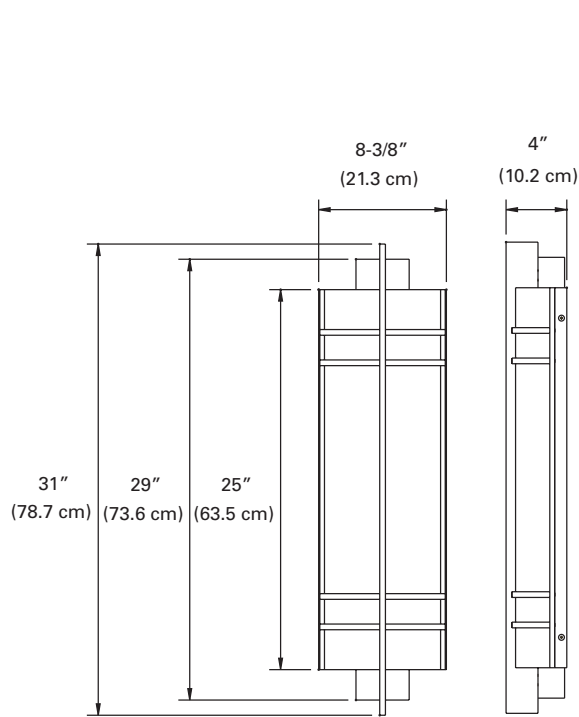
ORDERING INFORMATION

Sample Number: 674-55-WP-T5/2/28-277V-ALP

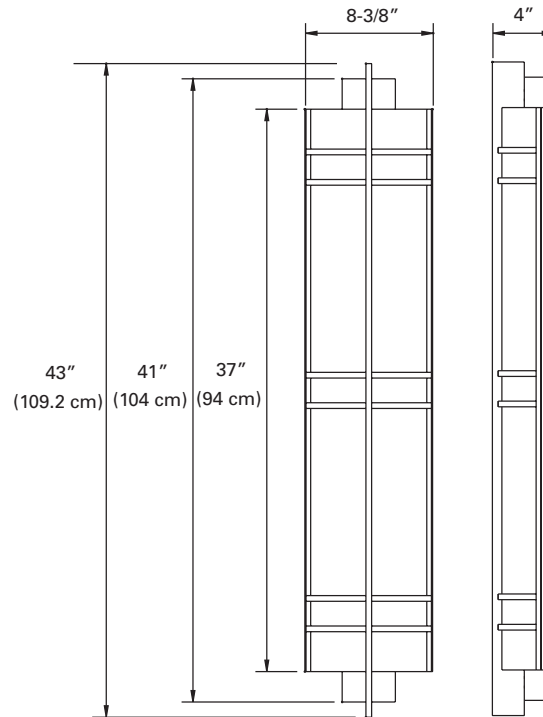
Series	Size	MountingType	Lamp	Voltage	Finish ⁴	Options
674 = Luminous Wall Sconce	31" 43" 55"	WP = Exterior Wall	T5/2/14 ¹	120V	<u>Standard</u>	GGA = Green Glass Acrylic
			T5/2/21 ²	277V	ALP = Aluminum Paint	
			T5/2/28 ³	347V ⁵	<u>Premium</u>	
			LED		BK = Black	
			L3/827 ¹		BM = Bronze Metallic Paint	
			L4/827 ²		CC = Custom Color	
			L5/827 ³		DP = Dark Platinum Paint	
			L3/830 ¹		GM = Gold Metallic Paint	
			L4/830 ²		GRM = Graphite Metallic Paint	
			L5/830 ³		GY = Grey	
			L3/835 ¹		WH = White	
			L4/835 ²			
			L5/835 ³			
			L3/840 ¹			
			L4/840 ²			
			L5/840 ³			

¹ Available in 31".² Available in 43".³ Available in 55".⁴ Premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear.⁵ For T5 lamping only

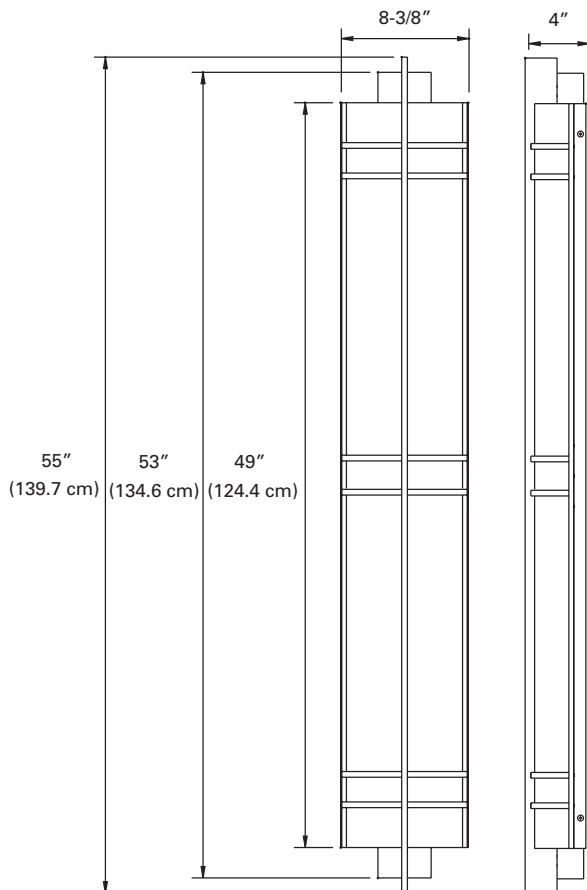
MOUNTING TYPE



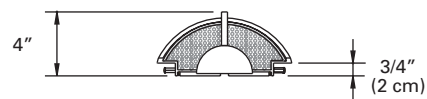
674-31-WP STANDARD



674-43-WP STANDARD



674-55-WP STANDARD



DESCRIPTION

The Halo Surface Mount LED Downlight (SMD) is an ultra-low profile surface mounting luminaire with a modern look and high performance. SMD6-DM (6" with spring clips) is designed for new installation into drywall, without any additional housing or junction box needed. Suitable for residential or commercial installations. Ideal for general areas, closets, storage areas, attics and basements. Compliant with NFPA® 70, NEC® Section 410.16 (A)(3) and 410.16 (C)(5).

Catalog #	Type
Project	
Comments	
Prepared by	

SPECIFICATION FEATURES

HOUSING

- Non-electrically conductive polycarbonate frame.
- High impact diffuse polystyrene lens provides shielding to the light guide with no pixilation
- Stamped aluminum housing provides thermal cooling achieving L70 at 50,000 hours in IC and non-IC applications

GASKETS

- Closed cell gasket achieves restrictive airflow and wet location requirements without additional caulking

OPTICS

- Precision acrylic light guide organizes source flux into wide distribution with 1.2 – 1.4 spacing criteria useful for general area illumination

LED

- Mid power led array provide a uniform source with high efficiency and long life.
- Available in 90 CRI minimum, R9 greater than 50 and color accuracy within 3 SDCM provide color accuracy and uniformity

DRIVER

- Integral 120V 50/60Hz constant current driver provides noise free operation.
- Continuous, flicker-free dimming from 100% to 5% with select leading or trailing edge 120V phase cut dimmers.
- Dimming to 5% is best assured using dimmers with low end trim adjustment. Consult dimmer manufacturer for compatibility and conditions of use. (Note some dimmers require a neutral in the wallbox.)
- Inline electrical quick connect (provided) provides mains connections.

MOUNTING/RETENTION

- The SMD-DM with Spring Clips requires no housing or junction box.
- The integral enclosure may be used in direct contact with insulation including spray foam insulation.
- Installer must cut template out of drywall, and install into the aperture with the clips compressed.
- When released, the spring clips will rest on to the back side of the drywall.
- Installer must ensure secure fit and wiring. This includes all applicable national and local electrical and building codes

COMPLIANCE

- cULus listed / certified for use with Halo housings, classified for use with other's housings, see instruction sheet for conditions of acceptability.
- Wet and Damp Location listed, airtight per ASTM-E283
- Suitable for use in closets, compliant with NFPA® 70, NEC® Section 410.16 (A)(3) and 410.16 (C)(5)
- EMI/RFI emissions per FCC 47CFR Part 15B
- Contains no mercury or lead and RoHS compliant.
- Photometric testing in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11.
- Can be used for State of California Title 24 high efficacy luminaire compliance, reference the California Energy Commission Title 20 Appliance Efficiency Database for current listings.
- Can be used for International Energy Conservation Code (IECC) and Washington State Energy Code high efficiency luminaire compliance

WARRANTY

- Five year limited warranty, consult website for details. www.eaton.com/lighting/legal



SMD6-DM Series

6 Inch Round and Square
Direct Mount

SMD6R-DM
SMD6S-DM

**6" Surface Mount
Downlight**

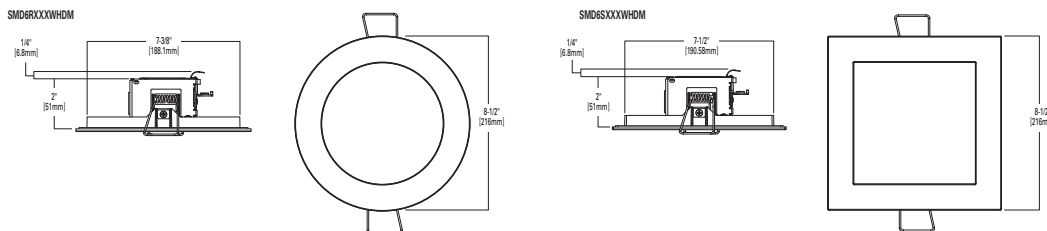
**Direct Mount into
non-accessable ceiling**

ORDERING INFORMATION

SAMPLE NUMBER: SMD6R6930WHDM=6" Round Surface Mount Downlight, 90CRI, 3000K, Direct Mount

Models	Lumens	CRI / CCT	Finish	Mouting
SMD6R = 6" Round Surface Mount Downlight, 120V	6 =600 lumen series	927 =90CRI, 2700K 930 =90CRI, 3000K 935 =90CRI, 3500K 940 =90CRI, 4000K 950 =90CRI, 5000K	WH =White	DM =Direct Mount
SMD6S = 6" Square Surface Mount Downlight, 120V				

DIMENSIONS

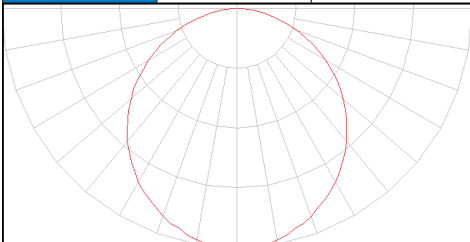


ENERGY DATA

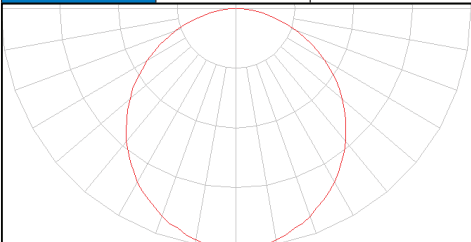
	Round	Square
Lumens (5000K models)	788	815
Input Power	9.62 W	9.9 W
Input Current	0.0811 A	0.085 A
Efficiency	82 lm/W	82 lm/W
THD	13.9	14.7
Input Voltage	120V	
Frequency	50/60 Hz	
CRI	90 CRI	
Power Factor	0.99	
T Ambient	-30 - +40°C	
Sound Rating	Class A	

PHOTOMETRIC DATA

SMD6R6927WHDM		
Luminaire lumens		750
Input watts		9.4
LER (LPW)		80
Spacing Criteria	0-180	1.26
	90-270	1.26
	Diagonal	1.38
Beam angle (degrees)		112
Field angle (degrees)		162
Max. Candela		264
Zonal lumen	Lumens	% Lumens
0-30	204	27.2%
0-40	334	44.5%
0-60	590	78.6%
0-90	750	100.00%



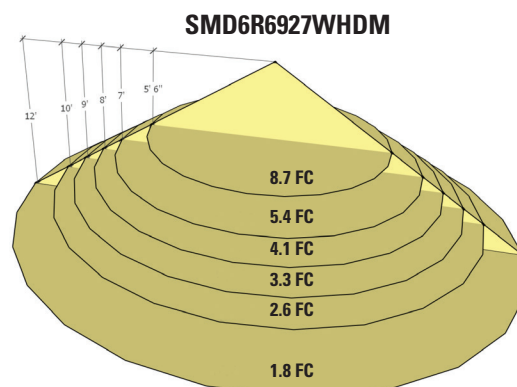
SMD6S6927WHDM		
Luminaire lumens		750
Input watts		10.0
LER (LPW)		75
Spacing Criteria	0-180	1.24
	90-270	1.24
	Diagonal	1.36
Beam angle (degrees)		112
Field angle (degrees)		162
Max. Candela		271
Zonal lumen	Lumens	% Lumens
0-30	207	27.6%
0-40	337	44.9%
0-60	590	78.6%
0-90	750	100.00%



Cat. No.	CRI	CCT	Lumens	Power (W)	LPW
SMD6R6927WHDM	93	2700	754	9.6	78.5
SMD6R6930WHDM	92	3000	758	9.6	78.7
SMD6R6935WHDM	95	3500	740	9.6	77.0
SMD6R6940WHDM	94	4000	792	9.8	80.5
SMD6R6950WHDM	92	5000	788	9.6	81.9
SMD6S6927WHDM	92	2700	750	10.0	75.0
SMD6S6930WHDM	92	3000	790	9.9	79.8
SMD6S6935WHDM	93	3500	740	10.0	74.0
SMD6S6940WHDM	92	4000	760	10.3	73.8
SMD6S6950WHDM	90	5000	815	9.9	82.3

Foot-candle Values at Nadir 0 degree Aiming Angle			
DD (FT)	SMD6R6927WHDM (FC)	SMD6S6927WHDM (FC)	DIA (FT)
5.5	8.7	9.0	16.3
7	5.4	5.5	20.9
8	4.1	4.2	23.8
9	3.3	3.3	26.8
10	2.6	2.7	29.7
12	1.8	1.9	35.7

DD = distance down to illuminated work plane
FC = initial foot-candles at nadir
DIA = diameter



Multiplier Table					
CCT Option	2700K	3000K	3500K	4000K	5000K
CCT Multiplier	1.00	1.014	1.042	1.083	1.083

DESCRIPTION

The Impact Elite family of wall luminaires is the ideal complement to site design. Incorporating modular LightSquares technology, the Impact Elite luminaire provides outstanding uniformity and energy-conscious illumination. Combined with a rugged construction, the Impact Elite luminaire is the ideal facade and security luminaire for zones surrounding schools, office complexes, apartments and recreational facilities. UL/cUL listed for wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Heavy-wall, die-cast aluminum housing and removable hinged door frame for precise tolerance control and repeatability. Hinged door inset for clean mating with housing surface and secured via two captive fasteners. Optional tamper-resistant Torx™ head fasteners offer vandal resistant access to the electrical chamber.

Optics

Choice of 10 patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K, 5000K and 5700K CCT.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less than 20% harmonic distortion, and are suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightSquares feature an IP66 enclosure rating and maintain greater than 90% lumen maintenance at 60,000 hours per IESNA TM-21. Emergency egress options for -20°C ambient environments and occupancy sensor available.

Mounting

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" mechanism for quick installation. Secured with two captive corrosion resistant black oxide coated allen head set screws concealed but accessible from bottom of fixture.

Finish

Cast components finished in a five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

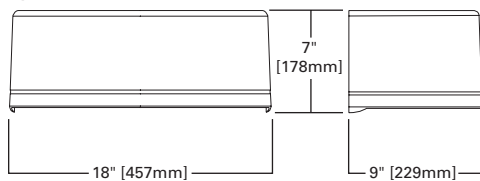
Warranty

Five-year warranty.

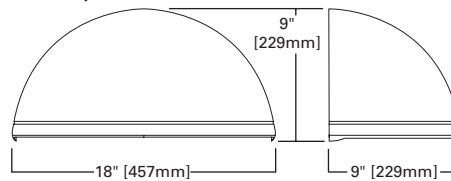


DIMENSIONS

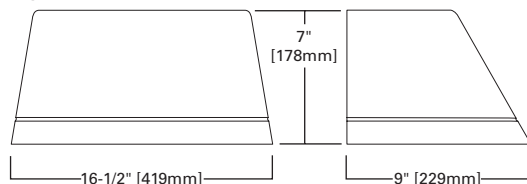
Cylinder



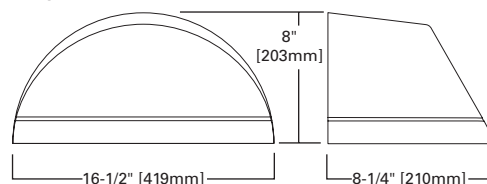
Quarter Sphere



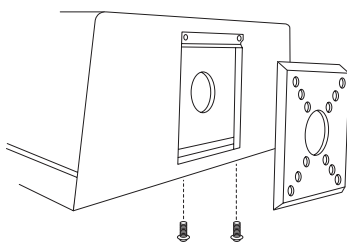
Trapezoid



Wedge



HOOK-N-LOCK MOUNTING



ISC/ISS/IST/ISW IMPACT ELITE LED

1 LightSquare
Solid State LED

WALL MOUNT LUMINAIRE

CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightSquare
DesignLights Consortium® Qualified*
ISO 9001

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60Hz, 347V/60Hz,
480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating

SHIPPING DATA

Approximate Net Weight:
18 lbs. (8 kgs.)

POWER AND LUMENS

1 LightSquare (AF)		Cylinder (ISC) and Quarter Sphere (ISS)						Trapezoid (IST) and Wedge (ISW)					
Drive Current (mA)		350	450	600	800	1000	1200	350	450	600	800	1000	1200
Power (Watts)	120-277V	20.3	25.5	33.4	43.9	55.1	66.2	20.3	25.5	33.4	43.9	55.1	66.2
Current (A)	120V	0.17	0.22	0.29	0.38	0.48	0.56	0.17	0.22	0.29	0.38	0.48	0.56
	277V	0.09	0.10	0.13	0.17	0.21	0.25	0.09	0.10	0.13	0.17	0.21	0.25
Power (Watts)		23.3	28.7	36.6	49.5	60.7	70.1	23.3	28.7	36.6	49.5	60.7	70.1
Current (A)	347V	0.07	0.08	0.11	0.15	0.18	0.21	0.07	0.08	0.11	0.15	0.18	0.21
	480V	0.05	0.06	0.08	0.11	0.13	0.16	0.05	0.06	0.08	0.11	0.13	0.16
Optics													
T2	Lumens	2,336	2,934	3,827	4,791	5,663	6,444	2,498	3,136	4,091	5,122	6,054	6,889
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2
T3	Lumens	2,385	2,994	3,906	4,889	5,779	6,577	2,504	3,144	4,101	5,133	6,068	6,905
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2
T4FT	Lumens	2,360	2,963	3,866	4,839	5,720	6,509	2,530	3,177	4,145	5,188	6,133	6,979
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2
T4W	Lumens	2,386	2,996	3,908	4,892	5,783	6,581	2,500	3,139	4,095	5,126	6,059	6,895
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2
SL2	Lumens	2,257	2,834	3,697	4,628	5,470	6,225	2,413	3,030	3,953	4,948	5,849	6,656
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2
SL3	Lumens	2,220	2,787	3,636	4,552	5,380	6,122	2,365	2,970	3,874	4,849	5,732	6,523
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2
SL4	Lumens	2,110	2,649	3,456	4,326	5,113	5,818	2,234	2,805	3,660	4,581	5,415	6,162
	BUG Rating	B0-U0-G1	B0-U0-G1	B0-U0-G1	B0-U0-G1	B0-U0-G1	B0-U0-G1	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2
SLL/SLR	Lumens	1,990	2,498	3,259	4,080	4,823	5,488	2,154	2,705	3,529	4,418	5,222	5,942
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2	B1-U1-G2
RW	Lumens	2,380	2,988	3,898	4,880	5,768	6,564	2,465	3,095	4,037	5,054	5,974	6,798
	BUG Rating	B2-U0-G0	B2-U0-G0	B2-U0-G0	B2-U0-G0	B2-U0-G0	B2-U0-G0	B3-U1-G1	B3-U1-G1	B3-U1-G1	B3-U1-G1	B3-U1-G1	B3-U1-G1

LUMEN MAINTENANCE

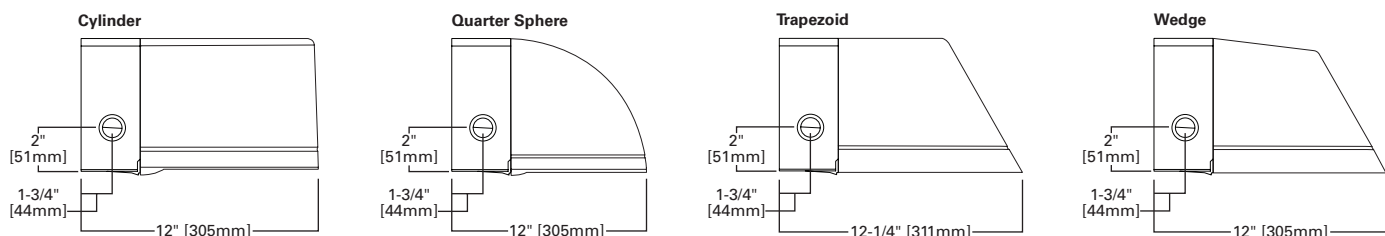
Current	Ambient Temperature	25000 Hours*	50000 Hours*	60000 Hours*	100000 Hours*	Theoretical L70 (Hours)*
Up to 1.2A	Up to 40°C	>95%	>91%	>90%	>83%	20,4000

*Data calculated based on TM-21 calculator.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99

THRUWAY BACK BOX



ORDERING INFORMATION

Sample Number: ISC-AF-1200-LED-E1-T3-BZ

Product Family ¹	Light Engine	Drive Current	Lamp Type	Voltage	Distribution	Color
ISC =Impact Elite LED Small Cylinder ISS =Impact Elite LED Small Quarter Sphere IST =Impact Elite LED Small Trapezoid ISW =Impact Elite LED Small Wedge	AF =(1) LightSquare	350 =Drive Current Factory Set to 350mA 450 =Drive Current Factory Set to 450mA 600 =Drive Current Factory Set to 600mA 800 =Drive Current Factory Set to 800mA 1000 =Drive Current Factory Set to 1000mA 1200 =Drive Current Factory Set to 1200mA ²	LED =Solid State Light Emitting Diodes	E1 =Electronic (120-277V) 347 =347V ² 480 =480V ^{2,3}	T2 =Type II T3 =Type III T4FT =Type IV Forward Throw T4W =Type IV Wide SL2 =Type II w/Spill Control SL3 =Type III w/Spill Control SL4 =Type IV w/Spill Control SLL =90° Spill Light Eliminator Left SLR =90° Spill Light Eliminator Right RW =Rectangular Wide Type I	AP =Grey BZ =Bronze BK =Black DP =Dark Platinum GM =Graphite Metallic WH =White
Options (Add as Suffix)				Accessories (Order Separately) ¹⁷		
7030 =70 CRI / 3000K CCT ⁴ 7050 =70 CRI / 5000K CCT ⁴ 7060 =70 CRI / 5700K CCT ⁴ 8030 =80 CRI / 3000K CCT ⁴ PER7 =NEMA 7-PIN Twistlock Photocontrol Receptacle ^{2,5,6} P =Button Type Photocontrol (Available in 120, 208, 240 or 277V. Must Specify Voltage) ^{2,6} HA =50°C High Ambient ⁷ AHD145 =After Hours Dim, 5 Hours, 50% ⁸ AHD245 =After Hours Dim, 6 Hours, 50% ⁸ AHD255 =After Hours Dim, 7 Hours, 50% ⁸ AHD355 =After Hours Dim, 8 Hours, 50% ⁸ MS/DIM-LXX =Motion Sensor for Dimming Operation ^{9,10,11} LWR-LW =LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height ^{6,11,12} LWR-LN =LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height ^{6,11,12} BBB =Battery Pack with Back Box (Specify 120V or 277V) ¹³ CWB =Cold Weather Battery Pack with Back Box (Specify 120V or 277V) ¹⁴ LCF =LightSquare Trim Plate Matches Housing Finish HSS =Factory Installed House Side Shield ¹⁵ ULG =Uplight Glow ^{5,6} TR =Tamper Resistant Hardware X =Driver Surge Protection (6kV) Only ¹⁶				MA1253 =10kV Circuit Module Replacement MA1254-XX =Thruway Back Box - Impact Elite Trapezoid MA1255-XX =Thruway Back Box - Impact Elite Cylinder MA1256-XX =Thruway Back Box - Impact Elite Quarter Sphere MA1257-XX =Thruway Back Box - Impact Elite Wedge FSIR-100 =Wireless Configuration Tool for Occupancy Sensor		

NOTES:

- Standard 4000K CCT and greater than 70 CRI.
- Not available with ULG option.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Exextended lead times apply.
- Not available with ISS or ISW.
- Not available with LWR-XX or MS/DIM-LXX.
- Suitable for 50°C provided no options other than motion sensor are included and driver output set to 1.A or less.
- Requires the use of P photocontrol or the PER7 photocontrol receptacle with photocontrol accessory. Not available with 350mA drive current. See After Hours Dim supplemental guide for additional information.
- Specify lens in place of XX. Round to next highest option based on mounting height. Available options are 08, 20 and 40W.
- The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
- Includes integral photocell.
- LumaWatt Pro wireless sensors are factory installed and requiring network components in appropriate quantities. See www.eaton.com/lighting for LumaWatt Pro application information.
- LED standard integral battery pack is rated for minimum operating temperature 32°F (0°C). Operates downlight for 90-minutes.
- LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates downlight for 90-minutes.
- Only for use with SL2, SL3 and SL4 distributions. The LightSquare trim plate is painted black when the HSS option is selected.
- Removes additional surge module.
- Specify color in place of XX.

Shipyard Brewery -project

Mike Curran <mwcurren@gmail.com>

May 12, 2018 10:54 AM

Posted in group: **Planning Board**

Based on project description at this time I am in support with some concerns.

-Does the Planning Board foresee changes?

-Traffic plan? Tilson/Marriott/Wex/MasonBlock/OceanGate garage along with new Shipyard project as well as another new hotel on Middle St. will create grid-lock on one lane streets. Could one solution be one-way streets?

-Street pavement conditions in this area, as well as Portland proper, are in deplorable conditions. Is there a timeline plan to improve?

Managed growth question- is the growing density of condos and hotels consistent with a 3 to 5 year plan for Portland?

Fair to say a recession is on the horizon (history and our growing deficit dictate this).

If so, tax revenue burdens will fall to residents as businesses fail and as you know current rates and pending re-valuation plan will challenge many homeowners.

Thank you for reading this, I hope to attend the meeting.

--

Mike Curran
22 Hancock St. #206
Portland, ME 04101
207 747 9639

Google Groups

Protest against proposed Shipyard Brewing 86 Newbury Street

Mary G Cadagin <marycadagin@gmail.com>

May 15, 2018 9:27 AM

Posted in group: **Planning Board**

Mary G Cadagin
Leon A Wilson, Jr
22 Hancock Street Unit A207
Portland ME 04101

May 15, 2018

Dear Portland Planning Board:

We are opposed to the proposed Shipyard Brewing Company construction project called in the documents the Shipyard Brewing 86 Newbury Street project. We think the hotel, especially, will contribute not to the neighborhood's growth and development, but rather to a transient and rowdy element.

One of the best things about how this area has grown is that it still feels like most of the people walking the streets around our home are our neighbors. This 105 room hotel, especially with its brew-themed concept, will not bring neighbors and more congeniality into the area. It will bring, in a predominately residential area, people and car congestion, party-animal hotel guests and almost no new neighbors.

We do not support this project.

Sincerely,

Mary G Cadagin & Leon A Wilson, Jr

CC:
Barbara Nash
John Bubar

Shipyard Project 86 Newbury St.

Jeanne Ouellette <jeanouel@comcast.net>

Sun, May 20, 2018 at 1:06 PM

To: Andrews Deb <dga@portlandmaine.gov>, Cameron Caitlin <ccameron@portlandmaine.gov>, Portland Planning Board
<planningboard@portlandmaine.gov>

As an neighbor to the proposed Shipyard development site at [86 Newbury Street](#), I have had the opportunity to attend two public meetings to learn of the project's scope in its preliminary form—one public forum held by the developer on May 15, 2018 and a workshop held by Portland's Historic Preservation Board on May 16, 2018. While detailed plans have yet to be provided, it is my understanding that the two acre project site will contain a 6 story hotel and a 7 story office building which includes a bonus floor for the developer's construction of green roof. Also part of the plan is the renovation of the existing Shipyard Brewery building and the construction of a limited number of townhouses along Newbury Street. The suggested schedule for the build out of the entire project is of 21 month duration and could begin as early as this summer.

At present, my primary concern is the Newbury Street residential neighborhoods and the impact this development has on the character of this urban neighborhood adjacent to the Abyssinian Meeting House. My concerns are as follows with some of the potential solutions raised at the meeting of the Historic Preservation Board for the area.

Let neighbors look at neighbors—the proposed office building and the brewery with the hotel behind it (two stories higher) show their backs to the existing residences creating a wall. More residential units on the south side of Newbury which mirror the look, character, and massing of the north side would knit the neighborhood together.

Repeat the rhythm of the residential shapes and materials of the existing residences. Gable roofs, front door stoops and materials, both brick and clapboard, have a precedent in the neighborhood. See images attached.

Create a service alley for underground parking under proposed Newbury row of residences with an entrance off of Hancock St. between the houses and the brewery. This eliminates multiple curb cuts and provides more on-street parking.

Give the neighborhood the benefit of buried utilities and street trees. All telephone poles are located on the construction side of Newbury St. and with the extensive demolition of existing houses and brewery buildings this is a real opportunity to bury the overhead lines. These neighbors will have to put up with two years of construction hassle. Street trees on the project side of Newbury will help with the scale of the new buildings.

The city has a unique opportunity with this development to work with the developers to preserve and strengthen the Newbury Street corridor between Hancock and Mountfort Streets. It is my hope that the solution for the neighborhood can benefit everyone.

Jeanne Ouellette
113 Newbury Street No.302
Portland ME 04101
jeanouel@comcast.net



SHIPYARD REDEVELOPMENT

NEWBURY STREET

PORTLAND, MAINE

PROJECT PARCEL SITE PORTLAND ASSESSOR'S MAP & LOT NUMBERS

MAP	LOT
020	C001, C002
020	C005, C009, C015

Applicant:

86 NEWBURY STREET, LLC
470 FORE STREET, PORTLAND ME 04101
CLIENT PHONE #: (207) 772-2992

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

1. TOPOGRAPHIC DATA AND EXISTING CONDITIONS WAS PREPARED BY OWEN HASKELL OF FALMOUTH, MAINE ON FEBRUARY 14, 2017.
2. 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.
3. 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.
4. 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.
5. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, AND/OR CITY OF PORTLAND SPECIFICATIONS.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF A SITE PLAN 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.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

LAYOUT NOTES

1. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB.
2. OFFSETS TO CATCH BASINS AND MANHOLES ARE TO THE CENTER OF THE FRAME.
3. 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.
4. 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.
5. PROPOSED RIGHT OF WAY MONUMENTS AND PROPERTY LINE PINS SHALL BE INSTALLED UNDER THE DIRECTION OF A MAINE LICENSED LAND SURVEYOR.
6. CURB RADI UNLESS OTHERWISE NOTED ON THE PLAN SHALL BE A MINIMUM OF 3'.

UTILITY NOTES

1. 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 C851, LATEST REVISION.
2. THE LOCATION OF THE PROPOSED UNDERGROUND ELECTRICAL SERVICE IS APPROXIMATE AND THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION WITH CENTRAL MAINE POWER COMPANY.
3. THRUST BLOCKS 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 STANDARDS.
4. 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.

GRADING AND DRAINAGE NOTES

1. 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
2. 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.
3. 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

1. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE SITE.
2. PRIOR TO BEGINNING ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES AND THE CONSTRUCTION ENTRANCE.
3. 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 C408.
4. PRIOR TO PAVING, THE CONTRACTOR SHALL FLUSH SEDIMENT FROM ALL STORM DRAIN LINES, REMOVE ACCUMULATED SEDIMENT FROM SUMPS AND INVERTS AND PROPERLY DISPOSE OF.
5. ALL CATCH BASINS WITH OUTLET PIPES 18" DIAMETER OR LESS SHALL BE PROVIDED WITH A "SNOUT" SEDIMENTATION HOOD PER DETAIL.
6. SILT FENCES SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL NOTES.
7. 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.
8. 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.
9. EROSION CONTROL NOTES ACCOMPANY THIS PLAN SET AND ARE CONTAINED ON DRAWING C405 OF THIS PLAN SET.
10. THE MAINTENANCE SCHEDULE FOR THE CATCH BASIN SEDIMENT SUMPS IS CONTAINED IN THE EROSION CONTROL NOTES INCLUDED ON SHEET C405.
11. 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 MDEP) MAY RESULT IN MONETARY PENALTIES. THE CONTRACTOR SHALL BE ASSESSED ALL SUCH PENALTIES AT NO COST TO THE OWNER OR PERMITTEE.
12. ALL NON--PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE LOAMED AND SEEDDED, UNLESS OTHERWISE DIRECTED BY THE OWNER.
13. ALL DISTURBED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL PRIOR TO PERMANENT SEEDING.

PERMITS

TYPE OF PERMIT

LEVEL III SITE PLAN AND SUBDIVISION APPLICATION

TRAFFIC MOVEMENT PERMIT

CONSTRUCTION GENERAL PERMIT

GOVERNING BODY

CITY OF PORTLAND
PLANNING DEPARTMENT
389 CONGRESS STREET
PORTLAND, MAINE 04101
(207) 874-8719

CITY OF PORTLAND
PLANNING DEPARTMENT
389 CONGRESS STREET
PORTLAND, MAINE 04101
(207) 874-8719

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
312 CANCO ROAD
PORTLAND, ME 04103
(207) 822-6300

UTILITIES

WATER:

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PORTLAND, MAINE 04102
(207) 761-8300
CONTACT: JAY ARNOLD

SEWER:

DEPARTMENT OF PUBLIC SERVICES
55 PORTLAND STREET
PORTLAND, MAINE 04101-2991
(207) 874-8832
CONTACT: BRAD ROLAND

ELECTRIC:

CENTRAL MAINE POWER
162 CANCO ROAD
PORTLAND, MAINE 04103
(207) 828-2882
CONTACT: JAMES COUGH

TELEPHONE:

FAIRPOINT
5 DAVIS FARM ROAD
PORTLAND, MAINE 04103
(207) 797-1842
(207) 712-1063 (C)
CONTACT: BRIAN BOUCHARD

CABLE:

SPECTRUM
118 JOHNSON ROAD
PORTLAND, MAINE 04102
(207) 253-2222

GAS:

UNITIL
376 RIVERSIDE INDUSTRIAL PARKWAY
PORTLAND, MAINE 04103
(207) 541-2543
CONTACT: SCOTT CARPENTER

STATUS

SUBMITTED: APRIL 2018

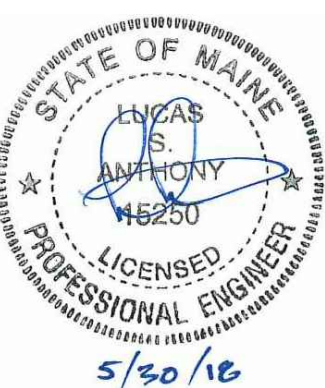
ANTICIPATED SUBMITTAL: JUNE 2018

ANTICIPATED SUBMITTAL: AUGUST 2018

INDEX

C001	COVER SHEET, GENERAL NOTES, & LEGEND
—	BOUNDARY AND TOPOGRAPHIC SURVEY
C002	DEMOLITION PLAN
C100	SITE AND UTILITY PLAN - FIRST FLOOR
C101	UTILITY INSETS
C102	GRADING, DRAINAGE & EROSION CONTROL PLAN
C401	SITE DETAILS
C402	SITE AND LIGHTING DETAILS
C403	DRAINAGE & UTILITY DETAILS
C404	FOCAL POINT AND DETENTION POND DETAILS
C405	DETENTION POND AND DRAINAGE DETAILS
C406	FOCAL POINT DETAILS
C407	SUBSLAB DRAINAGE PLAN & DETAILS
C408	EROSION CONTROL NOTES & DETAILS
L001	LANDSCAPING PLAN
E0.00	PHOTOMETRIC LIGHTING PLAN

CALL BEFORE YOU DIG
1-888-344-7233



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

U:\3184_Shipyard Browning Z - CAD\DWG\3184-COVER.dwg 5/30/2018 5:00 PM

Rev.	Date	Revision
2	5/30/18	REVISED PER CITY STAFF COMMENTS
1	5/14/18	REVISED PER UPDATED ARCHITECTURAL PLANS

SITE PLAN AND SUBDIVISION	4/10/18	LSA
Issued For	Date	By

Design: CEH	Draft: CG	Date: APR 2018
Checked: LSA	Scale: NTS	Job No.: 3184
File Name: 3184-COVER.dwg		

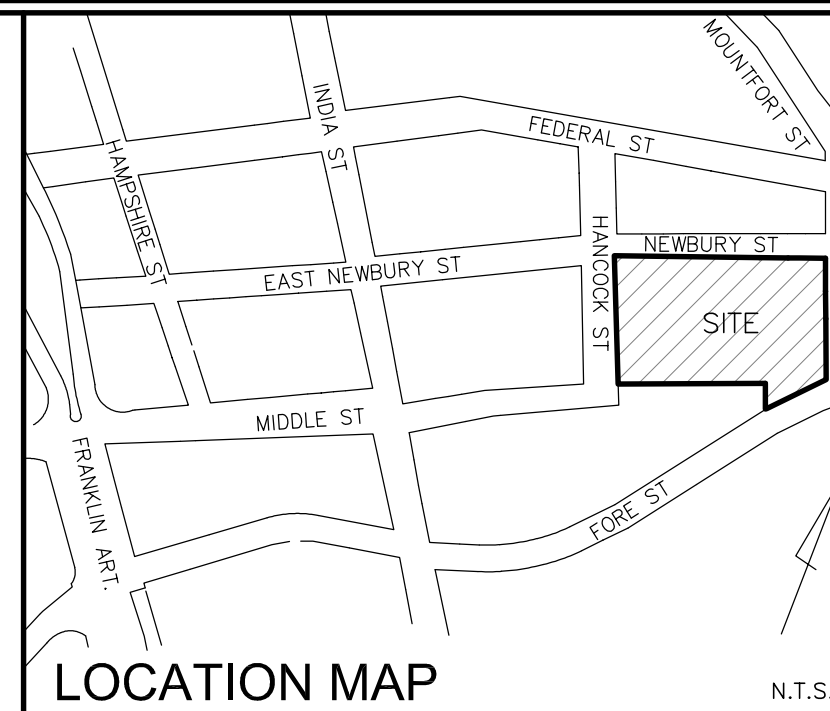
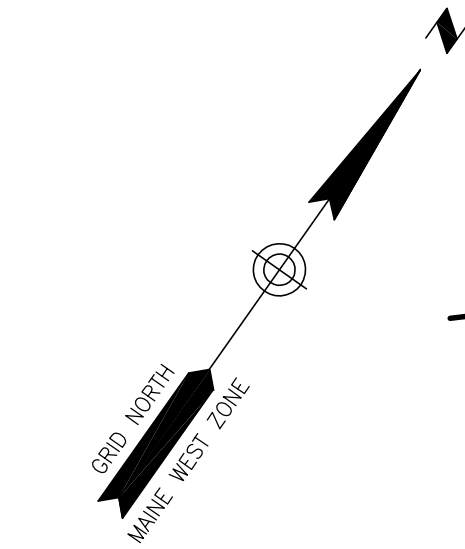
This plan shall not be modified without written permission from Gorrill Palmer (GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP.



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207.772.2151

COVER SHEET, GENERAL NOTES & LEGEND	
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.
C001



LEGEND

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- ELECTRIC/GAS METER
- SIGN
- CATCH BASIN
- GAS VALVE
- HYDRANT
- WATER VALVE OR SHUTOFF
- LIGHT POLE
- BOLLARD
- DECIDUOUS TREE
- GUARDRAIL
- FENCE
- CURB
- OVERHEAD WIRES
- UNDERGROUND ELECTRIC
- WATER LINE
- GAS LINE
- STORM DRAIN
- SANITARY SEWER
- 1" CONTOUR
- IRON PIPE OR ROD FOUND
- INVERT
- FINISHED FLOOR ELEVATION
- CONC.
- N/F
- 000/000
- DEED BOOK AND PAGE

CITY CONTROL

CITY CONTROL POINTS USED:

3022 - 3' O/S MONUMENT
AT HANCOCK/THAMES

N:301388.62
E:2931424.18

3000 - 3' O/S MONUMENT
AT HANCOCK/FORE

N:301536.15
E:2931222.69

GENERAL NOTES

1. OWNER OF RECORD: SHIPYARD BREWING COMPANY, LLC
TAX MAP 020 BLOCK C LOT 009
C.C.R.D. BOOK 12206 PAGE 170
AREA= 82,519 S.F.±

70-72 NEWBURY ST, LLC
TAX MAP 020 BLOCK C LOTS 5, 15, 1
C.C.R.D. BOOK 24966 PAGE 65
AREA= 7,756 S.F.±

FRED FORSELY
TAX MAP 020 BLOCK C LOT 2
C.C.R.D. BOOK 23197 PAGE 64
AREA= 3,500 S.F.±

2. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD83.

3. ELEVATIONS ARE BASED ON CITY OF PORTLAND VERTICAL DATUM. BENCHMARK USED IS A USC&GS DISK AT 17 COMMERCIAL STREET ELEVATION=14.50.

4. STREET LINES REPRODUCED FROM MARKERS FOUND AS SHOWN ON PLAN REFERENCE 3.

PLAN REFERENCES

1. "SUBDIVISION PLAN ON FORE STREET, PORTLAND, MAINE MADE FOR NORWICH PARTNERS LLC," BY OWEN HASKELL, INC. DATED DECEMBER 12, 2007 AND REVISED THROUGH 02-05-08. AN UNREVISED COPY CAN BE FOUND AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 207 PAGE 783. OHI JOB# 2008-262P.

2. "PLAN OF LAND - LAND TITLE SURVEY ON FORE, INDIA, MIDDLE, NEWBURY, HANCOCK, AND MOUNTFORT STREETS, PORTLAND, MAINE FOR SHIPYARD BREWING CO., LLC," BY OWEN HASKELL, INC. DATED APRIL 1987 AND UPDATED THROUGH 1/10/03. AN EARLIER REVISED VERSION CAN BE FOUND IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 195 PAGE 398. OHI JOB# 95217P

3. "PLAN OF LAND - STANDARD BOUNDARY SURVEY ON FORE, INDIA, MIDDLE, NEWBURY, HANCOCK, AND MOUNTFORT STREETS, PORTLAND, MAINE FOR AMERICAN HOIST & DERRICK CO." BY OWEN HASKELL, INC. DATED APRIL 1987 AND REVISED THROUGH 2/13/92. OHI JOB# 86193P.

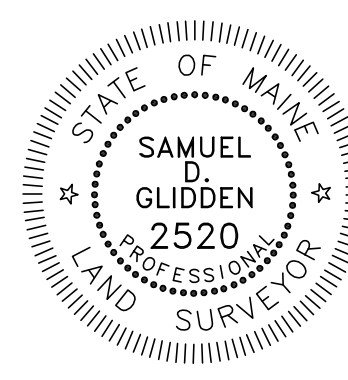
4. "SITE PLAN WITH PARKING GARAGE SHIPYARD BREWERY PORTLAND, MAINE FOR SEA DOG REALTY" DATED 3-16-2011 BY ATTAR ENGINEERING INC.

CERTIFICATE

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE. WITH THE EXCEPTION OF MARKERS SET AT ALL CORNERS.

04/05/2017
DATE

SAMUEL D. GLIDDEN, PLS #2520



REV. 2 4/5/17 FLOOR ELEVATIONS, UPDATE BENCHMARK
REV. 1 4/3/17 MISC. PLAN REVISIONS

BOUNDARY & TOPOGRAPHIC SURVEY

AT
#70-72 NEWBURY STREET, PORTLAND, MAINE
MADE FOR
BATEMAN PARTNERS, LLC
470 FORE STREET, PORTLAND, MAINE



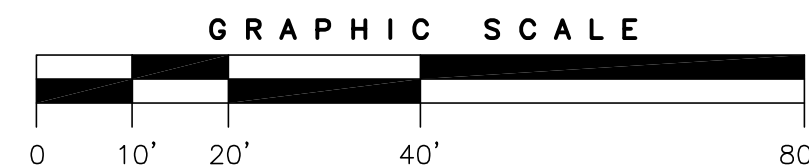
OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS

390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207) 774-0424

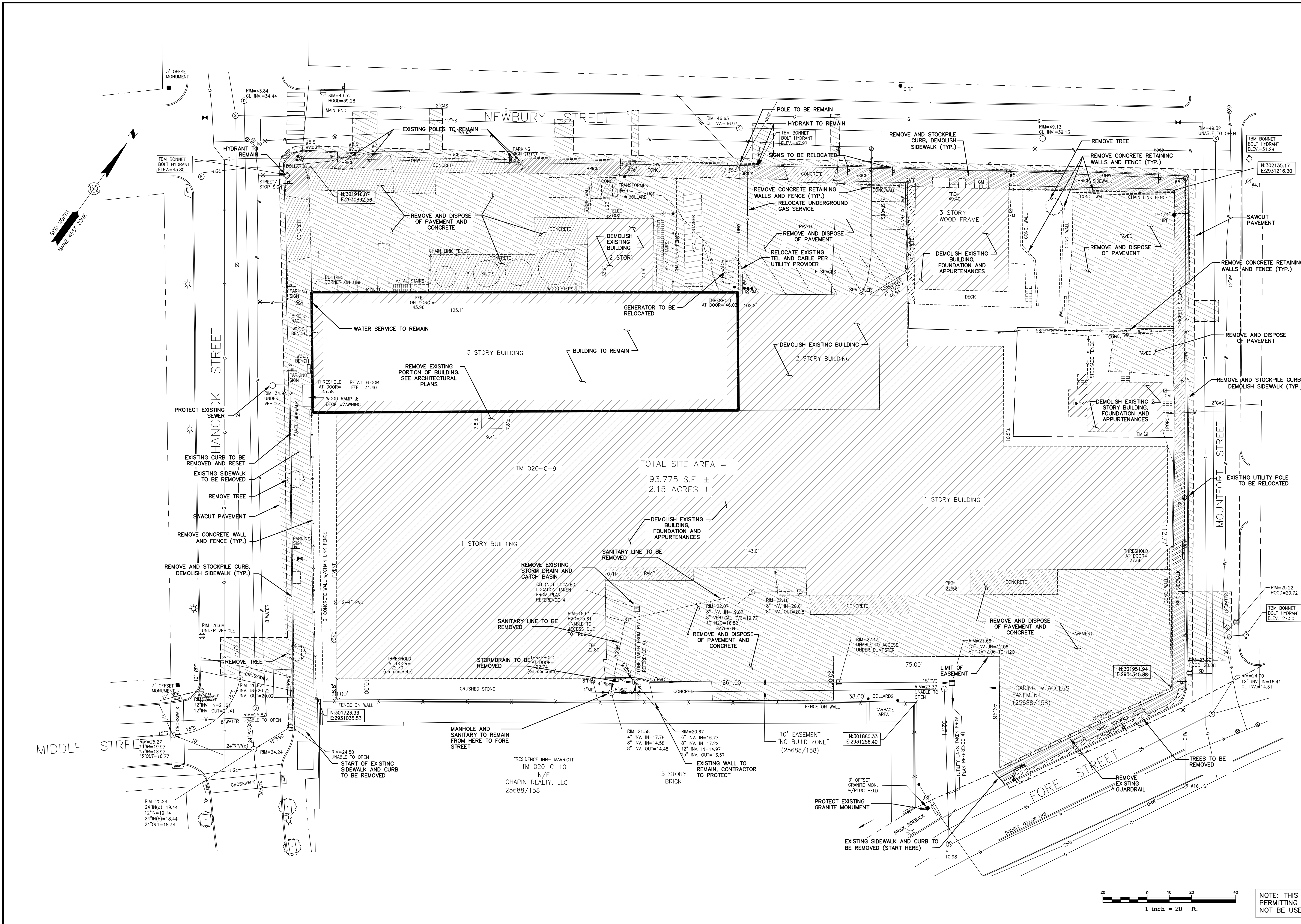
Drawn By	SDG	Date	Job No.
Trace By	JLW	FEBRUARY 14, 2017	2017-010P
Check By	JWS	Scale	Drwg. No.
Book No.	1155	1" = 20'	1

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.



U:\3184_Shipyard Brewing V - CAD\DWG\3184-DEMO.dwg 5/20/2018 5:01 PM



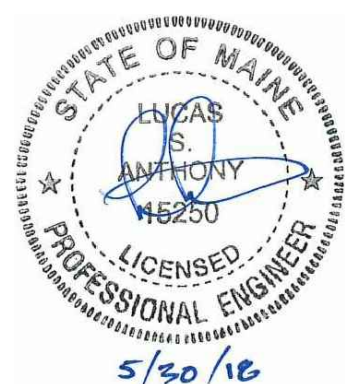
NOTES:

- ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTES SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
- CONTRACTOR SHALL COORDINATE WITH CENTRAL MAINE POWER FOR TERMINATION OF ELECTRIC SERVICE FROM EXISTING BUILDINGS AND ALL ELECTRICAL WORK.
- CONTRACTOR SHALL COORDINATE WITH PORTLAND WATER DISTRICT FOR THE SHUT OFF OF WATER SERVICE TO THE EXISTING BUILDINGS.
- CONTRACTOR SHALL COORDINATE WITH THE CITY OF PORTLAND FOR TERMINATION THE EXISTING SEWER SERVICES.
- DEMOLITION SHALL OCCUR SUCH THAT RECYCLING OF WASTE OCCURS TO THE MAXIMUM EXTENT PRACTICABLE; INCLUDING BUT NOT LIMITED TO: STONE, BRICK, CONCRETE, STEEL, WOOD AND PAVEMENT.
- PRIOR TO DEMOLITION, A CONSTRUCTION MANAGEMENT PLAN PREPARED BY THE GENERAL CONTRACTOR SHALL BE SUBMITTED TO THE CITY OF PORTLAND PLANNING DIVISION FOR REVIEW. THE CONSTRUCTION MANAGEMENT PLAN SHALL ADDRESS THE FOLLOWING:
 - ANTICIPATED PROJECT START DATE
 - ANTICIPATED PROJECT END DATE
 - CONSTRUCTION SEQUENCE
 - PEDESTRIAN CIRCULATION PLAN
- CONTRACTOR SHALL NOTE PRESENCE OF FLOWING GROUNDWATER KNOWN AT EAST SIDE OF SITE. GEOTECHNICAL ENGINEER TO PROVIDE MORE INFORMATION.
- CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO THE SHIPYARD BREWERY AND SURROUNDING BUILDINGS. ANY PLANNED OUTAGES TO BE PROPERLY NOTICED PER CITY REQUIREMENTS.
- CONTRACTOR TO DETERMINE MOST COST EFFECTIVE METHOD FOR DEEP EXCAVATIONS TO AVOID OPENING ADJACENT CITY STREETS.
- ACCESS TO DUMPSTER FOR RESIDENCE INN TO BE MAINTAINED DURING CONSTRUCTION. OWNER/OPERATOR OF RESIDENCE INN TO BE NOTIFIED BY CONTRACTOR AT LEAST 7 DAYS PRIOR TO ANY PLANNED DISRUPTION FOR REPAIRING, ETC.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF CURB FOR REUSE ON THE PROJECT WITHOUT DAMAGE. CURB NOT REUSED ON THE PROJECT SHALL BE CLEANED AND STACKED AT A LOCATION AS DESIGNATED BY THE CITY OF PORTLAND.
- REFER TO CONSTRUCTION MANAGEMENT PLAN FOR SIDEWALK AND STREET CLOSURE INFORMATION.
- CONTRACTOR SHALL COMPLY WITH ALL TERMS AND CONDITIONS OF THE WRAP. COORDINATE WITH OWNER FOR APPROPRIATE DOCUMENTATION.

LEGEND

- EXISTING BUILDING TO BE REMOVED
- EXISTING BITUMINOUS CONCRETE TO BE REMOVED
- EXISTING CONCRETE SIDEWALK TO BE REMOVED
- EXISTING BRICK SIDEWALK TO BE REMOVED
- PROPOSED SAW CUT

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



Rev.	Date	Revision
2	5/30/18	REVISED PER CITY STAFF COMMENTS
1	5/14/18	REVISED PER UPDATED ARCHITECTURAL PLANS

SITE PLAN AND SUBDIVISION	4/10/18	LSA
Issued For	Date	By

Design: CEH	Draft: CG	Date: APR 2018
Checked: LSA	Scale: 1"=20'	Job No.: 3184
File Name: 3184-DEMO.dwg		
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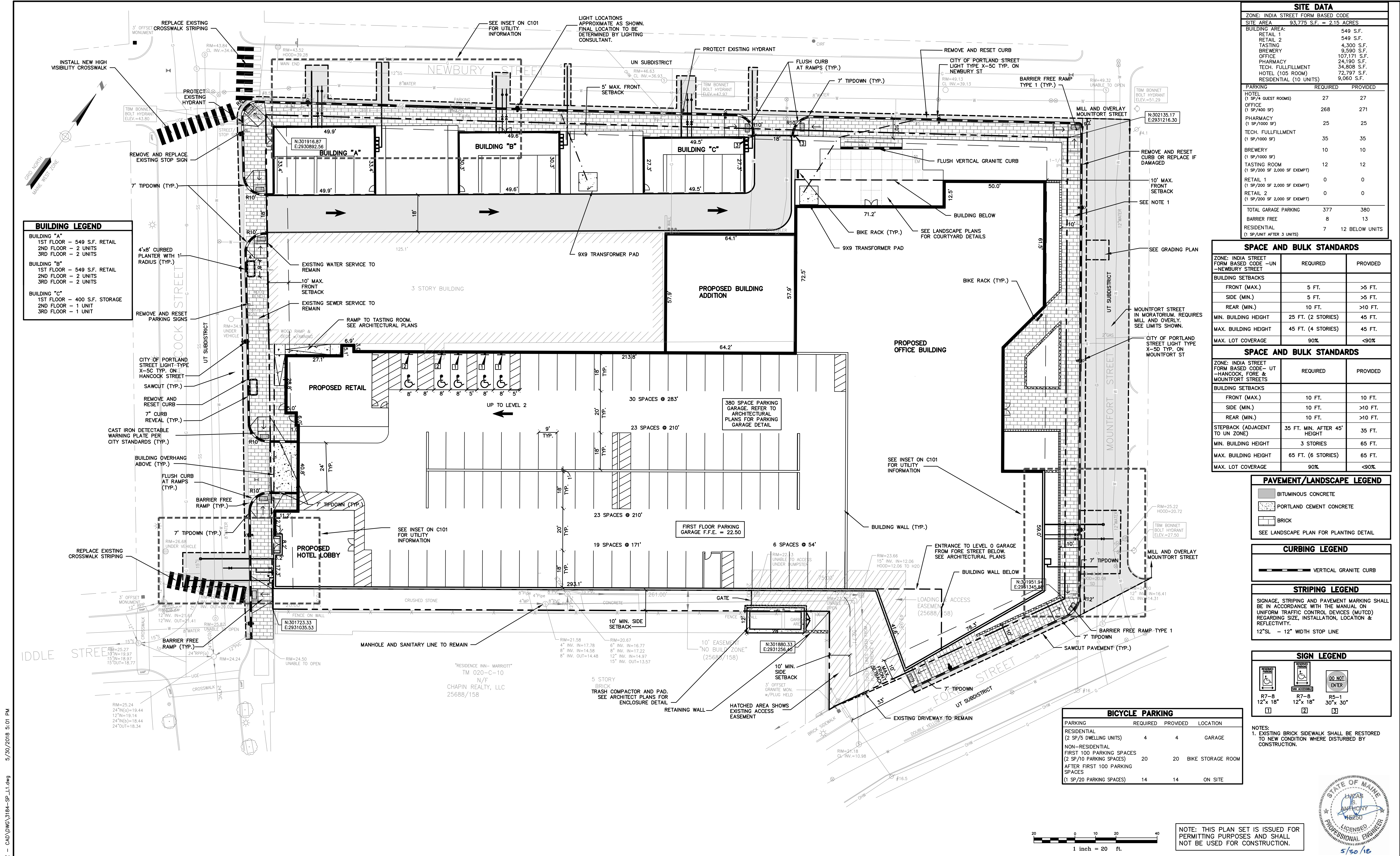


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Drawing Name:	DEMOLITION PLAN
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.

C002



SITE DATA		
ZONE: INDIA STREET FORM BASED CODE		
SITE AREA	93,775 S.F. = 2.15 ACRES	
BUILDING AREA:	549 S.F.	
RETAIL 1	549 S.F.	
RETAIL 2	4,300 S.F.	
TASTING	9,590 S.F.	
BREWERY	107,171 S.F.	
OFFICE	24,190 S.F.	
PHARMACY	34,808 S.F.	
TECH. FULFILLMENT	72,797 S.F.	
HOTEL (105 ROOM)	9,060 S.F.	
RESIDENTIAL (10 UNITS)		
PARKING	REQUIRED	PROVIDED
HOTEL (1 SP/4 GUEST ROOMS)	27	27
OFFICE (1 SP/400 SF)	268	271
PHARMACY (1 SP/1000 SF)	25	25
TECH. FULFILLMENT (1 SP/1000 SF)	35	35
BREWERY (1 SP/1000 SF)	10	10
TASTING ROOM (1 SP/200 SF 2,000 SF EXEMPT)	12	12
RETAIL 1 (1 SP/200 SF 2,000 SF EXEMPT)	0	0
RETAIL 2 (1 SP/200 SF 2,000 SF EXEMPT)	0	0
TOTAL GARAGE PARKING	377	380
BARRIER FREE	8	13
RESIDENTIAL (1 SP/UNIT AFTER 3 UNITS)	7	12 BELOW UNITS

SPACE AND BULK STANDARDS		
ZONE: INDIA STREET FORM BASED CODE - UN - NEWBURY STREET		
BUILDING SETBACKS	REQUIRED	PROVIDED
FRONT (MAX.)	5 FT.	>5 FT.
SIDE (MIN.)	5 FT.	>5 FT.
REAR (MIN.)	10 FT.	>10 FT.
MIN. BUILDING HEIGHT	25 FT. (2 STORIES)	45 FT.
MAX. BUILDING HEIGHT	45 FT. (4 STORIES)	45 FT.
MAX. LOT COVERAGE	90%	<90%

SPACE AND BULK STANDARDS		
ZONE: INDIA STREET FORM BASED CODE - UT - HANCOCK, FORE & MOUNTFORT STREETS		
BUILDING SETBACKS	REQUIRED	PROVIDED
FRONT (MAX.)	10 FT.	10 FT.
SIDE (MIN.)	10 FT.	>10 FT.
REAR (MIN.)	10 FT.	>10 FT.
STEPBACK (ADJACENT TO UN ZONE)	35 FT. MIN. AFTER 45' HEIGHT	35 FT.
MIN. BUILDING HEIGHT	3 STORIES	65 FT.
MAX. BUILDING HEIGHT	65 FT. (6 STORIES)	65 FT.
MAX. LOT COVERAGE	90%	<90%

PAVEMENT/LANDSCAPE LEGEND	
	BITUMINOUS CONCRETE
	PORTLAND CEMENT CONCRETE
	BRICK
SEE LANDSCAPE PLAN FOR PLANTING DETAIL	

CURBING LEGEND	
	VERTICAL GRANITE CURB

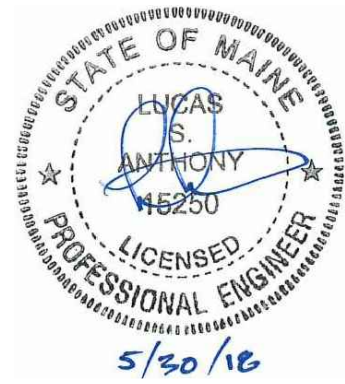
STRIPING LEGEND	
SIGNAGE, STRIPING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION & REFLECTIVITY.	
12" SL - 12" WIDTH STOP LINE	

SIGN LEGEND	
	R7-8 12" x 18"
	R7-2 12" x 18"
	R5-1 30" x 30"

NOTES:
1. EXISTING BRICK SIDEWALK SHALL BE RESTORED TO NEW CONDITION WHERE DISTURBED BY CONSTRUCTION.

BICYCLE PARKING			
PARKING	REQUIRED	PROVIDED	LOCATION
RESIDENTIAL (2 SP/5 DWELLING UNITS)	4	4	GARAGE
NON-RESIDENTIAL FIRST 100 PARKING SPACES (2 SP/10 PARKING SPACES)	20	20	BIKE STORAGE ROOM
AFTER FIRST 100 PARKING SPACES (1 SP/20 PARKING SPACES)	14	14	ON SITE

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



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Issued For		By

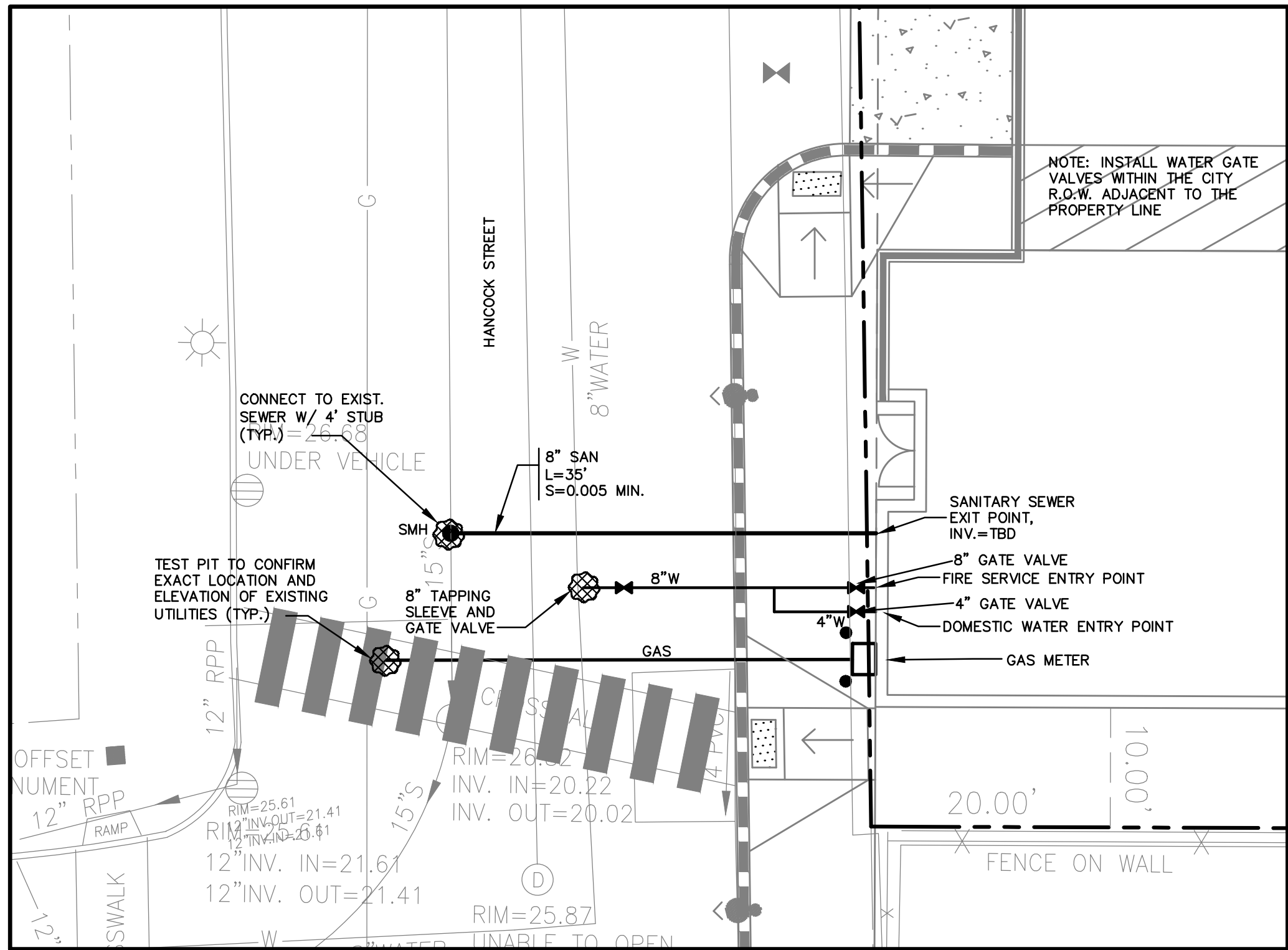
Design: CEH	Draft: CG	Date: APR 2018
Checked: LSA	Scale: 1"=20'	Job No.: 3184
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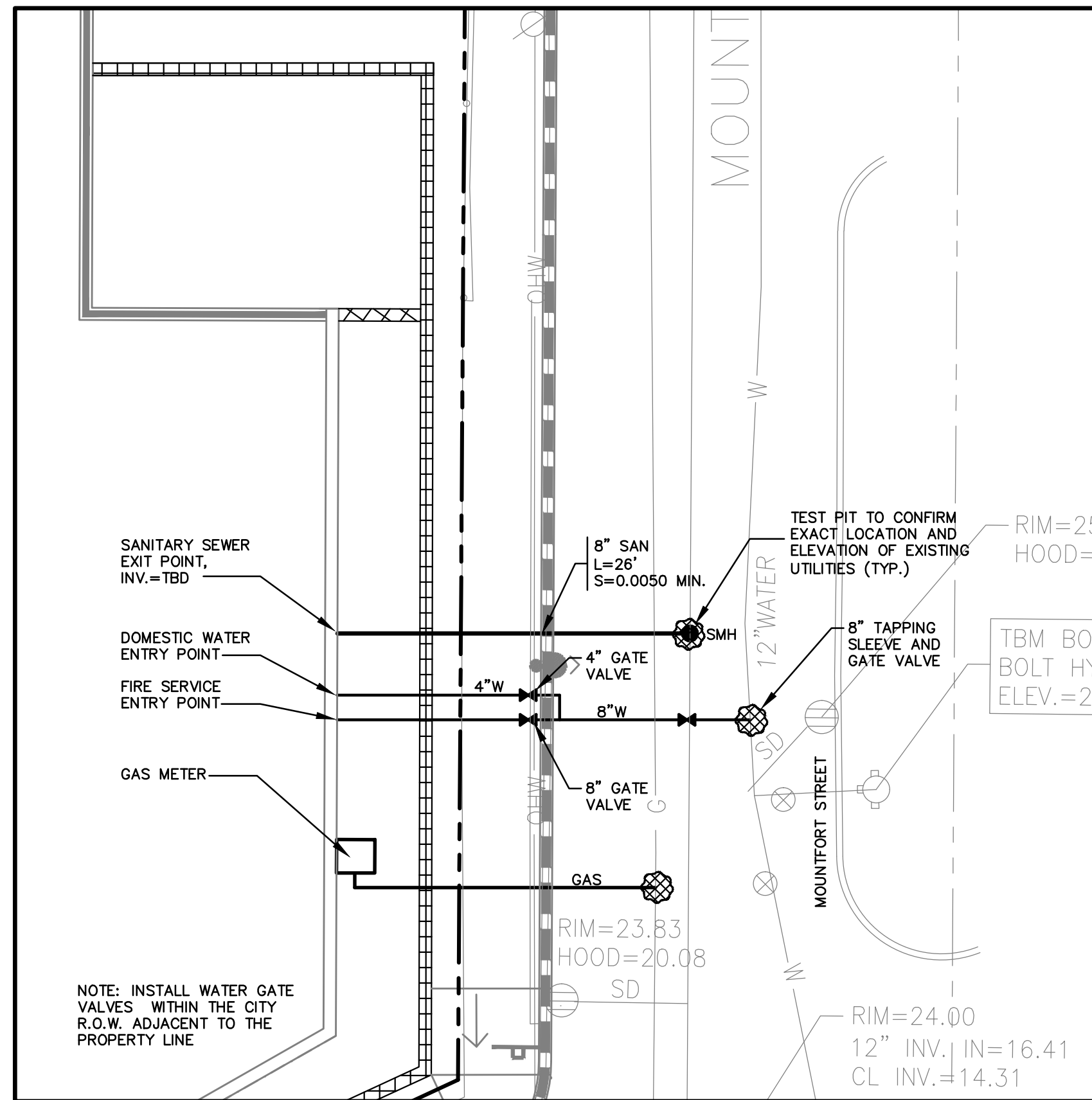
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Drawing Name:	SITE AND UTILITY PLAN- FIRST FLOOR
Project:	Shipyards Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

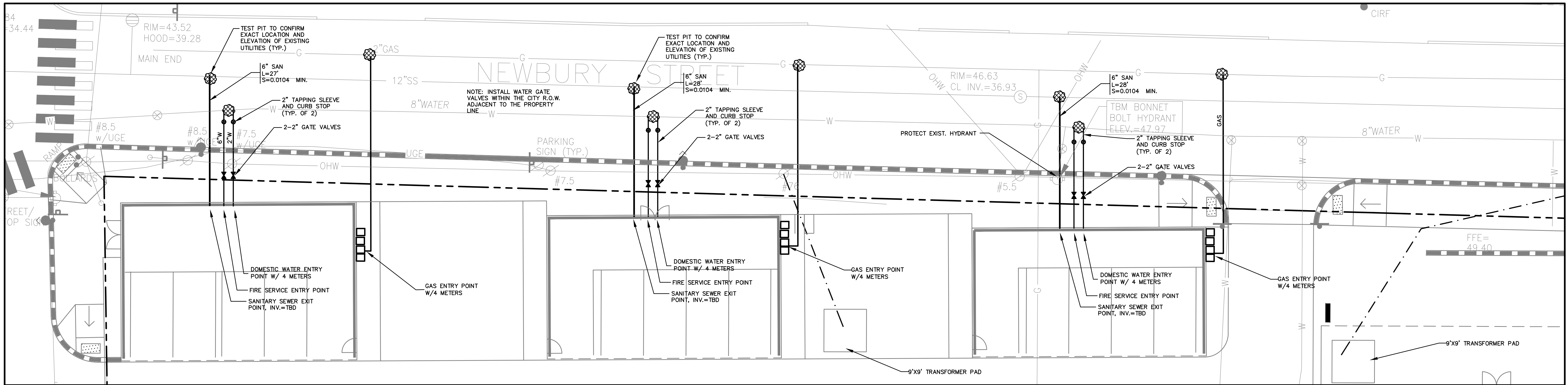
Drawing No.
C100



UTILITY PLAN 1
1"=10'

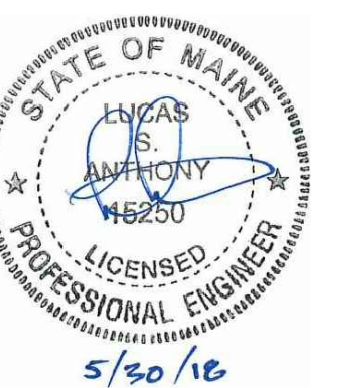


UTILITY PLAN 2
1"=10'



UTILITY PLAN 3
1"=10'

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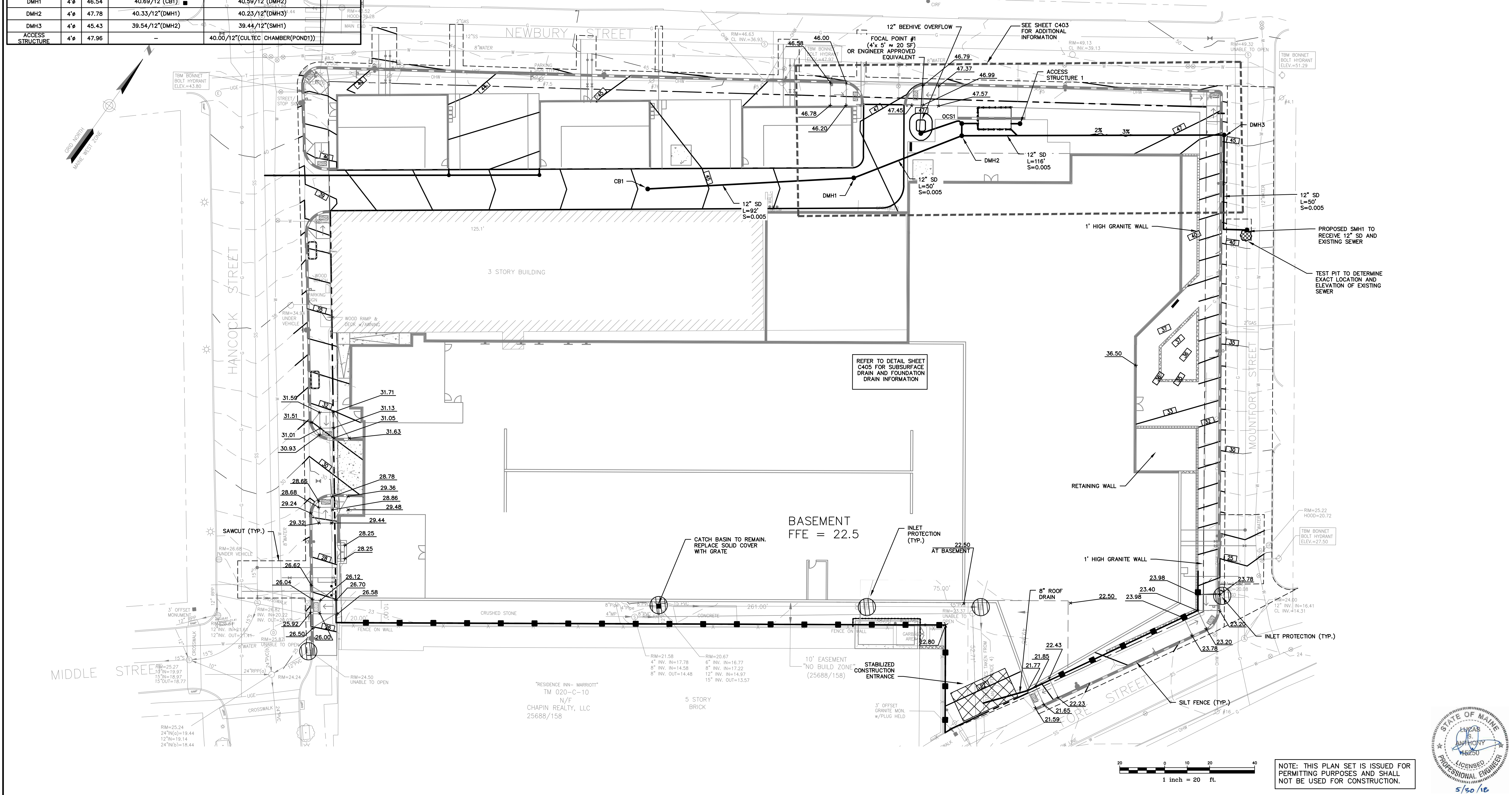
Drawing Name:	UTILITY INSETS
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.
C101

DRAINAGE STRUCTURE SCHEDULE					
STRUCTURE	SIZE	RIM	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)	COMMENTS
BEEHIVE OVERFLOW	1'ø	46.75	43.00/6"(FOCALPOINT 1)	42.00/6"(OCS1)	
OCS1	6'ø	47.72	41.62/6"(BEEHIVE OVERFLOW)	40.14/12"(CULTECT CHAMBER(POND1)) 38.29/12"(DMH2)	FIELD INLET
CB1	4'ø	44.15	-	41.15/12"(DMH1)	
DMH1	4'ø	46.54	40.69/12"(CB1)	40.59/12"(DMH2)	
DMH2	4'ø	47.78	40.33/12"(DMH1)	40.23/12"(DMH3)	
DMH3	4'ø	45.43	39.54/12"(DMH2)	39.44/12"(SMH1)	
ACCESS STRUCTURE	4'ø	47.96	-	40.00/12"(CULTECT CHAMBER(POND1))	

NOTE: INSTALL SEDIMENT HOODS (SNOUT) ON ALL CATCH BASIN OUTLET PIPES 18"ø AND LESS.

- NOTES:
- PER THE CITY OF PORTLAND'S TECHNICAL STANDARD, THE CURBING ALONG ALL STREETS SHALL HAVE A 7" REVEAL.
 - A FOUNDATION DRAIN SHALL BE INSTALLED AROUND THE BUILDING PERIMETER AND OUTLET INTO THE STORM DRAIN SYSTEM AS SHOWN. REFER TO SHEET C405 FOR DETAIL.
 - A SUB SLAB DRAINAGE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH SHEET C404. THE 6" SUBSLAB DRAIN SHALL OUTLET AT THE FOUNDATION DRAIN LOCATION INTO THE STORM DRAINAGE SYSTEM AS SHOWN ON C405.



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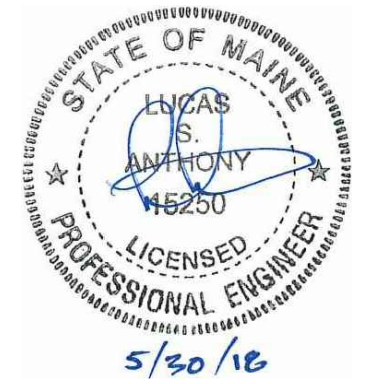
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Drawing Name:	GRADING, DRAINAGE, & EROSION CONTROL PLAN
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.	C102
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NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

DOWNTOWN RACK

Submittal Sheet

CAPACITY

2 Bikes

MATERIALS

- ☐ **Standard**
2" x 2" x .188" square tube - mild steel
2" x 2" x .120" square tube - stainless steel
- ☐ **Lightweight**
"Powder coat galvanized only"
2" x 2" x .080" square tube - mild steel

FINISHES

- ☐ **Galvanized**
After fabrication hot dipped galvanized finish is our standard option.
- ☐ **Powder Coat**
Our powder coat finish assures a high level of adhesion and durability by following these steps:
1. Sandblast
2. Epoxy primer electrostatically applied
3. Final thick TGIC polyester powder coat

- ☐ **Thermoplastic**
In addition to an increased thickness (8-10mils), the thermoplastic finish covers a galvanized layer and offers superior impact resistance over powder coating.

- ☐ **PVC Dip** (plastioll)
Other colors available by special order (minimum orders apply)

- ☐ **Stainless**
Stainless Steel: 304 grade stainless steel material finished in either a high polished shine or a satin finish.

MOUNT OPTIONS

- ☐ **In-ground**
In ground mount is embedded into concrete base. Specify in ground mount for this option.
- ☐ **Surface**
Foot Mount has two 2.5"x6"x.25" feet with two anchors per foot. Specify foot mount for this option.

- ☐ **Rail**
Rail Mounted Downtown Racks are bolted to two parallel rails which can be left freestanding or anchored to the ground. Rails are heavy duty 3"x14"x3/16" thick galvanized mounting rails. Specify rail mount for this option.

OPTIONAL LEAN BAR

- ☐ **Add Lean Bar**

IN GROUND MOUNT

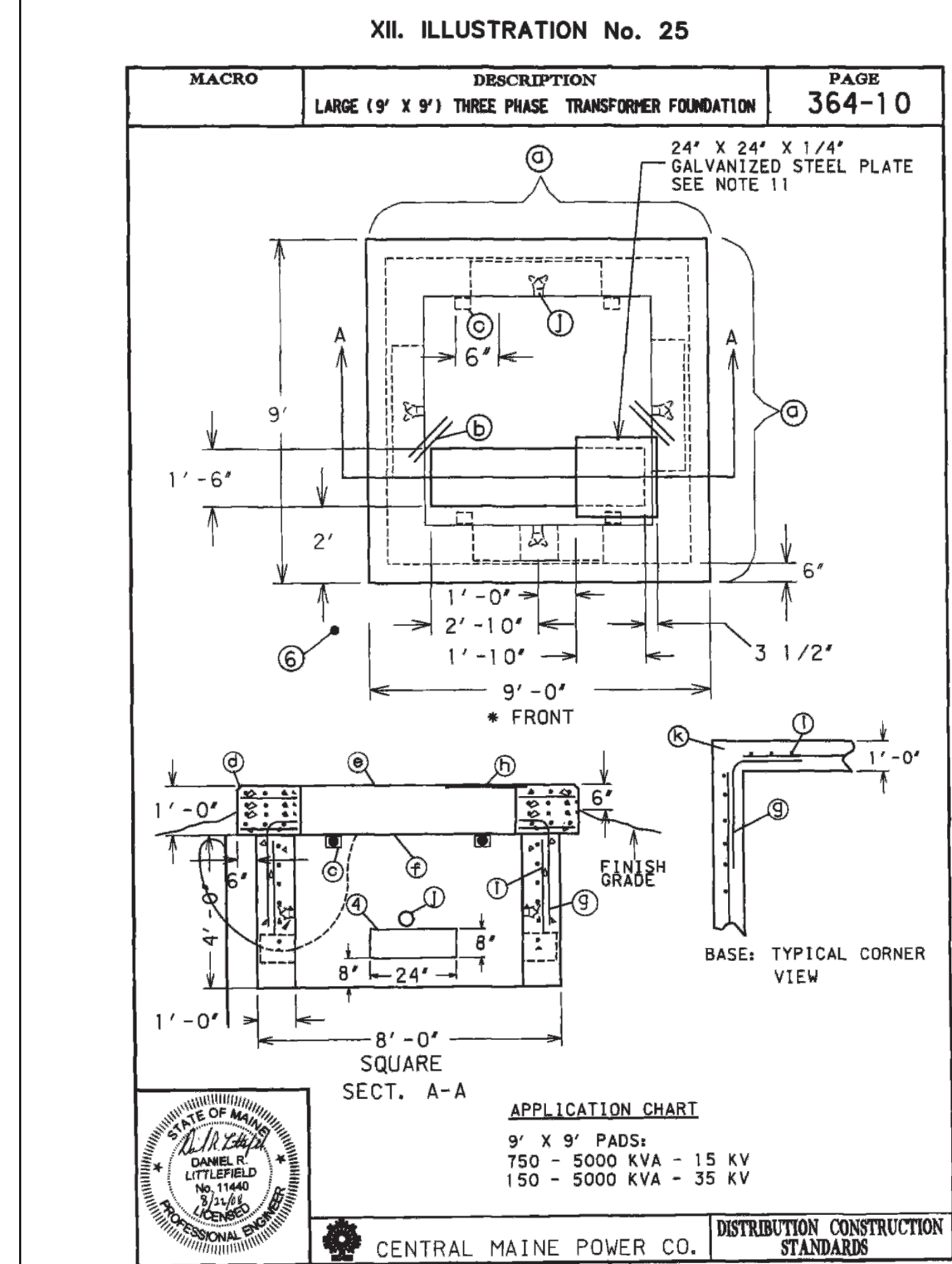
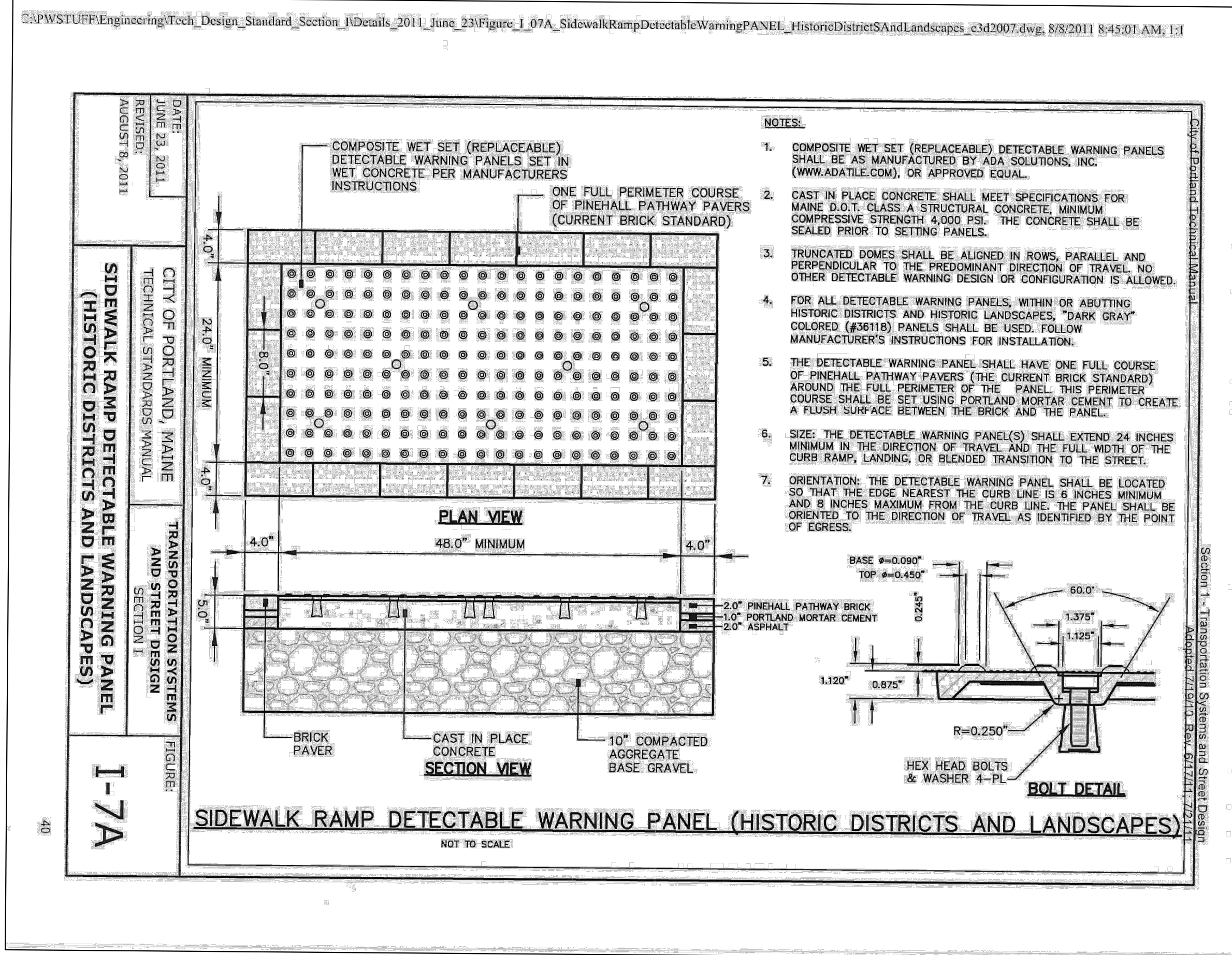
SURFACE MOUNT

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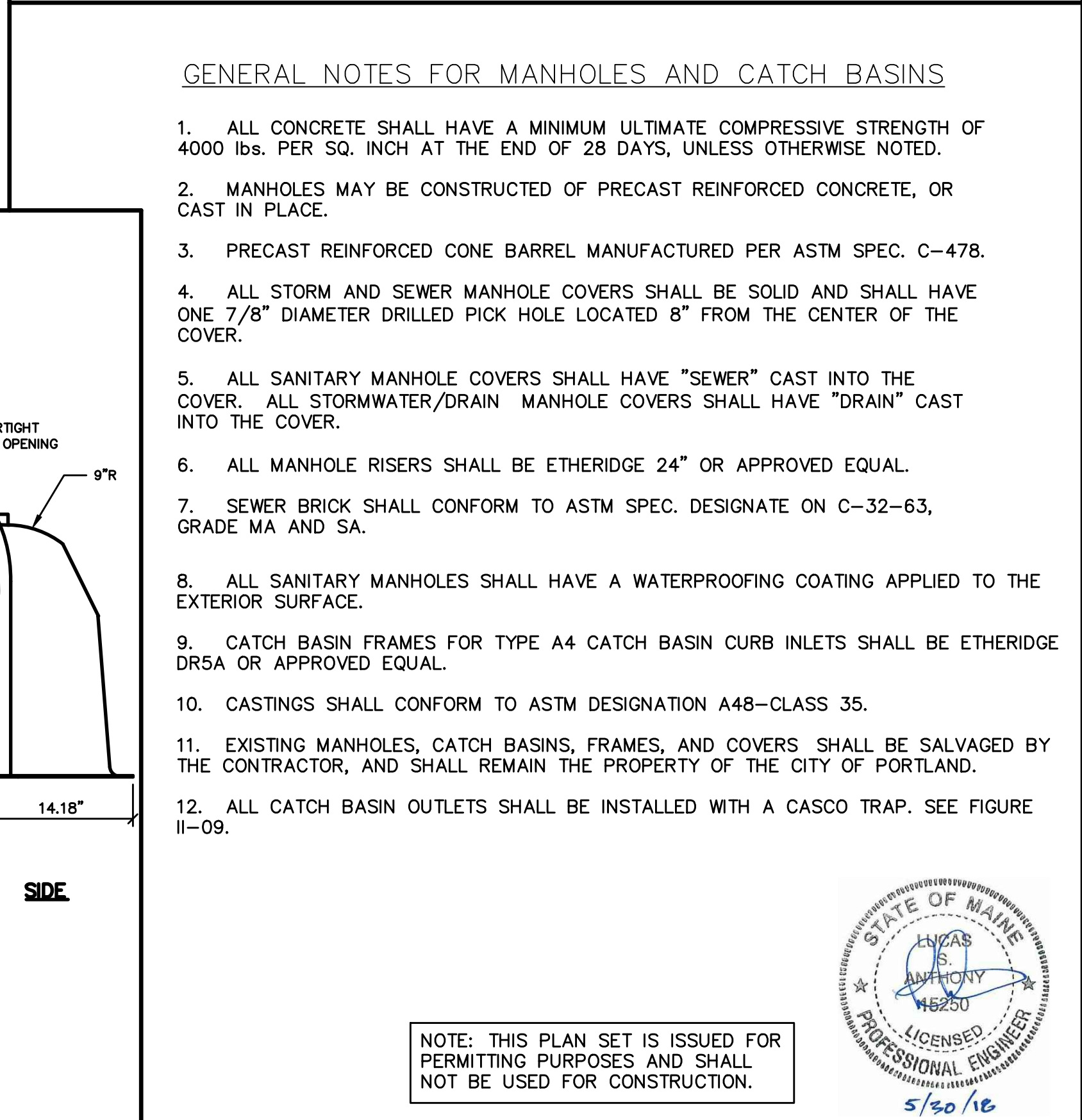
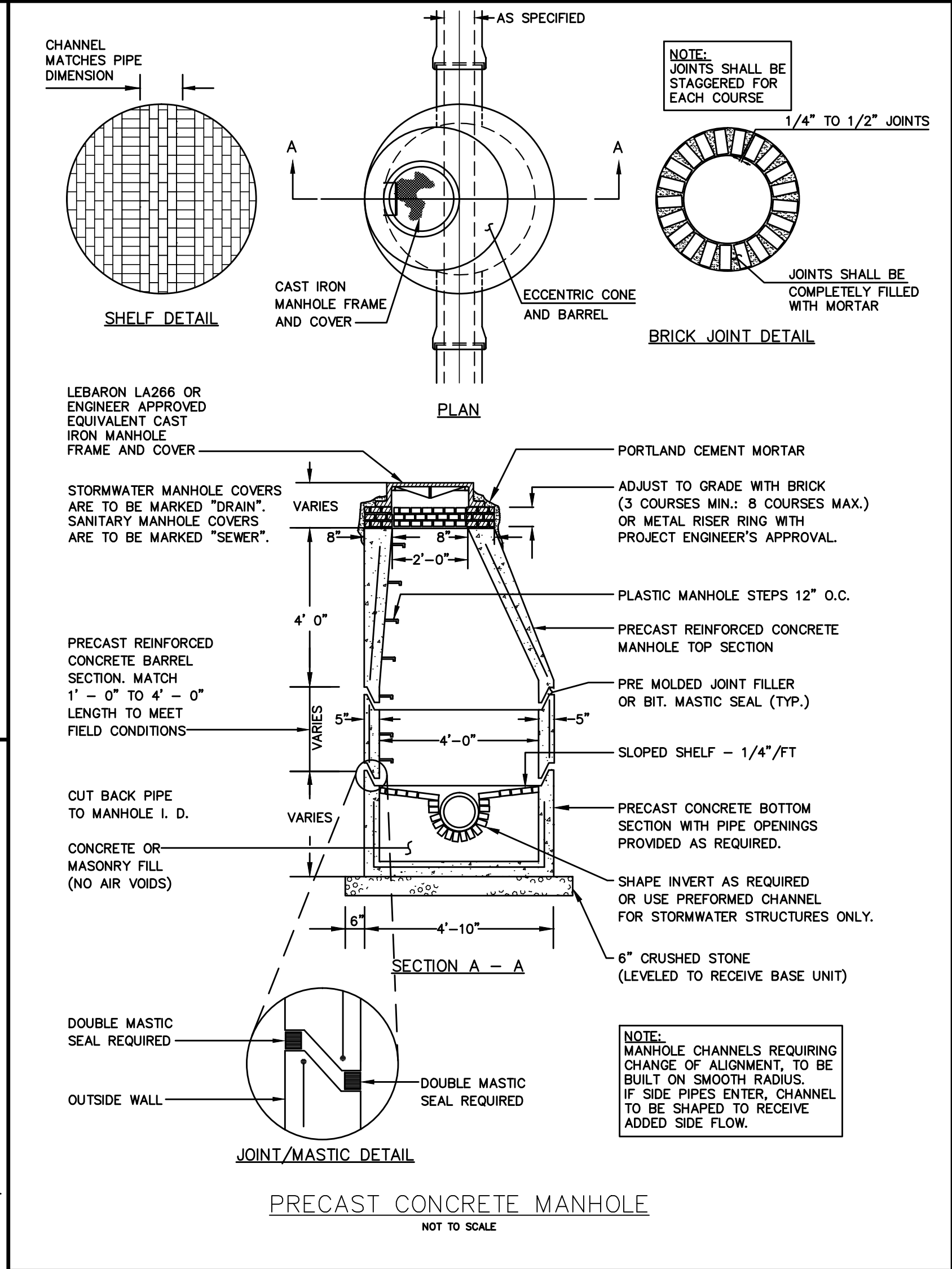
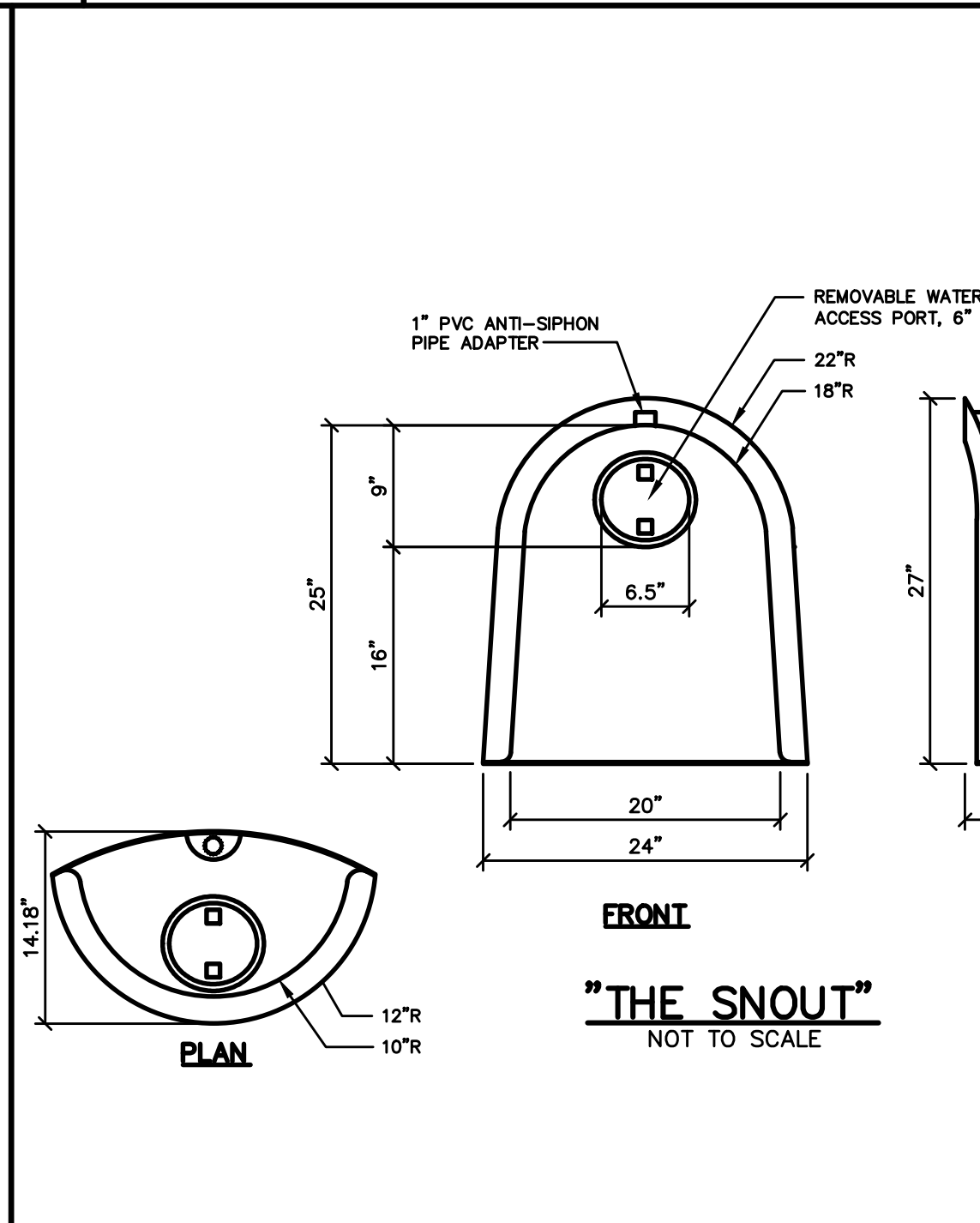
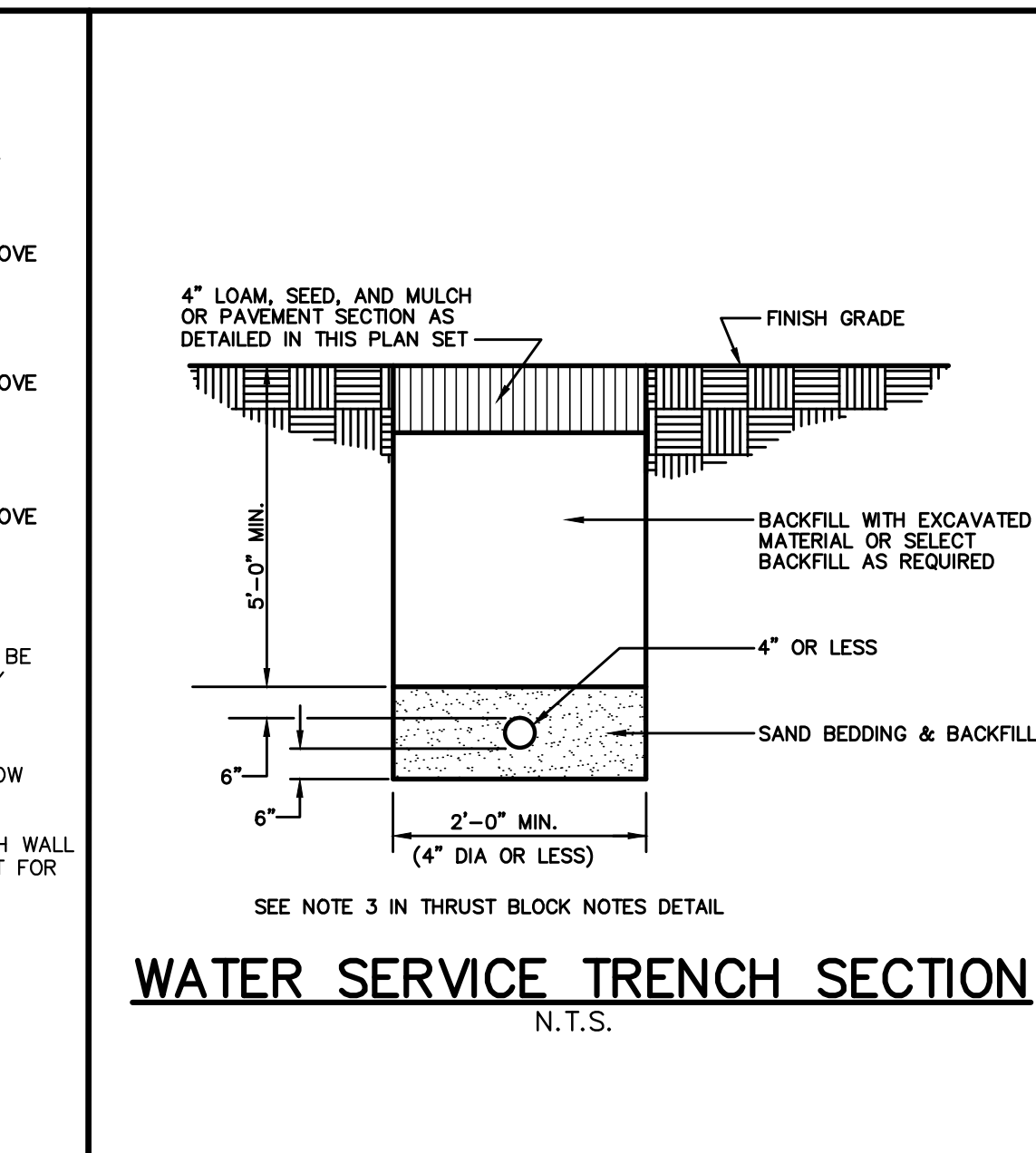
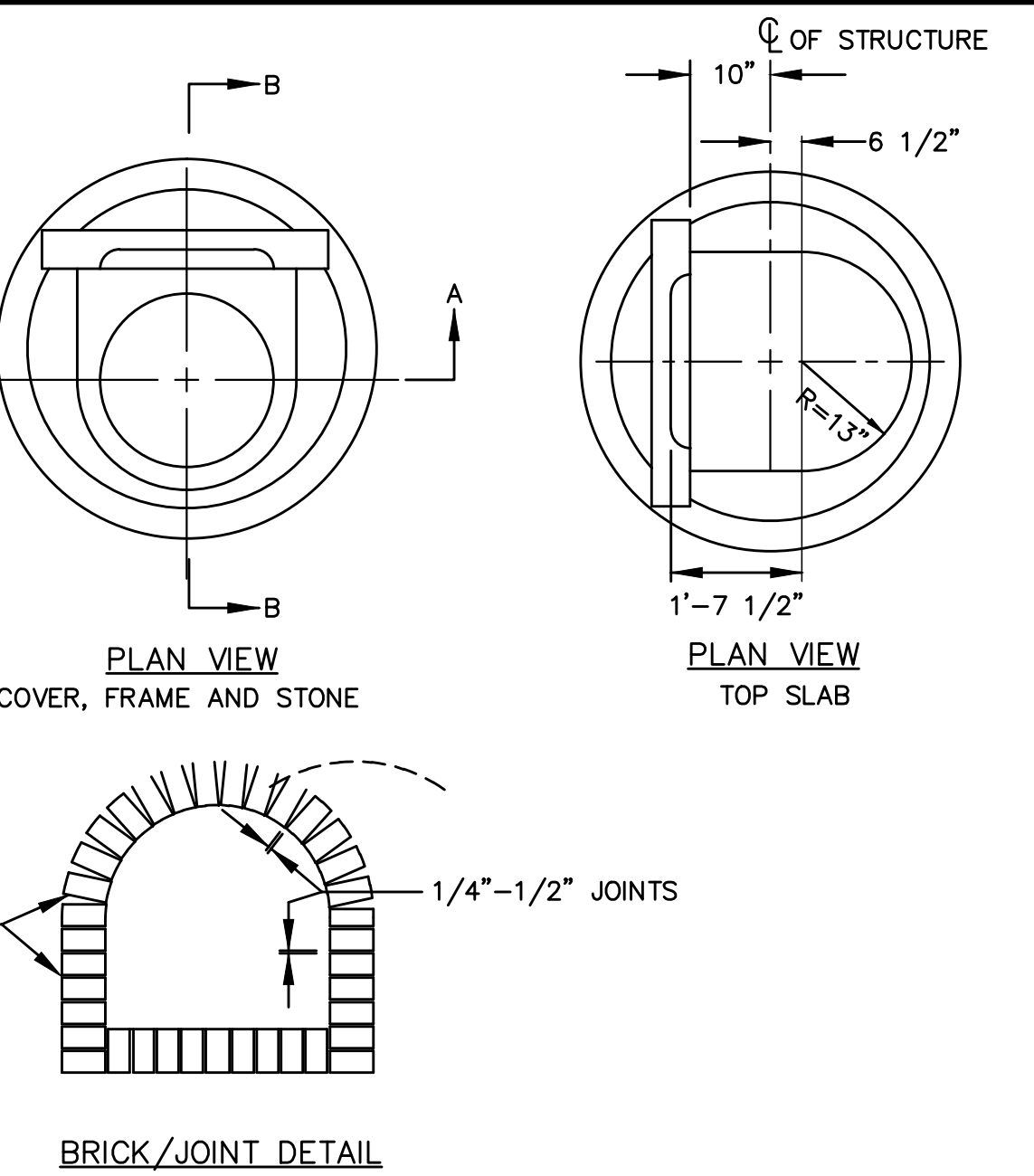
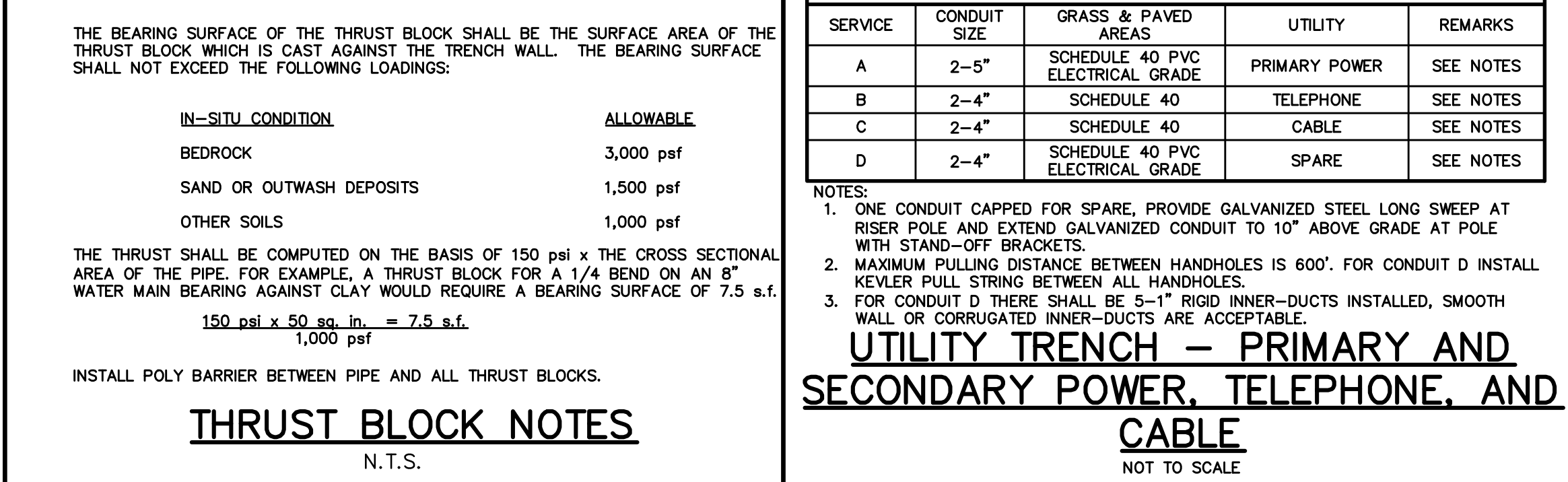
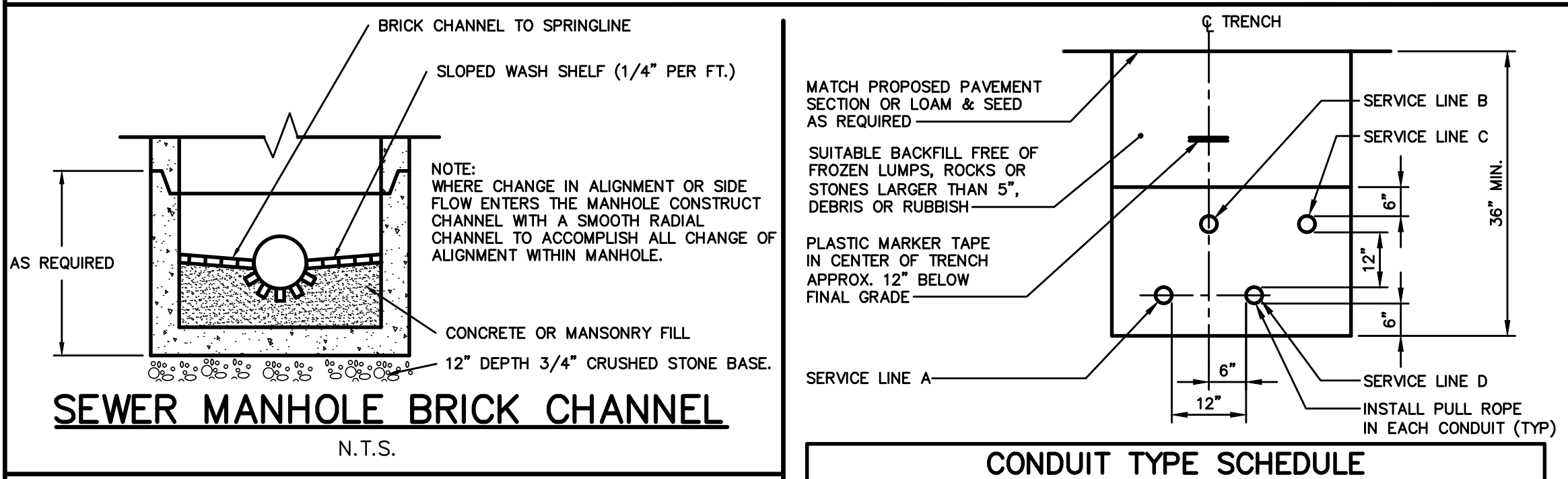
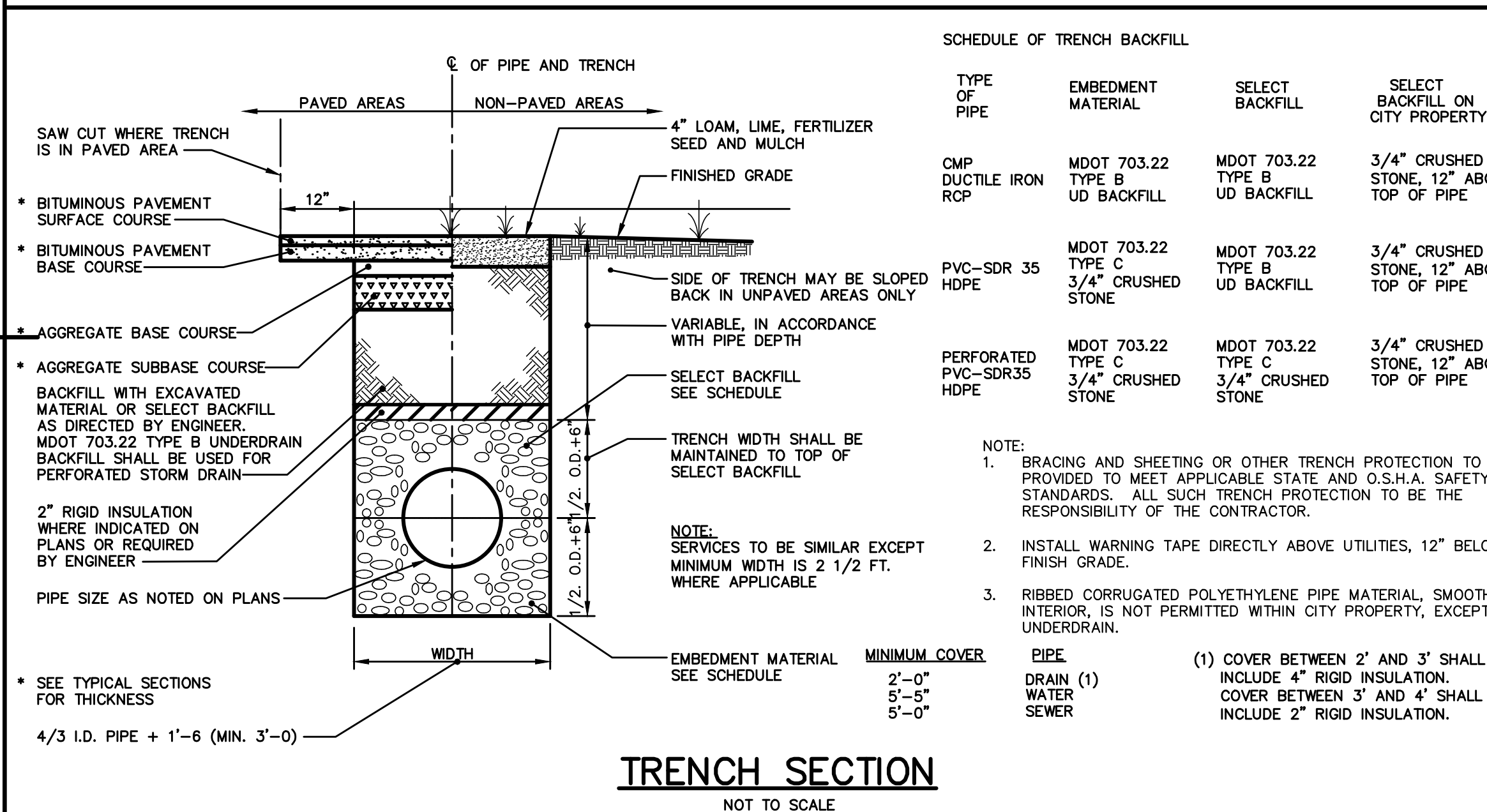
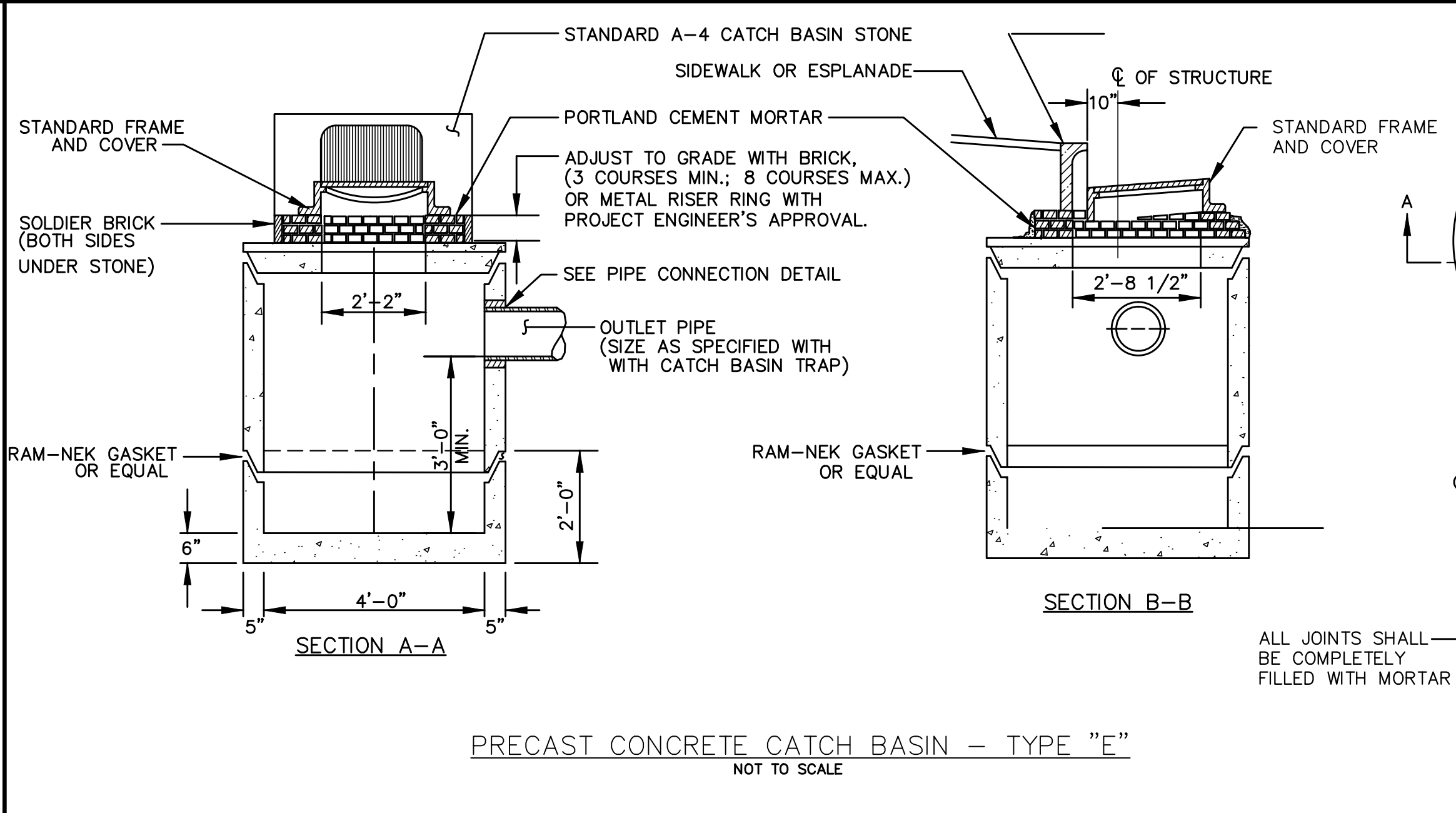
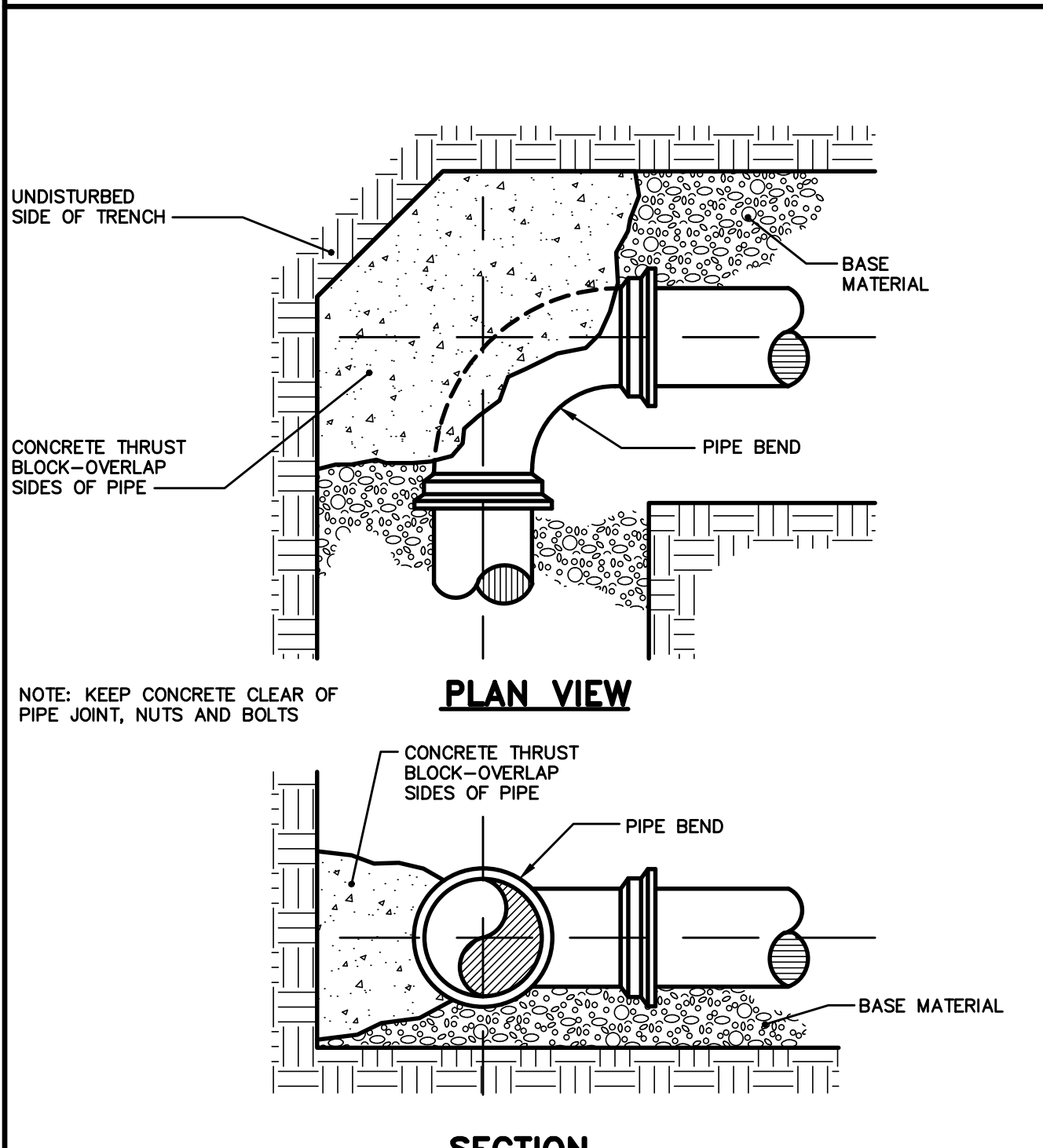
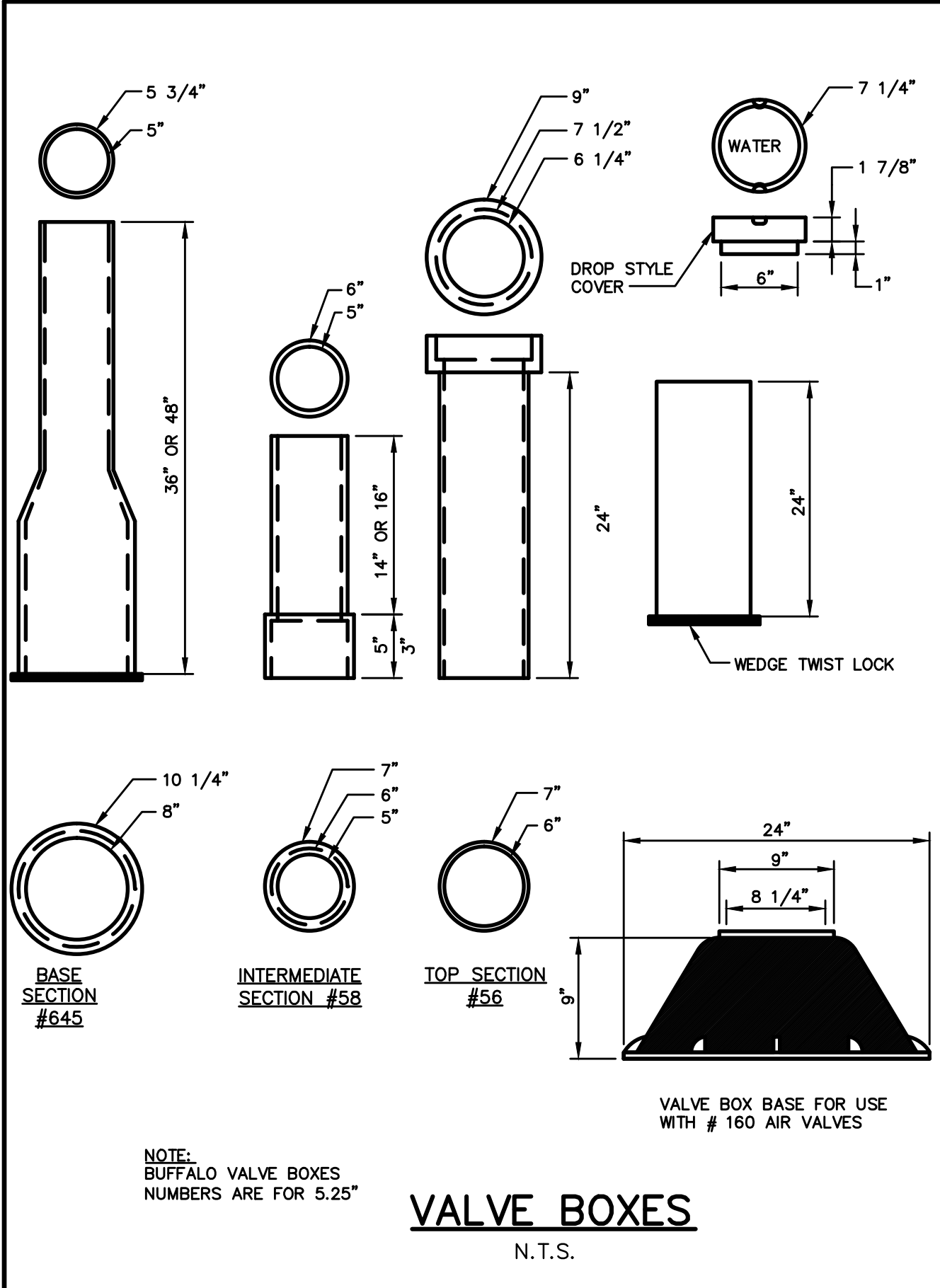


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Drawing Name:	SITE AND LIGHTING DETAILS
Project:	Shipyards Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.
C402

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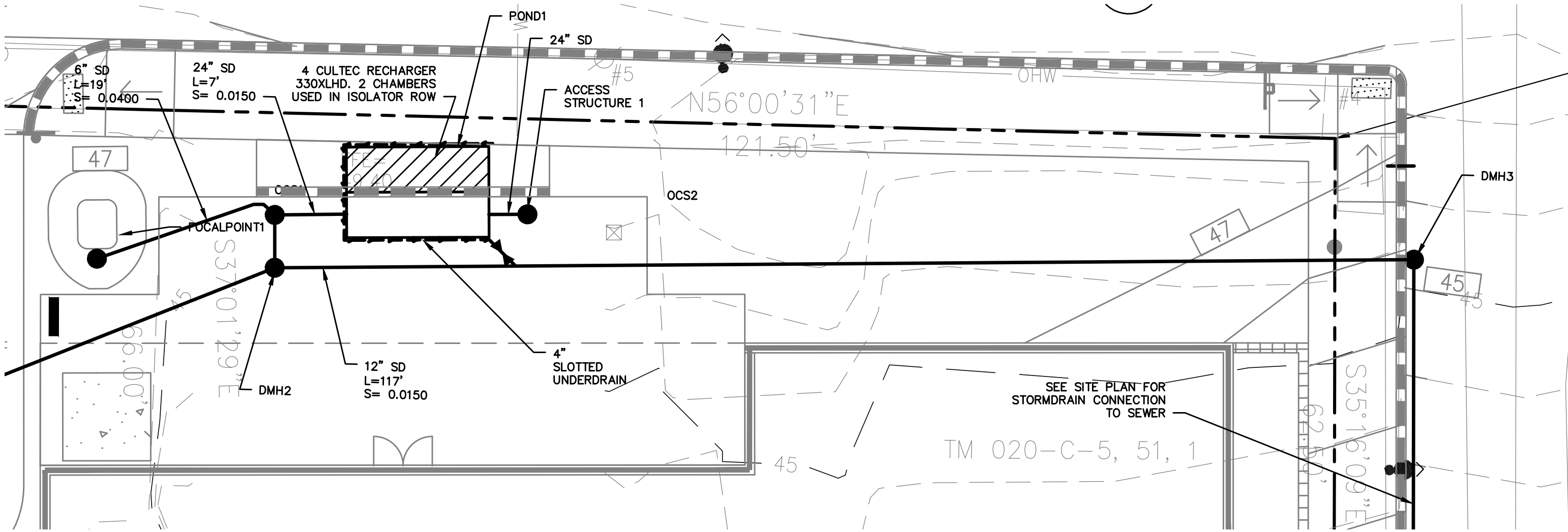
SITE PLAN AND SUBDIVISION	4/10/18	LSA
Issued For	Date	By

Design: CEH	Draft: CG	Date: APR 2018
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Drawing Name:	DRAINAGE & UTILITY DETAILS
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.	C403
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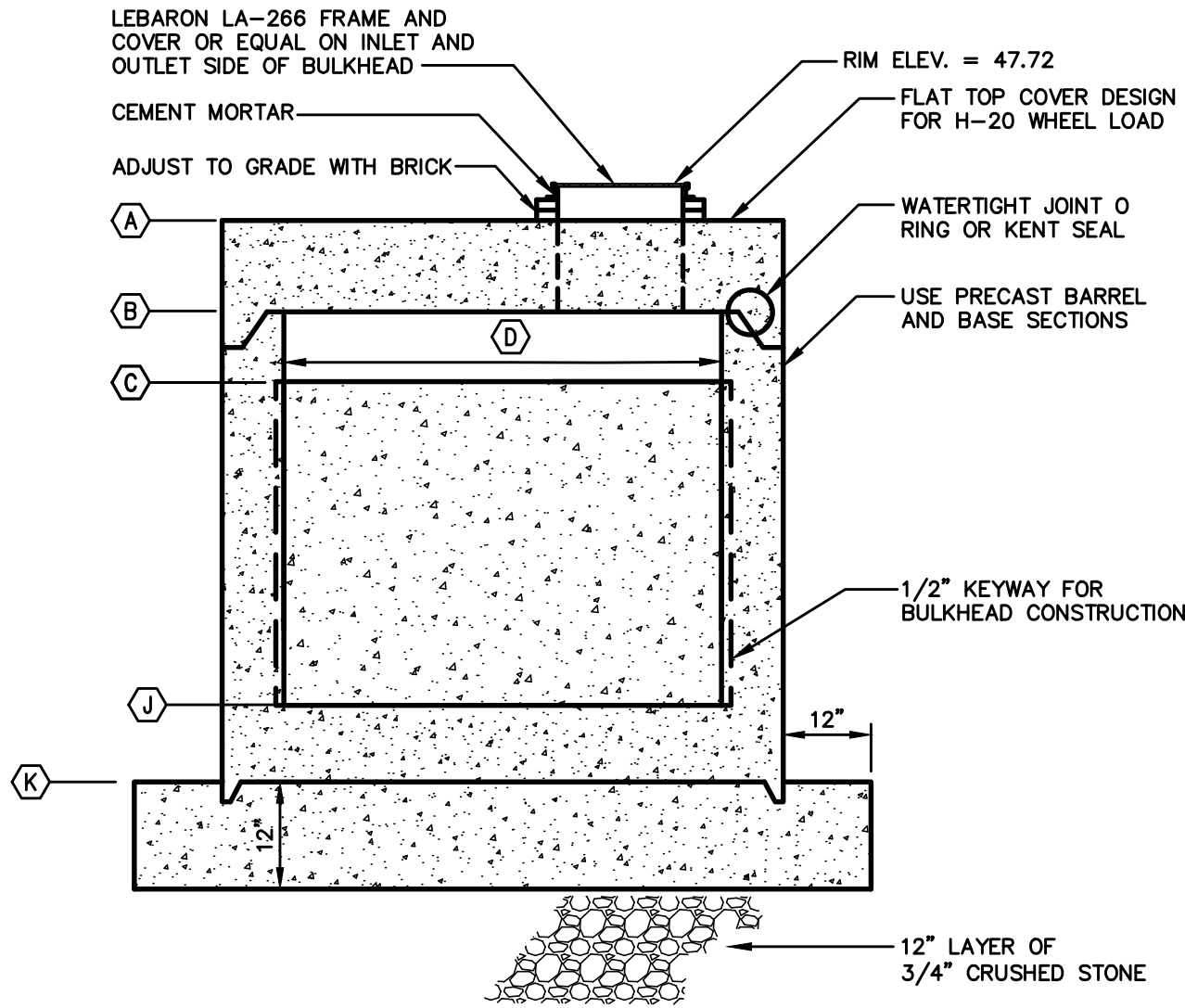


SUBSURFACE CULTEC PLAN
SCALE: 1" = 10'

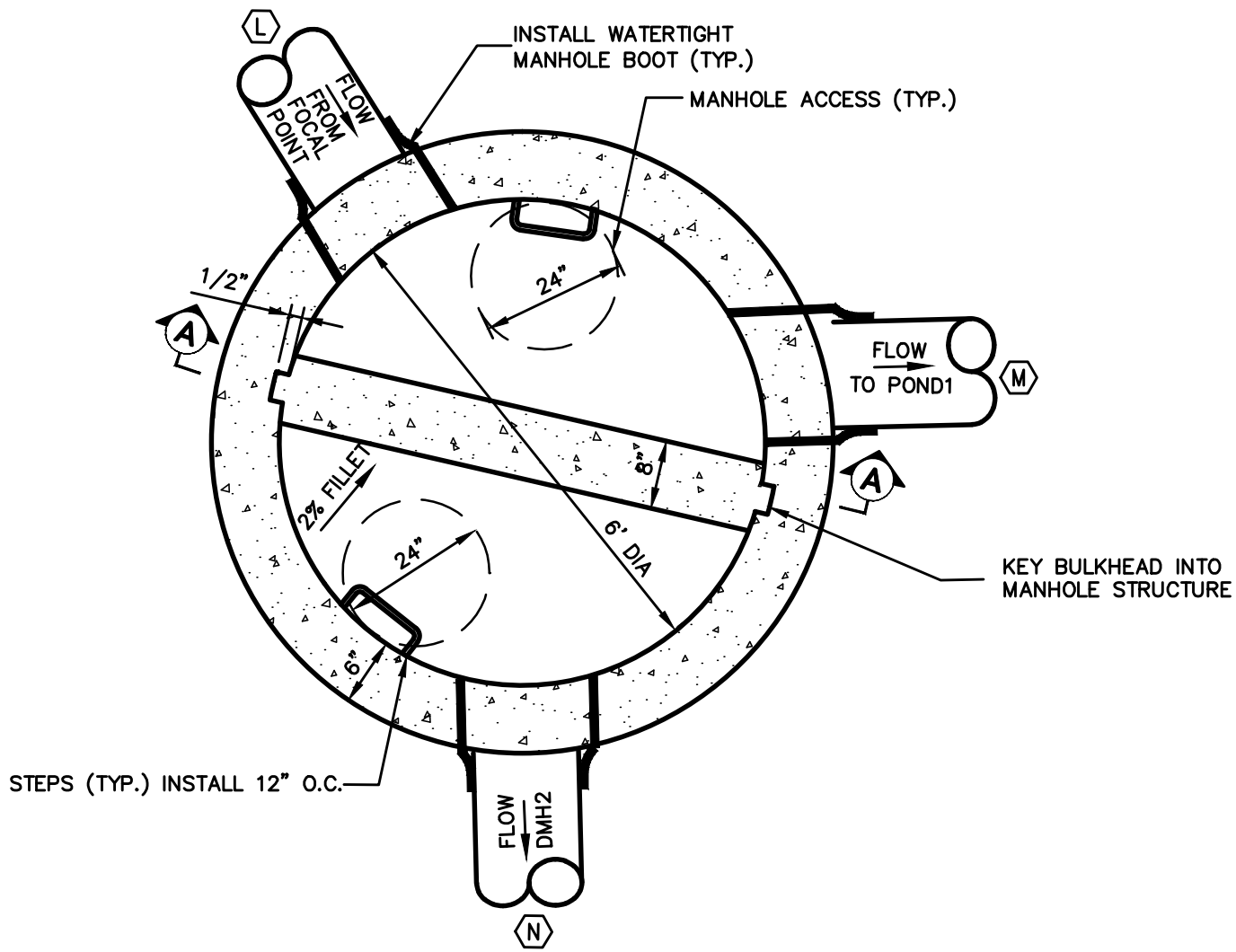
CONSTRUCTION OVERSIGHT

1. THE FOCAL POINT SYSTEM SHALL BE INSTALLED UNDER THE SUPERVISION OF A MANUFACTURERS REPRESENTATIVE.
2. ALL PLANT MATERIAL SHALL BE APPROVED BY THE FOCAL POINT REPRESENTATIVE.
3. CONTRACTOR SHALL FLOOD POND1 TO ELEVATION 42.7 WITH OUTLET VALVE CLOSED, AND THEN ADJUST OUTLET VALVE TO ACHIEVE A 24-48 HOUR RELEASE RATE.

Drainage Structure Schedule					
Structure	Size	Rim	inv. In/Size (From)	Inv. Out/Size (To)	Comments
FOCALPOINT 1	20 SF	-		43.00/6" (BEEHIVE OVERFLOW)	
BEEHIVE OVERFLOW	12"	46.75	43.00/6" (FOCALPOINT 1)	41.00/6" (OCS1)	
OCS1	6'	47.72	40.24/6" (BEEHIVE OVERFLOW)	40.14/12" (CULTEC CHAMBER(POND1)) 38.29/ 12" (CULTEC CHAMBER(POND2))	
CULTEC CHAMBER (POND1)	330XLHD	-	40.00/12" (OCS1)	39.50/4" (OCS2)	4 CHAMBERS. 2 CHAMBERS REQUIRED FOR ISOLATOR ROW
ACCESS STRUCTURE 1	4'	48.02	-	40.00/12" (CULTEC CHAMBER(POND1))	
DMH3	4'	46.48	36.94/12" (DMH2)	36.84/12" (SMH1)	



SECTION A-A
OUTLET CONTROL STRUCTURE 1 (OCS1)
NOT TO SCALE



PLAN VIEW
6' OUTLET CONTROL STRUCTURE 1 (OCS1)
NOT TO SCALE

OUTLET CONTROL STRUCTURE 1		
	Item Description	Elevation
		OCS 1
A	TOP OF STRUCTURE	47.22
B	UNDERSIDE TOP SLAB	46.55
C	TOP CONCRETE BULKHEAD	41.4
D	WEIR LENGTH	6'
J	MANHOLE INVERT	38.29
K	BOTTOM OF STRUCTURE	37.29
L	PIPE DIAMETER	6"
	INVERT IN	40.24
M	PIPE DIAMETER	12"
	INVERT OUT	40.14
N	PIPE DIAMETER	12"
	INVERT OUT	38.29

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



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Issued For	Revision	Date By

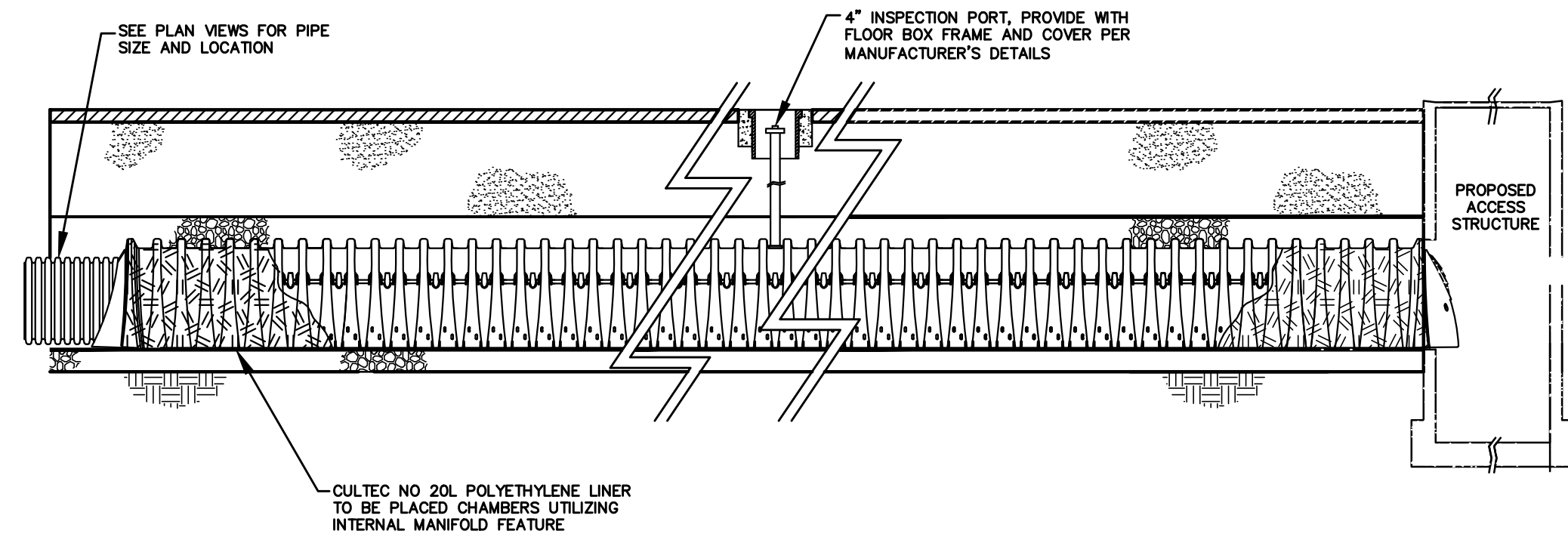
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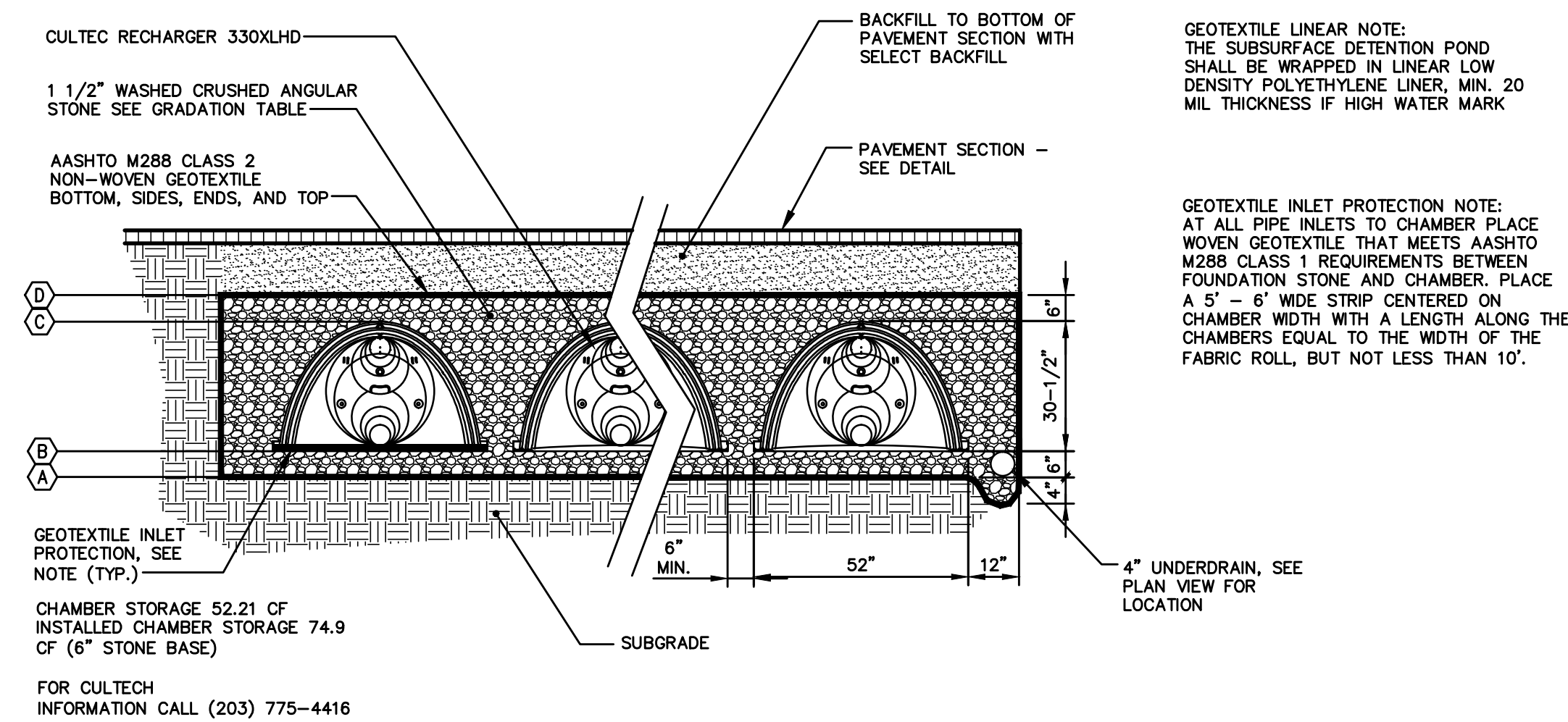
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FOCAL POINT AND DETENTION POND DETAILS	
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.
C404



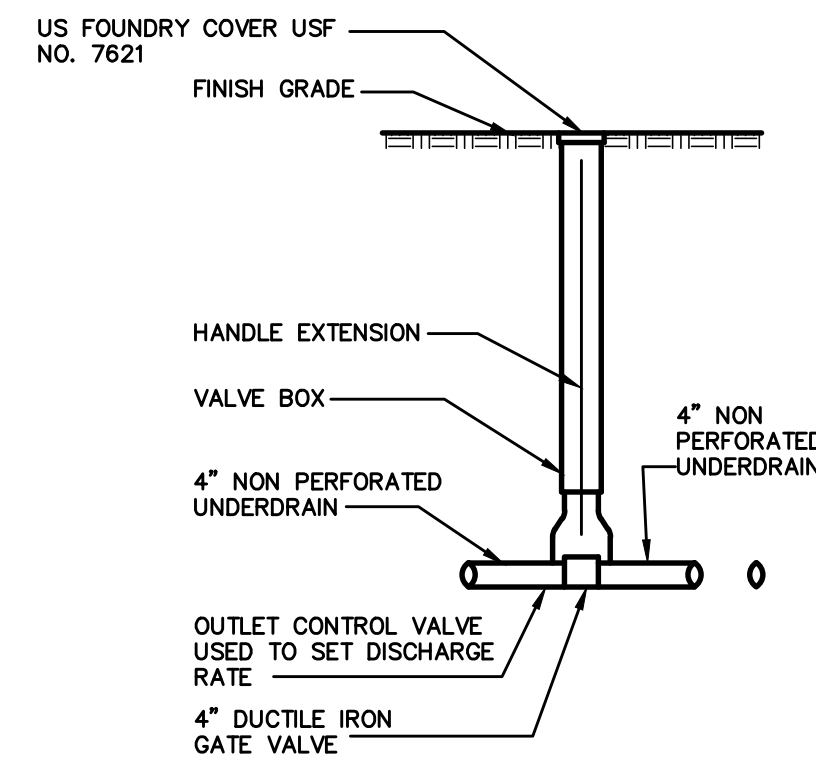
CHAMBER ISOLATOR ROW
N.T.S.



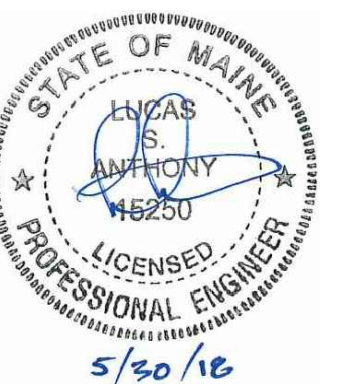
CHAMBER CROSS SECTION
NOT TO SCALE

Chambers				
Structure	ELEVATION			
POND	A	B	C	D
1	39.5	40	42.54	43.04
2	37.5	38	40.54	41.04

SUBSURFACE DETENTION SYSTEMS MAY BE SUBSTITUTED WITH AN ENGINEER APPROVED EQUAL WHICH PROVIDES EQUAL DETENTION STORAGE AND WATER QUALITY TREATMENT



OUTLET VALVE
NOT TO SCALE



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File Name: 3184 - DRAINAGE DETAILS.dwg		
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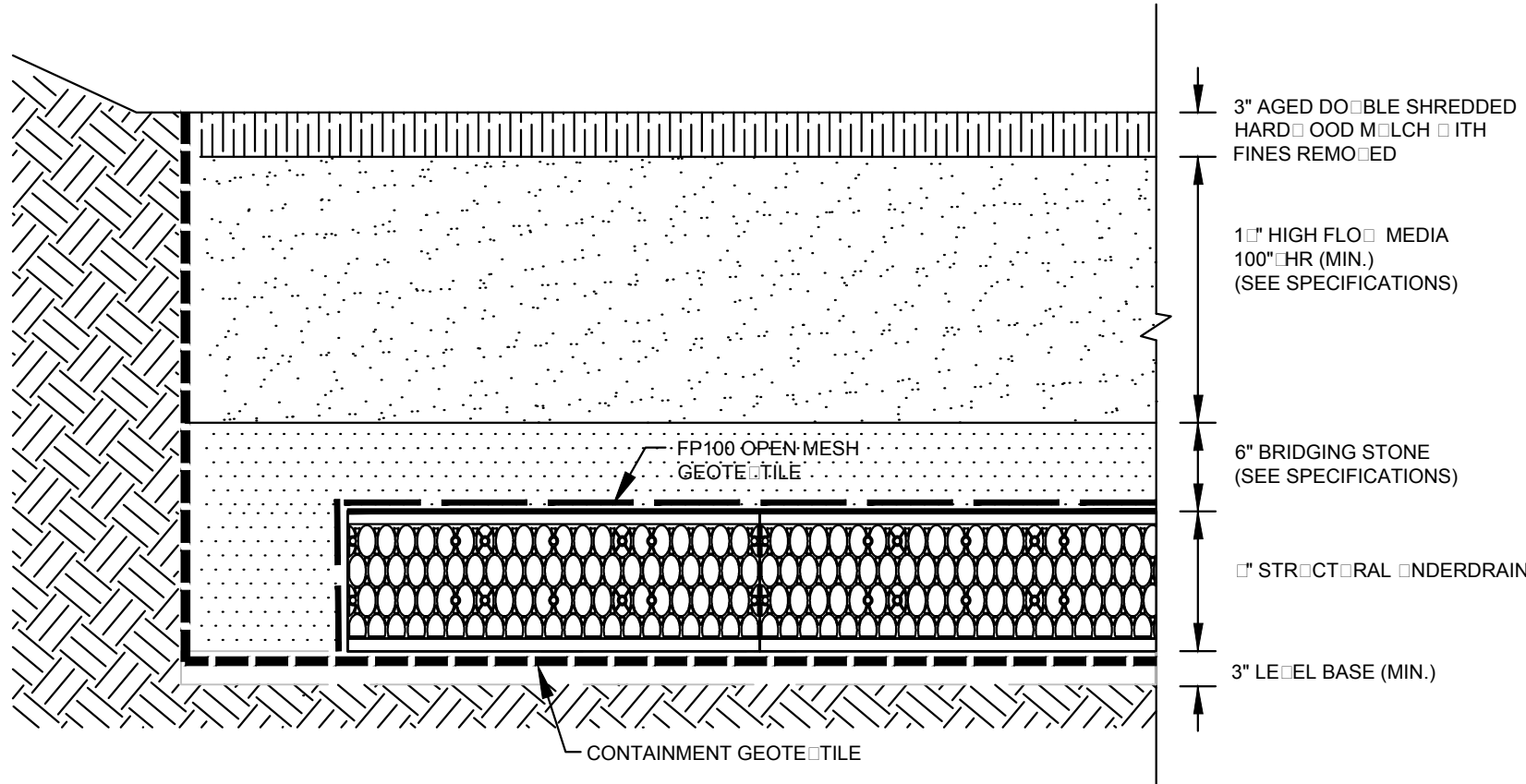
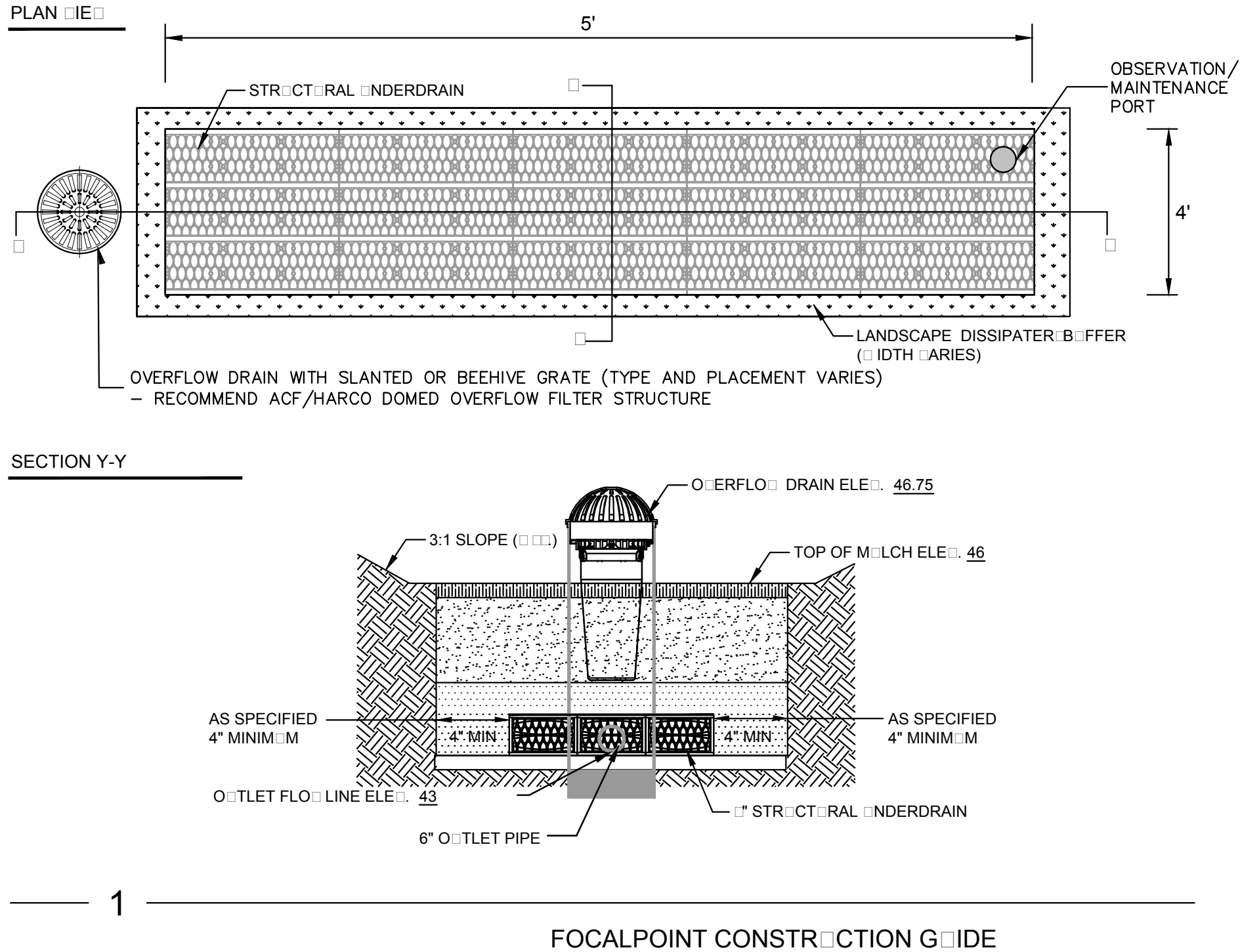


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Drawing Name:	DETENTION POND AND DRAINAGE DETAILS
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.
C405

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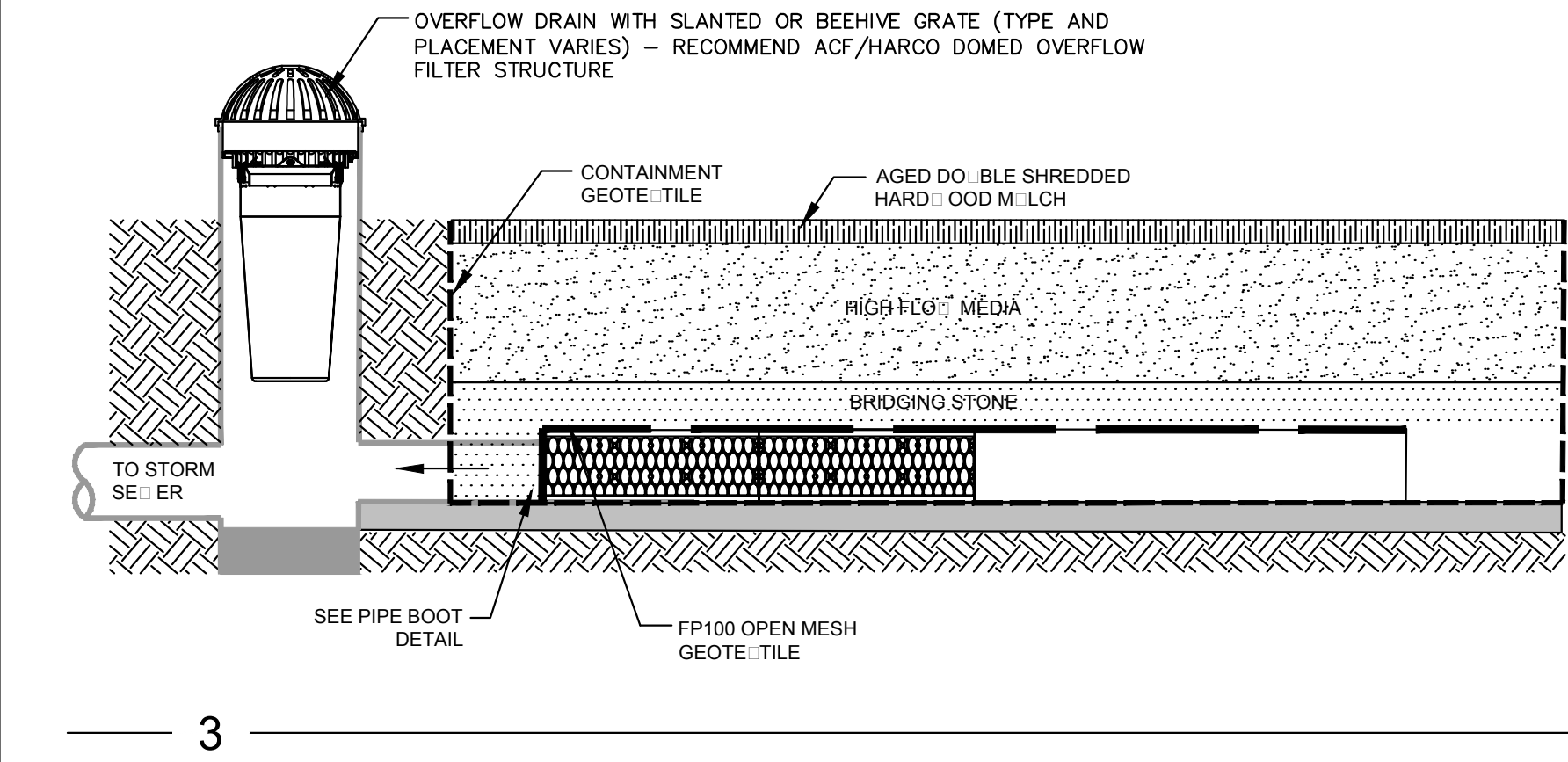
FOCALPOINT HP PERFORMANCE SPECIFICATION:

HIGH PERFORMANCE MEDIA

HIGH PERFORMANCE MEDIA MUST MEET A MINIMUM OF 100" PER HOUR INFILTRATION RATE.

HIGH PERFORMANCE STRUCTURAL UNDERDRAIN

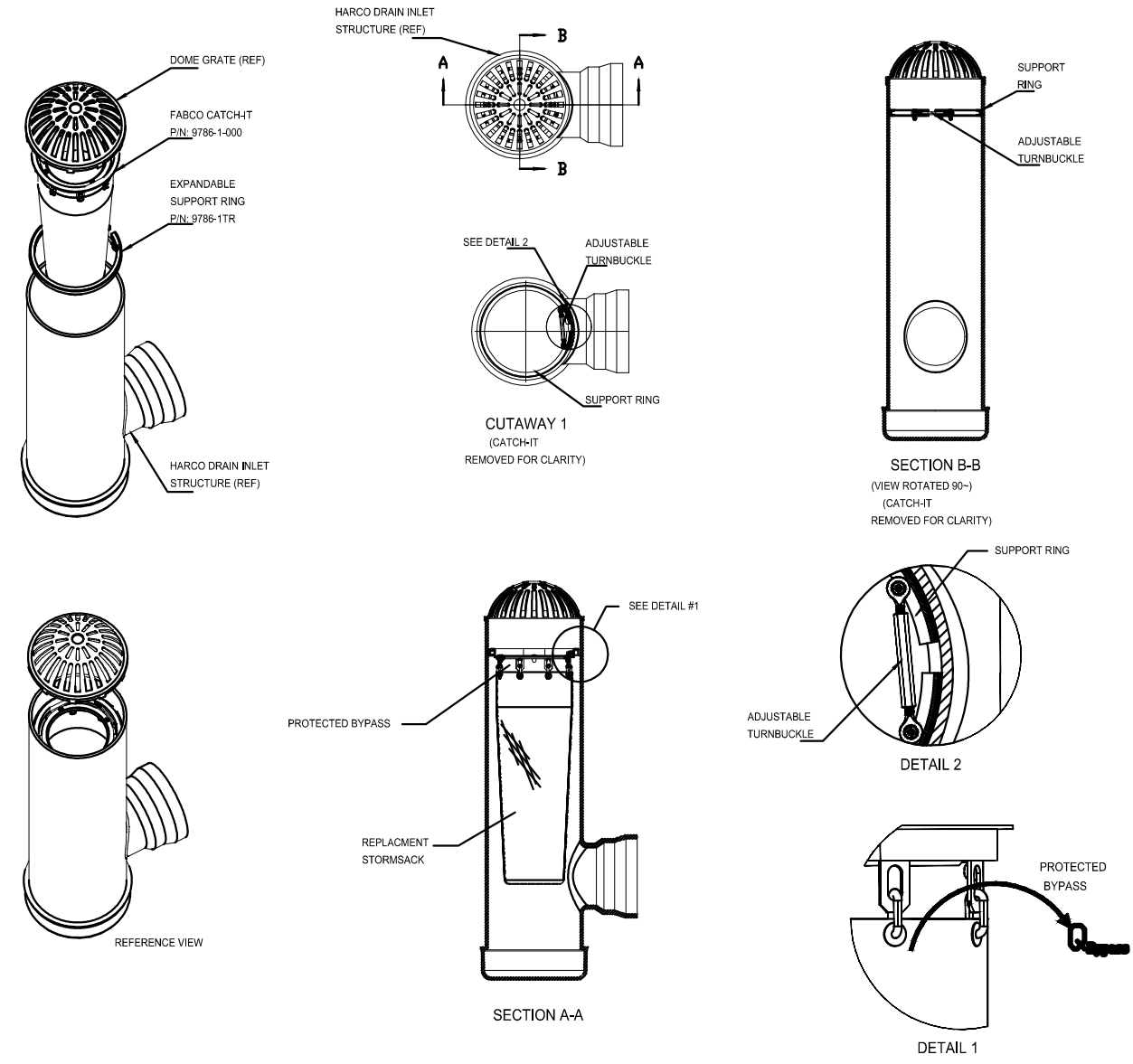
MUST HAVE A MINIMUM OF 19 SQUARE INCHES OF ORIFICE OPENING PER SQUARE FOOT. MUST MEET H₂O LOADING REQUIREMENTS. MUST BE MODULAR IN NATURE AND ASSEMBLED ON SITE. MUST HAVE MINIMUM 90% INTERIOR VOID SPACE.



NOTES:

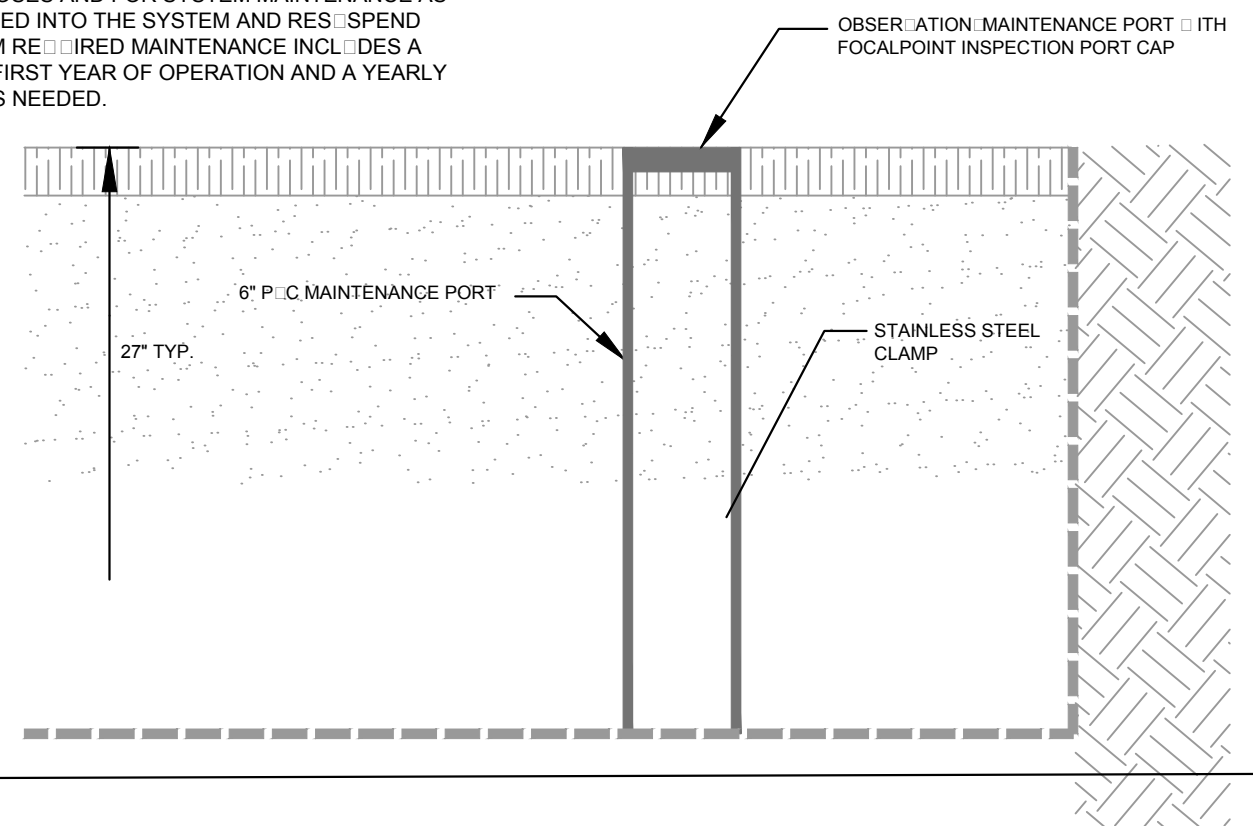
1. STORMSACK WEIGHT (EMPTY): 12 LB MAX
2. MATERIAL:
 - A) SHROUD: HIGH DENSITY POLYETHYLENE (TYPICAL WALL THICKNESS: .125")
 - B) SUPPORT HUB: CRS. POWDER COATED
 - C) STORMSACK: WOVEN POLYPROPYLENE GEOTEXTILE (GEOTEX 1117)
 - D) HARDWARE: ALUMINUM POP-RIEVETS
3. RECOMMENDED MINIMUM VAULT DEPTH: 24" BELOW CARTRIDGE
4. TYPICAL INSTALLATION: RAISE STORM GRATE, PUSH CATCH-T SHROUD DOWN ON FRAME SUPPORT LEDGE UNTIL LOCKING-CLIPS CLICK IN PLACE, LOWER STORM GRATE.
5. USE ONLY WITH FABCO REPLACEABLE STORMSACK.

PIPE SIZE (INCHES)	GEOTEX CAPACITY (CF)	FILTERED FLOW RATE (GPM)	BYPASS FLOW RATE (GPM)	TOTAL SYSTEM FLOW RATE (GPM)
12	0.37	2.2	1.2	3.4
18	1.88	2.5	1.0	3.5

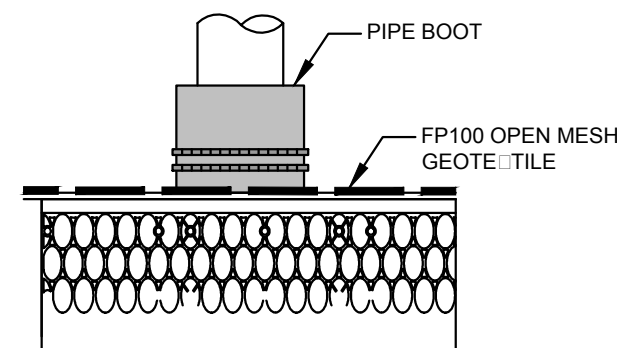


OBSERVATION/ MAINTENANCE PORT

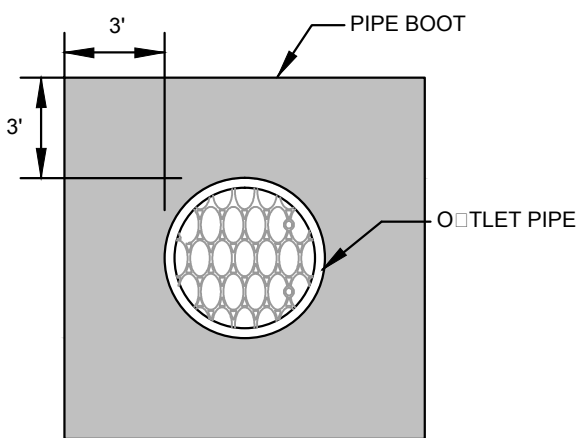
PORT DESIGNED FOR INSPECTION PURPOSES AND FOR SYSTEM MAINTENANCE AS REQUIRED. PORTER SHALL BE PIPED INTO THE SYSTEM AND RESPOND ACCUMULATED SEDIMENT. MINIMUM REQUIRED MAINTENANCE INCLUDES ANNUAL INSPECTION FOR THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER FLUSH AS NEEDED.



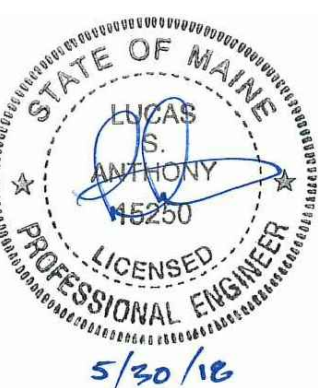
OBSERVATION/ MAINTENANCE PORT CONNECTION



PIPE BOOT DETAIL



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



Rev.	Date	Revision
2	5/30/18	REVISED PER CITY STAFF COMMENTS
1	5/14/18	REVISED PER UPDATED ARCHITECTURAL PLANS

SITE PLAN AND SUBDIVISION	4/10/18	LSA
Issued For	Date	By

Design: CEH	Draft: CG	Date: APR 2018
Checked: LSA	Scale: NTS	Job No.: 3184
File Name: 3184 - DRAINAGE DETAILS.dwg		
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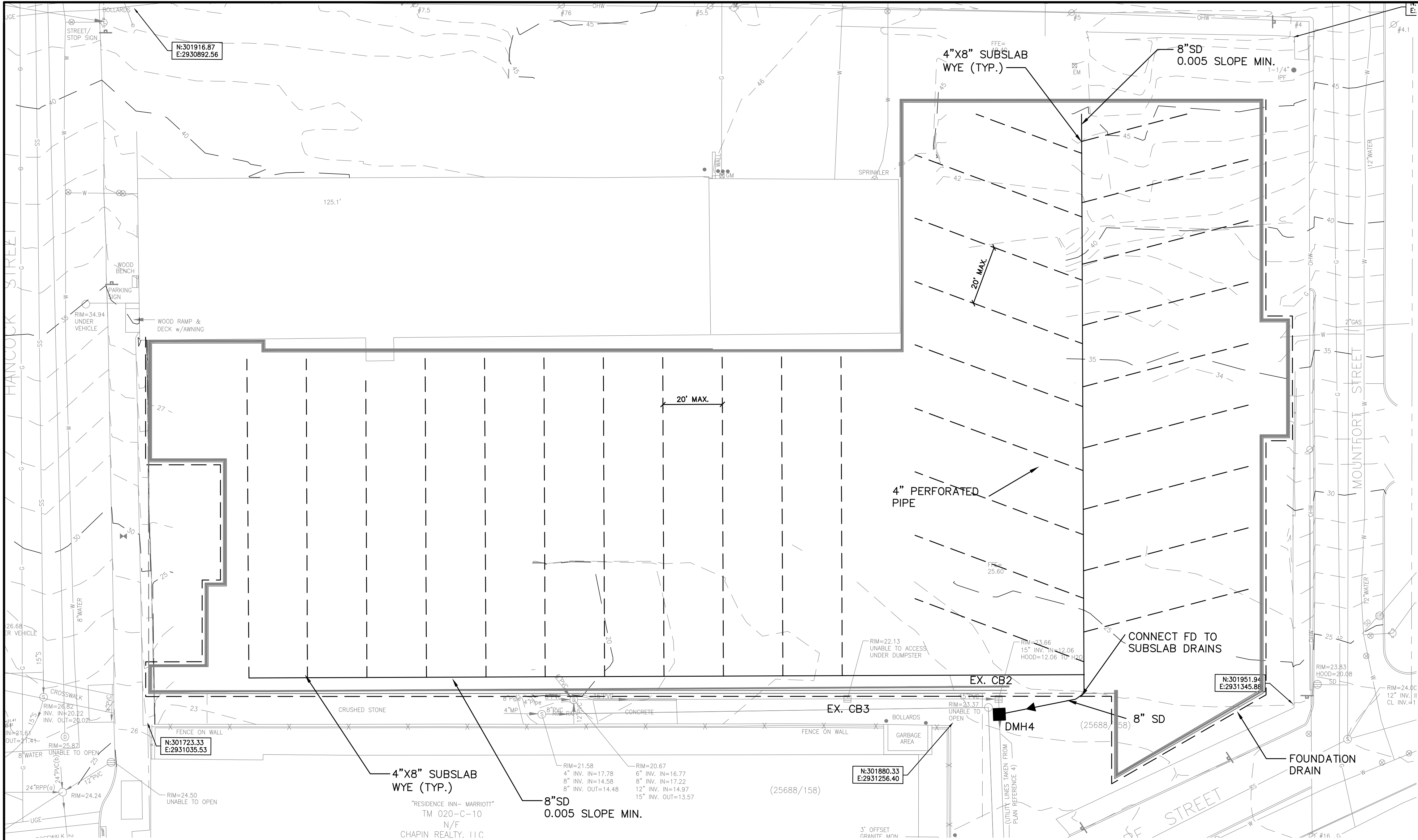
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207.772.2515

Drawing Name:	FOCAL POINT DETAILS
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.

C406

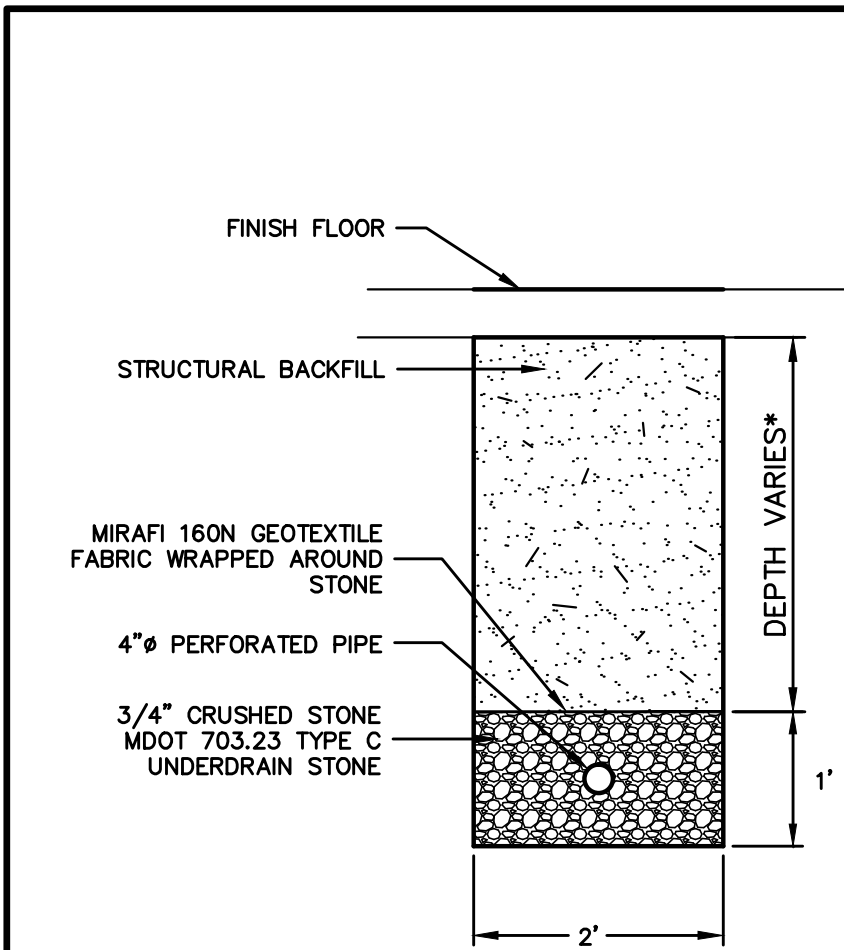
U:\3184-Shipyard Brewing V - CAD\DWG\3184 - DRAINAGE DETAILS.dwg 5/20/2018 5:03 PM



- NOTE:**
1. THE INSTALLATION OF THE SUBSLAB DRAIN SHALL BE COORDINATED WITH THE STRUCTURAL FOUNDATION PLAN TO AVOID ANY POTENTIAL CONFLICTS.
 2. THE SUBSLAB DRAIN WILL NOT PROVIDE DRAINAGE FOR ANY FEATURE 4" BELOW THE BUILDING'S FINISH ELEVATION.
 3. COORDINATE LOCATION OF EXTERIOR FOUNDATION DRAIN WITH LOCATION OF PROPERTY LINES AND EASEMENTS ON SHEET C101. PROPERTY LINES AND EASEMENTS ARE NOT SHOWN ON THIS PLAN FOR CLARITY.

SUBSLAB DRAIN PLAN
SCALE: 1"=20'

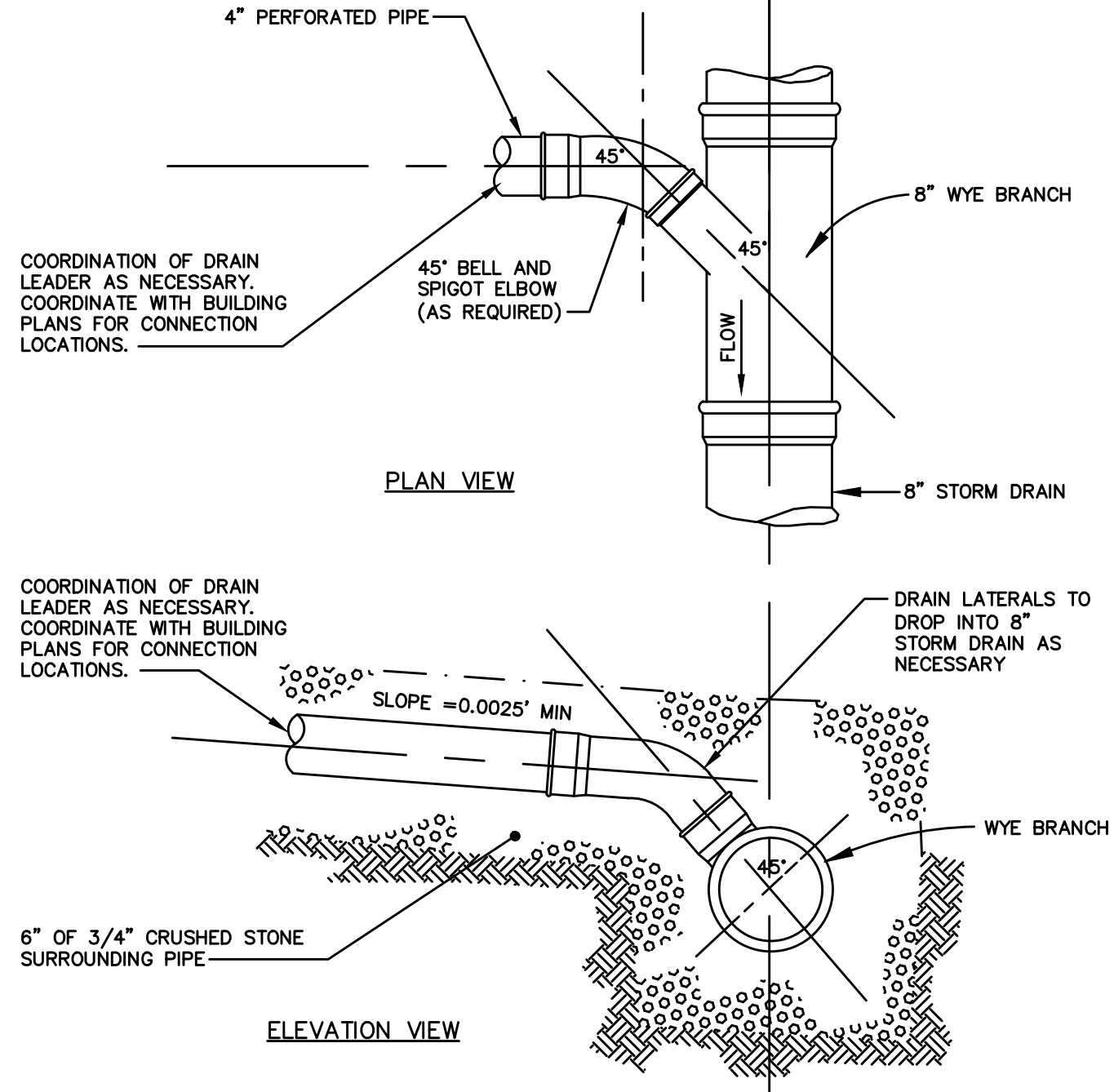
DRAINAGE STRUCTURE SCHEDULE				
STRUCTURE	SIZE	RIM	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)
DMH4	TBD	23.06	TBD/15" (EX. CB2) TBD/8" (SUBSURFACE DRAIN)	TBD



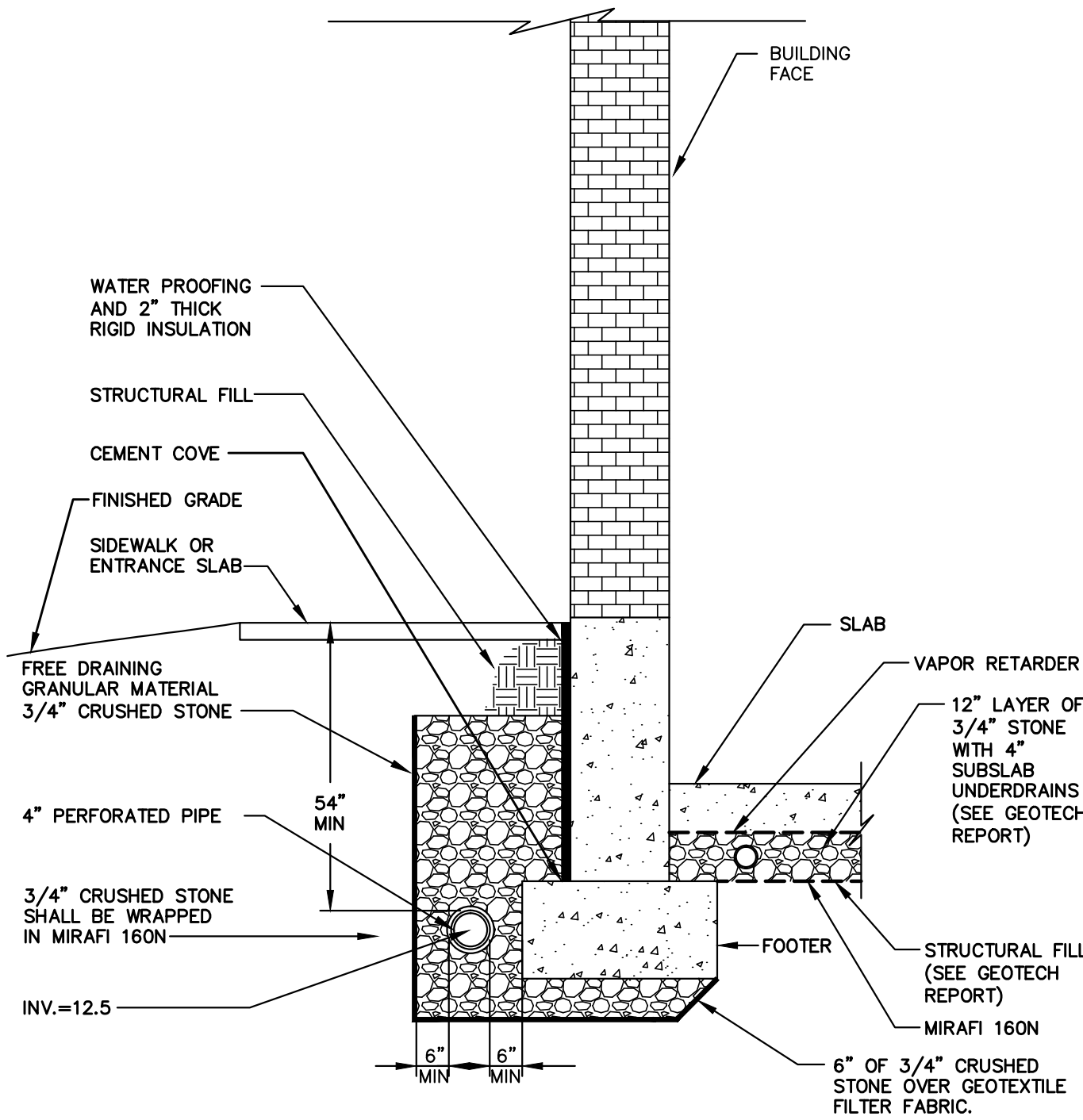
SUBSLAB DRAIN

NOT TO SCALE

• REFER TO GEOTECHNICAL REPORT AND ARCHITECTURAL PLANS



4"x8" SUBSLAB WYE
NOT TO SCALE



TYPICAL FOUNDATION DRAIN DETAIL

NOT TO SCALE

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



Rev.	Date	Revision
2	5/30/18	REVISED PER CITY STAFF COMMENTS
1	5/14/18	REVISED PER UPDATED ARCHITECTURAL PLANS

SITE PLAN AND SUBDIVISION	4/10/18	LSA
Issued For	Date	By

Design: CEH	Draft: CG	Date: APR 2018
Checked: LSA	Scale: NTS	Job No.: 3184
File Name: 3184 - DRAINAGE DETAILS.dwg		
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207.772.2151

Drawing Name:	SUBSLAB DRAINAGE PLAN & DETAILS
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.
C407

- UT SUBDISTRICT**
FRONTAGE REQUIREMENTS
- BUILDING LENGTH - 100' MAX
MASSING VARIATION - 200' MAX
(ACTUAL = 200'-0")
- SETBACKS**
- FRONT YARD - 10' MAX
(ACTUAL = 10'-0" MAX)
 - SIDEYARD - (N/A)
 - BONUS FLOOR - 15' MIN.
(ACTUAL = 15'-0", 35'-0" AT CORNER)
- HEIGHT STANDARDS**
- BUILDING HEIGHT - 65' MAX
BONUS HEIGHT - 77' MAX
(ACTUAL = 77'-0")
 - BUILDING STORIES - 6 STORIES
BONUS FLOORS - 7 STORIES
(ACTUAL = 6 STORIES)



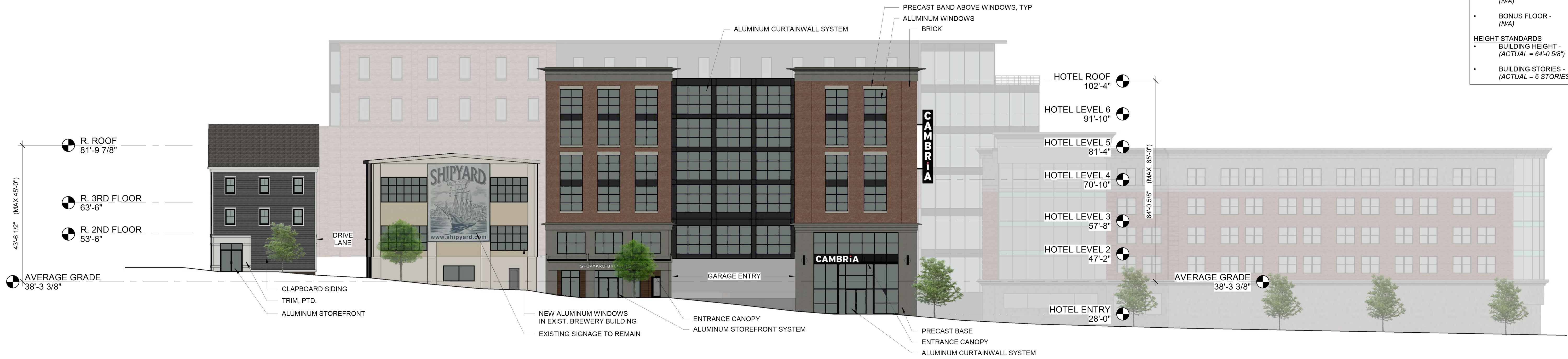
1 | MOUNTFORT STREET ELEVATION
1/16" = 1'-0"

- UN SUBDISTRICT**
FRONTAGE REQUIREMENTS
- BUILDING LENGTH - 50' MAX
(ACTUAL = 50'-0")
- SETBACKS**
- FRONT YARD - 5' MAX
(ACTUAL = 22'-0" (UT CONFLICT))
 - SIDEYARD - 10' MIN.
(N/A)
 - CORNER COND. - 35' MIN.
(ACTUAL = 35'-0")
- HEIGHT STANDARDS**
- BUILDING HEIGHT - 45' MAX
(ACTUAL = 40'-0")
 - BUILDING STORIES - 4 STORIES
(ACTUAL = 3 STORIES)
(ACTUAL = 5 STORIES W/CORNER)



2 | NEWBURY STREET ELEVATION
1/16" = 1'-0"

Prepared For:		Owner	
Consultant:		Address City, State	
Architect:		ARCHETYPE architects 48 Union Wharf Portland, Maine 04101 (207) 772-6022 ARCHETYPE@ARCHETYPPEPA.COM	
Project:		SHIPYARD DEVELOPMENT Address City, State	
Revisions:		Date: March 22, 2018 Scale: 1/16" = 1'-0"	
Building Elevations		A2.01	



UT SUBDISTRICT		
FRONTAGE REQUIREMENTS		
• BUILDING LENGTH -	100' MAX	
• PARTITION WALLS -	200' MAX	
(ACTUAL = 120'-0")		
SETBACKS		
• FRONT YARD -	10' MAX	
(ACTUAL = 3'-0" / 0'-6")		
• SIDEYARD -	10' MIN.	
(N/A)		
• BONUS FLOOR -	15' MIN.	
(N/A)		
HEIGHT STANDARDS		
• BUILDING HEIGHT -	65' MAX	
(ACTUAL = 64'-0 5/8")		
• BUILDING STORIES -	6 STORIES	
(ACTUAL = 6 STORIES)		

1 | HANCOCK STREET ELEVATION
1/16" = 1'-0"

Owner

Consultant:

Architect:
ARCHETYPE
architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:
SHIPYARD
DEVELOPMENT

Revisions:

Scale:
1/16" = 1'-0"

Date:
March 22, 2018

Unnamed

GENERAL PLANTING NOTES

1. CALL DIG-SAFE (1-888-344-7233) PRIOR TO BEGINNING WORK. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO OWNER.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. DO NOT SCALE FROM DRAWINGS. ANY OMISSIONS IN DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT. ANY DISCREPANCIES BETWEEN DRAWINGS, PLANT QUANTITIES, DETAILS, NOTES AND SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT FOR FURTHER DIRECTION AND RESOLUTION BEFORE ANY ADDITIONAL WORK PROCEEDS.
4. PROVIDE SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. CONTRACTOR SHALL FURNISH AND PLACE 12 INCHES OF LOAM IN ALL SHRUB BEDS, 30 INCHES IN ALL TREE PITS, AND 6 INCHES UNDER ALL TURF AREAS. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
6. ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF THE LATEST PUBLICATION OF "AMERICAN STANDARDS FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN".
7. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
8. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM THE OWNER.
9. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
10. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY, OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. DAMAGE TO EXISTING SITE IMPROVEMENTS DURING INSTALLATION OF LANDSCAPE MATERIAL SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
14. CONTRACTOR SHALL COORDINATE INSPECTION OF PLANT MATERIAL AND LOCATIONS WITH PROJECT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ALL PLANT MATERIAL SHALL BE ON-SITE AND PLACED BEFORE INSPECTION CAN BE COMPLETED. A MINIMUM OF 48 HOUR NOTIFICATION SHALL BE REQUIRED.
15. MAINTENANCE REQUIREMENTS: PRUNE DEAD OR DAMAGED BRANCHES, MAINTAIN GUY POSTS AND WATER AS REQUIRED UNTIL PROJECT COMPLETION AND ACCEPTANCE BY OWNER.
16. WATERING: ALL PLANTINGS SHALL BE THOROUGHLY WATERED UPON INSTALLATION, AND THEN WEEKLY WHENEVER ANY DRY SPELLS OCCUR, UNTIL ACCEPTANCE BY OWNER.
17. LANDSCAPE CONTRACTOR OR PLANT SUPPLIER SHALL GUARANTEE PLANTS AND PROVIDE REPLACEMENTS FOR TWO YEARS FROM INSTALLATION.
18. CONTRACTOR SHALL PLACE 4" SHREDDED DARK BARK MULCH WITHIN ALL PLANTING BEDS AND TREE PITS.

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE
AAS	ASTILBE ARDENSII 'FLAMINGO'	FLAMINGO ASTILBE	NO. 1 CONT.
ACA	AQUILEGIA CANADENSIS 'PINK LANTERNS'	CANADIAN COLUMBINE	NO. 1 CONT.
ATR	ATHYRIUM NIPONICUM	PAINTED LADY FERN	NO. 1 CONT.
ANA	ASTER NOVAE ANGLIAE	PURPLE DOME ASTER	NO. 1 CONT.
CK	CORNUS KOUSA	JAPENSES DOGWOOD	8'-10' HGT. CLUMP
CAK	CALAMAGROSTIS X ACUTIFOLLA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	NO. 1 CONT.
CFR	CIMICIFUGA RACEMOSA	SNAKE ROOT	NO. 1 CONT.
DCS	DIGITALIS 'CAMELOT SERIES'	CAMELOT SERIES FOXGLOVE	NO. 1 CONT.
DEB	DRYOPTERIS ERYTHROSORA 'BRILLANCE'	AUTUMN FERN	NO. 1 CONT.
EPF	EUPATORIUM FISTULOSUM	JOE PYE WEED	NO. 1 CONT.
HAF	HELIANTHUS ANGUSTIFOLIUS	SWAM SUNFLOWER	NO. 1 CONT.
HGU	HOSTA 'GUACAMOLE'	GUACAMOLE HOSTA	NO. 1 CONT.
HBA	HOSTA 'BLUE ANGEL'	BLUE ANGEL HOSTA	NO. 1 CONT.
HSC	HEMEROCALLIS 'STEEPLE JACKIE'	STEEPLE JACKIE DAYLILY	NO. 1 CONT.
HQ	HYDRANGEA QUERCIFOLIA	OAK LEAF HYDRANGEA	18"-24" HGT.
KB	KALMIA LATIFOLIA 'BULLSEYE'	BULLSEYE KALMIA	18"-24" HGT.
LSR	LUGULARIA STENOCEPHALA 'THE ROCKET'	THE ROCKET GOLDEN RAY	NO. 1 CONT.
ML	MAGNOLIA X LOEBERNII 'LEONARD MESSEL'	LEONARD MESSEL MAGNOLIA	8'-10' HGT.
PVH	PANICUM VERGATUM 'HEAVY METAL'	HEAVY METAL SWITCH GRASS	NO. 1 CONT.
RB	RHODODENDRON X 'BOULE DE NEIGE'	BOULE DE NEIGE 'RHODODENDRON	18"-24" HGT.
SR	SYRINGA RETICULTA	JAPANESE TREE LILAC	2" CAL.
VC	VIBURNUM X CARLCEPHALUM 'CAYUGA'	CAYUGA VIBURNUM	24"-30" HGT.
UA	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	2-1/2" CAL.

GENERAL PLANTING NOTES:

DIG HOLE AT LEAST 2 TIMES THE WIDTH OF ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH ROOT FLARE AT GROUND LEVEL. CORRECT HOLE DEPTH AS NEEDED. NOTE: MANY BALLED & BURLAPPED PLANTS HAVE SOIL PILED AROUND THE ROOT FLARE WHICH SHOULD BE REMOVED PRIOR TO PLANTING.

FOR DECIDUOUS AND NEEDLED EVERGREEN TREES AND SHRUBS 1 FULL WHEELBARROW EXISTING SOIL, 2 SHOVELS PEAT, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL. FOR BROAD-LEAVED EVERGREENS AND RELATED ERICACEAE PLANTS, 1 FULL WHEELBARROW EXISTING SOIL, 3-4 SHOVELS PEAT, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL OF LOW pH (RECOMMENDATIONS ARE FOR ACCEPTABLE PLANTING AREAS).

CONTAINER GROWN STOCK: REMOVE ALL CONTAINERS AND GENTLY COMB OUT ROOTS TO ELIMINATE CIRCLING ROOTS. PRUNE DAMAGED ROOTS AS NEEDED.

BACKFILL 2/3 OF HOLE WITH AMENDED SOIL. THEN FILL HOLE WITH WATER. LET DRAIN. REPEAT WATER AND DRAIN. BACK FILL TO FINISH GRADE, TAMP GENTLY, AND CREATE EARTH SAUCER. WATER THOROUGHLY ONCE AGAIN TO REMOVE REMAINING AIR POCKETS.

TREE AND SHRUB PLANTING DETAIL

NOT TO SCALE

2" X 2" OR 2 1/2" DIAMETER STAKES WITH 2 #12 GAUGE WIRES ENCASED IN 2-PLY REINFORCED RUBBER HOSE 1/2" DIAMETER OR CHAINLOCK AS APPROVED BY LANDSCAPE ARCHITECT. 2 STAKES LOCATED 180° APART (STAKES SHALL BE FIRMLY SET TO PROVIDE NECESSARY TENSION). STAKES TO BE REMOVED AFTER ONE YEAR TIME.

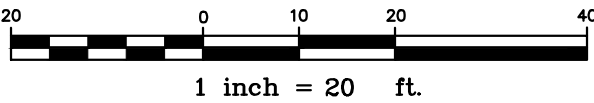
BLACK MULCH IN PLANTING BEDS

REMOVE PLASTIC BURLAP AND FIBER OR PEAT POT. REMOVE NATURAL FIBER BURLAP FROM AT LEAST THE TOP 1/3 OF ROOTBALL, OR MORE IF THE ROOTBALL IS FIRM. REMOVE TOP 1/2 OF WIRE BASKET.

EARTH SAUCER (3" HT.)

SOIL MIX-SEE NOTE ABOVE AND BELOW

UNDISTURBED SUBGRADE



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



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Drawing Name:	Landscape Plan
Project:	Shipyard Redevelopment Newbury Street, Portland, ME
Client:	86 Newbury Street, LLC 470 Fore Street, Portland, ME 04101

Drawing No.

L001

Rev.	Date	Revision
2	5/30/18	REVISED PER CITY STAFF COMMENTS
1	5/14/18	REVISED PER UPDATED ARCHITECTURAL PLANS

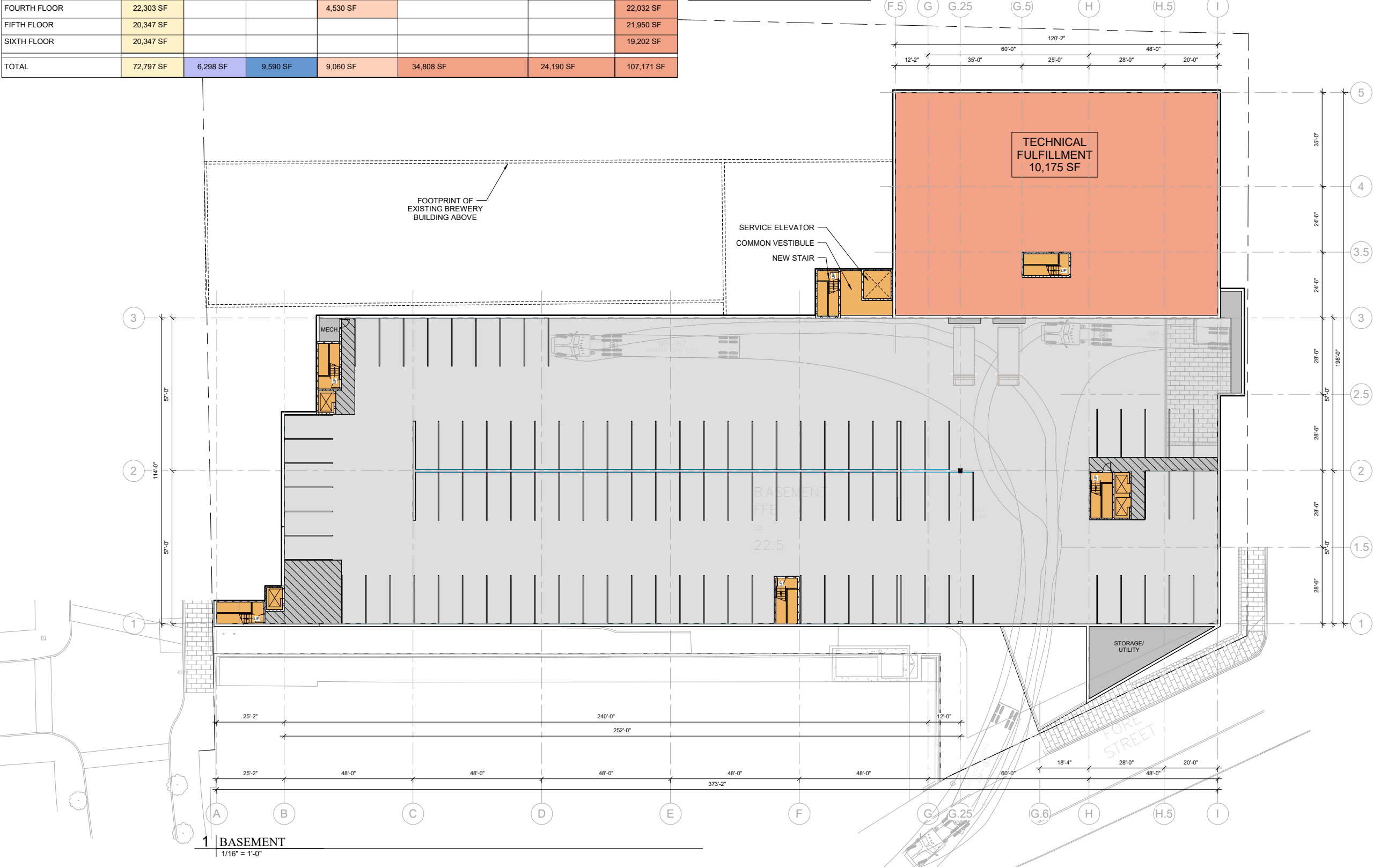
SITE PLAN AND SUBDIVISION	4/10/18	LSA
Issued For		By

Design:	CDM	Draft:	CH	Date:	APR 2018
Checked:	LSA	Scale:	1"=20'	Job No.:	3184
File Name:	3184-LANDSC.dwg				
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PROJECT DESCRIPTION

	HOTEL	RETAIL	BREWERY	RESIDENTIAL	TECHNICAL FULFILLMENT	PHARMACY	OFFICE
BASEMENT					10,175 SF		
FIRST FLOOR	1,480 SF	5,200 SF	9,590 SF		21,043 SF		
SECOND FLOOR	4,160 SF	1,098 SF			3,590 SF	10,300 SF	20,485 SF
THIRD FLOOR	4,160 SF			4,530 SF		13,890 SF	23,502 SF
FOURTH FLOOR	22,303 SF			4,530 SF			22,032 SF
FIFTH FLOOR	20,347 SF						21,950 SF
SIXTH FLOOR	20,347 SF						19,202 SF
TOTAL	72,797 SF	6,298 SF	9,590 SF	9,060 SF	34,808 SF	24,190 SF	107,171 SF

HOTEL	105 ROOMS
RESIDENTIAL A	4 UNITS
RESIDENTIAL B	4 UNITS
RESIDENTIAL C	2 UNITS
PARKING GARAGE	380 SPACES



Prepared For:

Owner

Consultant:

ARCHETYPE
architects
48 Union Wharf Portland, Maine 04101
(207) 773-6022 ARCHETYPE@ARCHETYPEPA.COM

Architect:

ARCHETYPE
architects
48 Union Wharf Portland, Maine 04101
(207) 773-6022 ARCHETYPE@ARCHETYPEPA.COM

Project:

SHIPYARD
DEVELOPMENT

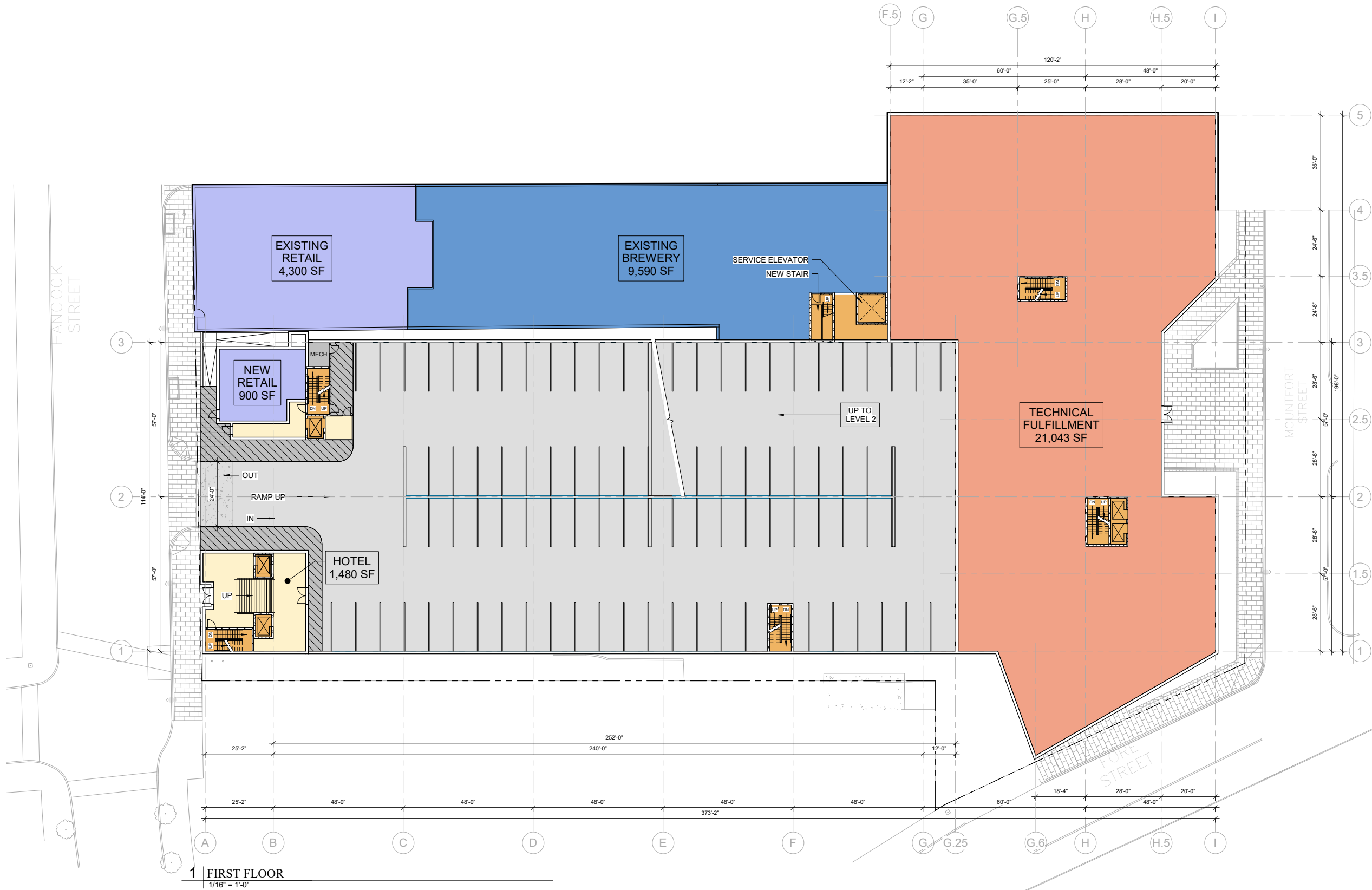
Revisions:

Scale: 1/16" = 1'-0"

DATE: May 24, 2018

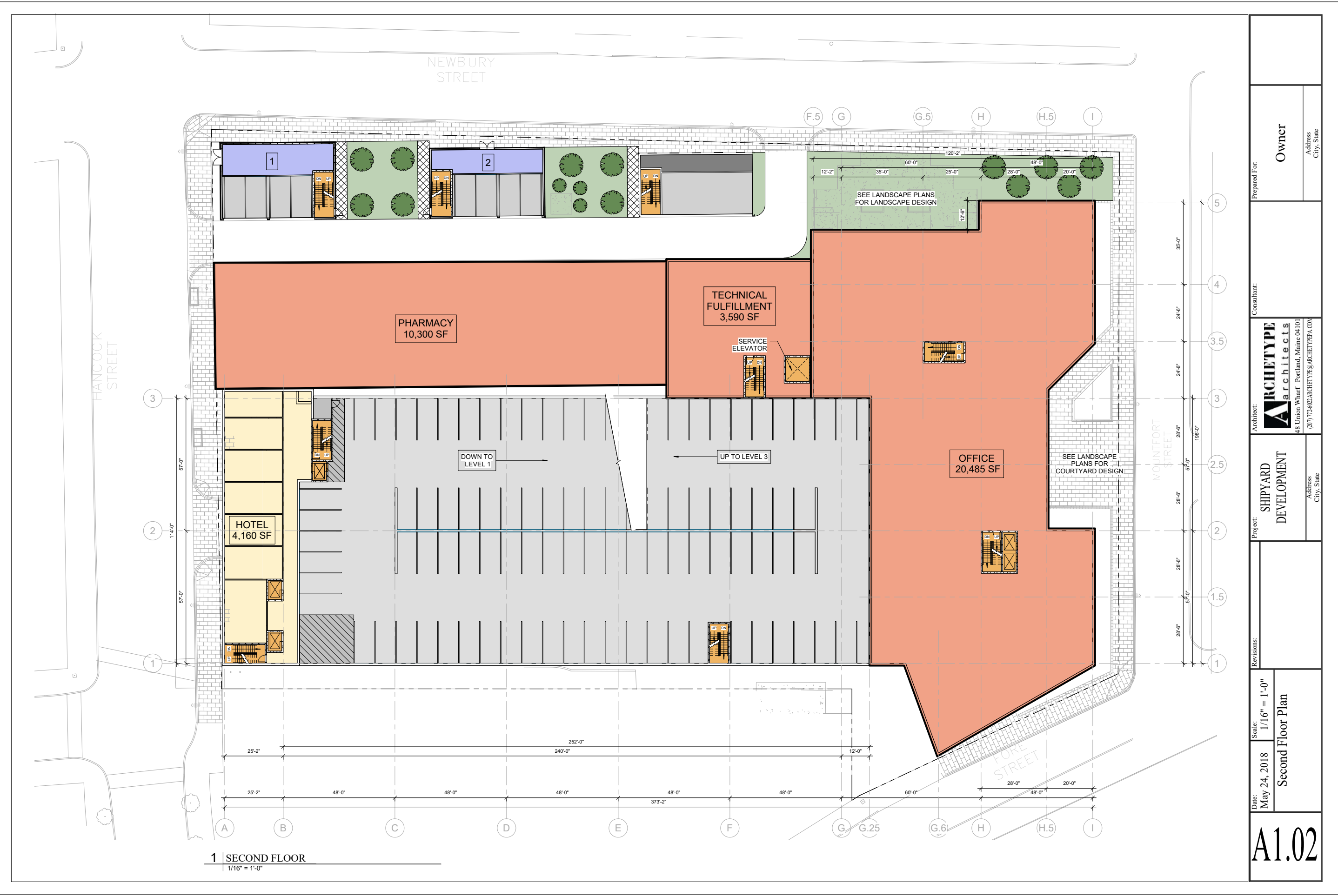
BASEMENT

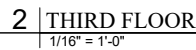
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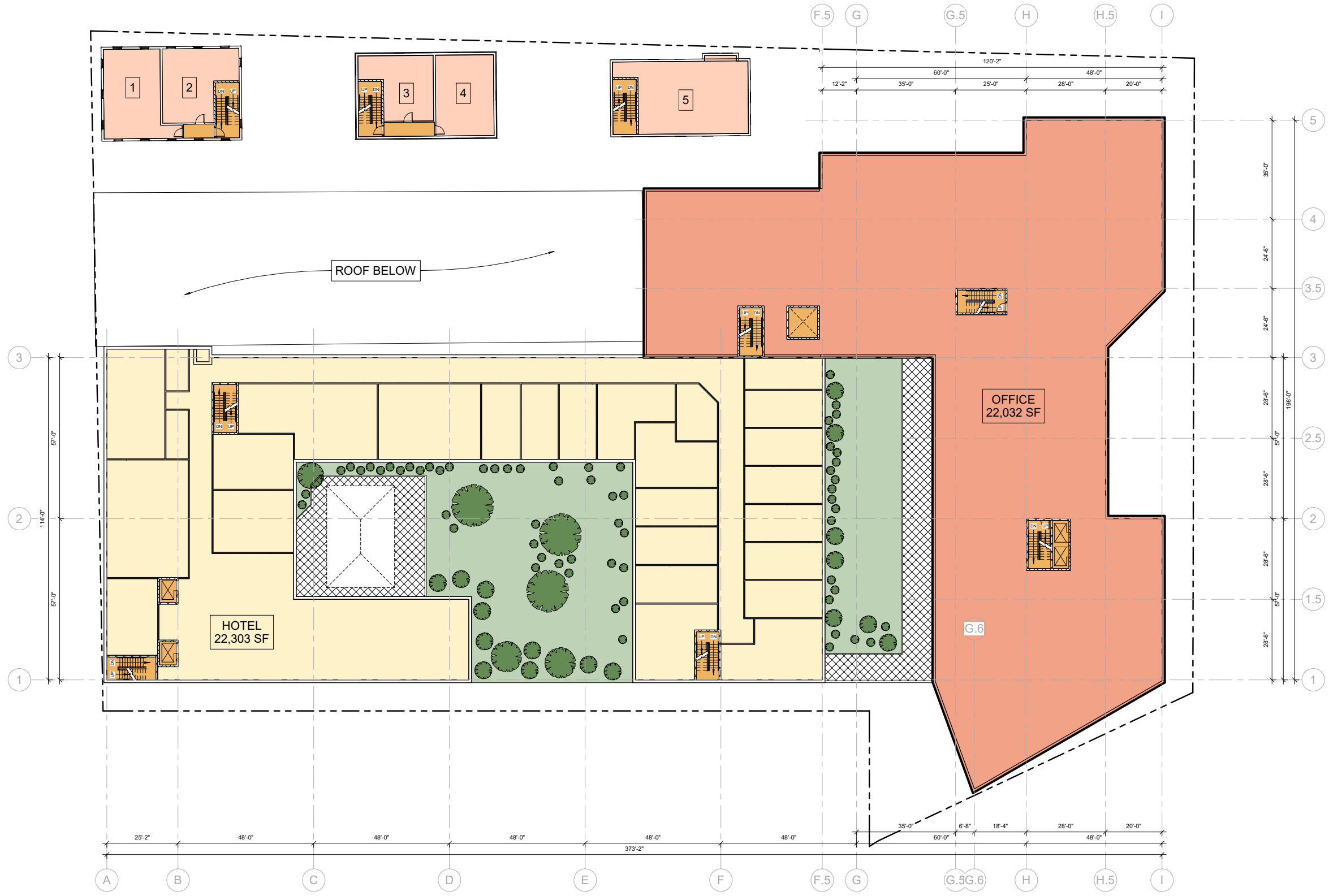
1 | FIRST FLOOR
1/16" = 1'-0"

Date: May 24, 2018		Scale: 1/16" = 1'-0"	Revisions:	Project: SHIPYARD DEVELOPMENT	Architect: ARCHETYPE architects 48 Union Wharf Portland, Maine 04101 (207) 773-6022 ARCHETYPE@ARCHETYPEPA.COM	Consultant:	Prepared For: Owner	A1.01
May 24, 2018		1/16" = 1'-0"		SHIPYARD DEVELOPMENT	ARCHETYPE architects 48 Union Wharf Portland, Maine 04101 (207) 773-6022 ARCHETYPE@ARCHETYPEPA.COM		Owner	
First Floor								





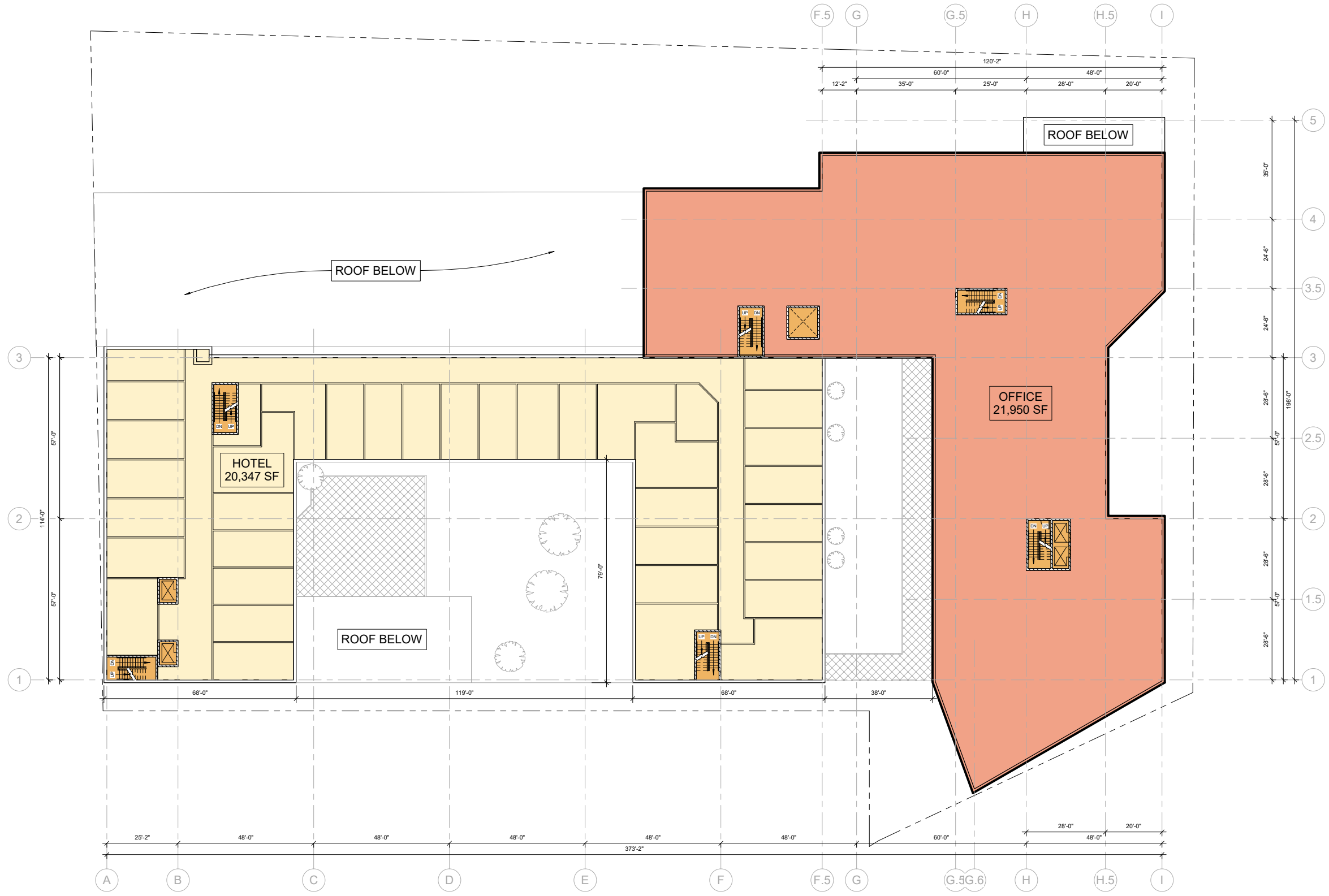
Date: May 24, 2018	Scale: 1/16" = 1'-0"	Third Floor Plan	Revisions:	Project: SHIPYARD DEVELOPMENT	Architect:  448 Union Wharf Portland, Maine 04101 (207) 772-6002 ARCHETYPE@ARCHETYPEPA.COM	Consultant:	Prepared For: Owner	Address City, State



2 | FOURTH FLOOR
1/16" = 1'-0"

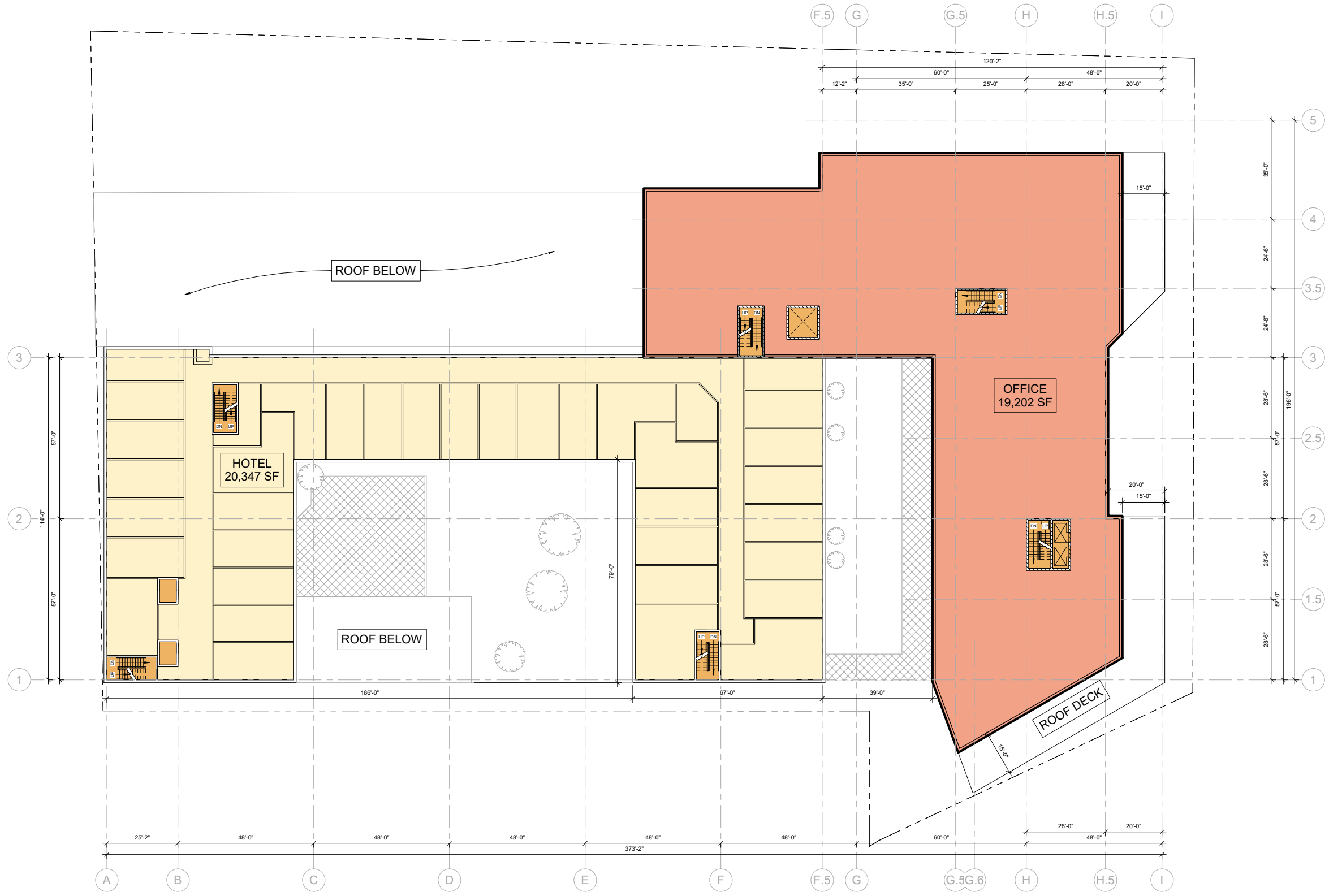
Date: May 24, 2018	Scale: 1/16" = 1'-0"	Revisions:	Project: SHIPYARD DEVELOPMENT	Architect: ARCHETYPE architects 48 Union Wharf Portland, Maine 04101 (207) 772-6022 ARCHETYPE@ARCHETYPEDA.COM	Consultant:	Prepared For:
					Address City, State	Owner

A1.04



1 | 5TH FLOOR
1/16" = 1'-0"

Date: May 24, 2018		Scale: 1/16" = 1'-0"	Fifth Floor Plan	Revisions:	Project: SHIPYARD DEVELOPMENT	Architect:  48 Union Wharf Portland, Maine 04101 (207) 772-6022 ARCHETYPE@ARCHETYPEDA.COM	Consultant:	Prepared For:	
								Owner	Address City, State
A1.05									



1 | 6TH FLOOR
1/16" = 1'-0"

Date: May 24, 2018 Scale: 1/16" = 1'-0"		Revisions: Project: SHIPYARD DEVELOPMENT	Architect: ARCHETYPE architects 48 Union Wharf Portland, Maine 04101 (207) 773-6022 ARCHETYPE@ARCHETYPEDA.COM	Consultant: Prepared For: Owner	A1.06 Sixth Floor Plan



FORE STREET PERSPECTIVE

Portland, Maine

MAY 2018

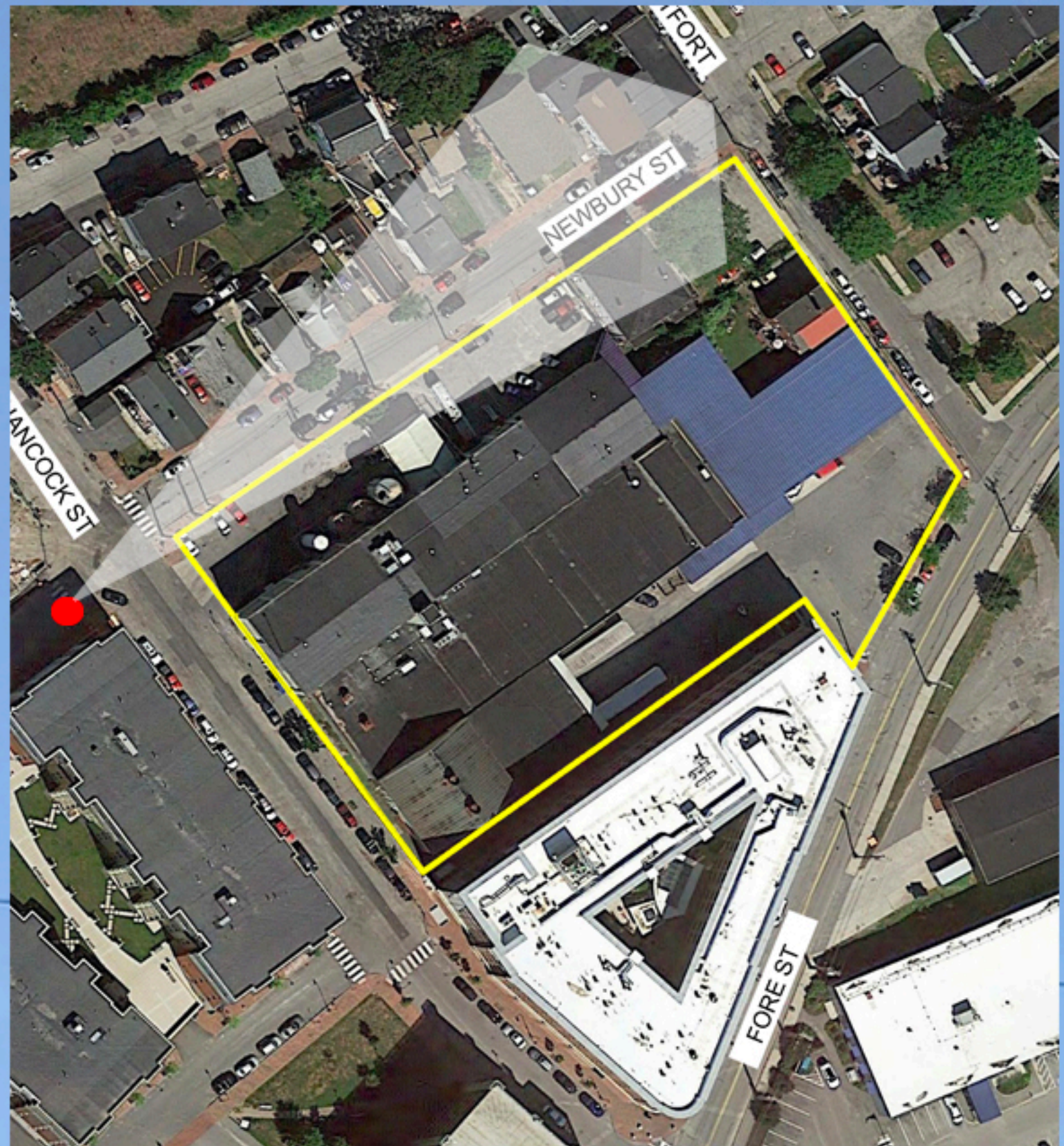




HANCOCK STREET PERSPECTIVE

Portland, Maine

MAY 2018



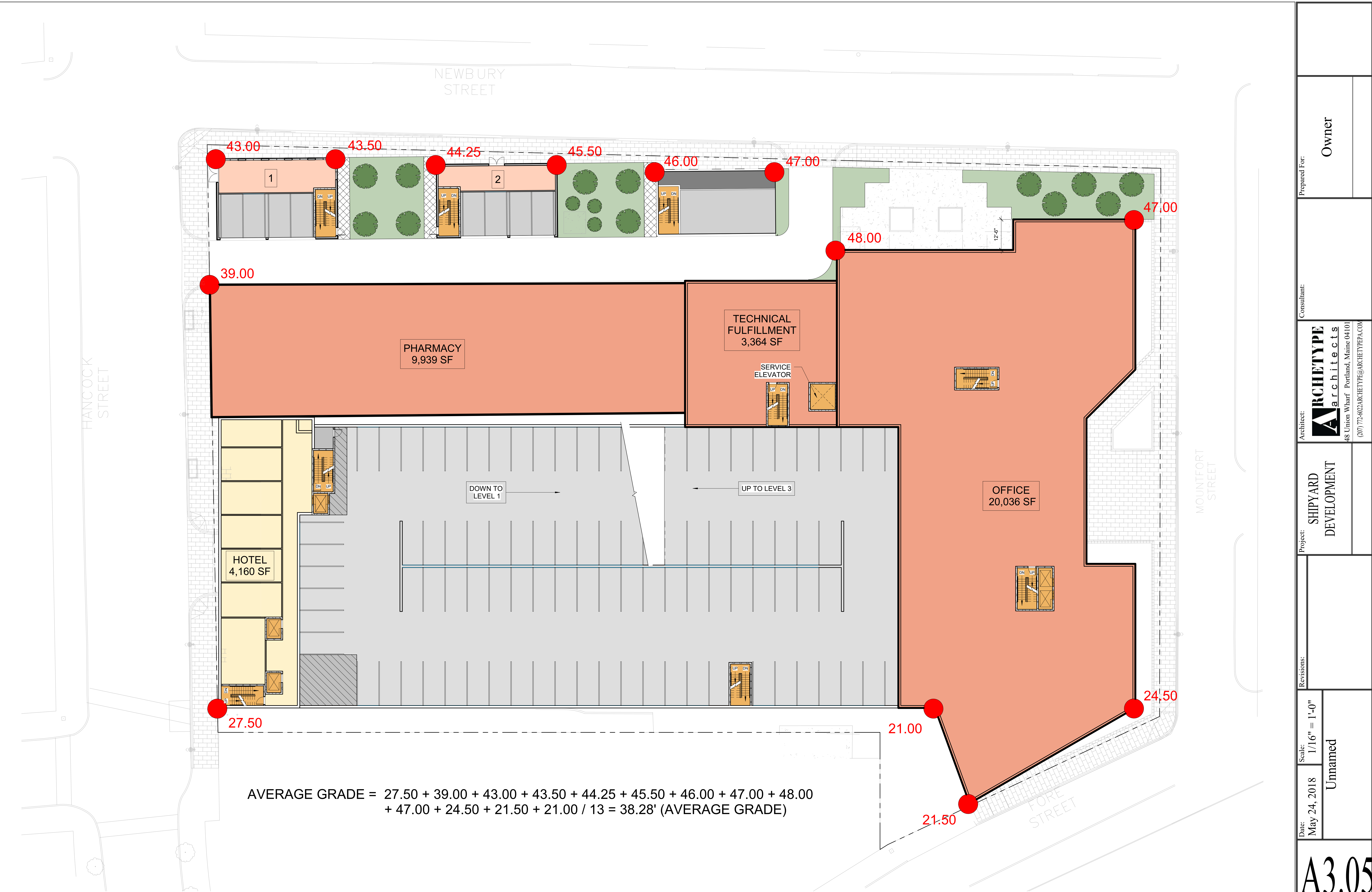
NEWBURY STREET PERSPECTIVE

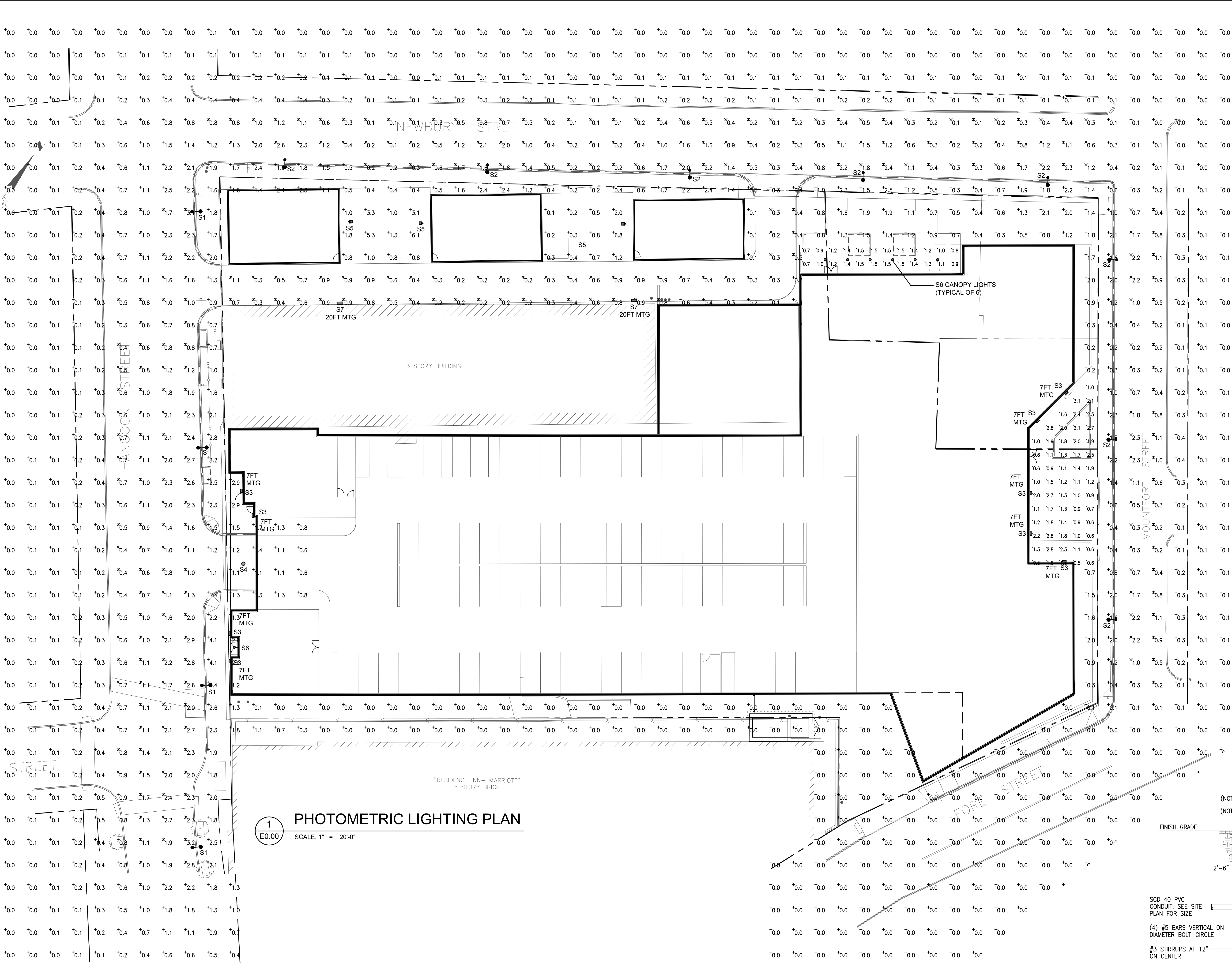
Portland, Maine

MAY 2018









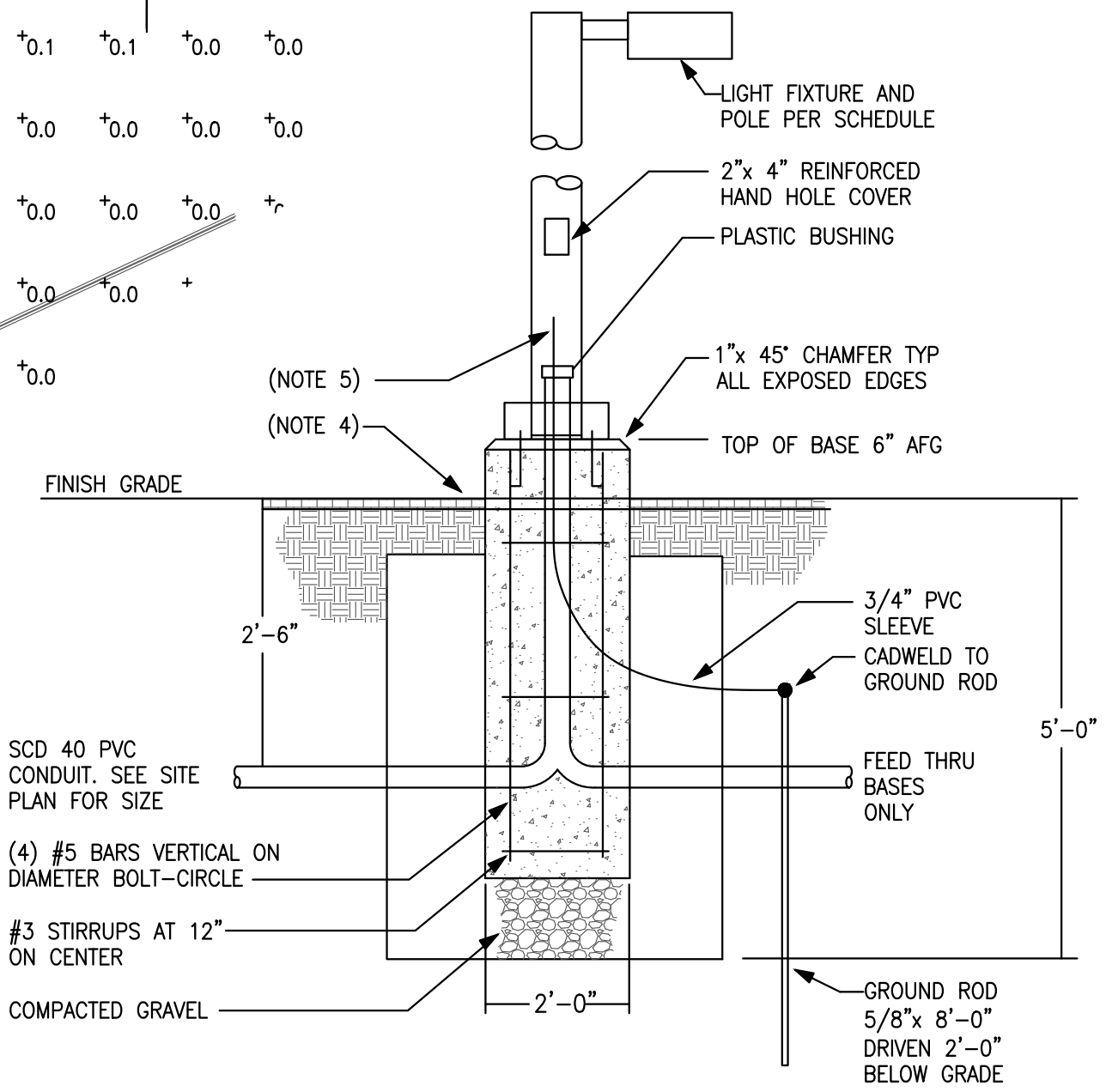
1
E0.00

PHOTOMETRIC LIGHTING PLAN

SCALE: 1" = 20'-0"

- GENERAL NOTES:
1. CALCULATIONS REPRESENT MAINTAINED FOOTCANDLE LEVELS AT GRADE.
 2. LIGHT LOSS FACTOR USED IN CALCULATION: 0.9.
 3. LIGHTING FIXTURES:
 - TYPE S1 STANDARD CITY OF PORTLAND STREET LIGHT, TYPE X-5C
 - TYPE S2 STANDARD CITY OF PORTLAND STREET LIGHT, TYPE X-5D
 - TYPE S3 BEGA #99 868 BLK SMALL DECORATIVE WALKWAY LIGHT WITH TEMPERED GLASS LENS MOUNTED ON A 89.5" TALL POLE. FINISH: BLACK
 - TYPE S4 MCGRAW EDISON #77-C2-LED-E1-DL-DP-7050 PARKING GARAGE LED LIGHT WITH ALUMINUM HOUSING ACRYLIC LENS AND DRIVE LANE DISTRIBUTION OPTICS. FINISH: DARK PLATINUM.
 - TYPE S5 SHAPER #674-31-WP-L3/835-120V-ALP DECORATIVE WALL MOUNTED MOUNTED LED FIXTURE ALUMINUM HOUSING AND TRIM AND WHITE ACRYLIC DIFFUSER. FINISH: ALUMINUM PAINT.
 - TYPE S6 HALO #SMD6R6935WHDW LOW PROFILE DIRECT MOUNT DOWNLIGHT WITH POLYCARBONATE FRAME AND HIGH IMPACT DIFFUSE LENS. FINISH: WHITE
 - TYPE S7 MCGRAW EDISON #ISC-AF-450-LED-E1-RW-BK-7050 DECORATIVE WALL MOUNTED LED LIGHT WITH ALUMINUM HOUSING AND RECTANGULAR WIDE OPTICAL DISTRIBUTION. FINISH: BLACK
 4. CALCULATED GRID STATISTICS
 - GRID A - BACK ALLEY
AVE: 0.5 MAX: 1.1 MIN: 0.2 MAX:MIN 5.5:1 AVE:MIN 2.5:1
 - GRID B - HANCOCK ST
AVE: 1.4 MAX: 3.2 MIN: 0.3 MAX:MIN 10.7:1 AVE:MIN 0.4:1
 - GRID C - MOUNTFORT ST
AVE: 0.9 MAX: 2.3 MIN: 0.2 MAX:MIN 11.5:1 AVE:MIN 4.5:1
 - GRID D - NEWBURY ST
AVE: 0.8 MAX: 2.6 MIN: 0.1 MAX:MIN 26.0:1 AVE:MIN 8.0:1
 - GRID E - OFFICE BUILDING ENTRANCE
AVE: 1.6 MAX: 3.1 MIN: 0.5 MAX:MIN 6.2:1 AVE:MIN 3.2:1
 - GRID F - OFFICE BUILDING CANOPY ENTRANCE
AVE: 1.2 MAX: 1.6 MIN: 0.7 MAX:MIN 2.3:1 AVE:MIN 1.7:1

- LIGHTING POLE BASE DETAIL NOTES:
1. POLE BASE MAY BE PRECAST
 2. PAINT EXPOSED CONCRETE WITH (2) TWO COATS OF BRONZE MASONRY PAINT.
 3. CONCRETE WITH AIR ENTRAINED AGENT. 4000 P.S.I. AFTER 30 DAYS.
 4. COORDINATE TYPES AND REQUIREMENTS OF SIDEWALKS WITH GENERAL CONTRACTOR.
 5. #4 BARE COPPER GROUND WIRE. ATTACH TO POLE PER MANUFACTURERS INSTRUCTIONS.
 6. BOLT COVER, BOLT PATTERN TEMPLATE, ANCHOR BOLTS, NUTS, WASHERS AND SHIMS BY POLE SUPPLIER.



2
E0.00

LIGHTING POLE BASE DETAIL

SCALE: NOT TO SCALE

STATE OF MAINE
STEVEN W. MASON
#8468
LICENSED PROFESSIONAL ENGINEER

Prepared For:
86 Newbury Street, LLC
470 Fore St
Portland, Maine

Consulting Engineer:
BENNETT
ENGINEERING
MECHANICAL-ELECTRICAL
CDD1804045

Architect:
ARCHETYPE
Architects
48 Union Wharf Portland, Maine 04101
(207) 772-6022 Fax (207) 772-4056

Project:
Shipyard
Redevelopment
NEWBURY ST
PORTLAND, MAINE

Revisions:
Date: 30 May 2018
Scale: 1" = 20'-0"

PHOTOMETRIC
LIGHTING PLAN

E0.00

FOR PLANNING BOARD REVIEW ONLY



Memorandum

Planning and Urban Development Department

Planning Division

To: Sean Dundon, Chair and Members of the Portland Planning Board

From: Shukria Wiar, Planner

Date: June 8, 2018

Re: **Recommendation to Table – 1006 Congress Street Rezone**

In consultation with the applicant and their consultants, it was determined that the required neighborhood meeting for the zone change has not been held. The Planning Division requests that the Planning Board table the review of the 1006 Congress Street rezone to the public hearing planned for Tuesday, June 26th.



PLANNING BOARD REPORT PORTLAND, MAINE

44 Pleasant Street
Legalization of 4 Existing Residential Units
Level III Site Plan and Subdivision Review
23-2018
Applicant: Justin Tourigny, 44 Pleasant St LLC

Submitted to Portland Planning Board Public Hearing Date: June 12, 2018	Prepared by: Christian Roadman Date: June 08, 2018
--	---

I. Project Summary

The owners of 44 Pleasant Street, who purchased the property in May 2017, seek to legalize four existing residential units. The building currently contains nine residential units and two commercial units, but is only permitted for five residential units and two commercial units. The owners allege that nine residential units existed in the building since 1997. They seek to bring the building and all existing units into compliance with City code and the subdivision ordinance. In order to do this, the applicant intends to install a sprinkler system and upgrade the water service. This will necessitate utility work under the sidewalk and street next to the property, but no other exterior changes are proposed.

At the time of this writing, the Planning Department has not received a final site plan or construction management plan for review. Given the importance of improving life safety in the building, and because the four units to be legalized already exist, the Planning Department seeks planning board approval of the project with the condition that necessary documents (including a final site plan and construction management plan) be submitted for review and approval by the Planning Authority, Department of Public Works, and Corporation Counsel.

The property in question is located on the Peninsula between Pleasant Street, Maple Street, and Danforth Street. The property is not within a historic district, but is located immediately next to the How Houses historic district. (As no exterior building changes are proposed as part of this application, the project's review process did not incorporate historic preservation advisory review). The Planning Department sent 264 notices of this agenda item to property owners within 500 feet of the site. Notice of this item also appeared in legal advertisements on June 4 and June 5, 2018.

Applicant: Justin Tourigny, 44 Pleasant Street LLC

Consultants: Owen Haskell Inc (Randy Loubier); Northeast Civil Solutions (Jim Fisher); Leslie Benson (architect)

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
None	n.a.
Review	Relevant Code
Site Plan	Section 14-526
Subdivision	Section 14-497



44 Pleasant Street (image via Portland Assessor)

III. PROJECT DATA

Existing Zoning	B-3 Downtown Business
Existing Use	Commercial and Residential
Proposed Use	Commercial and Residential
Existing / Proposed Program	2 Commercial Units, 9 Residential Units (only 5 are currently permitted)
Bedroom Mix	Seven 1-Bedroom, One 2-Bedroom, One 3-Bedroom
Parcel Size	5,337 sq. ft.

	<i>Existing</i>	<i>Proposed</i>	<i>Net Change</i>
Building Footprint (sq. ft.)	5,078	5,078	0
Building Floor Area (sq. ft.)	10,156	10,156	0
Impervious Surface Area (sq. ft.)	~5,337	~5,337	0
Parking Spaces	0	0	0
Bicycle Parking Spaces	0	10	10
Estimated Cost of Project	Not Provided		

VI. PUBLIC COMMENT / NEIGHBORHOOD MEETING

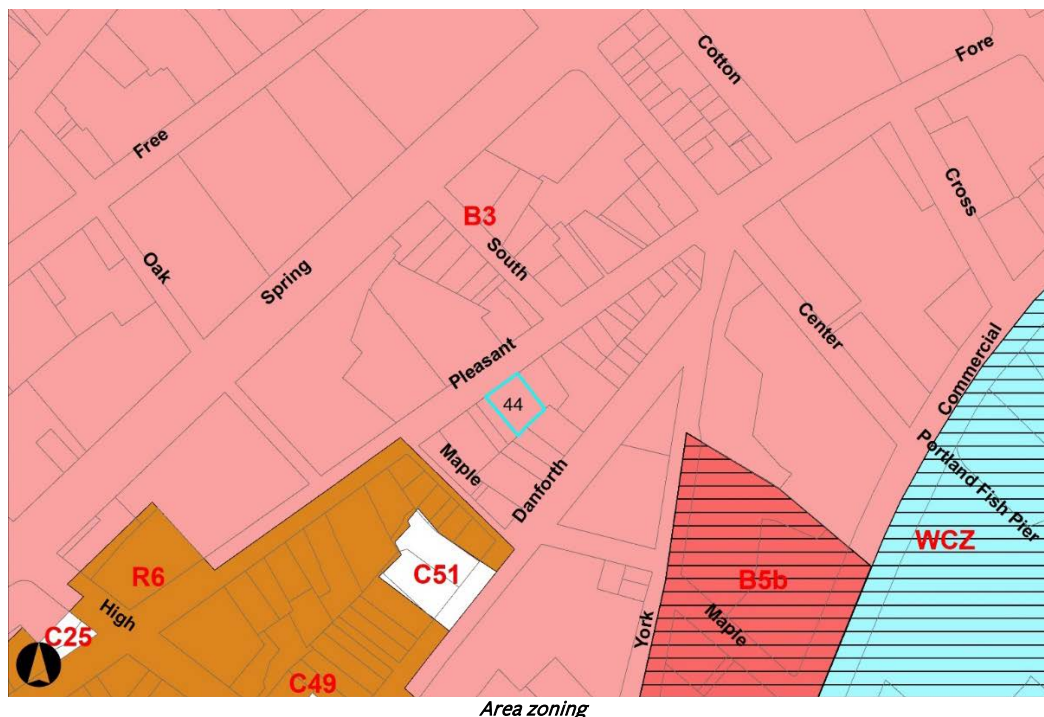
A neighborhood meeting is not required for this project, and no public comment has been received.

VII. RIGHT, TITLE, INTEREST AND FINANCIAL / TECHNICAL CAPACITY

The applicant submitted a copy of a warranty deed evidencing ownership of 44 Pleasant Street. This project entails the legalization of four existing units, not the construction of four units, so evidence of financial / technical capacity has not been requested.

VIII. ZONING ANALYSIS

The property at 44 Pleasant Street is located within the B-3 downtown business zone. As the proposed legalization of four residential units is considered a change of use, no additional vehicle parking is required under B-3 zoning. Two bicycle parking spaces are required for every five dwelling units, which is exceeded by the applicant's proposal of 10 spaces. Staff find the proposed project in conformance with zoning requirements.



IX. DEVELOPMENT REVIEW

A. SUBDIVISION (Section 14-497)

The proposed development prompts review for conformance with relevant standards of Portland's subdivision ordinance and applicable regulations.

Will Not Result in Undue Water and Air Pollution; Will Not Result in Undue Soil Erosion

Staff find the proposed project in conformance with this standard.

Sufficient Water Available

The applicant has not provided a capacity to serve letter from the Portland Water District, only the District's suggestions for new water / sprinkler service. A subdivision plat was submitted by the applicant on Friday, June 8, and has not been thoroughly reviewed at the time of this writing.

Staff recommends submittal of a capacity to serve letter from the Portland Water District as a condition of approval.

Staff also recommends review and acceptance of the subdivision plat by the Planning Authority, Department of Public Works, and Corporation Counsel as a condition of approval.

Will Not Cause Unreasonable Traffic Congestion

Staff find the proposed project in conformance with this standard.

Will Provide for Adequate Sanitary Sewer and Stormwater Disposal; Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage

Staff received a wastewater capacity authorization from the Department of Public Works.

Scenic Beauty, Natural, Historic, Habitat and other Resources

Staff find the proposed project will not have an adverse effect on the scenic or natural beauty of the area.

Comprehensive Plan

Staff find the proposed project compatible with the Comprehensive Plan, which includes the following applicable goals:

- “encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods”

B. SITE PLAN (Section 14-526)

The proposed development prompts review for conformance with relevant standards of Portland’s site plan ordinance and applicable regulations.

Transportation Standards

Traffic Impacts; Parking; Construction Management Plan

As mentioned above, the B3 zone does not require one parking space per dwelling unit in this instance. The proposed project is not anticipated to significantly impact surrounding street systems, access, or circulation, as the units proposed for legalization already exist.

In their application, the applicants indicated an intention to install 10 bicycle parking spaces. Without a site plan, it is unclear where these spaces are intended. Staff seeks further clarity on this point from the applicant team.

Environmental Quality Standards

The proposed project is not anticipated to significantly impact natural features or water quality. As it is located on a fully developed site, the project was not subject to additional stormwater controls.

Because the project legalizes four residential units, four street trees are required under the City’s Technical Standards. Two street trees exist already. Applicant payment of the fee-in-lieu for the remaining two street trees is suggested as a condition of approval.

Public Infrastructure and Community Safety Standards

The applicant communicated with staff in the Permitting and Inspections Department to determine relevant standards / requirements applicable to their building. Based on these communications, the applicant intends to add a sprinkler system to the building. Division Chief Mike Thompson noted that the Fire Department has no comment on this project at the moment, as code requirements will be addressed in the permit process.

Utility work in the street and sidewalk next to the building is anticipated in order to upgrade water service and install a sprinkler system. Such work may disrupt pedestrian and traffic flow. Lauren Swett, the City’s consulting civil engineer, commented that the water service upgrade should be shown on appropriate plans with adequate consideration for sidewalk and pavement repair. She also noted that a construction management plan with consideration for the utility construction impacts to sidewalk and traffic should be provided.

As such, and as mentioned above, receipt and approval of a final site plan and construction management plan by the Planning Authority is suggested as a condition of approval.

Site Design Standards

The proposed project is not anticipated to create significant issues related to snow and ice loading, exterior lighting, noise and vibration, or waste/ recycling materials.

XII. PROPOSED MOTIONS

A. 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 June 12, 2018 for application 000023-2018 (44 Pleasant Street) 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, subject to the following conditions of approval, which must be met prior to the signing of the plat:

1. Confirmation from the Portland Water District of capacity to serve the property shall be provided to the Planning Authority for review and approval.
2. The subdivision plat shall be reviewed by the Planning Authority, Department of Public Works, and Corporation Counsel, and any necessary changes made.

B. DEVELOPMENT REVIEW

On the basis of the application, plans, reports, and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on June 12, 2018 for application 0000-23 (44 Pleasant Street) relevant to the site plan 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 of approval, which must be met prior to issuance of a certificate of occupancy:

1. The applicant shall submit a final site plan and construction management plan for review and approval by the Planning Authority, Department of Public Works, and Corporation Counsel.
2. The applicant shall pay into the City's street tree fund, at a cost of \$400 per tree, to account for each of the two trees not provided per the City's Technical Standards.

XIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. CONSULTING CIVIL ENGINEER EMAIL COMMENTS 5-3-18
2. FIRE STAFF COMMENTS
3. WASTEWATER CAPACITY AUTHORIZATION

APPLICANT'S SUBMITTALS

- A. PROJECT DESCRIPTION
- B. LEVEL III APPLICATION
- C. LEVEL III CHECKLIST
- D. SERVICE CARD
- E. INFRASTRUCTURE MAP
- F. UTILITY CAPACITY INFORMATION
- G. WARRANTEE DEED

PLANS

- P1. BOUNDARY SURVEY
- P2. RECORDING PLAT
- P3. LIFE SAFETY
- P4. CODE SUMMARY



PLAN CORRECTIONS REPORT PL-000023-2018 FOR CITY OF PORTLAND

PLAN ADDRESS:	44 Pleasant Street	PARCEL:	040 B004001
APPLICATION DATE:	03/25/2018	SQUARE FEET:	0.00
EXPIRATION DATE:		VALUATION:	\$0.00
		DESCRIPTION:	Bring 4 non-conforming dwelling units, built in 1997, into code and city compliance

CONTACTS	Name	Company	Address
Agent/Representative	Justin Tourigny		9E Oxford Street Portland, ME 04101

Corrections Required

City Arborist	Jeff Tarling
Civil Engineering - Third Party Reviewer	Lauren Swett
Fire	Robert Thompson
v.1.00 - Not Resolved	
Correction: General	
The Fire Department has no comment on this project.	
Corrective Action: N/A	
Correction: General	
Code Requirements will be addressed in the permit process.	
Corrective Action: N/A	
Planning	Christian Roadman
Public Works Engineering	Keith Gray
Transportation/Planning	Bruce Hyman
Zoning	Pool Zoning
City Arborist	Jeff Tarling
Civil Engineering - Third Party Reviewer	Lauren Swett
Fire	Pool Fire
Parking	John Peverada
Planning	Phil DiPierro
Public Works Engineering	Mike Farmer
Public Works Street Openings	Rhonda Zazzara
Public Works Water Resources	Nathaniel Smith
Public Works Water Resources Engineering	Doug Roncarati
Traffic - Third Party Reviewer	Tom Errico

Conditions Required



Christian Roadman <croadman@portlandmaine.gov>

44 Pleasant Street

Lauren Swett <lswett@woodardcurran.com>
To: Christian Roadman <croadman@portlandmaine.gov>
Cc: Keith Gray <kgray@portlandmaine.gov>

Thu, May 3, 2018 at 8:34 AM

Hi Christian,

For 44 Pleasant Street, they have noted that their water service will need to be upgraded. They should submit a request to the City for sewer service capacity as well.

The water service upgrade should be shown on the plans, with adequate consideration for sidewalk and pavement repair. The Portland Water District will review and approve their service layout on the plan and will provide an ability to serve. A construction management plan with consideration for the utility construction impacts to sidewalk and traffic should be provided.

If you have any questions, let me know.

Thanks,

Lauren

Lauren Swett, P.E.*

Technical Manager

Woodard & Curran

[41 Hutchins Drive](#)

[Portland, Maine 04102](#)

Phone: (207)558-3763 (direct)

(207)219-3591 (cell)

(800)426-4262 (office)

Email: lswett@woodardcurran.com

*Licensed in Maine and Wisconsin

Commitment & Integrity Drive Results

www.woodardcurran.com

Portland, Maine



Yes. Life's good here.

Christopher C. Branch, P.E.
Director of Public Works

Date: May 29, 2018

Re: Wastewater Capacity Authorization

Address: 44 Pleasant Street

Applicant: 44 Pleasant Street LLC

Planner: Christian Roadman

Anticipated Wastewater Flow:

The project involves the clarification of existing units which include two commercial spaces and 9 apartments. Portland Water District records indicate a daily use of approximately 750 GPD for the 2017 calendar year.

Comments:

The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

If the City can be of further assistance, please contact me at all 874-8840 or brad@portlandmaine.gov

Sincerely,

CITY OF PORTLAND

A handwritten signature in dark ink that reads "Bradley A. Roland".

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

Keith Gray, City Engineer/Engineering Manager, Portland Department of Public Works

Nancy Gallinaro, Water Resources Manager, Portland Department of Public Works

Ben Pearson, Compliance 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

Charlene Poulin, Wastewater Chief Operator – Systems



44 Pleasant Street, LLC

2.28.2018

Subdivision Project Description

The existing structure located at CBL# 040 B004001 is documented in City records dating from 1995, to be comprised of 5 commercial and 5 dwelling units.

The current occupancy is 2 street -level commercial units and 9 dwelling units. Historical data has shown this building to reflect this occupancy since 1997.

A change of ownership in May 2017 is the impetus to bring the building and all existing units into City code compliance.

Thank you.

- 44 Pleasant St team:

44pleasantstreet@gmail.com

Josh- 207.233.037 Justin- 347.296.6438



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), Design Manual and Technical Manual.

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207) 874-8719
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:	44 Pleasant St.
Proposed Development Address:	44 Pleasant St.
Project Description:	Bring 4 existing, non-conforming dwelling units to code compliance
Chart/Block/Lot:	040 B004001
Preliminary Plan	
Final Plan	

II. Contact Information (Please enter n/a on those fields that are not applicable)

APPLICANT

Name:	Justin Tourigny
Business Name:	44 Pleasant St. LLC
Address:	7 Stephenson St
City/State:	Cape Elizabeth, ME
Zip Code:	04107
Work #:	347-296-6438 Justin Tourigny
Home #:	
Cell #:	207-233-0377 Josh Nappi
Fax #:	
E-mail:	44pleasantstreet@gmail.com

OWNER

Name:	See Above
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

AGENT/REPRESENTATIVE

Name:	n/a
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

BILLING (to whom invoices will be forwarded to)

Name:	44 Pleasant St LLC
Address:	see above
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

ENGINEER

Name:	
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

SURVEYOR

Name:	Owen Haskell
Address:	390 US Rt. 1, Unt #10
City/State:	Falmouth, ME
Zip Code:	04105
Work #:	207-774-0424
Home #:	
Cell #:	
Fax #:	207-774-0511
E-mail:	jswan@owenhaskell.com

ARCHITECT

Name:	Leslie Benson, Leslie Benson Designs
Address:	19 Commercial St.
City/State:	Portland, ME
Zip Code:	04101
Work #:	217-553-0672
Home #:	
Cell #:	
Fax #:	
E-mail:	lesliebdesigns@gmail.com

ATTORNEY

Name:	Michael Vaillancourt, Ainsworth, Thelin, Raftice, P.A.
Address:	7 Ocean St.
City/State:	S. Portland
Zip Code:	04106
Work #:	207-767-4824
Home #:	
Cell #:	
Fax #:	207-767-4829
E-mail:	mvaillancourt@atrlaw.pro

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Justin Tourigny
E-mail:	justintourigny@gmail.com
Name:	
E-mail:	
Name:	
E-mail:	

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

☒	Less than 50,000 sq. ft.	\$750.00
☐	50,000 – 100,000 sq. ft.	\$1,000.00
☐	100,000 – 200,000 sq. ft.	\$2,000.00
☐	200,000 – 300,000 sq. ft.	\$3,000.00
☐	Over 300,000 sq. ft.	\$5,000.00
☐	Parking lots over 100 spaces	\$1,000.00
☐	After-the-fact Review	\$1,000.00 + applicable application fee above

PLAN AMENDMENTS (check applicable review)

☒	Planning Staff Review	\$250.00
☐	Planning Board Review	\$500.00

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	\$1,500.00
☐	Stormwater Quality	\$250.00
☐	Subdivision	\$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [] x \$25.00 each	\$
☐	Site Location	\$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [] x \$200.00 each	\$
☒	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
TOTAL APPLICATION FEE DUE:		\$

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)

V. PROJECT DATA (Please enter n/a on those fields that are not applicable)

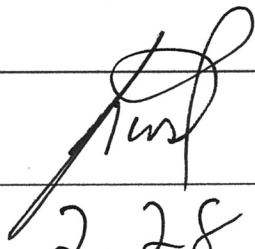
TOTAL AREA OF SITE	5,337	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	0	sq. ft.
<i>If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.</i>		
IMPERVIOUS SURFACE AREA		
Impervious Area (Total Existing)	3,427	sq. ft.
Impervious Area (Total Proposed)	3,427	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	3,427	sq. ft.
Building Footprint (Total Proposed)	3,427	sq. ft.
Building Floor Area (Total Existing)	3,427	sq. ft.
Building Floor Area (Total Proposed)	3,427	sq. ft.
ZONING		
Existing		
Proposed, if applicable		
LAND USE		
Existing		
Proposed		
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	5	
# of Residential Units (Total Proposed)	9	
# of Lots (Total Proposed)	0	
# of Affordable Housing Units (Total Proposed)	0	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)		
# of One-Bedroom Units (Total Proposed)	3	
# of Two-Bedroom Units (Total Proposed)		
# of Three-Bedroom Units (Total Proposed)		
PARKING SPACES		
# of Parking Spaces (Total Existing)	0	
# of Parking Spaces (Total Proposed)	0	
# of Handicapped Spaces (Total Proposed)	0	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	0	
ESTIMATED COST OF THE PROJECT		
	\$ 0	

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 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:	 Justin Tourigny
Date:	2.28.2018

PRELIMINARY PLAN (Optional) - Level III Site Plan

Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST
✓		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)
Applicant Checklist	Planner Checklist	# of Copies	SITE PLAN SUBMISSIONS CHECKLIST
✓		1	Boundary Survey meeting the requirements of Section 13 of the City of Portland's Technical Manual
n/a		1	Preliminary Site Plan including the following: (information provided may be preliminary in nature during preliminary plan phase)
			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.

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:

2.28.2018

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

Site Address:

44 Pleasant St.

Chart Block Lot Number:

040 B004001

Proposed Use:

2 commercial / 9 dwelling units

Previous Use:

same

Existing Sanitary Flows:

750 GPD

Existing Process Flows:

GPD

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

Site Category

Commercial (see part 4 below)
Industrial (complete part 5 below)
Governmental
Residential
Other (specify)

☒	retail
☐	
☐	
☒	
☐	

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

2. Please, Submit Contact Information.

City Planner's Name:

Phone:

Owner/Developer Name:

44 Pleasant St. LLC

Owner/Developer Address:

7 Stephenson St.

Phone: 347 296 6438

Fax:

E-mail:

Cape Elizabeth ME 04107
44pleasantstreet@gmail.com

Engineering Consultant Name:

Engineering Consultant Address:

Phone:

Fax:

E-mail:

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:

750

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) avg. 1 HCF/day over 2017

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.

No change of use.

Portland, Maine



Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST
 Submit each Tab as one PDF file and bookmark the items as noted below
 Please confirm by electronically checking the boxes to the left

Tab 1 – General Application Documents

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

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

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

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

Tab 2 - TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ☐ ☒ ☐	Transportation Analysis- Traffic Impact (14-526 (a) 1) - Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts - Traffic Impact Study (Technical Manual, Section 1) if applicable
Yes NA Plan ☐ ☒ ☐	Access and Circulation (14-526 (a) 2 a) - Access and internal circulation, addressing ADA access - Access and egress impacts on traffic flows - Description and use of drive-up features, if applicable
Yes NA Plan ☐ ☒ ☐	Loading and Servicing (14-526 (a) 2 b) - Loading and servicing needs, route and travel way geometrics for deliveries - Turning templates for delivery vehicles, if applicable
Yes NA Plan ☐ ☒ ☐	Sidewalks (14-526 (a) 2 c) - Sidewalks and condition along street frontages and internal walkways - Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
Yes NA Plan ☐ ☒ ☐	Public Transit (14-526 (a) 3), if applicable - Existing available transit services - Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ☐ ☐ ☐	Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c) - Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements - Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
Yes NA Plan ☐ ☒ ☐	Bicycle Parking (14-526 (a) 4 b) - Address bicycle parking requirements and identify locations on-site - Construction details for bike racks (Technical Manual, Section 1)
Yes NA Plan ☐ ☒ ☐	Snow Storage (14-526 (a) 4 d) Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ☐ ☒ ☐	Traffic Demand Management (TDM) (14-526 (a) 5), if applicable Develop TDM with Trip Reduction Targets and Strategies

Tab 3 - ENVIRONMENTAL AND LANDSCAPE FEATURES		
Check list		
Yes	NA	Plan
☐	☒	☐
Assess/Provide/Document: Preservation of Significant Natural Features (14-526 (b) 1), if applicable • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies		
☐	☒	☐
Landscaping and Landscape Preservation (14-526 (b) 2 a) • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable		
☐	☒	☐
Site Landscaping (14-526 (b) 2 b) • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)		
☐	☒	☐
Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable • Landscaped islands within parking areas (Technical Manual, Section 4)		
☐	☒	☐
Street Trees (14-526 (b) 2 b iii) • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable		
Tab 4 - ENVIRONMENTAL AND STORMWATER		
Check list		
Yes	NA	Plan
☐	☒	☐
Assess/Provide/Document: Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a) • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection		

Tab 5 - PUBLIC INFRASTRUCTURE AND SAFETY			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	Consistency with City Master Plans (14-526 (c) 1) - Identify consistency with master plans - Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
☐	☒	☐	
Yes	NA	Plan	Public Safety and Fire Prevention (14-526 (c)) - Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) - Emergency vehicle access - Address consistency with public safety standards (Technical Manual, Section 3) - Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
☒	☐	☐	
Yes	NA	Plan	Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9) - Electrical services, including providing underground services - Identify existing and proposed connections for public utilities and required public utility upgrades - Sewer line connections are required, if there is a main within 200 feet - Proposed solid waste management facilities on-site and management for the site - Written evidence of the ability to serve from utility companies, as applicable
☒	☐	☐	
Tab 6 - SITE DESIGN			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	Massing, Ventilations and Wind Impact (14-526 (d) 1) - Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable - Bulk, location or height impacts on adjoining structures - Identify and locate HVAC equipment and venting away from public spaces and residential properties - Identify screening and manufacturing specifications for noise, if applicable
☐	☒	☐	
Yes	NA	Plan	Shadows (14-526 (d) 2), if applicable Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
☐	☒	☐	
Yes	NA	Plan	Snow and Ice Loading (14-526 (d) 3) Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
☐	☒	☐	
Yes	NA	Plan	View Corridors (14-526 (d) 4), if applicable Protection of designated view corridors (Portland Design Manual, Appendix 1)
☐	☒	☐	

Yes NA Plan ☐ ☐ ☐	Historic Resources (14-526 (d) 5), if applicable • Identify developments within Historic Districts or affecting Designated Landmarks • Certificate of Appropriateness or other evidence • Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required • Address preservation and documentation of Archaeological Resources
Yes NA Plan ☐ ☐ ☐	Exterior Lighting (14-526 (d) 6) • Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) • Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes NA Plan ☐ ☐ ☐	Noise and Vibration (14-526 (d) 7) • Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes NA Plan ☐ ☐ ☐	Signage and Wayfinding (14-526 (d) 8), if applicable • Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff • Proposed commercial and directional signage on site
Yes NA Plan ☐ ☐ ☐	Zone Related Design Standards (14-526 (d) 5) • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Tab 7 - Construction Management Plan	
Check list	
Yes NA Plan ☐ ☐ ☐	Construction Management Plan • Construction Management Document and Plan

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

☐ GRADING and DRAINAGE PLAN including:
• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☐ EROSION CONTROL
• Must be in compliance with Technical Manual, Section 5
☐ LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping and buffers • Planting schedule
☐ RECORDING PLAT , if applicable
• IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☐ ARCHITECTURAL PLANS & RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans

Att. D

NO. ~~48/55~~ ⁴⁴ Pleasant ST. ST., DIVISION Port.
 REG. NO. 1911 CODE NO. ~~P-38-97~~
 NAME Sherman Scribner PG 1-32
 NAME Mark Foley
 NAME Dennis

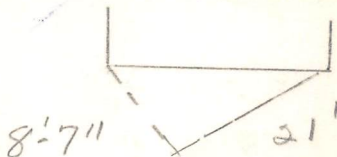
REIN SERVICE RECORD

SIZE OF PIPE $3/4"$
 KIND OF PIPE Cop.
 MAIN TO STOP $15'$
 STOP TO ST. LINE $9'$
 ST. LINE TO BLDG. $3/4$ Cop.
 DATE 5/5/61
 DEPTH OF MAIN $5'$
 SIZE OF TAP $3/4"$
 DEPTH ON PRIVATE $5'$

SHUT AT CORP.

REMARKS (SEE REVERSE) 5M 1-60 E.P.

MEASURES



5/5/61
 Installed Conc. Meter Box P.W.D.





44 Pleasant Street

Portland



PORTLAND WATER DISTRICT
225 Douglass Street
Portland, ME 04104

Scale 0 12.5 25 50 75 100 Feet 1 inch = 50 feet

Legend

- | | | | |
|----------------|-----------------------|----------------------|--------------------|
| ● Air Valve | ● Connection | ⊕ Combined Service | ● Private Hydrants |
| ⊕ Blow Off | ● Attribute Change | ⊕ Domestic Service | → Gravity |
| ⊕ By Pass | ⊕ Hydrant Control | ⊕ Fire Service | → Force |
| ⊕ Distribution | ▲ Reducer | — Shallow Water Main | ● Manhole |
| ⊕ Transmission | ● Hydrant | — Deep Water Main | ● CSO |
| ⊕ Meter Pits | — Proposed Water Main | | |



Disclaimer: This map is suitable for preliminary study and analysis and is based on PWD record information. PWD is not liable for any damages whatsoever resulting from inaccurate data or from errors made in the location and marking of its infrastructure.

Drawn By: Morris

Prepared For: Customer

Scale: As Noted

Date: 06/29/17



44 Pleasant Street, LLC

2.28.2018

Utility Capacity to serve

The existing structure located at CBL# 040 B004001 is documented in City records dating from 1961, to have a $\frac{3}{4}$ " service line and $\frac{5}{8}$ " water meter.

"Based on calculations done by PWD, we have determined the peak water demand for the building is 53.75 gallons per minute (gpm). Under our current standards for sizing water service lines and water meters this peak demand would require a 1.5-inch service line with a 1-inch water meter."

Brian Johnson

MEANS Group

Main Extensions and New Services

Portland Water District

225 Douglass Street

Portland, ME 04104-3553

P:(207)774-5961 Ext. 3199

F:(207)761-8307

MEANS@pwd.org

The current plan involves moving the existing street meter inside the building, upgrading domestic service 1.5-2", and adding sprinkler service line 5-6".



44 Pleasant Street, LLC

Account Number: 140338-05 - ACTIVE

[Close Window](#)

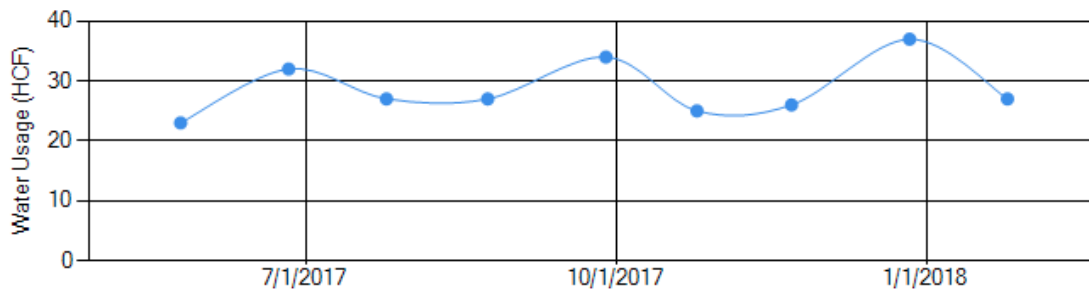
Service Address: **44 PLEASANT ST PORTLAND ME 04101-**

Account Balance: **\$0.00**

Water Usage History

(hundreds of cubic feet,
1 HCF = 748 gallons)

● Monthly ○ Daily Average



Place your mouse cursor on the dots above to see usage values

Bill Date	Estimated	Read Date	Water Usage (in HCF)	Wastewater Usage	Days in Read Period	Average Daily Use
02-02-2018	N	01-25-2018	27	27	29	0.931
01-05-2018	N	12-27-2017	37	37	35	1.057
12-08-2017	N	11-22-2017	26	26	28	0.929
11-03-2017	N	10-25-2017	25	25	27	0.926
10-06-2017	N	09-28-2017	34	34	35	0.971
09-08-2017	N	08-24-2017	27	27	30	0.900
08-04-2017	N	07-25-2017	27	27	29	0.931
07-07-2017	N	06-26-2017	32	32	32	1.000
06-09-2017	N	05-25-2017	23	23	22	1.045

Thank you.

- 44 Pleasant St team:

44pleasantstreet@gmail.com

Josh- 207.233.037

Justin- 347.296.6438

WARRANTY DEED

KNOW ALL BY THESE PRESENTS, That **Henry L. Steinberg** ("Grantor"), a Maine resident with a mailing address of 13 Hunts Point Road, Cape Elizabeth, Maine 04107, in consideration of One Dollar (\$1.00) and other valuable consideration, paid by **44 Pleasant Street, LLC**, a Maine limited liability company with a place of business in Cape Elizabeth, Maine (the "Grantee"), the receipt whereof is hereby acknowledged, does hereby give, grant, bargain, sell and convey unto the said Grantee, its successors and assigns forever, with warranty covenants, the following described real estate:

SEE ATTACHED EXHIBIT A

Being the premises described in the Warranty Deed from Ora Properties, LLC to Henry L. Steinberg, dated November 27, 2012, and recorded in the Cumberland County Registry of Deeds in Book 30159, Page 88.

TO HAVE AND TO HOLD the aforementioned and bargained premises, with all the privileges and appurtenances thereof, to the said Grantee, its successors and assigns, and its use and behoof forever.

AND GRANTOR DOES COVENANT with said Grantee, its successors and assigns, that Grantor is lawfully seized in fee of the premises, that it is free of all encumbrances and that Grantor has good right and title to sell and convey the same to the said Grantee to hold as aforesaid; and that Grantor and his heirs and assigns shall and will warrant and defend the same to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons.

IN WITNESS WHEREOF, the undersigned Henry L. Steinberg, hereby sets
his hand and seal this 2nd day of May, 2017.

Signed, Sealed and Delivered
In the Presence of:


Henry L. Steinberg

STATE OF MAINE

May 2, 2017

COUNTY OF CUMBERLAND, ss.

Personally appeared the above named Henry L. Steinberg, and acknowledged
the foregoing instrument to be his free act and deed in his said capacity.

Before me,



~~Notary Public~~/Attorney at Law

Scott Herrick
Printed Name

My Commission Expires: _____

EXHIBIT A

The Land referred to in this Commitment is described as follows:

Beginning at a stake standing on the most westerly corner of land on Pleasant Street formerly owned by Mrs. How, deceased;

Thence running westerly by said street thirty-seven (37) feet to a stake; Thence southeasterly eighty-one (81) feet, more or less, to land now or formerly of A.C. Libby;

Thence northeasterly thirty seven (37) feet, more or less, to the line of said land formerly owned by said How; Thence northwesterly by said How land seventy-eight (78) feet, more or less, to the point of beginning.

Said premises are number 44-48 on Pleasant Street according to City Plan.

Also another certain other lot or parcel of land with the buildings thereon situated on said southeasterly side of Pleasant Street and adjoining the above described lot, same being numbered 50-52 on said Street according to City Plans (formerly number 28).

Said lot is bounded on the northeast by the lot herein before described; On the southeast by land now or formerly of A.C. Libby, land now or formerly of G. S. O'Conner;

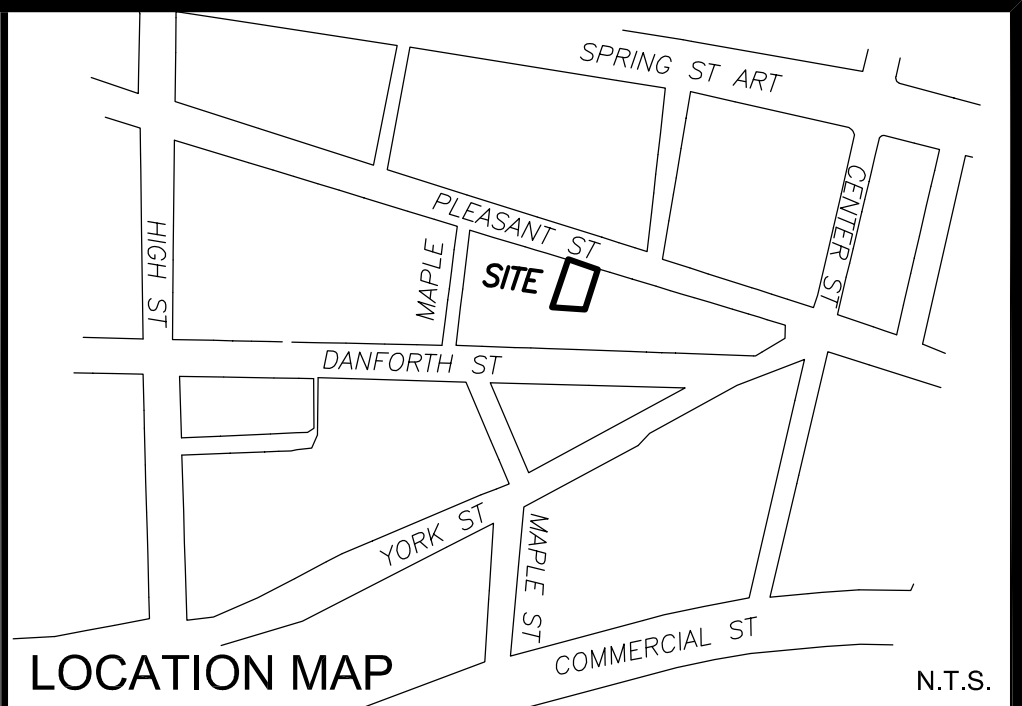
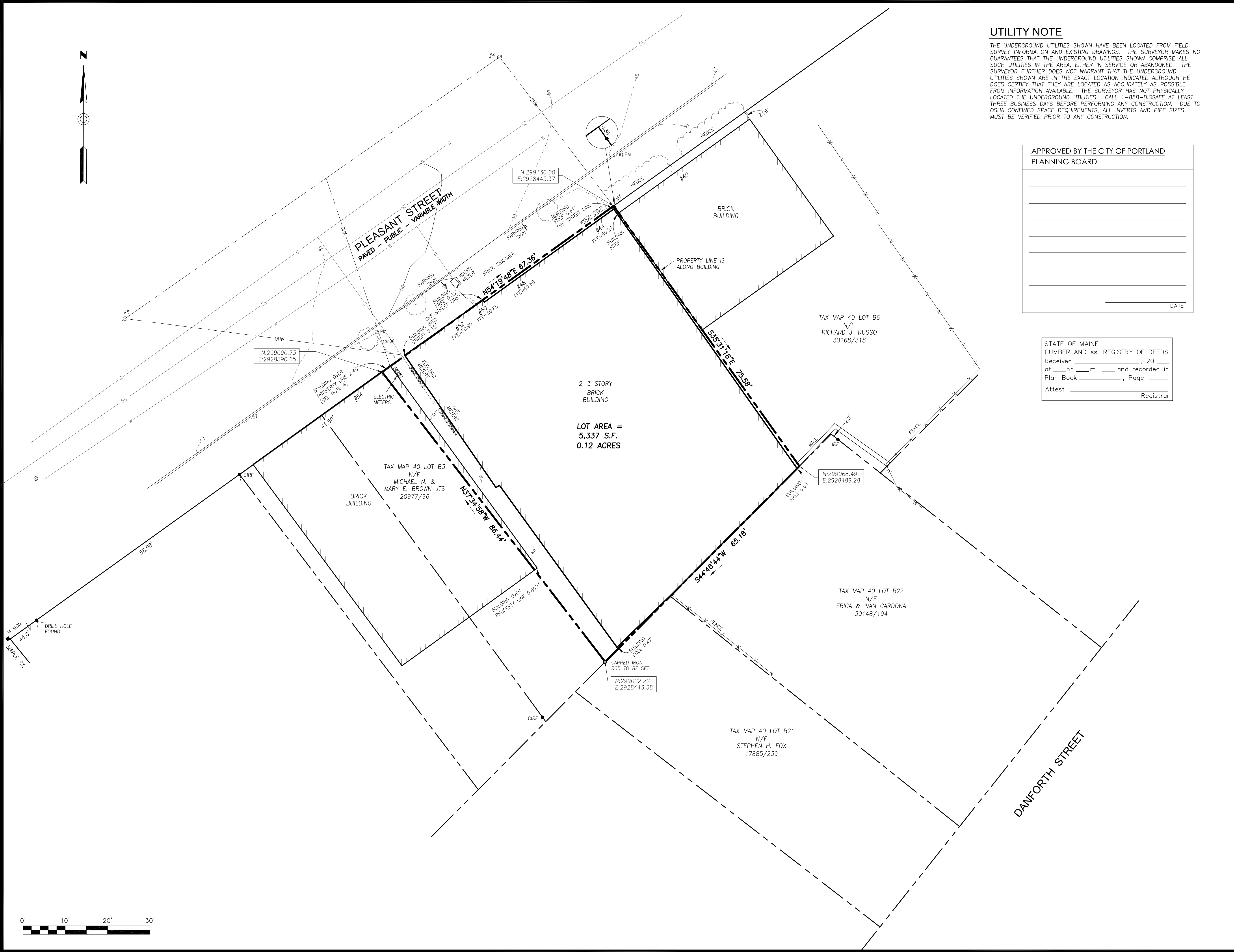
On the southwest by land now or formerly of Martin O'Hare and Annie M. O'Hare;

On the northwest by said Pleasant Street.

Received
Recorded Register of Deeds
May 04, 2017 10:11:03A
Cumberland County
Nancy A. Lane



DRAWN BY: JLW/TMK	DATE: JAN. 17, 2018	JOB NO. 2017-379 P
CHECKED BY: RRL	SCALE: 1" = 10'	DRWG. NO. 1



LEGEND

●	IRON PIPE OR ROD FOUND	—X—X—	FENCE
■	MONUMENT FOUND	—	CURB
○	UTILITY POLE	50	1' CONTOUR
⊗	ELECTRIC/GAS METER	—OHW—	OVERHEAD WIRES
—	SIGN	—W—	WATER LINE
⊙	PARKING METER	—G—	GAS LINE
⊙	GAS VALVE	—SS—	SANITARY SEWER
⊙	WATER VALVE OR SHUTOFF	—IPF/IRF—	IRON PIPE OR ROD FOUND
○	DECIDUOUS TREE	N/F	NOW OR FORMERLY
		000/000	DEED BOOK / PAGE

- PLAN REFERENCES**
- PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR DONALD FORST BY H.I. & E.C. JORDAN DATED 10-29-80, ECJ #161.
 - BOUNDARY SURVEY ON DANFORTH STREET, PORTLAND, MAINE MADE FOR ROBYN MCCARTHY BY OWEN HASKELL, INC. DATED AUGUST 6, 2003, OHI #03-125.
 - BOUNDARY SURVEY AND CONDO CONVERSION 56 PLEASANT STREET PORTLAND MAINE MADE FOR WILLIAM HALL DATED 02/05/2007, RECORDED IN PLAN BOOK 207, PAGE 72.

- GENERAL NOTES**
- OWNER OF RECORD: 44 PLEASANT STREET LLC
TAX MAP 40 BLOCK B LOT 4
C.C.R.D. BOOK 33984 PAGE 260
 - BEARINGS ARE BASED UPON THE STATE OF MAINE WEST ZONE COORDINATES NAD 1983 AS SUPPLIED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.
THE COORDINATES WERE OBTAINED FROM THE TWO MONUMENTS LISTED BELOW:
T124-27-1279~THE INSIDE CORNER OF A "M" MONUMENT FOUND AT THE NORTHWEST CORNER OF DANFORTH STREET AND MAPLE STREET
NORTHING: 298832.7832
EASTING: 2928493.1717
T124-27-1281~THE INSIDE CORNER OF THE "M" MONUMENT FOUND AT THE NORTHWEST CORNER OF YORK STREET AND HIGH STREET
NORTHING: 298095.4968
EASTING: 2928500.4167.
 - ELEVATIONS ARE BASED ON OFFICIAL CITY BENCHMARK: GRANITE MONUMENT NORTHEAST CORNER OF DANFORTH & MAPLES STREETS, ELEVATION=40.03 FEET.
 - BUILDING #54 IS PARTIALLY LOCATED ON THE LOCUS PROPERTY BASED ON THE RECORD DEEDS, PLANS AND MONUMENTATION FOUND. THE CITY TAX RECORDS SHOW THIS BUILDING BEING BUILT IN 1905, THEREFORE PRESCRIPTIVE RIGHTS MAY EXIST FOR THE CURRENT BUILDING LOCATION.

CERTIFICATE
OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE

Randy R. Louber
RANDY R. LOUBIER, PLS #2407
6/7/18
DATE

STATE OF MAINE
RANDY R. LOUBIER
2407
PROFESSIONAL LAND SURVEYOR

Recording Plat
At
#44-52 Pleasant Street, Portland, Maine
Made for Owner of Record
44 Pleasant Street, LLC
Justin Tourigny
9E Oxford Street, Portland, Maine 04101

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105

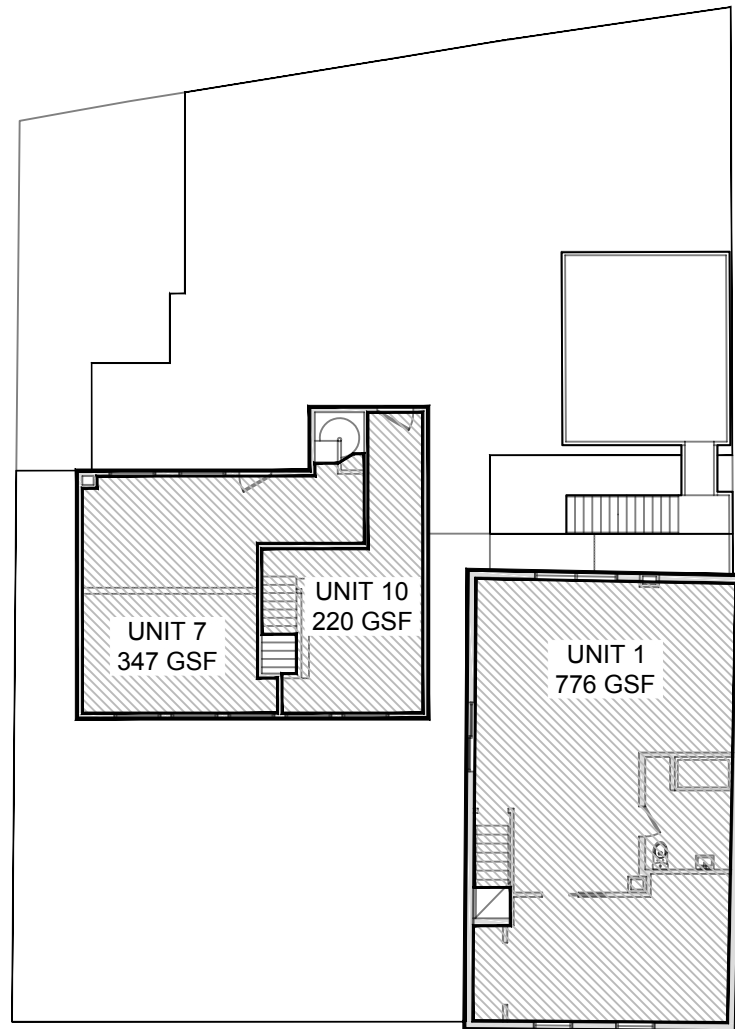
DRAWN BY: JLV/TMK DATE: JUNE 7, 2018 JOB NO. 2017-379 P
CHECKED BY: RRL SCALE: 1" = 10' DRWG. NO. 1-RP

GENERAL LIFE SAFETY NOTES:

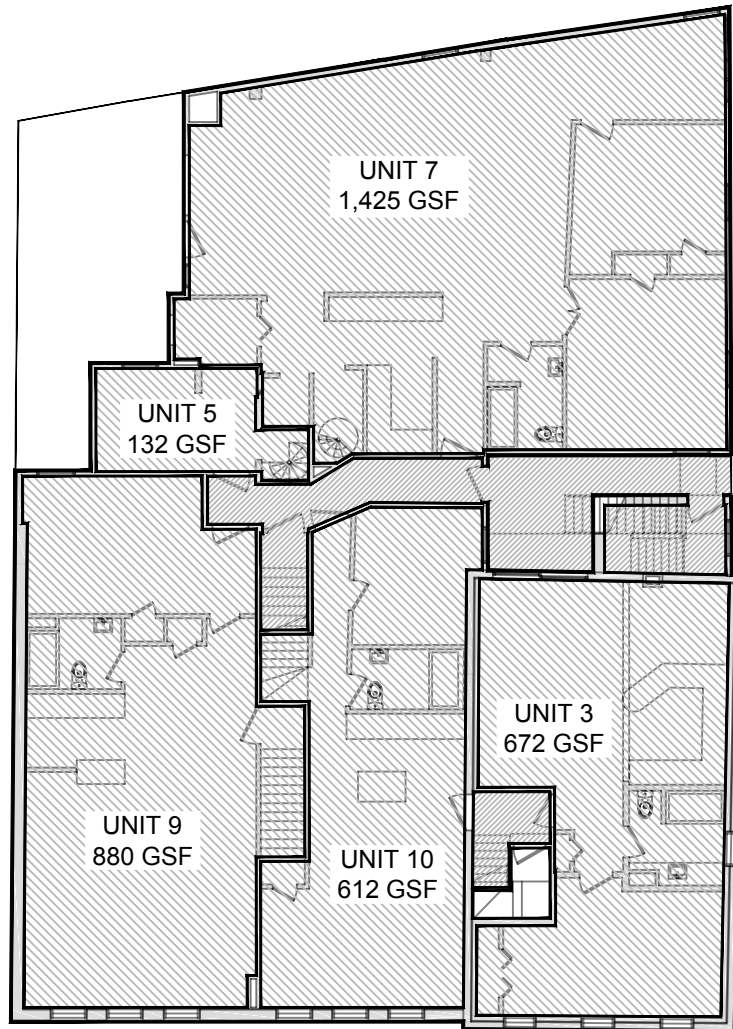
1. PLANS SHOWN REPRESENT CURRENT CONFIGURATION OF ALL RESIDENTIAL AND COMMERCIAL UNITS AND EXISTING MEANS OF EGRESS WITHIN AND FROM THE BUILDING.
2. ALL EXISTING MEANS OF EGRESS FROM BUILDING AND DWELLING UNITS TO REMAIN.
3. 1/2 HR FIRE RATING REQ'D BETWEEN DWELLING UNITS, TYP.
4. 1 HR FIRE RATING REQ'D BETWEEN RESIDENTIAL AND COMMERCIAL SPACES, TYP.
5. 1/2 HR FIRE RATING REQ'D AT CORRIDOR WALLS, TYP.
6. 20 MIN RATED DOORS REQ'D AT ALL RATED WALLS, TYP.
7. NFPA 13 SPRINKLER SYSTEM TO BE INSTALLED THROUGHOUT ENTIRE BUILDING OVER 3 YEAR PHASED PLAN, PER SFM REQ'S

OCCUPANCY LOAD CALCULATIONS

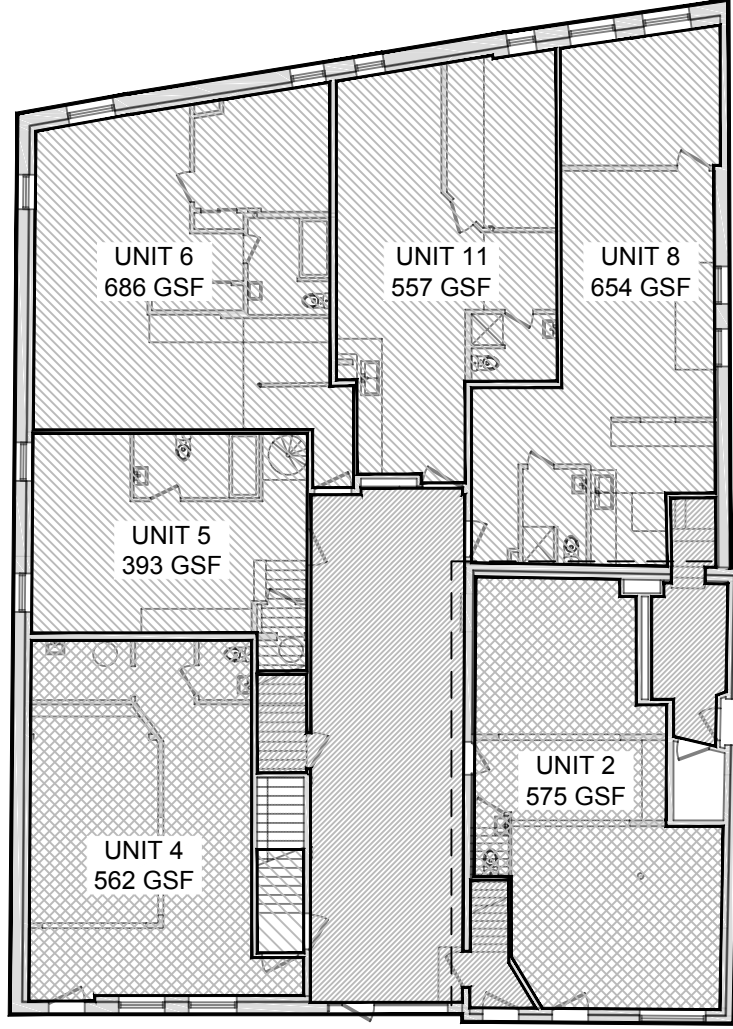
OCCUPANCY TYPE	FLOOR 1	FLOOR 2	FLOOR 3
RESIDENTIAL 1:200	2,290 SF/200 = 11	3,723 SF/200 = 18	1,343 SF/200 = 6
BUSINESS 1:100	1,137 SF/100 = 11	NA	NA
SHARED MEANS OF EGRESS 1,020 SF TOTAL	NA	NA	NA
TOTALS PER FLOOR	22	18	6
TOTAL OCCUPANCY = 46			



THIRD FLOOR

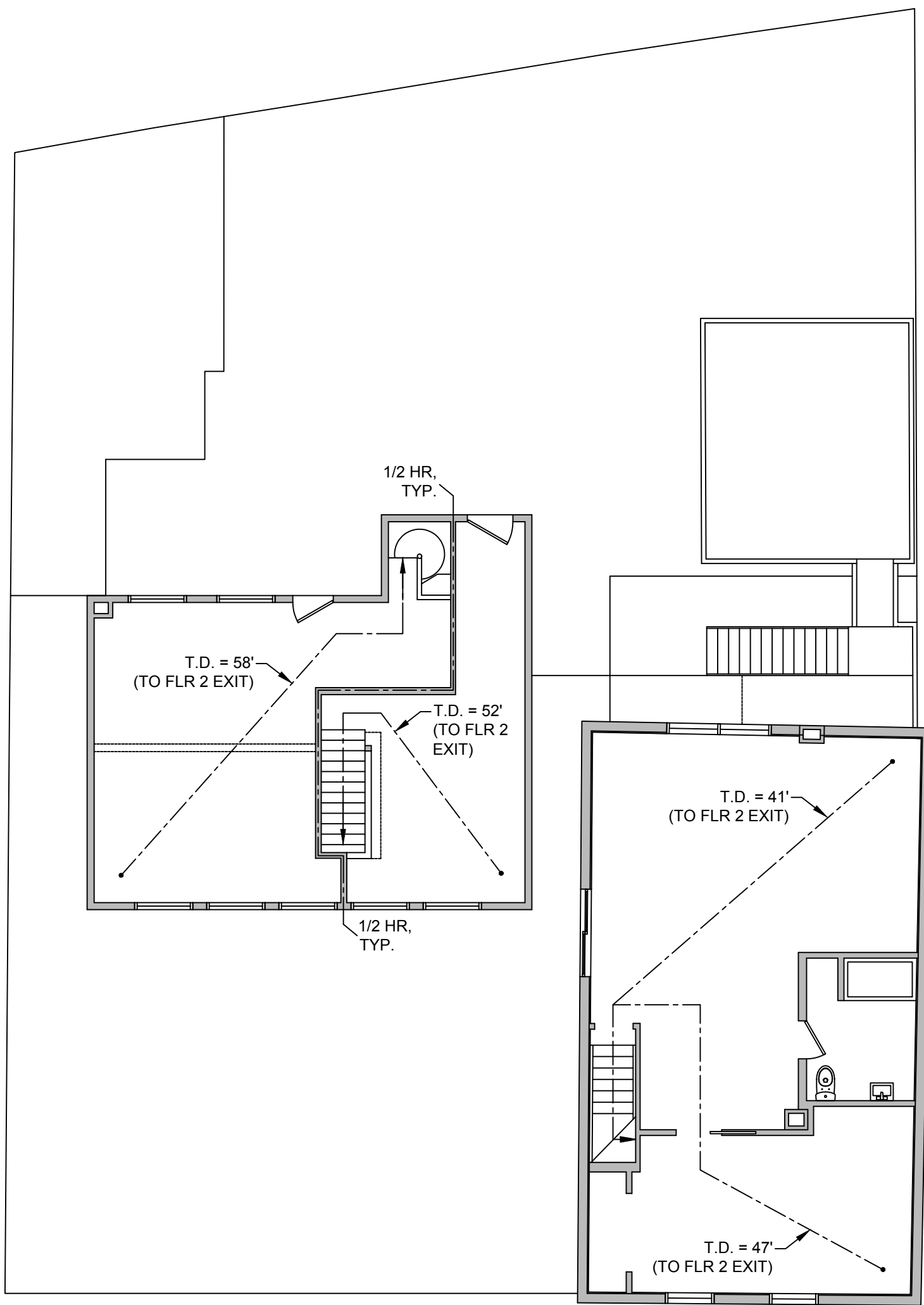


SECOND FLOOR

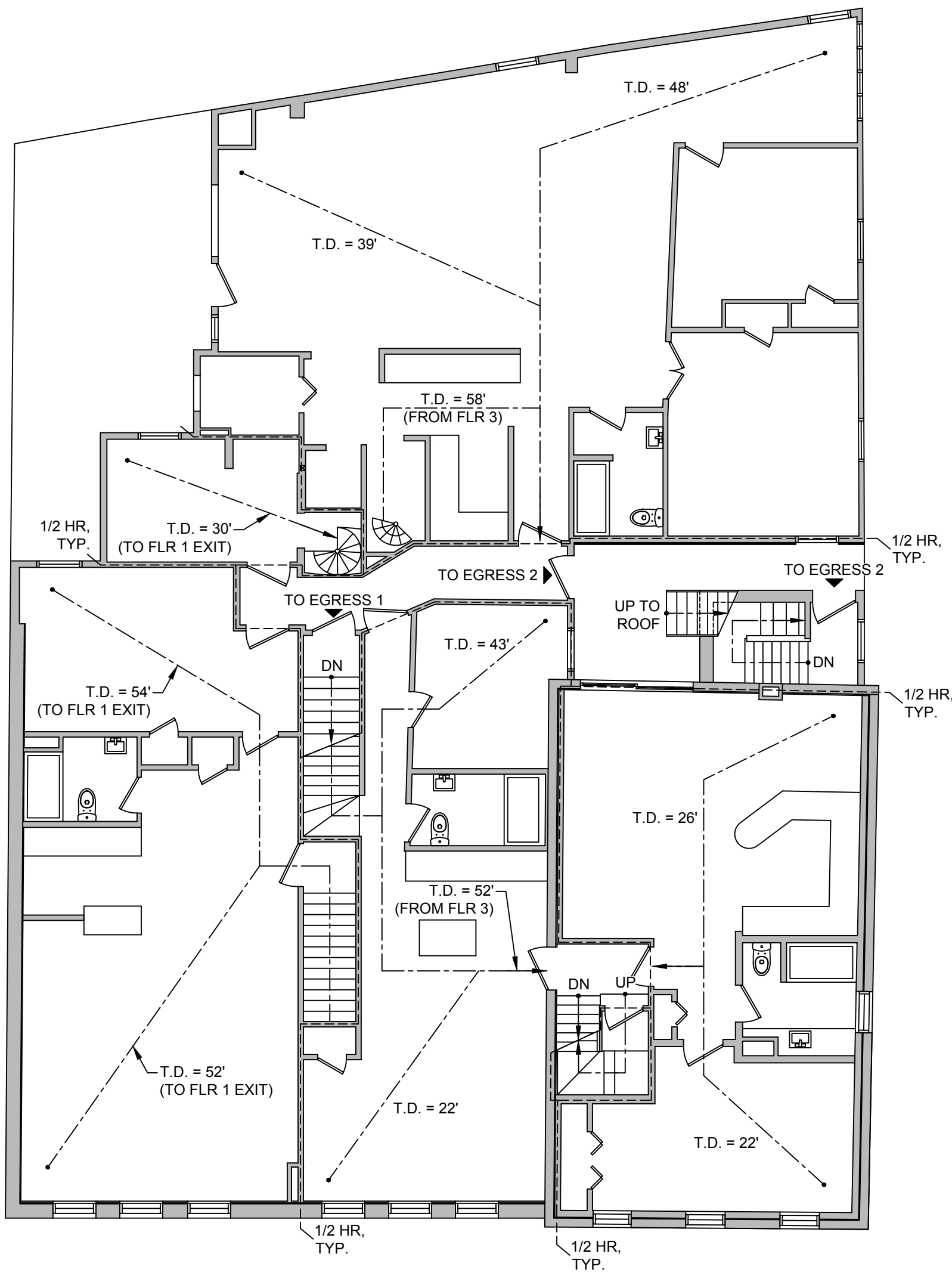


FIRST FLOOR

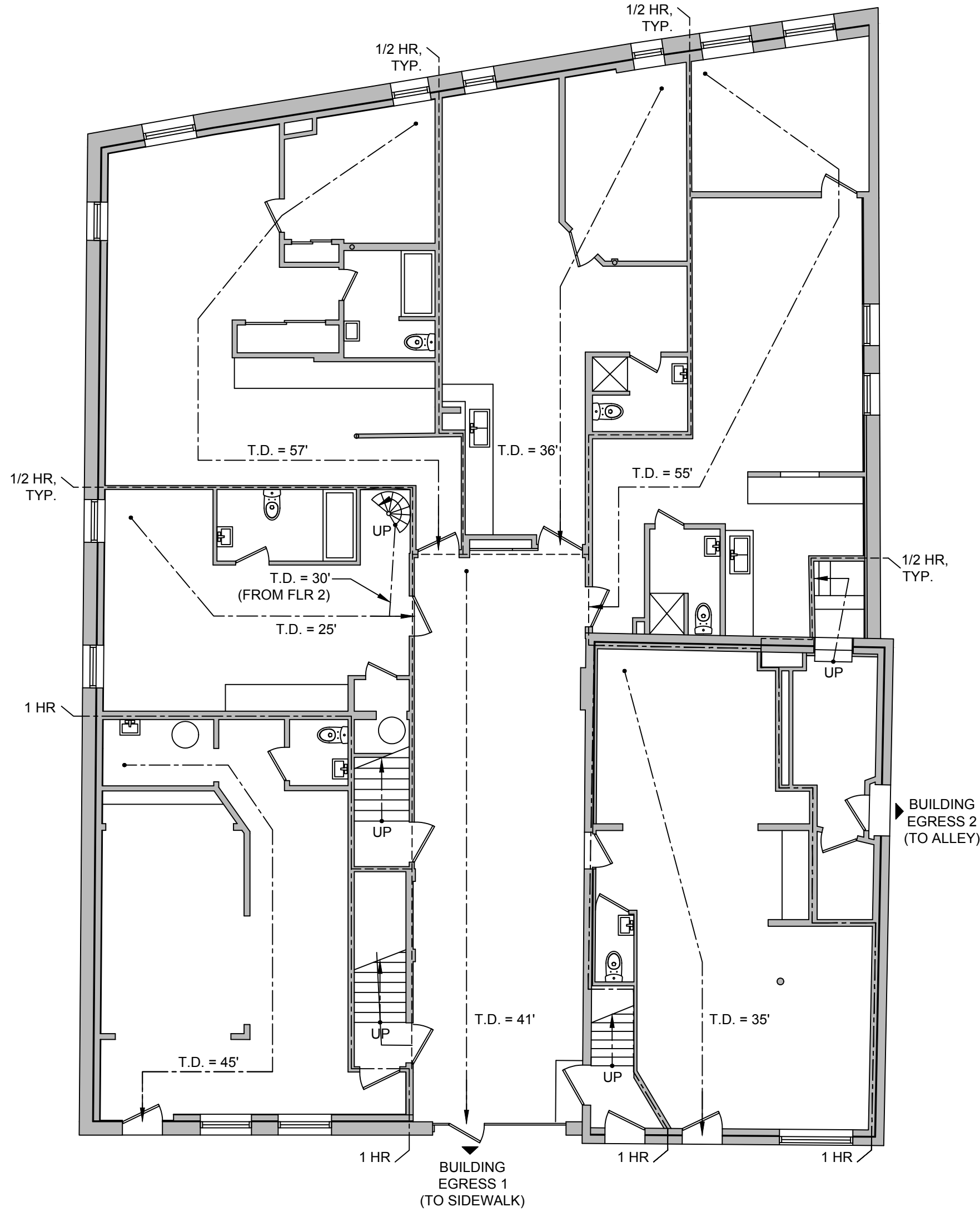
2 KEY PLANS SHOWING OCCUPANCY TYPE AND SQUARE FOOTAGE
SCALE: 1/16" = 1'-0"



3 LIFE SAFETY PLAN - THIRD FLOOR
SCALE: 1/8" = 1'-0"



2 LIFE SAFETY PLAN - SECOND FLOOR
SCALE: 1/8" = 1'-0"



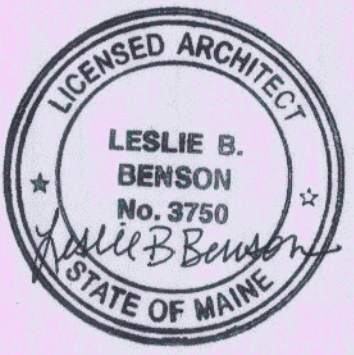
1 LIFE SAFETY PLAN - FIRST FLOOR
SCALE: 1/8" = 1'-0"



PROJECT NAME:
44 PLEASANT STREET

SUBDIVISION AND CHANGE OF USE
44 PLEASANT STREET
PORTLAND, ME 04101

SEAL:



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REVISION:

1	DATE
2	DATE
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4	DATE
5	DATE
6	DATE

DATE OF ISSUE: FEBRUARY 27, 2018

PROJECT NUMBER: 2017-0010

STATUS: ISSUED FOR PERMITTING

LIFE SAFETY
PLANS AND
DIAGRAMS

A100

44 PLEASANT STREET

SUBDIVISION & CHANGE OF USE

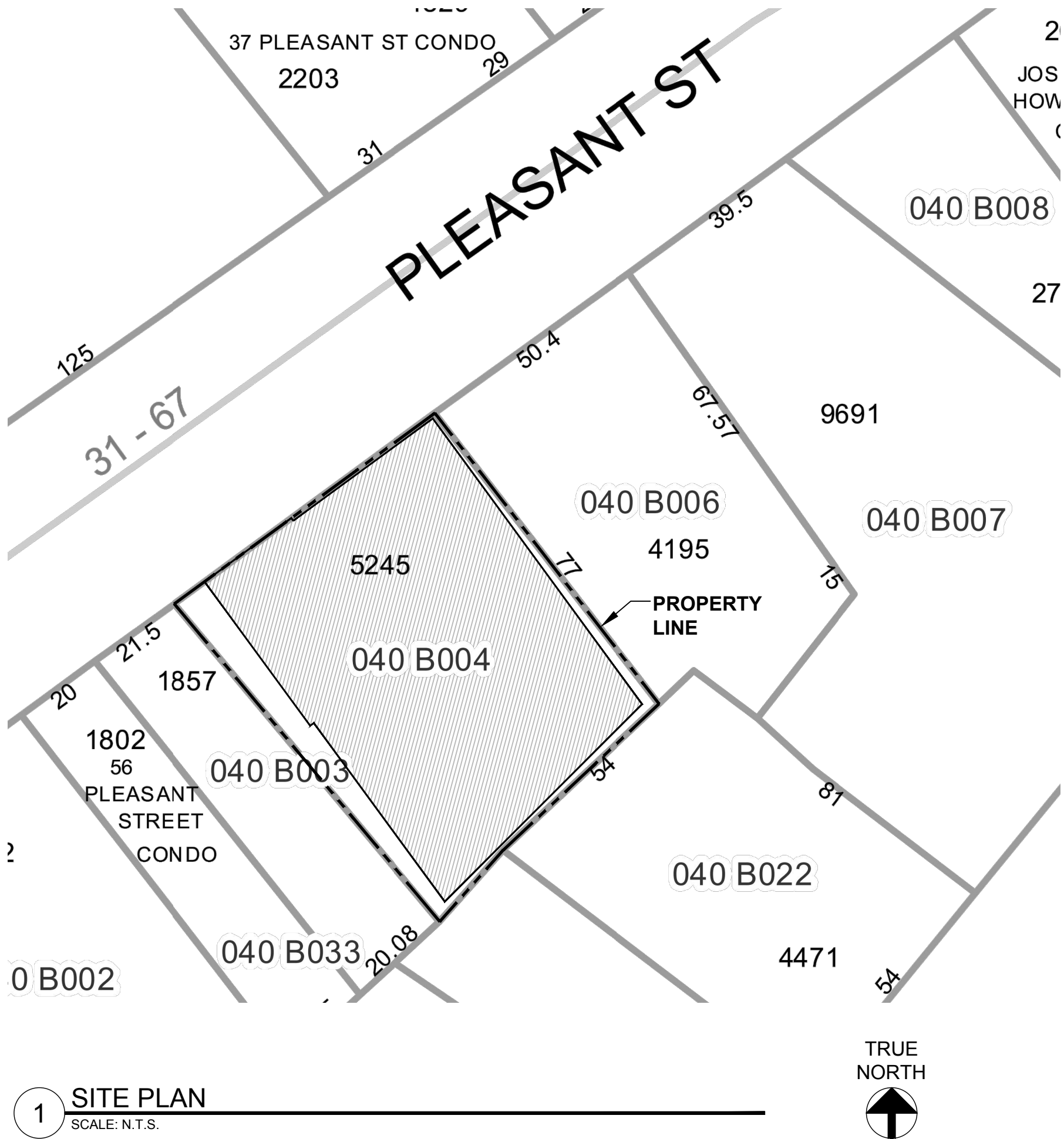
NOT FOR CONSTRUCTION

CODE SUMMARY

PROJECT ADDRESS	44 PLEASANT STREET
PROJECT TYPE	MIXED USE SUBDIVISION AND CHANGE OF USE FROM: EXISTING ON FILE - 5 COMMERCIAL/5 RESIDENTIAL TO: EXISTING AS BUILT - 2 COMMERCIAL/9 RESIDENTIAL
SQUARE FOOTAGE	10,900 GSF (FLOORS 1/2/3 TOTAL COMBINED (4,811 SF/4,562 SF/1,527 SF))
BUILDING CODES	IBC 2009, IEBC 2009, NFPA 101
SPRINKLER SYSTEM	CURRENTLY NOT SPRINKLED, NEW NFPA 13 SYSTEM TO BE INSTALLED IN ENTIRE BUILDING, PHASED IN OVER 3 YEARS, AS ALLOWED BY SFM

IBC	RESIDENTIAL	CODE REF.	COMMERCIAL	CODE REF.
CONSTRUCTION TYPE	TYPE III B	TABLE 601	TYPE III B	TABLE 601
OCCUPANCY TYPE	GROUP R-2, RESIDENTIAL	310.1	GROUP B, BUSINESS	304.1
OCCUPANT LOADS		TABLE 1004.1.1		TABLE 1004.1.1
FIRST FLOOR	2,290 SF/200 GROSS = 11		1,137 SF/100 GROSS = 11	
SECOND FLOOR	3,723 SF/200 GROSS = 18		NA	
THIRD FLOOR	1,343 SF/200 GROSS = 6		NA	
TOTAL OCCUPANT LOAD = 46 PEOPLE	RESIDENTIAL OCCUPANT LOAD = 35 PEOPLE		COMMERCIAL OCCUPANT LOAD = 11 PEOPLE	
NUMBER OF EXITS PER DWELLING UNIT	1 ALLOWED W/SPRINKLER SYSTEM	1021.1 EXC 4	NA	
MINIMUM NUMBER OF EXITS PER STORY	1 PER STORY ALLOWED	TABLE 1021.2	1 PER STORY ALLOWED	TABLE 1021.2
SPACES WITH ONE EXIT	ALLOWED WITH MAX OCCUP 10 PPL	TABLE 1015.1	ALLOWED WITH MAX OCCUP 49 PPL	TABLE 1015.1
EXIT ACCESS TRAVEL DISTANCE	250' WITH SPRINKLER SYSTEM	TABLE 1016.1	300' WITH SPRINKLER SYSTEM	TABLE 1016.1
FIRE ALARM SYSTEM	NOT REQUIRED	907.2.9.1	NOT REQUIRED	907.2.2
SMOKE ALARMS	1 PER SLEEPING ROOM, HALL OUTSIDE SLEEPING ROOM AND 1 PER STORY	907.2.11.2	NA	
	SMOKE ALARMS SHALL BE INTERCONNECTED	907.2.11.3	NA	
CARBON MONOXIDE DETECTION SYSTEM	REQUIRED DUE TO PRESENCE OF FUEL BURNING APPLIANCES	908.7.1 (2012)	NA	
DOOR CLOSING DEVICES	ALL FIRE DOORS MUST BE SELF OR AUTOMATIC CLOSING	715.4.8	ALL FIRE DOORS MUST BE SELF OR AUTOMATIC CLOSING	715.4.8
EGRESS WINDOWS	NOT REQ'D W/ACCESS TO RATED CORRIDOR	1029.1, EXC 2	NA	
HORIZONTAL ASSEMBLIES	1/2 HR RATING REQ'D	712.3 EXC NA	NA	
FIRE PARTITIONS/REQ'D SEP. OF OCCUP.	1/2 HR RATING REQ'D BETWEEN DWELLING UNITS	709.3 EXC 2	1 HR RATING REQ'D BETWEEN OCCUPANCIES (W/SPRINKLERS)	TABLE 508.4
CORRIDOR RESISTANCE RATING	1/2 HR	709.3 EXC 2	0 HR	TABLE 1018.1
CORRIDOR DOORS	20 MIN FIRE RATING	TABLE 715.4	20 MIN FIRE RATING	TABLE 715.4

NFPA 101		CODE REF.		CODE REF.
OCCUPANCY TYPE	RESIDENTIAL	6.1.8.1	BUSINESS	6.1.11
SUBCLASSIFICATION	EXISTING APARTMENT BUILDING	6.1.8.1.5	NA	
OCCUPANT LOADS	200 SF/PERSON	TABLE 7.3.1.2	100 SF/PERSON	TABLE 7.3.1.2
	SEE IBC SECTION ABOVE		SEE IBC SECTION ABOVE	
NUMBER OF EXITS PER SPACE	2 PER DWELLING UNIT	31.2.4.1	1 ALLOWED	39.2.4.3
NUMBER OF EXITS PER BUILDING	1 ALLOWED	31.2.4.4	1 ALLOWED	31.2.4.4
TRAVEL DISTANCE (W/SPRINKLERS)	125' WITHIN APARTMENT, 200' FROM DOOR TO EXIT	TABLE A.3.1.1	100' MAX	39.2.4.3
FIRE ALARM SYSTEM	NOT REQUIRED - LESS THAN 4 STORIES	31.3.4.1.1	NOT REQUIRED	39.2.4.3
SMOKE ALARMS	SINGLE STATION - OUTSIDE SLEEPING AREAS, EVERY LEVEL AND BASEMENT	31.3.4.1.1	NA	
CARBON MONOXIDE DETECTION SYSTEM	OUTSIDE SLEEPING AREAS, 1 PER LEVEL AND BASEMENT	CH 30 (2012)	NA	
DOOR SELF CLOSING DEVICES	REQUIRED AT EXIT STAIR DOORS - SELF OR AUTOMATIC CLOSING	7.2.1.8.1	REQUIRED AT EXIT STAIR DOORS - SELF OR AUTOMATIC CLOSING	7.2.1.8.1
EGRESS WINDOWS	NA - ONLY REQ'D IN ONE AND TWO FAMILY DWELLINGS	24.2.2.3.3		
EXIT DOORS	1 HR RATING REQ'D FOR 1-3 STORIES	TABLE A.3.1.1		
EXIT ENCLOSURE WALLS	1 HR RATING REQ'D FOR 1-3 STORIES	TABLE A.3.1.1		
INTERIOR STAIRS FOR PRIMARY ESCAPE	ALLOWED TO BE OPEN TO STORY ABOVE FIRST FLOOR (1/2 HR RATING REQ'D)	33.2.2.4.5	ALLOWED TO BE OPEN TO STORY ABOVE FIRST FLOOR (1/2 HR RATING)	33.2.2.4.5
CORRIDOR RESISTANCE RATING	1/2 HOUR MINIMUM	TABLE A.3.1.1		
CORRIDOR DOORS	SMOKE RESISTING	TABLE A.3.1.1		
FIRE SEPARAION	1HR BETWEEN OCCUPANCIES (DUE TO 1HR SPRINKLER REDUCTION)	TABLE 6.1.14.4.1	1HR BETWEEN OCCUPANCIES (DUE TO 1HR SPRINKLER REDUCTION)	TABLE 6.1.14.4.1



PROJECT TEAM

OWNER:
44 Pleasant Street LLC
7 Stephenson Street
Cape Elizabeth, ME 04107
(e): 44pleasantstreet@gmail.com

ARCHITECT:
Leslie Benson Designs, LLC
Leslie Benson, R.A.
19 Commercial Street
Portland, ME 04101
(c): 217.553.0672
(e): lesliebdesigns@gmail.com

BUILDER:
Justin Tourigny
9 E Oxford Street
Portland, ME 04101
(c): 347.296.6438
(e): justintourigny@gmail.com

DRAWING LIST

SHEET C100	SHEET TITLE COVER SHEET & CODE SUMMARY
CIVIL	SURVEY
ARCHITECTURAL A100	LIFE SAFETY PLANS & DIAGRAMS

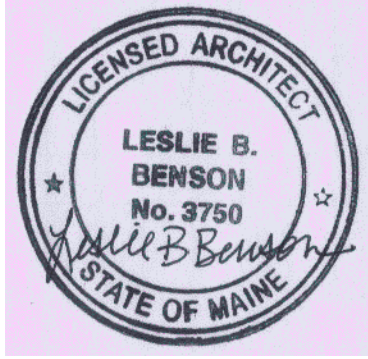
MATERIAL KEY		ARCHITECTURAL ABBREVIATIONS												ARCHITECTURAL SYMBOLS											
	COURSE GRAVEL	AB ACT ADDL ADMIN	ANCHOR/BOLT ACCOUSTICAL ADDITIONAL ADMINISTRATION	D DBL DEFL DEMO	DRYER DOUBLE DEFLECTION DEMOLITION	GA GALV GC GLASS	GAUGE GALLON GALVANIZED GENERAL CONTRACTOR	MTRL MAS MAX MECH	MATERIAL MASONRY MAXIMUM MECHANICAL	QT R RD REF	QUART RADIUS/RISER/RANGE ROOF DRAIN REGISTRATION	T TEL TEMP T&G	TREAD/TOILET TELEPHONE TEMPERATURE/TEMPERED TONGUE & GROOVE	FINISH MATERIAL		PROPOSED ELEVATION									
	CONCRETE	ALUM AP APV ARCH	ALUMINUM ACCESS PANEL ASPHALT PAVEMENT ARCHITECT	DIAG DIM DR DIV DN DWG	DIAGONAL DIMENSION DIRECTOR/DOOR DIVISION DOWN DRAWING	GR GWB GYM	GRANITE GYPSUM WALL BOARD GYPSUM	MGR MH MIN MISC	MANAGER MANHOLE MINIMUM MISCELLANEOUS	REF REQD REFR REIN RESIL	REFERENCE REQUIRED REFRIGERATOR REINFORCE/REINFORCING RESILIENT	TH T.O. TV TYPICAL	THICKNESS TOP OF TELEVISION TYPICAL	ROOM NUMBER		BUILDING SECTION									
	STONE	BD BIT BLDG BLKG	BOARD BITUMINOUS BUILDING BLOCKING	E EA EF EJ EL	EAST EACH EXHAUST FAN EXPANSION JOINT ELEVATION	HD HR HC HWDWR	HIGH DENSITY HOUR HOLLOW CORE HARDWARE	MTG MNL MOLD MOLDING	MOUNTING METAL MOLDING MOISTURE RESISTANT	RO RM RFG RTO RO	ROUGH OPENING ROOM ROOFING ROOF ROUGH OPENING	UL UNO UTIL	UNDERWRITERS LABORATORIES UNLESS NOTED OTHERWISE UTILITIES	DOOR NUMBER		BUILDING ELEVATION									
	GYPSUM PLASTER	BM BRG BTW	BENCHMARK BEARING BETWEEN	E EA EF EJ EL	EAST EACH EXHAUST FAN EXPANSION JOINT ELEVATION	HD HR HC HWDWR	HIGH DENSITY HOUR HOLLOW CORE HARDWARE	MTG MNL MOLD MOLDING	MOUNTING METAL MOLDING MOISTURE RESISTANT	RO RM RFG RTO RO	ROUGH OPENING ROOM ROOFING ROOF ROUGH OPENING	UL UNO UTIL	UNDERWRITERS LABORATORIES UNLESS NOTED OTHERWISE UTILITIES	WINDOW TYPE		BUILDING ELEVATION									
	PLYWOOD	CAB CB CEM CF CIRC CJ CL	CABINET CATCH BASIN CEMENT CUBIC FEET CIRCLE/CIRCULAR CONTROL JOINT CENTER LINE	E EA EF EJ EL	EAST EACH EXHAUST FAN EXPANSION JOINT ELEVATION	HD HR HC HWDWR	HIGH DENSITY HOUR HOLLOW CORE HARDWARE	MTG MNL MOLD MOLDING	MOUNTING METAL MOLDING MOISTURE RESISTANT	RO RM RFG RTO RO	ROUGH OPENING ROOM ROOFING ROOF ROUGH OPENING	UL UNO UTIL	UNDERWRITERS LABORATORIES UNLESS NOTED OTHERWISE UTILITIES	PARTITION TYPE		BUILDING ELEVATION									
	BATT INSULATION	CLG CLO CMU CLEAN OUT	Ceiling Closet Concrete Masonry Unit Clean Out	FBO FCO FDO FIR	FURNISHED BY OWNER Floor Clean Out Floor Drain Fire Control Panel	IN INSUL INT INV	INCH INSULATE/INSULATION Interior Invert	PC PL PLAS	Part Plate Plastic	STC SQ SPEC	STANDARD SOUND TRANSMISSION SQUARING POOL CONTRACTOR	W WB WC WD WFO WFO WWM	WEST / WATER / WASHER / WIDTH WITH WATER CLOSET WOOD WINDOW WITH CUT WELDED WIRE FABRIC WELDED WIRE MESH	REVISION REFERENCE		WALL SECTION									
	FINISH WOOD	CJ CL CLG CLO CMU CLEAN OUT	Circle/Circular Control Joint Center Line Ceiling Closet Concrete Masonry Unit Clean Out	E EA EF EJ EL	EAST EACH EXHAUST FAN EXPANSION JOINT ELEVATION	HD HR HC HWDWR	HIGH DENSITY HOUR HOLLOW CORE HARDWARE	MTG MNL MOLD MOLDING	MOUNTING METAL MOLDING MOISTURE RESISTANT	RO RM RFG RTO RO	ROUGH OPENING ROOM ROOFING ROOF ROUGH OPENING	UL UNO UTIL	UNDERWRITERS LABORATORIES UNLESS NOTED OTHERWISE UTILITIES	ROUGH WOOD		INTERIOR ELEVATION									
	CONCRETE MASONRY	CONC CONST CONT CONTR	Concrete Construction Continue Contract	FE FG FIN FL	Fire Extinguisher Fiberglass Finish Floor	IN INSUL INT INV	INCH INSULATE/INSULATION Interior Invert	PC PL PLAS	Part Plate Plastic	STC SQ SPEC	STANDARD SOUND TRANSMISSION SQUARING POOL CONTRACTOR	W WB WC WD WFO WFO WWM	WEST / WATER / WASHER / WIDTH WITH WATER CLOSET WOOD WINDOW WITH CUT WELDED WIRE FABRIC WELDED WIRE MESH	FIRE EXTINGUISHER, RECESSED CABINET		INTERIOR ELEVATION									
	BRICK MASONRY	COORD COORD CRS CT	Coordinated Course Ceramic Tile	FOS FRP FT FTG	Face of Stud Fiberglass Reinforced Foot Footing	IN INSUL INT INV	INCH INSULATE/INSULATION Interior Invert	PC PL PLAS	Part Plate Plastic	STC SQ SPEC	STANDARD SOUND TRANSMISSION SQUARING POOL CONTRACTOR	W WB WC WD WFO WFO WWM	WEST / WATER / WASHER / WIDTH WITH WATER CLOSET WOOD WINDOW WITH CUT WELDED WIRE FABRIC WELDED WIRE MESH	FIRE EXTINGUISHER SURFACE MOUNT		INTERIOR ELEVATION									
	SAND/FINE GRAVEL	CTV CUH CY	Cable Television Line Cabinet Unit Heater Cubic Yard	FT FTG F.O.	Foot Footing Face Of	IN INSUL INT INV	INCH INSULATE/INSULATION Interior Invert	PC PL PLAS	Part Plate Plastic	STC SQ SPEC	STANDARD SOUND TRANSMISSION SQUARING POOL CONTRACTOR	W WB WC WD WFO WFO WWM	WEST / WATER / WASHER / WIDTH WITH WATER CLOSET WOOD WINDOW WITH CUT WELDED WIRE FABRIC WELDED WIRE MESH	DETAIL		COLUMN REFERENCE LINE									
	RIGID INSULATION	CTV CUH CY	Cable Television Line Cabinet Unit Heater Cubic Yard	FT FTG F.O.	Foot Footing Face Of	IN INSUL INT INV	INCH INSULATE/INSULATION Interior Invert	PC PL PLAS	Part Plate Plastic	STC SQ SPEC	STANDARD SOUND TRANSMISSION SQUARING POOL CONTRACTOR	W WB WC WD WFO WFO WWM	WEST / WATER / WASHER / WIDTH WITH WATER CLOSET WOOD WINDOW WITH CUT WELDED WIRE FABRIC WELDED WIRE MESH	DETAIL		COLUMN REFERENCE LINE									
	GLASS	CTV CUH CY	Cable Television Line Cabinet Unit Heater Cubic Yard	FT FTG F.O.	Foot Footing Face Of	IN INSUL INT INV	INCH INSULATE/INSULATION Interior Invert	PC PL PLAS	Part Plate Plastic	STC SQ SPEC	STANDARD SOUND TRANSMISSION SQUARING POOL CONTRACTOR	W WB WC WD WFO WFO WWM	WEST / WATER / WASHER / WIDTH WITH WATER CLOSET WOOD WINDOW WITH CUT WELDED WIRE FABRIC WELDED WIRE MESH	DETAIL		COLUMN REFERENCE LINE									

LESLIE BENSON DESIGNS, LLC
19 COMMERCIAL STREET
PORTLAND, ME 04101

lesliebdesigns@gmail.com
217.553.0672

PROJECT NAME:
44 PLEASANT STREET
SUBDIVISION AND CHANGE OF USE
44 PLEASANT STREET
PORTLAND, ME 04101

SEAL:



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REVISION:

1	DATE
2	DATE
3	DATE
4	DATE
5	DATE
6	DATE

DATE OF ISSUE: FEBRUARY 27, 2018

PROJECT NUMBER: 2017-0010

STATUS: ISSUED FOR PERMITTING

COVER SHEET & CODE SUMMARY

C100



To: Sean Dundon, Chair Planning Board
Members of the Planning Board

From: Victoria Volent, Housing Program Manager
Housing & Community Development Division

Date: June 11, 2018

Subject: Guidelines for Developers of Inclusionary Workforce Units- Amendment to the Calculation of Maximum Sale Price

Introduction

The maximum sale price for a workforce unit is established so that appropriately-sized households are not required to spend more than 30% of their gross income on total housing costs. Based on this assumption, the sale price of a housing unit calculated for sale at 120% of the Area Median Income (AMI) is affordable to a household earning exactly 120% AMI, but no less. Household earning 119% AMI or less would need to spend more than 30% of their gross income on total housing costs. Subsequently these households cannot afford the condo or house priced for sale at 120% AMI.

A well calculated maximum sale price allows for a range of buyers rather than the rare buyer that can afford the maximum sale price while also being considered income qualified.

If the maximum sale price is set too high for the target income group, buyers who are below the income cutoff may have trouble qualifying for a mortgage. While developers have an interest in advocating for higher prices, units that are slow to sell impact their bottom line.



Establishing Maximum Sale Price

Division 30 of the City's Zoning Ordinance restricts the sale of workforce units to households at or below 120% of the area median income (AMI). The maximum allowable sale price of a workforce unit is based on the minimum number of bedrooms in each workforce unit. Calculating the initial maximum sale price begins by calculating 30% of the gross monthly income for a household's 120% AMI. The sale price is then based off a 30 year fixed rate mortgage with a 5% down payment and includes monthly property taxes, homeowner insurance, private mortgage insurance, and any condominium or HOA fees. The result is a sale price affordable to households earning exactly 120% AMI.

Adjusted Maximum Sale Price Calculation

A maximum sale price that is more comfortably managed by a wider range of potential buyers would be calculated by changing the current pricing methodology. Using a target AMI that is 10 percentage points less than the target AMI of 120% would look as follows:

- 1) Begin by calculating 30% of the gross monthly income for a household earning 110% AMI as appropriate for the minimum household size for each Workforce Unit by bedroom type.
 - o $(\text{Household's } 110\% \text{ AMI} \times 0.30) / 12 = \text{monthly income available for housing expenses.}$
- 2) Housing expenses available for studios will be calculated at 85% of the income available for a one person household using the following formula:
 - o $((\text{Household's } 110\% \text{ AMI} \times 0.30) \times 0.85) / 12 = \text{monthly income available for housing expenses of a studio unit.}$



Lowering the maximum sale price in this manner is a common approach used by communities such as those located in Massachusetts. California uses a "target income" level set towards the lower end of an income range for income categories to ensure affordability to a greater market of buyers.

Recommendation

Staff recommends amending language in the Inclusionary Zoning Implementation Guidelines for Developers of Workforce Housing to reflect a change in the calculation of the maximum sale price of workforce units from 30% of 120% AMI to 30% of 110% AMI to broaden the market of income qualified households eligible to purchase the maximum priced workforce housing unit.



Inclusionary Zoning Implementation Guidelines for Developers of Homeownership Housing

Applicability/Conditional Use Requirement

Division 30, Section 14-487 of the City's Zoning Ordinance requires that development projects creating ten (10) or more new dwelling units for rent or for sale 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 set aside a portion of the project as Workforce Housing. This provision does not apply to projects that have submitted complete Master Development Plan, Level III Site Plan, or comparable applications to move forward prior to November 18, 2015.

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.

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 the Workforce Units are provided on- or off-site. If a Developer prefers to pay a fee-in lieu of each Workforce Unit, as outlined in greater detail below, then the Workforce obligation will be calculated on a fractional value to one tenth. For example, a project creating 26 units of housing would be required to provide two (2) units of on-site as Workforce Units. If the Developer instead prefers to pay the fee-in lieu of providing Workforce Units the Developer would be required to pay 2.6 times the current rate as established by the City.

Household Income Limits

In accordance with Division 30 of the City's Zoning Ordinance, the sale of Workforce Units will be restricted to households at or below 120% of the area median income (AMI). In order to most effectively target this income level, and based on national best practices, these calculations allow for an "affordability window" of between 110% and 120% AMI. The City will reference Area Median Income figures published annually by HUD for the Portland Metropolitan Statistical Area (MSA) or other income limits as deemed reasonable by the City. The City will make available on its website a list of income limits by household size. If at a time in the future HUD no longer provides these annual figures, the City will identify another similar method of determining income guidelines for affordability.

Eligible Households for Workforce Homeownership Units



At the time of sale, a buyer must be a member(s) of an Eligible Household as defined within the Background and Definition section of the City's Inclusionary Zoning Guidelines. The Household must occupy the Workforce Homeownership Unit (Workforce Unit) as its principal residence. To purchase a Workforce Unit an Eligible Household must be permanent residents of the United States. The Intent is to limit the risk of a loss of the Unit's affordability restrictions due to foreclosure of a household no longer able to reside in the United States. Household size/composition upon the unit's sale should be appropriate to the size of the unit as outlined in the chart below. For the qualification of households by unit size, the head of the household and spouse/partner are assumed to share a bedroom. Two children whose ages are not excessively disparate, may share a bedroom. Legal custody is required for households including one or more minor children. There will be no fewer than one, nor more than two persons per bedroom.

The City will consider households eligible based on their adjusted gross income. The City will use a process similar to what HUD recommends for the HOME program to determine adjusted gross income or another method as deemed reasonable by the City. The Owner or their representative will collect and compile all of the relevant paperwork needed to assess a household's eligibility. Verification will require sufficient proof of household size and income in the form of mortgage pre-approval letters, official tax statements, W-2 forms, pay stubs, credit reports, bank statements, birth certificates, and any other reasonable documents requested by the City to aid in their efforts to verify whether or not a household is eligible. 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 closing. The City reserves the right to request proof of income for the last three years from an applicant. The City may request additional information if needed.

The chart below indicates the minimum household size for each unit type based on bedroom count.

	Studio/One-Bed	Two-Bed	Three-Bed	Four-Bed
Minimum Household Size By Bedroom	1	2	3	4

Workforce Units will also be subject to maximum household sizes based on bedroom counts. The following chart outlines the maximum persons allowable per bedroom assuming the occupants meet all other requirements related to qualifications for determining a household such as age of children sharing bedrooms.

	Studio/One-Bed	Two-Bed	Three-Bed	Four-Bed
Maximum Household Size By Bedroom	2	4	6	8



Eligible Households may not qualify if any member of the household owns other residential real estate at the time of application or sale.

The City reserves the right to perform an asset test 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, money market accounts, certificates of deposit (CD's) or other financial instruments. The City may request documentation for the three most recent years to help determine a household's income.

Closing costs and a down payment of up to 20% of the sale price may be gifted to an Eligible Household as outlined in the Workforce Housing Background and Definitions Regulations.

Maximum Allowable Sale Price

The calculation of the maximum allowable sales price will be determined by the City. The price will in part be based on the minimum number of bedrooms in each Workforce Unit for sale as outlined in the chart below:

	Studio/One-Bed	Two-Bed	Three-Bed	Four-Bed
Max Sale Price Basis -Household Size	1	2	3	4

For example, the maximum allowable sale price of a two bedroom Workforce Unit will be based on what is affordable to a two (2) person household. A larger household of four (4) persons meeting the income qualifications for their household size would still be able to purchase this unit but the maximum allowable sale price will be calculated based on a two (2) person household. It is important to be clear that this is to calculate the maximum allowable sale price of a Workforce Unit and that units may be sold at lower prices depending on the market, location, and condition of a unit.

The maximum allowable sale price at the initial sale of a Workforce Unit and for any subsequent sales will be based on the following calculation:

- 1) Begin by calculating 30% of the gross monthly income for a household earning 120110% AMI as appropriate for the minimum household size for each Workforce Unit by bedroom type (this pricing allows room for households up to 120% of AMI to be able to afford the unit with a reasonable down payment.
 - o $(\text{Household's } 120110\% \text{ AMI} \times 0.30) / 12 = \text{monthly income available for housing expenses.}$
- 2) Housing expenses available for studios will be calculated at 85% of the income available for a one person household using the following formula:
 - o $((\text{Household's } 120110\% \text{ AMI} \times 0.30) \times 0.85) / 12 = \text{monthly income available for housing}$



expenses of a studio unit.

- 3) That portion of monthly income may be attributed to mortgage payments less other housing related expenses such as real estate taxes, mortgage insurance, condominium/HOA fees, and insurance.
 - o Mortgage insurance will be estimated similar to current rates utilized by the Federal Housing Administration (FHA) or another reasonable method as determined by the City. Currently, for 30 year mortgages of less than \$625,000 with Loan to Value (LTV) ratios equal or less than 95%, the FHA utilizes a rate of 80 basis points on the mortgaged amount. The actual rate used in the calculation will be determined at the time the unit is marketed.
- 4) The sale price will then be based off a 30 year fixed rate mortgage with a 5% down payment.
 - o It will be allowable for qualified buyers to offer a larger down payment but a down payment larger than 5% will not increase the maximum allowable sale price of a Workforce Unit.
- 5) Interest rates for the calculation will be the average national mortgage rate over the past thirteen years as determined by the Freddie Mac Primary Mortgage Market Survey or another source as determined reasonable by the City. The interest rate for the calculation will be determined at the time the unit is marketed.

Purchase price limits establish maximum allowable sale prices. An Eligible Household's financial situation will determine the mortgage amount that can be borrowed. This amount may be more or less than the maximum allowable sales price of a particular Workforce Unit. However, at no time shall a Workforce Unit be sold for greater than the maximum allowable sale price as determined by the City.

Condominium/HOA Fees

If the Developer is setting up a new condominium trust or homeownership association (HOA), then the Developer shall present to the City a draft condominium/HOA budget and related governing documents. The City may request quotes and/or justification for costs, including replacement reserves, insurance, water and sewer, utilities, management fees, and other services. The City will have final approval of the initial condominium/HOA fee to ensure that a reasonable front-end calculation of cost in setting initial fees for a Project.

The condominium/HOA fee will be shared proportionately between units based on the City's tax assessment for the value of the units. If assessed values are not available at the time of initial sale of the units than initial sale prices will be used to determine the appropriate share of costs. Workforce Units' tax assessments by the City will take into consideration the Unit's restrictions and assess the Unit's value accordingly. Voting rights within the association will be no more or less than one vote per unit and will not be based on the value of paid fees or other metric as allowable by state law.



Condominium/HOA fees for Workforce Units may not increase more than 10% in a single year or 25% in any three year period without a supermajority vote gaining 100% support of the association.

The City shall have a right of first refusal if a Workforce Unit is forced to sell due to increased fees or has become delinquent in its payments and is in risk of foreclosure or any other legal threats to the Unit's affordability restrictions. The City shall also have the option of using City funds to support Workforce Units facing large special assessments that may pose a risk to the Workforce Household's ability to maintain their unit's affordability.

Right of First Refusal

The City of Portland shall have the right of first refusal to purchase any Workforce Unit that is in jeopardy of losing its affordability restrictions due to foreclosure, delinquency of condominium fee payments, or any other cause outside of the agreed upon term of restriction. The City's Right of First Refusal is not intended to infringe upon the ability of a mortgage lender to recapture any money owed by the Workforce Unit's Owner. The intent is to ensure affordability of the unit for Eligible Households.

Phasing

Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, Workforce Units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.

Integration of Units

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.

Size and Bedroom Count

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 ten percent (10%) of the total number of bedrooms in the development. For the purposes of this section, 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.

Interior Standards

The design, quality, and materials of Workforce Units interiors need not be the same as market rate units. However, the Workforce Units may not be strategically designed to avoid offering basic amenities similar to what are included in the market rate units such as the following:

Kitchen



Refrigerator
Stove or separate cook top and oven
Sink Disposal
Cabinets
Range Hood
Microwave (if provided in market rate units)
Washer Dryer (if provided in market rate units)
Countertop: Minimum Counter Space not including sink and stove
 Studio – 4 linear feet
 1BR – 6 linear feet
 2BR – 8 linear feet
 3BR – 10 linear feet

Bathroom

Sink
Shower
Toilet
Shower Curtain Rod or Shower Door
Medicine Cabinet with Mirror or other storage space with a separate mirror

Flooring

All living space and storage areas shall have a finished floor. The Workforce Units should have the same or comparable floor finishes to the market rate units. However, in order to promote respiratory health, living and dining areas and at least one bedroom should have a surface other than carpet.

Closets

All units shall have adequate storage (including common space storage if provided to the market rate units)
All bedrooms shall have at least one closet including at least one closet for a studio
All closets shall have a shelf and pole

Public Funding Sources

Projects that propose greater levels of affordability than what is required in Division 30 in terms of income levels, term of affordability, or number of units may be eligible for some financial resources through the City at the City's discretion.

Tax Increment Financing Eligibility

If at least thirty-three percent (33%) of the units in a development are Workforce Units, the development is eligible to request subsidy funding through an Affordable Housing Tax Increment Financing (TIF) deal, subject to City Council approval.

Affordable Housing Agreement



The buyer of each Workforce Unit will be required to sign and record in the Cumberland County Registry of Deeds an Affordable Housing Agreement (AHA) with the City and to include the affordability restrictions as a covenant to the project's deed. The Affordable Housing Agreement shall be referenced directly in the property's deed unless prohibited by federal, state, or local law. In order to guarantee affordability, this recorded covenant will limit increases in sales price according to the calculation defined by the City and the Eligible Household requirements as they relate to increases in median income. It will limit the incomes of subsequent buyers to the same income limits initially applied. It will also provide a right of first refusal and other purchase rights to the City or its designee (e.g. another Eligible Household, or a nonprofit corporation).

At the time of sale, the Workforce Unit must be the Eligible Household's primary residence. The Unit may not be rented out for short or long term periods to other households.

Minimum Term of Affordability

The term of affordability for the required 10% Workforce Units provided shall be defined as follows:

Percentage of Workforce Units Provided	Minimum Term of Affordability
10%	Longest term permitted under federal, state, and local laws and ordinances.
25%	30 Years
50%	20 Years
100%	10 Years

For Workforce Homeownership Units the reduced terms of affordability will apply to the minimum 10% of units required. The additional Workforce Units proposed above 10% shall be affordable at the initial sale with no restrictions placed on subsequent sales of the unit. For example, if a homeownership project proposed to develop 40 units of housing of which 10 units, or 25%, would be reserved as Workforce Units, then four (4) units would have a 30 year term of affordability while the remaining six (6) Workforce Units would be restricted only for the initial sale. Sales must be made through an arms length arrangement as discussed in greater detail under the Non-Eligibility/Disqualification section below.

Reduction of Fees & Priority Review

Notwithstanding any other provision of Chapter 14 or Chapter 6 of the City's Zoning Ordinance to the contrary, development fees shall be reduced by the City for an eligible project in the manner described in the chart below:

Percentage of new units that are low-income or Workforce Units	Percentage discount of development fees
5% up to but not including 10%	5% reduction
10% up to but not including 15%	10% reduction
15% up to but not including 20%	15% reduction



20% up to but not including 25%	20% reduction
25% or more	25% reduction

Household Preference

Preference for Workforce Units shall be given, to the extent permitted under law to Eligible Households, in the following order:

- 1) First time homebuyer
- 2) Current residents of the City who have lived in Portland as their primary residence for the past two years
- 3) Previous residents of the City who were displaced within the last 12 months prior to the Workforce Unit becoming available
- 4) Persons employed full time by the City
- 5) All others

The applicant for a Workforce Unit will be responsible for documenting their preference status under any of the above noted categories. Documentation may include voter registration, utility bills, confirmed leases, bank statements, tax returns, insurance statements, and other reasonable documents as requested by the City or Owner to demonstrate preference status. Households wishing to be considered as a preferred applicant must also have a pre-approval letter from a lending institution demonstrating their ability to qualify for any necessary loan.

Household preference does not preclude Owners from selling to non-preference applicants assuming applicants meet the necessary eligibility requirements and there are more Workforce Units available than preference applicants. Other preference categories may be added to specific projects or to the City's standards at a later date as appropriate.

Marketing / Selection Process

Unless otherwise agreed to with the City, the following system will be followed. At least 30 days prior to initial marketing, the Owner shall provide written notice to the City of the expected start of marketing process and occupancy dates of the designated Workforce Units. The Owner will place an advertisement, approved by the City, in one or more newspapers designated by the City. Interested parties will be given sufficient time to request and return a preliminary application. The Owner will inform the City of any interest from Eligible Households that it receives. From the beginning of the marketing process the City will 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 Owner or their designated representative. The Owner should also reach out to local groups and non-profits who may have connections to interested Eligible Households.

The Owner shall 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 each instance that an Owner intends to effect a sale, transfer or disposition of the Property to a third party, prior to listing the property for sale or entering into a purchase and sale agreement, or otherwise taking any steps to consummate the sale of the property, an owner shall first give the City written notice of such intent (the "Notice of Intent") addressed to the City's Housing and Community Development Office. The City shall make the final determination whether or not a potential buyer is qualified, selection preference guidelines have been followed, and the maximum allowable sales price as determined in accordance with the calculation parameters determined by the City.

The Owner shall collect all necessary supporting documents for the City's final approval. The City will, at a minimum, monitor the process and review buyer qualifications, but may work collaboratively with Developers and Owners on marketing, selection, qualification, and orientation. All determinations regarding eligibility and sale price are subject to review and final approval by the City.

First Time Homebuyers

Eligible Households will be considered first time homebuyers if the following criteria are met:

1. None of the parties within the household have had an ownership interest in their home within the last three years;
2. A single parent who has owned a residence while married but no longer holds a financial interest in the home; or

Eligibility for First Time Homebuyer status will be limited to a one time only occurrence per household.

First time homebuyer must provide documentation showing that all relevant applicants within a household have completed a homebuyer education course prior to a Purchase and Sale agreement being signed and before the City may approve the household as being eligible to purchase the Workforce Unit. Exemptions may be made for households who can sufficiently demonstrate expertise in real estate. An example of sufficient expertise would be if a member of the Eligible Household currently works in a residential real estate related field such as a Real Estate Broker. Any exemption made must be approved by the City.

Enforcement

The Owner will be required to record the AHA and conditions contained therein and shall file a copy of the recorded Agreement which copy shows the usual recording date, with the Cumberland County Registry of Deeds. In the case of off-site Workforce Units, the Owner shall record the AHA in the chain of title for both properties. No occupancy permit shall be issued until complete certified copies of the AHA with any attachment thereto with the recording date(s) noted thereon, are filed with the County and suitable evidence provided to the City.



Without limitation on any other rights of the City, in the event there is a violation of any conditions contained within the AHA, the City may take any one or combination of the following steps to ensure compliance and these enforcement provisions shall be expressly authorized by and contained within the AHA:

- Revocation or the Project's approval, Building Permit, or Certificate of Occupancy;
- Modification of the AHA;
- Injunctive relief to enforce the terms of the AHA;
- Any and all legal expenses incurred by the City or aggrieved tenant(s); and
- A cash payment, as provided for in Division 30 related to fee-in lieu payments, pro-rated to the number of required affordable units, made to the City if the Owner is unable to provide Workforce Units for occupancy as described in the AHA.
- Payment of money damages to the City in an amount at least equal to and as much as double the difference in value of the maximum allowable sale price and the actual sale price.

The Owner may request a certificate from the City stating that the Owner is in compliance with the terms and conditions of the AHA, or stating non-compliance and the actions necessary to come into compliance. The City will execute and deliver such certificate within thirty (30) business days or receipt of a written request for such a certificate.

Cash Payment In Lieu of Affordable Units

All projects including ten (10) or more residential units 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 must comply with Section 14-487 of the Code. The projects will be required to provide 10% of the total number of units as Workforce housing as defined in Section 14-485 of the Code. Developers of such units are encouraged to provide Workforce Units on-site. However, in accordance with subsection 14-487(e)4, developers may choose to make a cash contribution to Portland's Housing Trust Fund.

The payment is the same for rental and homeownership projects. The fee for Workforce Units not provided shall be \$100,000 per unit, adjusted annually in the same manner as the fee under Division 29 for Housing Replacement. For projects that are building more than one building in phases, the fee-in lieu payment shall be paid proportionally to the project's phasing. The fee is calculated up to one tenth of a fractional unit. For example, if a project is proposing 25 units and wants to pay the fee for all units it would be required to pay for 2.5 units or \$250,000 at today's rates.

All money shall be due prior to the issuance of a Certificate of Occupancy or another payment method approved by the City.

Off-Site Units



A Developer may choose to satisfy the Workforce Unit requirements by providing these units off-site through the construction of new units, the restriction of existing market rate units, or the conversion of non-residential uses. In addition to the foregoing, all off-site units shall be consistent with the following provisions:

1. Be located within the same Census Block Group as the parcel from which the Project triggering the creation of Workforce Units is located or within 1,500 feet of the Project;
2. Be comparable or larger in size and bedroom count to the average units being created within the associated Project.
3. Be similar in quality to the units being created within the project and if needed, as determined by the City, shall be rehabbed to be similar in quality to a newly constructed unit.

The Developer shall determine the intent for full or partial off-site placement of Workforce Units prior to a project's approval by the City. The City shall not accept off-site units to be sufficient that are run down or show signs of substantial wear and deterioration. This includes heating systems, appliances, plumbing, roofing, siding, flooring, common areas, windows, landscaping/hardscape, electrical wiring and fixtures, kitchen/bath countertops, fixtures, and cabinets, bath/shower, or other typical elements of a unit or building that are nearing the end of their expected life cycle and may soon need replacement or maintenance. If other amenities such as air conditioning, dishwasher or washer and dryer are provided for the new market rate units than comparable amenities shall be provided for the off-site Workforce Units.

Off-site units shall be delivered safe in accordance with all federal, state and local environmental regulations pertaining to lead paint, asbestos, mold, radon, and any other hazardous conditions common to residential structures. All reasonable tests, including but not limited to lead paint tests and radon tests shall be completed prior to the sale or lease of a unit.

The total required number of Workforce Units off-site will be based on the total number of market rate units created within a project. Similar to the calculation for providing on-site Workforce Units the requirement will round down to the nearest whole number. For example, a project with 26 market rate units choosing to provide all Workforce Units off-site will be required to provide two (2) off-site units.

Developers of condominium projects providing off-site Workforce Units may choose to provide the off-site Workforce Units for rent at 100% AMI with City approval. The City will only grant approval if there is a management plan in place that provides for stable and capable long term management of the Workforce Units by the developer or agreed upon third party. These units will have the same restrictions typical of Workforce Rental Units.

Financing

Workforce Units shall not have a mortgage on a unit that contains the following:

1. A pre-pay penalty or a balloon payment



2. A reverse mortgage
3. An adjustable rate mortgage (ARM)
4. A co-signer
5. An interest only loan
6. The loan to value ratio exceeds 95% of the maximum allowable purchase price

Appeals

A Developer or Owner may appeal to the City Manager if they believe that City misinterpreted Division 30 or any subsequent agreements restricting the Workforce Units. All such appeals shall be made in writing and include a description of the City action which is being appealed and the grounds for the appeal.

Non-Eligibility/Disqualification

No employee, agent, stockholder, officer, director, servant, or family member of the Owner or its Management Company, or its employees, agents, or servants thereof, related either by blood, marriage, or operation of law may qualify for a Workforce Unit or receive any benefit related in any way to the administration or compliance with the AHA conditions contained therein.

Employees of the Planning Authority will not be eligible for a Workforce Unit in the City.

Waiver

The City reserves the right to waive or amend portions of these regulations on a case by case basis where an Owner is able to sufficiently demonstrate that the need for a waiver is due to the unique circumstances of the property (e.g. in order to make Workforce Units similar in design or size to market rate units) or due to unique physical constraints of the property. The applicant shall bear the burden of presenting substantial evidence to support the grant of a waiver from any portion of these regulations.

Waivers shall not be granted that will have the effect of removing or reducing the minimum of 10% of the total units proposed as Workforce Units available, altering the income limits on eligible households, increasing the maximum allowable sale price or rental rate, or decreasing any fee owed outside of what is stipulated in the above regulations.

Waivers shall be determined by the City's Planning Authority. Owners may appeal the Planning Authority's decision regarding waivers to the City Manager. All such appeals shall be made in writing and include a description of the City action which is being appealed and the grounds for the appeal.



Regulations for Owners of Workforce Homeownership Units

Household Income Limits

In accordance with Division 30 of the City's Zoning Ordinance, the maximum allowable sale prices for Workforce Units will be restricted to households at or below 120% of the area median income (AMI). In order to most effectively target this income level, and based on national best practices, these calculations allow for an "affordability window" of between 100% and 120% AMI. The City will reference Area Median Income figures published annually by HUD for the Portland Metropolitan Statistical Area (MSA) or other income limits as deemed reasonable by the City. The City will make available on its website a list of income limits by household size. If at a time in the future HUD no longer provides these annual figures, the City will identify another similar method of determining income guidelines for affordability.

Eligible Households for Workforce Homeownership Units

At the time of sale, a buyer must be a member(s) of an Eligible Household as defined within the Background and Definition section of the City's Inclusionary Zoning Guidelines. The Household must occupy the Workforce Homeownership Unit (Workforce Unit) as its principal residence. To purchase a Workforce Unit an Eligible Household must be comprised of permanent residents of the United States. The Intent is to limit the risk of a loss of the Unit's affordability restrictions due to foreclosure of a household no longer able to reside in the United States. Household size/composition upon the unit's sale should be appropriate to the size of the unit as outlined in the chart below. For the qualification of households by unit size, the head of the household and spouse/partner are assumed to share a bedroom. Two children whose ages are not excessively disparate, may share a bedroom. Legal custody is required for households including one or more minor children. There will be no fewer than one, nor more than two persons per bedroom.

The City will consider households eligible based on their adjusted gross income. The City will use a process similar to what HUD recommends for the HOME program to determine adjusted gross income or another method as deemed reasonable by the City. The Owner or their representative will collect and compile all of the relevant paperwork needed to assess a household's eligibility. Verification will require sufficient proof of household size and income in the form of mortgage pre-approval letters, official tax statements, W-2 forms, pay stubs, credit reports, bank statements, birth certificates, and any other reasonable documents requested by the City to aid in their efforts to verify whether or not a household is eligible. 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 closing. The City reserves the right to request proof of income for the last three years from an applicant. The City may request additional information if needed.



The chart below indicates the minimum household size for each unit type based on bedroom count.

	Studio/One-Bed	Two-Bed	Three-Bed	Four-Bed
Minimum Household Size By Bedroom	1	2	3	4

Workforce Units will also be subject to maximum household sizes based on bedroom counts. The following chart outlines the maximum persons allowable per bedroom assuming the occupants meet all other requirements related to qualifications for determining a household such as age of children sharing bedrooms.

	Studio/One-Bed	Two-Bed	Three-Bed	Four-Bed
Maximum Household Size By Bedroom	2	4	6	8

Eligible Households may not qualify if any member of the household owns other residential real estate at the time of application or sale.

The City reserves the right to perform an asset test 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, money market accounts, certificates of deposit (CD's) or other financial instruments. The City may request documentation for the three most recent years to help determine a household's income.

Closing costs and a down payment of up to 20% of the sale price may be gifted to an Eligible Household as outlined in the Workforce Housing Background and Definitions Guidelines.

Maximum Allowable Sale Price

The calculation of the maximum allowable sales price will be determined by the City. The price will in part be based on the minimum number of bedrooms in each Workforce Unit for sale as outlined in the chart below:



	Studio/One-Bed	Two-Bed	Three-Bed	Four-Bed
Max Sale Price Basis -Household Size	1	2	3	4

For example, the maximum allowable sale price of a two bedroom Workforce Unit will be based on what is affordable to a two (2) person household. A larger household of four (4) persons meeting the income qualifications for their household size would still be able to purchase this unit but the maximum allowable sale price will be calculated based on a two (2) person household. It is important to be clear that this is to calculate the maximum allowable sale price of a Workforce Unit and that units may be sold at lower prices depending on the market, location, and condition of a unit.

The maximum allowable sale price at the initial sale of a Workforce Unit and for any subsequent sales will be based on the following calculation:

- 1) Begin by calculating 30% of the gross monthly income for a household earning ~~120%~~110% AMI as appropriate for the minimum household size for each Workforce Unit by bedroom type (this pricing allows room for households up to 120% of AMI to be able to afford the unit with a reasonable down payment).
 - o $(\text{Household's } \del{120}\u{110}\% \text{ AMI} \times 0.30) / 12 = \text{monthly income available for housing expenses.}$
- 2) Housing expenses available for studios will be calculated at 85% of the income available for a one person household using the following formula:
 - o $((\text{Household's } \del{120}\u{110}\% \text{ AMI} \times 0.30) \times 0.85) / 12 = \text{monthly income available for housing expenses of a studio unit.}$
- 3) That portion of monthly income may be attributed to mortgage payments less other housing related expenses such as real estate taxes, mortgage insurance, condominium/HOA fees, and insurance.
 - o Mortgage insurance will be estimated similar to current rates utilized by the Federal Housing Administration (FHA) or another reasonable method as determined by the City. Currently, for 30 year mortgages of less than \$625,000 with Loan to Value (LTV) ratios equal to or less than 95%, the FHA utilizes a rate of 80 basis points on the mortgaged amount. The actual rate used in the calculation will be determined at the time the unit is marketed.
- 4) The sale price will then be based off a 30 year fixed rate mortgage with a 5% down payment.
 - o It will be allowable for qualified buyers to offer a larger down payment but a



down payment larger than 5% will not increase the maximum allowable sale price of a Workforce Unit.

- 5) Interest rates for the calculation will be the average national mortgage rate over the past thirteen years as determined by the Freddie Mac Primary Mortgage Market Survey or another source as determined reasonable by the City. The interest rate for the calculation will be determined at the time the unit is marketed.

Purchase price limits establish maximum allowable sale prices. An Eligible Household's financial situation will determine the mortgage amount that can be borrowed. This amount may be more or less than the maximum allowable sales price of a particular Workforce Unit. However, at no time shall a Workforce Unit be sold for greater than the maximum allowable sale price as determined by the City.

Condominium/HOA Fees

If the Developer is setting up a new condominium trust or homeownership association (HOA), then the Developer shall present to the City a draft condominium/HOA budget and related governing documents. The City may request quotes and/or justification for costs, including replacement reserves, insurance, water and sewer, utilities, management fees, and other services. The City will have final approval of the initial condominium/HOA fee to ensure that a reasonable front-end calculation of cost in setting initial fees for a Project.

The condominium/HOA fee will be shared proportionately between units based on the City's tax assessment for the value of the units. If assessed values are not available at the time of initial sale of the units than initial sale prices will be used to determine the appropriate share of costs. Workforce Units' tax assessments by the City will take into consideration the Unit's restrictions and assess the Unit's value accordingly. Voting rights within the association will be no more or less than one vote per unit and will not be based on the value of paid fees or other metric as allowable by state law. Condominium/HOA fees for Workforce Units may not increase more than 10% in a single year or 25% in any three year period without a supermajority vote gaining 100% support of the association.

The City shall have a right of first refusal if a Workforce Unit is forced to sell due to increased fees or has become delinquent in its payments and is in risk of foreclosure or any other legal threats to the Unit's affordability restrictions. The City shall also have the option of using City funds to support Workforce Units facing large special assessments that may pose a risk to the Workforce Household's ability to maintain their unit's affordability.



Alterations to a Workforce Unit's Floorplan

The basic floor plan of a Workforce Unit may not be altered without the written approval of the City. Workforce Units shall not decrease in size or total number of bedrooms.

Right of First Refusal

The City of Portland shall have the right of first refusal to purchase any Workforce Unit that is in jeopardy of losing its affordability restrictions due to foreclosure, delinquency of condominium fee payments, or any other cause outside of the agreed upon term of restriction. The City's Right of First Refusal is not intended to infringe upon the ability of a mortgage lender to recapture any money owed by the Workforce Unit's Owner. The intent is to ensure affordability of the unit for Eligible Households.

Resale of Workforce Units

Once an Owner decides that they would like to sell a Workforce Unit they will need to notify the City in writing. The City will then confirm the Unit's maximum allowable sales price. The City shall have the opportunity to list the property on its website for a minimum of 30 days during the marketing process to solicit interest from potential Eligible Households. The City will forward any inquiries to the Owner or their representative.

If multiple offers are received during the marketing process the preferred households identified by the City will be given preference to purchase the Workforce Unit. The Owner and/or their agent shall keep records of all interested parties, the parties' eligibility, preference status, offers received, and any subsequent negotiations. The Owner and/or agent will provide these records to the City as requested.

In the event that the Owner is unable to find a ready, willing, and able Eligible Household for the property after reasonable efforts have been made to market the property for at least 180 days, then the Owner may notify the City in writing that it wants to market the unit to non-eligible households. The City will be given the option to purchase the Property after the 180 day period on the terms set forth below:

- 1) The Owner must establish, to the City's reasonable satisfaction that the Owner made good faith efforts to market the Property for the entire 180 day period for sale to Eligible Households at a price not in excess of the maximum allowable sales price but did not receive any reasonable offers from Eligible Households. The City shall determine if reasonable efforts have been made within ten (10) working days after the last day of the 180 day period and once the City has received to its satisfaction all relative information from the Owner related to its marketing efforts and interaction with interested parties.
- 2) Upon a determination by the City of such marketing efforts, the City has thirty (60) days



to decide if it will exercise its option to purchase the Property for the maximum allowable sales price.

- 3) If the City decides to exercise its option to purchase, it shall provide a notice of exercise of the option (the "Notice to Exercise") to the Owner. Failure to provide a Notice to Exercise within thirty (60) days of the determination that good faith efforts have been made to market the Property to Eligible Households shall cause the City's option to purchase to expire.
- 4) The City shall consummate its purchase of the Property within sixty (90) days of the date of service of the Notice to Exercise (the "City Closing Period"). The Owner shall cooperate fully with the City in the City's efforts to acquire the Property and shall take all reasonable steps necessary to clear any title defects. If the City fails to close on the Property within the City Closing Period for a reason other than liens voluntarily placed on the Property by the Owner, then the Owner shall immediately be free to sell the Property to a non-Eligible Household.

If the City decides not to exercise its option to purchase (including as a result of a failure to give a Notice of Exercise), the Owner shall be free to sell the Property to a non-Eligible Household at any such agreed sale price **provided however**, that to the extent the agreed sale price exceeds the maximum allowable sale price, as determined by the City, then any amount between the actual sale price and the maximum allowable sale price (the "Excess") shall be paid to the City at the time of the closing on the sale of the Property, and such Excess is to be paid into the City's Housing Trust. Upon payment of the Excess, if any, the Owner and the Owner's heirs, successors and assigns, shall thereafter be free to sell the Property free of the terms and conditions of the AHA, which shall be deemed terminated.

If the Owner is able and willing to sell their Workforce Unit to a non-Eligible Household the sale must be made through an arm's length arrangement. The Owner may not sell the Unit to an employee, agent, stockholder, officer, director, servant, or family member of the Owner or its Management Company, or its employees, agents, or servants thereof, related either by blood, marriage, or operation of law.

At the request of the Owner, and provided there has been full compliance by the Owner with the terms of the AHA, the City shall execute a written statement in recordable form acknowledging such compliance, including compliance with a sale of the Property which results in the release of the Owner and the Property from the terms of the AHA.

Household Preference

Preference for Workforce Units shall be given, to the extent permitted under law to Eligible Households, in the following order:

- 1) First time homebuyer



- 2) Current residents of the City who have lived in Portland as their primary residence for the past two years
- 3) Previous residents of the City who were displaced within the last 12 months prior to the Workforce Unit becoming available
- 4) Persons employed full time by the City
- 5) All others

The applicant for a Workforce Unit will be responsible for documenting their preference status under any of the above noted categories. Documentation may include voter registration, utility bills, confirmed leases, bank statements, tax returns, insurance statements, and other reasonable documents as requested by the City or Owner to demonstrate preference status. Households wishing to be considered as a preferred applicant must also have a pre-approval letter from a lending institution demonstrating their ability to qualify for any necessary loan.

Household preference does not preclude Owners from selling to non-preference applicants assuming applicants meet the necessary eligibility requirements and there are more Workforce Units available than preference applicants. Other preference categories may be added to specific projects or to the City's standards at a later date as appropriate.

Marketing / Selection Process

Unless otherwise agreed to with the City, the following system will be followed. At least 30 days prior to initial marketing, the Owner shall provide written notice to the City of the expected start of marketing process and occupancy dates of the designated Workforce Units. The Owner will place an advertisement, approved by the City, in one or more newspapers designated by the City. Interested parties will be given sufficient time to request and return a preliminary application. The Owner will inform the City of any interest from Eligible Households that it receives. From the beginning of the marketing process the City will 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 Owner or their designated representative. The Owner should also reach out to local groups and non-profits who may have connections to interested Eligible Households.

The Owner shall 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 each instance that an Owner intends to effect a sale, transfer or disposition of the Property to a third party, then prior to listing the property for sale or entering into a purchase and sale agreement, or otherwise taking any steps to consummate the sale of the property, an owner



shall first give the City written notice of such intent (the “Notice of Intent”) addressed to the City’s Housing and Community Development Office. The City shall make the final determination whether or not a potential buyer is qualified, selection preference guidelines have been followed, and the maximum allowable sales price as determined in accordance with the calculation parameters determined by the City.

The Owner shall collect all necessary supporting documents for the City’s final approval. The City will, at a minimum, monitor the process and review buyer qualifications, but may work collaboratively with Developers and Owners on marketing, selection, qualification, and orientation. The City will provide final approval of whether or not a household meets the eligibility requirements.

First Time Homebuyers

Eligible Households will be considered first time homebuyers if the following criteria are met:

1. None of the parties within the household have had an ownership interest in their home within the last three years;
2. A single parent who has owned a residence while married but no longer holds a financial interest in the home; or

Eligibility for First Time Homebuyer status will be limited to a one time only occurrence per household.

First time homebuyer must provide documentation showing that all relevant applicants within a household have completed a homebuyer education course prior to a Purchase and Sale agreement being signed and before the City may approve the household as being eligible to purchase the Workforce Unit. Exemptions may be made for households who can sufficiently demonstrate expertise in real estate. An example of sufficient expertise would be if a member of the Eligible Household currently works in a residential real estate related field such as a Real Estate Broker. Any exemption made must be approved by the City.

Affordable Housing Agreement

The buyer of each Workforce Unit will be required to sign and record in the Cumberland County Registry of Deeds an Affordable Housing Agreement (AHA) with the City and to include the affordability restrictions as a covenant to the project’s deed. The Affordable Housing Agreement shall be referenced directly in the property’s deed unless prohibited by federal, state, or local law. In order to guarantee affordability, this recorded covenant will limit increases in sales price according to the calculation defined by the City and the Eligible Household requirements as they relate to increases in median income. It will limit the incomes of subsequent buyers to the same income limits initially applied. It will also provide a right of



first refusal and other purchase rights to the City or its designee (e.g. another Eligible Household, or a nonprofit corporation).

At the time of sale, the Workforce Unit must be the Eligible Household's primary residence. The Unit may not be rented out for short or long term periods to other households.

Non-Eligibility/Disqualification

No employee, agent, stockholder, officer, director, servant, or family member of the Owner or its Management Company, or its employees, agents, or servants thereof, related either by blood, marriage, or operation of law may qualify for a Workforce Unit or receive any benefit related in any way to the administration or compliance with the AHA conditions contained therein.

Employees of the Planning Authority will not be eligible for a Workforce Unit in the City.

Financing

Workforce Units shall not have a mortgage on a unit that contains the following:

1. A pre-pay penalty or a balloon payment
2. A reverse mortgage
3. An adjustable rate mortgage (ARM)
4. A co-signer
5. An interest only loan
6. The loan to value ratio exceeds 95% of the maximum allowable purchase price

Refinancing

The Owner must get the City's approval to refinance the first mortgage or get an additional mortgage for a Workforce Unit. Refinancing must follow the same limitations outlined above for Financing. Owners may not refinance their unit for a value greater than 95% of the maximum allowable sale price at the time of refinancing as determined by the City. Under no conditions will the long term affordability or City's right of first refusal be compromised as a result of refinancing.

Transfer to Owner's Heirs

If the Owner should die still owning the Workforce Unit, then upon receipt of notice from the personal representative of the decedent's estate given within ninety (90) days of the death of such Owner (or the last surviving co-owner if the Property was owned in joint tenancy), the City



shall, except for good cause shown, consent to a transfer of the Property to one or more of the following:

1. The spouse of the deceased Owner (in cases where the spouse was not a joint tenant with the Owner); or
2. The child or children of the deceased Owner; or
3. Member(s) of the deceased Owner's household who have resided in the Property for at least three years prior to the Owner's death.

Any subsequent transfer by a transferee under 1, 2, or 3, above, shall be subject to the terms of this Agreement.

Enforcement

The Owner will be required to record the AHA and conditions contained therein and shall file a copy of the recorded Agreement which copy shows the usual recording date, with the Cumberland County Registry of Deeds. In the case of off-site Workforce Units, the Owner shall record the AHA in the chain of title for both properties. No occupancy permit shall be issued until complete certified copies of the AHA with any attachment thereto with the recording date(s) noted thereon, are filed with the County and suitable evidence provided to the City.

Without limitation on any other rights of the City, in the event there is a violation of any conditions contained within the AHA, the City may take any one or combination of the following steps to ensure compliance and these enforcement provisions shall be expressly authorized by and contained within the AHA:

- Revocation or the Project's approval, Building Permit, or Certificate of Occupancy;
- Modification of the AHA;
- Injunctive relief to enforce the terms of the AHA;
- Any and all legal expenses incurred by the City or aggrieved tenant(s); and
- A cash payment, as provided for in Division 30 related to fee-in lieu payments, pro-rated to the number of required affordable units, made to the City if the Owner is unable to provide Workforce Units for occupancy as described in the AHA.
- Payment of money damages to the City in an amount at least equal to and as much as double the difference in value of the maximum allowable sale price and the actual sale price.

The Owner may request a certificate from the City stating that the Owner is in compliance with the terms and conditions of the AHA, or stating non-compliance and the actions necessary to come into compliance. The City will execute and deliver such certificate within thirty (30) business days or receipt of a written request for such a certificate.

**Appeals**

A Developer or Owner may appeal to the City Manager if they believe that City misinterpreted Division 30 or any subsequent agreements restricting the Workforce Units. All such appeals shall be made in writing and include a description of the City action which is being appealed and the grounds for the appeal.

Waiver

The City reserves the right to waive or amend portions of these regulations on a case by case basis where an Owner is able to sufficiently demonstrate that the need for a waiver is due to the unique circumstances of the property (e.g. in order to make Workforce Units similar in design or size to market rate units) or due to unique physical constraints of the property. The applicant shall bear the burden of presenting substantial evidence to support the grant of a waiver from any portion of these regulations.

Waivers shall not be granted that will have the effect of removing or reducing the minimum of 10% of the total units proposed as Workforce Units available, altering the income limits on eligible households, increasing the maximum allowable sale price or rental rate, or decreasing any fee owed outside of what is stipulated in the above regulations.

Waivers shall be determined by the City's Planning Authority. Owners may appeal the Planning Authority's decision regarding waivers to the City Manager. All such appeals shall be made in writing and include a description of the City action which is being appealed and the grounds for the appeal.



Memorandum

Planning and Urban Development Department

Planning Division

To: Sean Dundon, Chair and Members of the Portland Planning Board
From: Matthew Grooms, Planner
Date: June 8, 2018
Re: Twelve-Unit Mixed-Use Development, Estelle Estates, LLC
Project #: 000012-2018 CBL: 344-E-006
Meeting Date: June 12, 2018

I. INTRODUCTION

Estelle Estates, LLC has submitted a Level III Site Plan, Subdivision and Conditional Use application for a new mixed-use development with twelve residential condominiums and 3,200 square feet of office space on a 1.27-acre parcel located at 300 Allen Avenue within the North Deering Neighborhood. This property falls within both the R-5 Residential and RP Residential Professional zones. The surrounding context consists of predominantly single-family and multi-family housing (located to the north, south and west) and commercial property, located to the east. The proposed development involves demolition of an existing single-family structure and construction of one new two-story office building, three duplex structures, two triplex structures and 47 off-street parking spaces.



Figure 1: Approximate location of Development Site

The Planning Board will hold a workshop on this proposal which is subject to the site plan, subdivision, conditional use and inclusionary zoning standards.

A total of 344 notices were sent to property owners within 500 feet of the site and a legal ad ran in the June 4th and 5th, 2018 editions of the Portland Press Herald.

Applicant: Peter Bouchard, ESTELLE ESTATES, LLC

Consultants: Doug Reynolds, P.E., Gorrill Palmer; Rex J. Croteau, Titcomb Associates

II. REQUIRED REVIEWS

<i>Waiver Requests</i>	<i>Applicable Standards</i>
Preservation of Significant Natural Features – Applicant is seeking to infill 9,159 square feet of scrub shrub wetland, and has applied for a Tier I application with Maine DEP. <u>Staff Comments:</u> The review staff is recommending that the applicant reduce wetland impacts to the extent possible and have specifically recommended removing some of the on-site parking spaces.	Site Plan Standard, <i>Section 14-526(b)(1)</i> , requiring that significant natural features be preserved through incorporation into site design.
<i>Review</i>	<i>Applicable Standards</i>
Site Plan	<i>Section 14-526</i>
Subdivision	<i>Section 14-497</i>

III. PROJECT DATA

Existing Zoning	R-5 Residential, R-P Residence Professional
Existing Use	Vacant/single-family
Proposed Use	Mixed-Use w/ 12 residential units and 3,200 sf of office space

- Bedroom Mix	12 two-bedroom units		
Parcel Size	55,342 SF (1.27 acres)		
	<i>Existing</i>	<i>Proposed</i>	<i>Net Change</i>
Building Footprint	1,800 SF	9,744 SF	7,944 SF
Building Floor Area	3,600 SF	17,888 SF	14,288 SF
Impervious Surface Area	2,700 SF	28,066 SF	25,366 SF
Parking Spaces	2	36	34
Bicycle Parking Spaces	0	14	14
Estimated Cost of Project	\$500,000		

IV. EXISTING CONDITIONS

The proposed project site is located on Allen Avenue between Pennell Avenue and Washington Avenue and at present consists of three separate lots, one of which is occupied by a single-family structure with garage and others being undeveloped. An existing bituminous sidewalk runs along the entire length of frontage for all three properties.



Figure 2: Existing conditions. Rise in elevation shows vegetated soil stockpile. Structure closest in view is to be demolished.

The easterly and largest of the three lots being developed is 39,330 square feet in area and while undeveloped was recently cleared. This lot features a maximum elevation of approximately 90' feet located atop a vegetated soil stockpile at the front of the site. This stockpile features steep slopes of 33% down to a minimum elevation of 80' feet. To the rear of this hill, emergent wetlands occupy a significant portion of the site, totaling 9,159 square feet. Mature tree cover can be found around the perimeter of this parcel.

The central lot is 14,213 square feet in area and contains a single-family structure with associated two-car garage. The rear portion of the lot contains additional wetlands with more limited topographical variation, gently sloping from between 80' feet and 82' feet in elevation.

The westerly lot is 4,642 square feet in area, and is currently undeveloped, providing a grassed buffer between the property located at 278 Allen Avenue and the existing single-family structure located at 292 Allen Avenue, proposed for demolition. As with the adjacent lot, the topographical variations are minor, ranging from a minimum of 82' feet and a maximum of 84' feet. Some mature vegetation can be found at the rear of the lot.

V. PROPOSED DEVELOPMENT

The project is proposed as a mixed-use development with twelve two-bedroom condominiums located in three three-story modular duplex buildings and two three-story modular triplex structures as well as a one and a half-story modular office building. According to the application, all proposed buildings will be less than 35' feet in height. Each residential unit will feature a one-car garage located at ground level within the principal buildings, and additional parking space within unit driveways. Eighteen (18) additional parking spaces, including one (1) handicap parking space, are located towards the rear of the site within two separate parking areas that are connected to the proposed buildings via 5' foot bituminous walkways. Individual units that front Allen Avenue also feature bituminous walkways that connect with the public

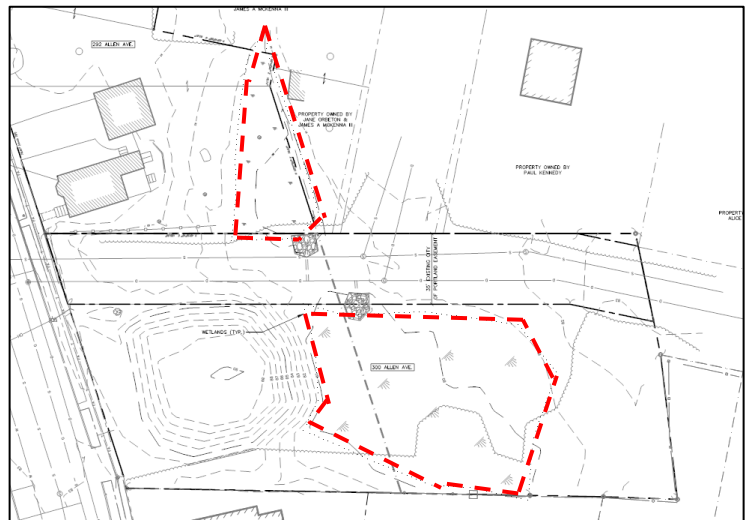


Figure 3: Approximate location of wetlands shown in red

sidewalk along Allen Avenue.

Due to the extensive grade differential present at 300 Allen Avenue, that portion of the site will be extensively regraded, with a finished floor elevation of between 84.2' feet and 85.5' feet. Around the perimeter of the easterly lot, the slope will be stabilized using rip-rap in several locations and will also be the location for proposed stormwater treatment systems.

In regards to stormwater management, each of the proposed buildings will feature roof dripline filtration system that will feed subcatchment areas prior to being treated within one of four grassed underdrained soil filters. The site will also feature a bioretention pond as a separate stormwater BMP, that will be located between the proposed office building and Allen Avenue. Following treatment, runoff will discharge into the existing stormdrain located beneath Allen Avenue via a new stormdrain connection.

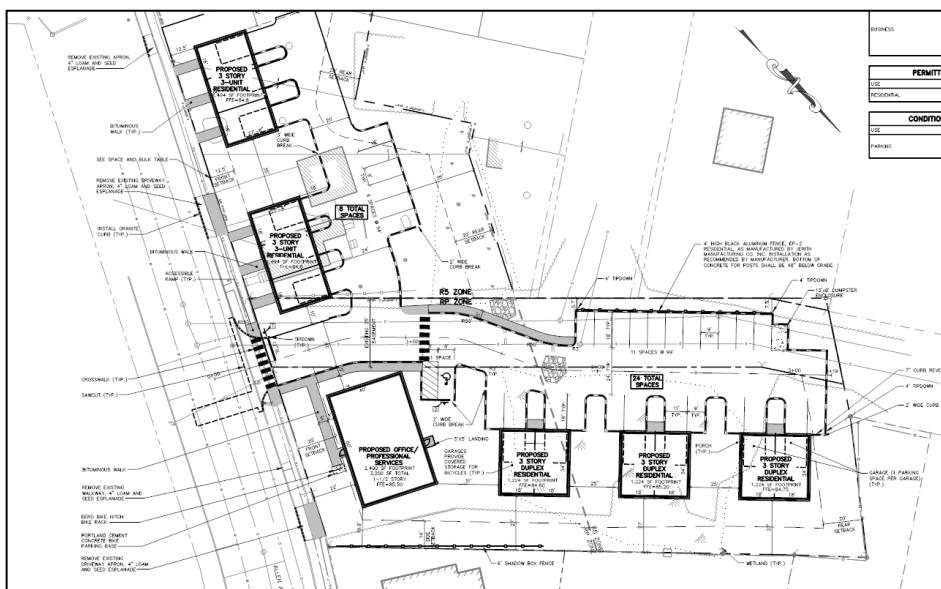


Figure 4: Proposed site plan

The site will be serviced by a 2" water line and 6" sanitary sewer connection. Electrical service will be located underground although the utility infrastructure along Allen Avenue is proposed to remain pole-mounted. Other utility connections include gas and then telephone/cable.

Other site improvements include the removal of one existing curb cut and replacement with sidewalk, installation of granite curbing, installation of a mixture of trees, shrubs, ornamental grasses and perennials, located predominately along the Allen Avenue frontage and along the westerly property boundary. Parking lot trees and other plantings are provided as well, with limited buffer plantings at the rear of the project site. Five pole mounted light fixtures are also proposed in order to illuminate the project site.

VI. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

As of the writing of this report, one (1) written comment have been received by the Planning Division. The concerns raised by the abutter were primarily focused on the height of the proposed buildings and screening of the development from adjacent properties. In preliminary review comments, the staff asked that additional buffer plantings be provided in accordance with city's standards for site buffering. The staff have also requested updated building elevations that clearly indicate the height of buildings as measured from average grade.

The required neighborhood meeting for this project has not yet been held, and the applicant has been notified that this will be required prior to the public hearing.

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

a. The applicant has provided a purchase and sale agreement and deed of sale for the purchase of three parcels, recorded at the Cumberland County Registry of Deeds (Book 34605, Page 339). The applicant is also seeking to finalize a land swap of 897 square feet, that would be transferred to the property at 278 Allen Avenue. This land transfer has not occurred as of the writing of this memo.

b. As evidence to demonstrate sufficient financial and technical capacity, the applicant has provided a letter from Barton Mortgage Corporation stating that the applicant has sufficient financial and technical capacity to complete the project. The anticipated cost of the project is \$500,000. (Attachment E)

VIII. ZONING ANALYSIS

The proposed project lies partially within the R-P Residence Professional zone and partially within the R-5 Residential zone, with the office component being located entirely within the R-P zone. The residential structures are considered a multiplex development and are permitted by right within both the R-5 and R-P zones.

In terms of dimensional requirements, the project appears to meet the majority of R-5 and R-P standards for setbacks, building height, lot size, lot width, street frontage, units per building and impervious surface ratio. The staff did identify that the methodology used to determine the front yard setback, using the average setback of the two adjacent lots was incorrectly applied, and has asked that revised calculations be provided, utilizing the properties on either side of the proposed development. Updated building elevations have been requested so as to determine height compliance and in the event that the land-swap is not finalized, the minimum rear and side yard setbacks would also be out of compliance.



Figure 5: Location of property with zoning context

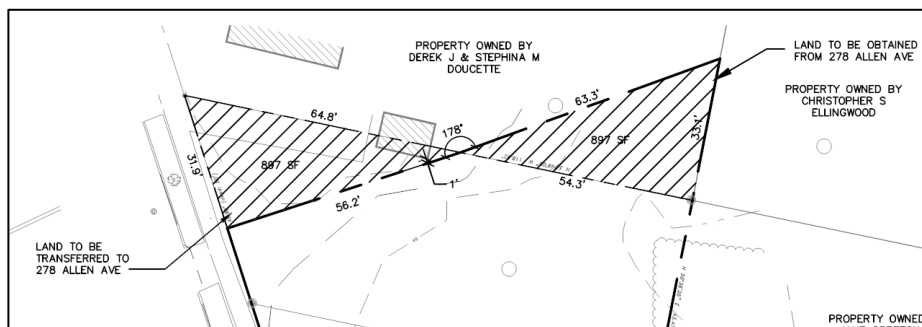


Figure 6: Proposed land-swap of 897 square feet. (Note - Land Swap not yet finalized)

The proposed uses require a total of thirty-two (32) parking spaces, eight (8) for the proposed office use and twenty-four (24) for the proposed residential uses. A total of forty-seven (47) parking spaces are being provided, exceeding the required amount by greater than 10%. As a result, the staff is requesting a written narrative from the applicant explaining the need for parking beyond what is required. Given on-site wetland impacts, the staff have also

requested that the applicant consider reducing the number of parking spaces so as to reduce wetland impacts.

Off-Street Parking Conditional Use

The use 'off-street parking', as a stand-alone use, is identified as a conditional use for the R-5 Residential zone. The project proposes a total of twelve (12) off-street parking spaces dedicated to the office use, all but one (1) of which are located within the R-5 zone. In reviewing this proposal, the zoning administrator determined that a conditional use application would be required to allow for this configuration. The proposal was reviewed against the general standards for conditional use, listed under Section 14-474. These standards relate to integration of a conditional use with other permitted uses, and considers traffic impacts, screening and negative externalities such as odor, glare, noise and other such characteristics of the use. Based upon these criteria, the staff finds the proposed conditional use to be compliant with the general conditional use standards.

IX. DEVELOPMENT REVIEW

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

The applicant has not submitted a recording plat. A draft plat will be required as part of the final plan submission for review by DPW and Corporation Counsel. If approved, the plat shall list any waivers approved by the Planning Board and shall be recorded within a period of two years from the date of approval.

B. SUBDIVISION (Section 14-496)

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

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)
Lauren Swett, P.E. with Woodard and Curran Engineering, has reviewed the erosion and sediment control plans and details, and inspection and maintenance requirements and offers the following comment (Attachment 1):
 - The applicant should note a location for snow storage or provide a plan for snow management. The snow storage location should be sited outside of existing and proposed drainage courses.
2. Sufficient Water Available (Section 14-497 (a) 2 and 3)
The project will be served by a new 2-inch domestic service from the existing water main in Allen Avenue. An 'Ability to Serve' letter shall be provided by the Portland Water District.
3. Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)
The proposed project closes existing curb-cuts located on the property and relocates the curb cut and driveway to the easterly lot, with a 24' foot driveway for two-way traffic. The proposed driveway is located in the immediate vicinity of where Allen Avenue transitions from a three-lane street to a two-lane street. Tom Errico, P.E. with T.Y. Lin reviewed the proposal's details including access, parking, construction management plan and vehicle circulation, and has provided the following comments (Attachment 1):
 - The applicant should provide an opinion on the location of the driveway as it relates to the Allen Avenue cross-section and the transition from a two-lane section to a three-lane section.
 - Sight distance from the driveway shall be provided.
 - Crash data for Allen Avenue in the vicinity of the project should be provided with a safety analysis of conditions.
 - A trip generation estimate shall be provided.
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 is proposing a new 6" sanitary sewer connection for the site and has submitted a wastewater capacity application to the Water Resources Division of DPW. That application is currently under review.
5. Comprehensive Plan (Section 14-497 (a) 9)
The development has been designed to be consistent with the City's Master Plan, adopted in June of 2017.

B. SITE PLAN STANDARDS (Section 14-526)

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

1. Transportation Standards
 - a. Impact on Surrounding Street Systems and Access and Circulation- Tom Errico, P.E. with T.Y. Lin, has reviewed the proposal for compliance with city standards related to access and circulation and has provided the following comments:
 - A pedestrian sidewalk shall be provided between the Duplex buildings and Allen Avenue
 - The parking layout generally meets City Technical standards with the exception of the parking aisle width, where a 20-foot width is provided. The applicant should formally request a waiver and provide supporting documentation.
 - b. Sidewalks
The applicant is proposing to remove existing curb cuts along their property's frontage and reconstruct those portions of the bituminous sidewalk. The project will also feature individual unit connections out to the public sidewalk and an internal pedestrian pathway system. As noted above under the previous standard, the staff are asking that an internal pathway connect all proposed buildings and parking areas to Allen Avenue. We have also requested that the applicant provide a pedestrian connection through their site to Cypress Street, over the existing but undeveloped right-of-way for Hennessy Street.
 - c. Public Transit Access

The public transit requirements do not apply to this project.

d. Parking

Forty-Seven (47) parking spaces are being proposed. These include spaces that are located within garages, individual unit driveways and separated parking areas. Per Division 20, the City's off-street parking standards, the project is required to provide parking at a ratio of two (2) spaces per residential unit, and one (1) space per 400 square feet of office space for a total requirement of twenty-four (24) and eight (8) respectively, or thirty-two (32) total. The staff have requested that written justification be provided for exceeding this amount and have asked that the applicant consider reducing on-site parking to mitigate wetland impacts.

Tom Errico, P.E. with T.Y. Lin, has reviewed the proposal for compliance with city standards related to parking and has provided the following comments:

- The applicant shall provide a parking analysis that documents parking demand. Shared parking should be a consideration.

e. Bicycle Parking

The proposal includes space for bicycle storage within each residential unit and exterior bicycle parking accommodations at the proposed office building. Proposed bicycle parking meets site plan standards.

2. Environmental Quality Standards

f. Preservation of Significant Natural Features

The development site features scrub shrub/emergent marsh wetlands that are located in the center of and along the western boundary of this site. No vernal pools or rare or unusual plant or animal species were observed at the site. As a result of the location of these wetlands and general site constraints, the applicant has indicated that it is impossible to avoid wetland impacts. The project proposal impacts 9,159 square feet of wetland, requiring the applicant to apply for a Tier I NRPA permit through Maine DEP (Attachment L). The staff, in reviewing this application, have asked that the applicant further reduce wetland impacts to the extent possible, suggesting reductions in off-street parking as one possible approach.

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

- Applicant has submitted a NRPA permit application to the Maine DEP for wetland impacts. Copies of correspondence that results in changes to the project, and copies of the final permit should be provide to the City when available. A copy of the Maine Construction General Permit Notice of Intent should also be provided when available

g. Landscaping and Landscape Preservation

A landscaping plan was submitted as part of the application, showing a mixture of trees, shrubs, perennials and ornamental grasses along the property's frontage, within proposed parking areas, along the westerly property boundary and in the rear of the site as buffer plantings. The staff have requested that additional efforts be made to screen the proposed development from adjacent residential properties, and that plans be updated to show compliance with city standards related to landscape preservation and protection during construction.

In regards to street trees, a total of twenty-four (24) are required along the property's frontage. A total of ten (10) are illustrated on the proposed landscape plan. The applicant shall be required to either provide additional trees or an acceptable equivalent as identified in the site plan ordinance. This shall be made a condition of approval unless met prior to the public hearing.

h. Water Quality, Storm Water Management and Erosion Control

Once developed, this site will feature 28,066 square feet of impervious surface and is subject to the Basic, General, Flooding and Urban Impaired Stream standards of Maine DEP Chapter 500 for stormwater quality and quantity control. The proposed treatment system includes on-site wet pond, a series of grassed underdrained soil filters, roof dripline filtration systems and vegetated buffers and

swales which provide on-site infiltration areas. Once treated, remaining stormwater will discharge into the existing stormdrain beneath Allen Avenue.

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

- Stormwater Management – The proposed condition peak flow rates of the 2 and 10 year storm events exceed the existing conditions peak flow rates at Point of Interest #2. We agree that the proposed total flow and the proposed increase in these storm events is minor. This point of interest is for the connection of new stormdrain to an existing stormdrain system. The applicant should confirm that there are no existing condition or capacity issues with that system.
- Stormwater Management – The HydroCAD model uses very small time of concentration values that are less than the 5-6 minute minimum typically utilized for the modeling methods. The TC values may not have a significant impact on the overall modeling results, but please clarify the TC values and either adjust or provide justification for the small values.
- Stormwater Management – The total area of the pre-development model (140,820 SF) is not equal to the total area of the post-development model (137,344 SF). The applicant should evaluate the total watershed areas and provide a model with equal pre- and post-development areas.
- Stormwater Management – The applicant provides three ponds, identified as P14, P15 and P17 in the model, which receive no inflow or discharge any outflow. These ponds are not identified on the Routing diagram or in the report. The applicant should clarify the purpose of these pond notes.
- Stormwater Management – The stormwater management plan should provide a stormwater inspection and maintenance plan and a stormwater maintenance agreement developed in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances.

3. Public Infrastructure and Community Safety Standards

i. Public Safety and Fire Prevention

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

- All residential units shall be sprinklered.
- A private fire hydrant shall be installed in the subdivision, on the North side of the road split.
- The business building will have a street number independent of the residential complex. The residential units shall have one street address with individual building and unit designations.
- All structures are required to display the assigned street and/or building designation. Street numbers and building designations shall be clearly visible from the public right of way.
- The dead end of each road shall provide a 30' x 30' turnaround.

j. Availability and Adequate Capacity of Public Utilities

The project will be served by the Portland Water District, City Department of Public Works, and underground/power/cable/communications. Evidence of utility capacity shall be required of all utility providers. Overhead utilities exist along the property's frontage, and while certain poles are proposed to be relocated, the proposal calls for this infrastructure to remain above ground which does not comply with Site Plan or Subdivision standards.

4. Site Design Standards

k. Snow and Ice Loading

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

l. View Corridors

This site is not within a Protected View Corridor as per the "View Corridor Protection Plan" approved by the Portland City Council in 2001.

m. Historic Resources

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

n. Exterior Lighting

The applicant has submitted a lighting and photometric plan. The plan shows the location of five (5) pole mounted site light fixtures and light trespass in compliance with city standards. The applicant has been asked to provide a lighting cut sheet with detail for the proposed fixtures.

o. Noise and Vibration

Exterior mechanical equipment is to be roof-mounted, and centrally located on top of the building to minimize visibility from adjacent properties and public spaces. It is not anticipated that this equipment will result in adverse conditions related to noise and vibration.

p. Signage and Wayfinding

This standard does not apply to the proposal.



Figure 7: Building elevations - duplex



Figure 8: Building elevations - triplex

q. Zoning Related Design Standards

A design review according to the City of Portland Design Manual Standards was performed for the proposed new construction of a mixed-use commercial and residential condominium project at 300 Allen Avenue. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner and Matthew Grooms, Planner. The project was reviewed against the R-P Residential Professional zone as well as the Multiple-Family standards in a context with a mix of commercial and residential character.

Design Review Comments (**red text denotes standards that are not met**):

- A more thorough design review will be conducted when the applicant provides the office building submission. **The design review does not include review of the office building.**
- R-P Residential Professional Zone
 - Standard: For development within the R-P zone where there is a consistent established architectural style or character to the existing structures in the immediate vicinity in which the development is proposed, that the concurrently visible architectural style or character of the proposed development would not be incongruous to that established style or character.
 - The established residential character uses articulation and massing elements such as gable and hip roofs, elevated ground floor, bay windows, extended porches, and overhanging eaves and cornices. To this end, the gable roof, shingle siding, shutters, and covered entries are appropriate. However, the staff review found that the project **does not go far enough to meet the standard consistency with the established architectural character** – additional elements such as extended porches, bay windows, elevated entry, or similar should be incorporated.

- The building and front doors have a direct relationship to the street similar to the other houses nearby.
- The slope of the roof is too shallow compared with the context.
- The gable dormers do not have windows – are these occupied spaces? Why are they provided if they are not functional?
- The window sizes and alignment create awkward façade compositions facing the street. Since these are townhouses, additional elements should be used to better articulate each unit and rationalize the façade composition.
- Parking areas are placed away from the street. They should be screened from abutting properties according to this standard as well as the Site Plan standards.

C. INCLUSIONARY ZONING

As this proposal is providing ten (10) or more residential units, the applicant is required to meet city standards for Inclusionary zoning, which require that 10% of both units and bedrooms being provided be set aside for a household earning 120% of the area median income (AMI) or less. This unit may be provided as a fee in lieu, off-site within close proximity of the project or on-site. The applicant has elected to provide one (1) two-bedroom unit, which satisfies these requirements. Victoria Volent, Housing Program Manager with the City, has reviewed this application and has found it to be compliant, noting the following conditions:

- Staff recommends the Board approve this conditional use provided the applicant and the City enter into a Workforce Housing Agreement (WHA) before a building permit may be issued. The workforce housing agreement shall outline the details of the affordability restrictions placed on the workforce unit and will be filed as covenant to the 300 Allen Avenue property's deed with the Cumberland County Registry of Deeds before a Certificate of Occupancy may be issued.

XII. NEXT STEPS

1. Address staff comments
2. Address additional comments of the Planning Board
3. Prepare final plan submission, including subdivision and site plan submittal requirements as included in 14-496(1) and (b) and 14-527(e) and (f) for review by the Planning Authority and Planning Board
4. Hold final Planning Board Hearing

XIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Preliminary Review Comments
2. Preliminary Design Review Comments
3. Public Comment
 - a. Christopher Ellingwood (4.24.18)

APPLICANT'S SUBMITTALS

- A. Application Form
- B. Agent Authorization
- C. Project Narrative
- D. Right, Title & Interest
- E. Financial and Technical Capacity
- F. Basic Standards
- G. Stormwater Management Plan
- H. Resource Letter
- I. Ability to Serve Letters
- J. Level III Site Plan Checklist
- K. Zoning Analysis Table
- L. Tier I NRPA Permit Application

PLANS

- Plan 1. Cover Sheet

- Plan 2. Existing Conditions Plan I
- Plan 3. Existing Conditions Plan II
- Plan 4. Site Plan
- Plan 5. Utility Plan
- Plan 6. Grading, Drainage and Erosion Control Plan
- Plan 7. Site Details
- Plan 8. Miscellaneous Details
- Plan 9. Drainage Details
- Plan 10. Bioretention Pond I Plan and Details
- Plan 11. Grassed Underdrain Soil Filter 1 Plan and Details
- Plan 12. Grassed Underdrain Soil Filter 2 Plan and Details
- Plan 13. Grassed Underdrain Soil Filter 3 Plan and Details
- Plan 14. Grassed Underdrain Soil Filter 4 Plan and Details
- Plan 15. Erosion and Sedimentation Control Details
- Plan 16. Erosion and Sedimentation Notes
- Plan 17. Landscape Plan
- Plan 18. Lighting Plan
- Plan 19. Building Elevations



PLAN CORRECTIONS REPORT PL-000012-2018 FOR CITY OF PORTLAND

PLAN ADDRESS:	300 Allen Ave Portland, Maine 04103	PARCEL:	344 E006001
APPLICATION DATE:	03/20/2018	SQUARE FEET:	0.00
EXPIRATION DATE:		VALUATION:	\$0.00
		DESCRIPTION:	Construction of three duplex units, two triplex units and 2400 SF professional office building

CONTACTS	Name	Company	Address
Agent/Representative	Doug Reynolds	Gorrill Palmer	707 Sable Oaks Drive, Suite 30 So. Portland, ME 04106
Applicant	Drew Gagnon	Gorrill Palmer	707 Sable Oaks Drive South Portland, ME 04106

Corrections Required

City Arborist Jeff Tarling

Civil Engineering - Third Party Reviewer Lauren Swett

v.1.00 - Not Resolved

Correction: Stormwater Management

The proposed condition peak flow rates of the 2- and 10-year storm events exceed the existing conditions peak flow rates at Point of Interest #2. We agree that the proposed total flow and the proposed increase in these storm events is minor. This point of interest is for the connection of new stormdrain to an existing stormdrain system. The Applicant should confirm that there are no existing condition or capacity issues with that system.

Corrective Action: Confirm existing conditions, and modify as necessary.

Correction: Stormwater Management

The HydroCAD model uses very small time of concentration values that are less than the 5-6 minute minimum typically utilized for the modeling methods. The TC values may not have a significant impact on the overall modeling results, but please clarify the TC values and either adjust or provide justification for the small values.

Corrective Action: Clarify model conditions

Correction: Stormwater Management

The total area of the pre-development model (140,820 SF) is not equal to the total area of the post-development model (137,344 SF). The Applicant should evaluate the total watershed areas and provide a model with equal pre- and post-development areas.

Corrective Action: Clarify model conditions.

Correction: General

Verification of utility ability to serve is required.

Corrective Action: Provide final letters from utilities when available.

Correction: Stormwater Management

The Applicant provides three ponds, identified as P14, P15, and P17 in the model, which receive no inflow or discharge any outflow.

These ponds are not identified on the Routing Diagram or in the report. The Applicant should clarify the purpose of these pond nodes.

Corrective Action: Clarify model conditions.

Correction: Significant Natural Features

Applicant has submitted a NRPA permit application to the Maine DEP for wetland impacts. Copies of correspondence that results in changes to the project, and copies of the final permit should be provided to the City when available. A copy of the Maine Construction General Permit Notice of Intent should also be provided when available.

Corrective Action: Provide final permits when available.

Correction: General

The Applicant should note a location for snow storage or provide a plan for snow management. The snow storage location should be sited outside of existing and proposed drainage courses.

Corrective Action: Provide Snow Storage information.

Correction: General

The City of Portland Technical manual only allows for 12.5 mm HMA surface material for work within the ROW. The detail for asphalt pavement currently calls for 9.5 mm HMA.

Corrective Action: Provide updated detail.

Correction: Stormwater Management

The Stormwater Management Plan should include a stormwater inspection and maintenance plan and a Stormwater Agreement developed in accordance with and in reference to MaineDEP Chapter 500 guidelines and Chapter 32 of the City of Portland Code of Ordinances.

Corrective Action: Provide a stormwater inspection and maintenance plan and Stormwater Agreement.

Fire

Pool Fire

Parking

John Peverada

Planning

Matt Grooms

v.1.00 - Not Resolved

Correction: Significant Natural Features

The project site includes significant natural features. The site plan should be revised to the extent possible to better preserve and protect significant natural features by incorporating them into site design.

Corrective Action: Update applicable plan sheets.

Correction: Street Trees

Based upon specifications listed under Section 4.6 of the City's Technical Manual, street trees are required at a rate of two street trees per residential unit for PRUDs for a total requirement of 24 trees. In the event that site constraints prevent the planting of all required trees, the applicant shall provide an acceptable alternative as listed in the site plan ordinance.

Corrective Action: Update applicable plan sheets or provide written response

Correction: General

Please note, the proposed development is being reviewed as a Multiplex development. The proposed development appears to meet most of the dimensional standards for the R-5 and R-P zone, with the exception of the front-yard setback. The applicant's analysis shows average setback based upon 278 and 292 Allen Avenue, for an average yard depth of 12.5' feet. Given that the structure at 292 Allen Avenue is being demolished as part of this proposal, that property cannot be referenced under the alternative standard. The standard also requires that the measurement be taken from the property on either side of the lot to be developed, which would be 308 Allen Avenue. Based upon the site plan, the front yard setback appears to be approximately 22.63' feet. This would provide an average front yard setback of 17.8' feet. The site plan shall be revised to reflect this requirement.

Corrective Action: Update applicable plan sheets and include revised calculations for front yard setback.

Correction: Snow Storage

Snow storage areas shall be indicated on the site plan.

Corrective Action: Update applicable plan sheets.

Correction: Utility Capacity

Prior to the issuance of any building permits, a copy of all 'ability to serve' letters shall be provided to the Planning Authority, which demonstrate adequate utility capacity for the project.

Corrective Action: Provide relevant documentation

Correction: Exceeds Required Parking

Based upon the proposed parking count which exceeds zoning requirements by 10% or more, the applicant shall provide a parking analysis justifying the need for additional parking. Staff further recommends that parking be reduced to the extent practicable to reduce wetland impacts on-site.

Corrective Action: Update applicable plan sheets and or provide written response justifying excess parking.

Correction: Landscape Protection During Construction

The construction management plan shall include adequate measures to protect vegetation that is to be preserved within the project site.

Corrective Action: Update applicable plan sheets.

Correction: Site Lighting

The applicant shall indicate the location and type of all site lighting on applicable plan sheets, and shall include lighting details. All proposed lighting shall be full cutoff and shall be in compliance with Section 12 of the City's Technical Manual.

Corrective Action: Provide lighting cut sheet

Correction: Landscape Preservation

The applicant's site plan and documentation shows vegetation removal within the required building setbacks. The applicant shall provide evidence that 30% of existing trees sized ten inches DBH or greater within those required setbacks are being preserved.

Corrective Action: Update applicable plan sheets.

Public Works Engineering

Keith Gray

Public Works Water Resources Engineering

Doug Roncarati

Traffic - Third Party Reviewer

Tom Errico

v.1.00 - Not Resolved

Correction: General

The Applicant should provide an opinion on the location of the driveway as it relates to the Allen Avenue cross-section and the transition from a two-lane section to a three-lane section.

Corrective Action: N/A

Correction: General

Sight distance from the driveway shall be provided.

Corrective Action: N/A

Correction: General

The Applicant shall provide a parking analysis that documents parking demand. Shared parking should be a consideration.

Corrective Action: N/A

Correction: General

A pedestrian sidewalk shall be provided between the Duplex buildings and Allen Avenue.

Corrective Action: N/A

Correction: General

Crash data for Allen Avenue in the vicinity of the project should be provided with a safety analysis of conditions.

Corrective Action: N/A

Correction: General

The parking layout generally meets City Technical standards with the exception of the parking aisle width where a 20-foot width is provided. The Applicant should formally request a waiver and provide supporting documentation.

Corrective Action: N/A

Correction: General

A trip generation estimate shall be provided.

Corrective Action: N/A

Transportation/Planning

Bruce Hyman

Zoning

Pool Zoning

Conditions Required

Planning and Urban Development Department Planning Division



Subject: RP Design Review – 300 Allen Avenue
Written by: Caitlin Cameron, Urban Designer
Date of Review: Wednesday, May 2, 2018

The multi-family and office development at 300 Allen Avenue was reviewed against the *R-P Residential-Professional Zone* as well as the *Multiple-Family* standards in a context with a mix of commercial and residential character. Reviewers: Caitlin Cameron, Urban Designer, Matt Grooms, Planner, and Shukria Wiar, Planner, Planning Division of the Department of Planning & Urban Development.

Design Review Comments (*red text denotes standards that are not met*):

- A more thorough design review will be conducted when the applicant provides the office building submission. **The design review does not include review of the office building.**

(a) R-P Residential Professional Zone

(1) Standard: For development within the R-P zone where there is a consistent established architectural style or character to the existing structures in the immediate vicinity in which the development is proposed, that the concurrently visible architectural style or character of the proposed development would not be incongruous to that established style or character.

- The established residential character uses articulation and massing elements such as gable and hip roofs, elevated ground floor, bay windows, extended porches, and overhanging eaves and cornices. To this end, the gable roof, shingle siding, shutters, and covered entries are appropriate. However, the staff review found that the project **does not go far enough to meet the standard of consistency with the established architectural character** – additional elements such as extended porches, bay windows, elevated entry, or similar should be incorporated.
- The building and front doors have a direct relationship to the street similar to the other houses nearby.
- **The slope of the roof is too shallow** compared with the context.
- The gable dormers do not have windows – **are these occupied space? Why are they provided if they are not functional?**
- **The window sizes and alignment create awkward façade compositions facing the street.** Since these are townhouses, additional elements should be used to **better articulate each unit and rationalize the façade composition.**
- Parking areas are placed away from the street. **They should be screened from abutting properties according to this standard as well as the Site Plan standards.**

300 Allen Avenue Proposal

Christopher Ellingwood <cellingwood@berrydunn.com>

Apr 24, 2018 11:48 AM

Posted in group: **Planning Board**

Good day Matt,

My name is Chris Ellingwood, I own the home on 19 Pennell Avenue in Portland and would be directly abutting the proposed development of 280-300 Allen Avenue. (our back/side yard is open to the vacant lot of 300 Allen).

We have discussed this plan with our neighbors and have reviewed the proposed documents and site plan that was provided on the web portal. We do have several questions and some concerns.

- 1) What will the type of residences be? (we understand they will be duplexes and triplexes), but will these be condos or apartments for rent? Will there be an established homeowners association for property maintenance and to (ideally) restrict rentals?
- 2) We are unclear on the size of the proposed triplexes – the project description narrative says 2-story, however the site plan indicates 3-story buildings.
- 3) Will there be outdoor decks/porches that would face our neighborhood and homes? If so, will these only be on ground level/first floor?
- 4) Will drawings of the proposed building/site become available?

As far as concerns go – the neighborhood is most concerned about three items –

- 1) The site plans show zero consideration for privacy of us, the current homeowners. There are no proposed fences (6 to 8-foot solid fence (non-see-through) on the homes on Pennell and Short Street. Also, we do not see any consideration of landscaping such as trees or hedges. Our biggest concern is with the parking lot in the rear of plan, headlights and other foot traffic would be directly in our backyards. We currently get a lot of foot traffic that cuts through the lots, with additional residences and guests, we'd like that addressed. Lighting of the lots and driveways is also a concern of ours.
- 2) The other concern would be if the proposed units exceed 2 stories. The neighborhood consists of a high majority of single residence homes. If the buildings were to be three stories in nature, they would stand tall over our homes and reduce our privacy.
- 3) We also do not agree that a traffic study is not necessary. An additional drive with potential of 12-residences would increase traffic on an already very busy street. (Allen). It is already exceedingly difficult to pull out of our street (Pennell) in peak times, and the traffic often does backup as far as Walgreens when school buses are dropping of students at Casco Bay High School.

We appreciate responses to our questions and would also request we are informed of planning board meetings on this matter. We don't generally oppose new development, however we want to ensure that our property value is maintained and that the quality of our peaceful neighborhood is not adversely impacted.

Thank you,

Chris

Christopher S. Ellingwood, CISA | Senior Manager

Information Technology Assurance Services

d/f: 207.541.2290 | **c:** 802.310.0361

berrydunn.com



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

Planning and Urban Development Department
Planning Division

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

Level III: Site Plan Development includes:

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

Portland's development review process and requirements are outlined in the [Land Use Code \(Chapter 14\)](#), [Design Manual](#) and [Technical Manual](#).

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207) 874-8719
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:	Mixed Use Development
Proposed Development Address:	300 Allen Avenue
Project Description:	Proposed Office/Professional Services Building and 12 unit multiplex residential structures with associated infrastructure.
Chart/Block/Lot:	344 E006
Preliminary Plan	
Final Plan	

II. Contact Information (Please enter n/a on those fields that are not applicable)**APPLICANT**

Name:	Peter Bouchard
Business Name:	ESTELLE ESTATES, LLC
Address:	39 Darling Avenue
City/State:	South Portland, ME
Zip Code:	04106
Work #:	207-956-8404
Home #:	
Cell #:	
Fax #:	
E-mail:	peter@bouchard.us

OWNER

Name:	
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

AGENT/REPRESENTATIVE

Name:	Gorrill Palmer, Doug Reynolds
Address:	707 Sable Oaks Drive Suite 30
City/State:	South Portland, ME
Zip Code:	04106
Work #:	207-772-2515
Home #:	
Cell #:	207-329-5584
Fax #:	
E-mail:	dreynolds@gorrillpalmer.com

BILLING (to whom invoices will be forwarded to)

Name:	Peter Bouchard
Address:	39 Darling Avenue
City/State:	South Portland, ME
Zip Code:	04106
Work #:	207-956-8404
Home #:	
Cell #:	
Fax #:	
E-mail:	peter@bouchard.us

ENGINEER

Name:	Gorrill Palmer, Doug Reynolds
Address:	707 Sable Oaks Drive Suite 30
City/State:	South Portland, ME
Zip Code:	04106
Work #:	207-772-2515
Home #:	
Cell #:	207-329-5584
Fax #:	
E-mail:	dreynolds@gorrillpalmer.com

SURVEYOR

Name:	Rex J. Croteau - Titcomb Associates
Address:	133 Gray Road
City/State:	Falmouth, ME
Zip Code:	04105
Work #:	207-797-9199
Home #:	
Cell #:	
Fax #:	
E-mail:	

ARCHITECT

Name:	
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

ATTORNEY

Name:	
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Douglas Reynolds
E-mail:	dreynolds@gorrillpalmer.com
Name:	Drew Gagnon
E-mail:	dgagnon@gorrillpalmer.com
Name:	David Vitali
E-mail:	dvitali@gorrillpalmer.com

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

☒	Less than 50,000 sq. ft.	\$750.00
☐	50,000 – 100,000 sq. ft.	\$1,000.00
☐	100,000 – 200,000 sq. ft.	\$2,000.00
☐	200,000 – 300,000 sq. ft.	\$3,000.00
☐	Over 300,000 sq. ft.	\$5,000.00
☐	Parking lots over 100 spaces	\$1,000.00
☐	After-the-fact Review	\$1,000.00 + applicable application fee above

PLAN AMENDMENTS (check applicable review)

☐	Planning Staff Review	\$250.00
☐	Planning Board Review	\$500.00

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	\$1,500.00
☒	Stormwater Quality	\$250.00
☒	Subdivision	\$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [12] x \$25.00 each	\$ 300
☐	Site Location	\$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [] x \$200.00 each	\$
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
TOTAL APPLICATION FEE DUE:		\$ 1,800

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)

V. PROJECT DATA (Please enter n/a on those fields that are not applicable)

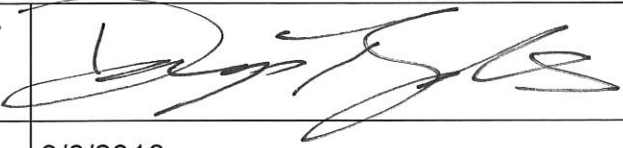
TOTAL AREA OF SITE	55,342	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	48,898	sq. ft.
<i>If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.</i>		
IMPERVIOUS SURFACE AREA		
Impervious Area (Total Existing)	2,700	sq. ft.
Impervious Area (Total Proposed)	28,066	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	1,800	sq. ft.
Building Footprint (Total Proposed)	9,744	sq. ft.
Building Floor Area (Total Existing)	3,600	sq. ft.
Building Floor Area (Total Proposed)	17,888	sq. ft.
ZONING		
Existing	RP/R5	
Proposed, if applicable	N/A	
LAND USE		
Existing	Vacant/Residential	
Proposed	Office/Professional/Residential	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	1	
# of Residential Units (Total Proposed)	12	
# of Lots (Total Proposed)	1	
# of Affordable Housing Units (Total Proposed)	1 (Workforce housing unit)	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)	0	
# of One-Bedroom Units (Total Proposed)	0	
# of Two-Bedroom Units (Total Proposed)	12	
# of Three-Bedroom Units (Total Proposed)	0	
PARKING SPACES		
# of Parking Spaces (Total Existing)	2 (Assumed in residential Driveway)	
# of Parking Spaces (Total Proposed)	24 for residential, 12 for office	
# of Handicapped Spaces (Total Proposed)	1	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	2 (office), 12 (residential garage)	
ESTIMATED COST OF THE PROJECT	\$500,000	

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 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: <i>AGENT</i>	
Date:	3/6/2018

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

FINAL PLAN - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST (* 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
		1	Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

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

- Continued on next page -

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



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



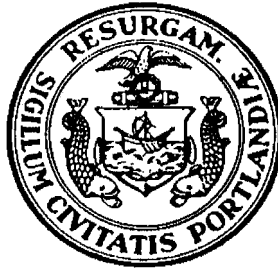
A separate drawing[s] shall be provided as part of the site plan application for the Portland Fire Department's review.

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: 02/28/2018

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

Site Address: 300 Allen Avenue

Chart Block Lot Number: 344 E003, E004, E006

Proposed Use: Office/Professional/Residential

Previous Use: E003 - grassed lawn, E004 - single family, E006 - vacant

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.

Existing 12" sewer within existing City Easement that crosses the site

Site Category
Commercial (see part 4 below)
Industrial (complete part 5 below)
Governmental
Residential
Other (specify)

X
X

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: ESTELLE ESTATES, LLC

Owner/Developer Address: 39 Darling Avenue, South Portland, ME 04106

Phone: _____ Fax: _____ E-mail: _____

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: 2,280 peak, 1,267 average GPD

Peaking Factor/ Peak Times: 180%

Specify the source of design guidelines: (i.e. X "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify)

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: _____

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.

March 1, 2018

Re: **Agent Authorization**
Mixed Use Development
Portland, Maine

To Whom it May Concern:

Peter Bouchard ("Developer") is in the process of developing a site (the "Site") in the state of Maine, Cumberland County, located at 300 and 292 Allen Ave, in Portland. On behalf of the Developer, I hereby authorize Gorrell Palmer, (the "Engineer") to act as agent for the purpose of obtaining permits and approvals related to the development of the Site.

In such capacity, the Engineer's authority is expressly limited to signing and delivering applications for permits and approvals that are related to the development of the Site, advancing nominal funds as are required to file such applications and to representation at meetings and hearings for the applications. The Engineer is not authorized to negotiate on the Developer's behalf or to bind or obligate the Developer in any manner whatsoever, including without limitation accruing any obligations on the Developer's behalf to pay for or construct improvements without additional authorization in writing.

This authorization is effective as of the date of this correspondence and will remain valid until revoked in writing.

Sincerely,


ESTELLE ESTATES, LLC

Peter Bouchard



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

Project Narrative
300 Allen Avenue
March 2018

The following narrative presents the information required for the Preliminary Level III Site Plan application.

Project Description:

The project is located at 300 Allen Ave in Portland, which is currently vacant and contains a vegetated soil stockpile in the easterly section of the site. Development is also proposed on the adjacent lot located at 292 and 280 Allen Ave. Currently, a single-family building with a parking garage is present at 292 Allen Ave and 280 Allen Ave is vacant with a fully developed lawn cover. Two areas of wetland are present on-site: one along the east property line at 300 Allen Ave and one further south behind the existing house and garage at 292 Allen Avenue. 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 fill.

The project is a proposed mixed-use development consisting of a 2,400 sf office/professional services building, three 1,224 sf footprint duplex residential structures, two 1,826 sf triplex residential structures, associated parking, and infrastructure. A single curb cut is proposed for access to the development. The project will require a conditional use permit for off-street parking in the R-5 zone. A conditional use permit application has been filed with this preliminary site plan application.

Right, Title and Interest:

The Applicant, ESTELLE ESTATES, LLC, purchased the lot located at 292 Allen Ave and the Title can be found in Attachment 4. The applicant has interest in 300 Allen Ave and a PSA and an emailing stating a 60 day extension is included in Attachment 4.

State and Federal Permits:

An NRPA Tier I permit application will be filed with the state for the proposed wetland fill of less than 14,999 square feet. The U.S. Army Corps of Engineers has been copied on the NRPA application. The project disturbs more than one acre and therefore requires a construction general permit. Copies of Resource Letters sent to the Maine Historic Preservation Commission (MHPC), the Maine Department of inland Fisheries and Wildlife (MDIFW) and the Maine Natural Areas Program (MNAP) can be found in Attachment 8.

Zoning Assessment:

The project is in the R-5 zone and the R-P zone. Two-family dwellings and multi-family dwellings are permitted uses within the R-5 zone. An office/professional use and a residential use are permitted in the R-P zone. Parking for the office/professional use is proposed within the R-5 zone. The project will require a conditional use permit for off-street parking in the R-5 zone. A conditional use permit application has been filed with this preliminary site plan application.

Easements or Other Burdens:

There is an existing 35-foot easement and right of way across the westerly portion of the site over the City's sanitary sewer and storm drain. The development proposes to connect into these utilities.

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. The applicant has demonstrated compliance with applicable state and federal regulations by applying for an MDEP NRPA Tier I permit for the wetland impact.

Evidence of Financial and Technical Capacity:

ESTELLE ESTATES, LLC has experience with development in the Greater Portland area and has hired Professional Engineers to prepare permitting and construction plans for this project. Given this, the applicant possesses sufficient technical capacity. Attachment 5 contains evidence of the financial and technical 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:

The proposed development anticipates fewer than 100 passenger car equivalents (PCE) and does not appear to require a traffic study.

Significant Natural Features:

Wetlands existing at 300 Allen Ave were delineated by Jones Associates of Auburn, Maine in July 2016 and wetlands at 292 Allen Ave were delineated by Boyle Associates in January 2018. There are no significant natural features on-site except for the wetlands at the center of the site and along the western property line. Given the size of the site, wetland impacts could not be avoided. An application for a MDEP NRPA Tier I wetland permit will be submitted to the state and copied to the City and the U.S. Army Corps of Engineers.

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 14-526.b.3.c of the Land Use Ordinance states that all development other than Level I residential that are located within the watershed of an Urban Impaired Stream shall comply with the Urban Impaired Stream Standards of Chapter 500. The site is within the watershed of Fall Brook which is listed as an Urban Impaired Stream.

Section 5.II.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 met by the Erosion and Sedimentation Control Report submitted with this application in Attachment 6.

The General and Flooding Standards are addressed in the Stormwater Management Report for the project which is included in Attachment 7.

The Stormwater Management Report also addresses the Urban Impaired Stream Standard which will be met by paying a compensation fee of \$7,300 to the City of Portland Compensation Fee Utilization Plan.

Master Plan:

There does not appear to be a Master Plan for this section of Allen Avenue.

Utility Capacity:

Attachment 9 contains letters sent to the Portland Water District, Portland Public Services and Central Maine Power requesting confirmation of their ability to serve the project. Responses will be forwarded to the City upon receipt.

Solid Waste Management:

The development consists of twelve residential units and a small office building. A dumpster is proposed in the northwestern corner of the site, located near the Professional/Office parking. Attachment 9 contains an ability to serve letter sent to Pine Tree Waste requesting confirmation of their ability to serve the project.

NFPA:

An existing fire hydrant is located approximately 500 feet to the north of the proposed entrance drive, and approximately 400 feet to the south.

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 – The required off-street parking is shown on the plans. Two bicycle parking spaces are shown adjacent to the proposed office building. The residential units have garages that can provide bicycle storage. Due to limited site area snow will not be stored on-site and will be removed by the snow removal contractor as noted on the site plan.

14-526 (b) Environmental Quality Standards – The site does not contain significant natural features other than the wetlands at the center of the site and the western 292 Allen Ave. Impacts to the wetlands 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 will be submitted to the MDEP and copied to the U.S. Army Corps of Engineers. A landscaping plan for the site is included in the plan set. Stormwater management is discussed above and in Attachments 6 and 7.

14-526 (c) Public Infrastructure and Community Safety Standards – There does not appear to be a Master Plan for this section of Allen Avenue. An existing fire hydrant is located approximately 500 feet to the north of the proposed entrance drive, and approximately 400 feet to the south. The proposed electric service is underground, and the applicant has contacted the Portland Water District and the Department of Public

services to obtain ability to serve letters for water service and wastewater service. The proposed utility connections are shown on the Utility plan of the plan set.

14-526 (d) Site Design Standards – The proposed buildings are 1.5 and 2 story structures which will not have a detrimental impact on adjoining properties. There are no known historic resources on the project site. All site lighting will be full cut off and will not impact adjoining properties. A lighting plan is included in the plan set. 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 are not incongruous with surrounding development. Building Elevations and details can be found in Attachment 10.

HVAC Verification:

The actual HVAC units are to be determined. All units used on the project will comply with all applicable state and federal emissions standards.

Boundary Survey

A boundary survey is included within the plan set.

Plan Set

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

The project proposes developing twelve residential units and an office/professional unit which meets the definition of a subdivision. 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. One-foot contours are shown. No existing structure is to remain.
3. No streets are proposed. A typical pavement section is included on the detail sheets for the project.
4. No new rights of way or easements are proposed.
5. A baseline with curve information is provided on the site plan.
6. Existing utilities are shown on the plans.
7. The parcel boundary and the proposed condominium lines are shown on the Plat.
8. Abutting parcel owners are shown on the plans.
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. A sanitary sewer and storm drain exist within the existing onsite easement. Proposed sanitary sewer service and storm drains are shown on the plans with inverts and rim elevations.
13. A lighting plan is included in the plan set.
14. No trees are proposed for preservation.
15. Grading and drainage is shown on the Grading, Drainage, and Erosion Control plan within the plan set.
16. The zoning boundaries are shown on the plans.
17. No future phases are proposed.

18. No public space is proposed.
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 the site plan.
24. Additional submission items are included in the Level III Site Plan submission.

Section 14-497 General Requirements

1. The project is a residential and small office development 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 to the Portland Water District is included in Attachment 9.
3. An ability to serve letter to the Portland Water District is included in Attachment 9.
4. An erosion and sedimentation control report is included in Attachment 6.
5. The proposed development does not warrant a traffic study because no more than 100 passenger car equivalents (PCE) are anticipated.
6. Attachment 9 contains a letter to the Public Works Department requesting their ability to provide sanitary sewer service to the project. The stormwater management report contained in Attachment 7 limits the post development runoff to predevelopment levels, therefore the project will not have an adverse impact on municipal services.
7. Attachment 9 contains a letter to the Public Works Department requesting their ability to provide sanitary sewer service to the project. A dumpster is proposed at the northwestern corner of the site for soil waste disposal. Attachment 9 contains a letter to Pine Tree Waste requesting their ability to serve the project.
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. It is believed that the project is in conformance with the land development plan.
10. The Applicant has hired Professional Engineers to prepare permitting plans for this project, therefore the Applicant possesses sufficient technical capacity. A financial and technical capacity letter is included in Attachment 5.
11. The project is not within the watershed of a pond or lake, or within 250' of a wetland defined in Title 38.
12. The connection to the municipal sewer, and the stormwater management plan for the project will ensure that the project does not adversely affect groundwater.
13. The site is not within a flood prone area.
14. Wetlands are shown on the plans.
15. There are no river, streams, or brooks abutting the project.

AGREEMENT FOR THE PURCHASE AND SALE OF REAL ESTATE

AGREEMENT made and entered into this 19th day of June, 2017, by and between HARLEQUIN LLC, a Maine limited liability company with its principal place of business in Portland, County of Cumberland and State of Maine (the "Seller") and ESTELLE ESTATES, LLC, a Maine limited liability company with its principal place of business in South Portland, County of Cumberland and State of Maine (the "Buyer").

WITNESSETH AS FOLLOWS:

1. PURCHASE AND SALE. Seller agrees to sell, and Buyer agrees to buy, on and subject to the terms and conditions hereinafter set forth certain real estate, together with the buildings and improvements located thereon and also owned by the Seller located at 300 Allen Avenue, in Portland, County of Cumberland and State of Maine, as more particularly described in a Warranty Deed from Robert L. Adam to the Seller dated August 11, 2004 and recorded at the Cumberland County Registry of Deeds in Book 21661, Page 282, a copy of which is attached hereto as Exhibit A and made a part hereof (such real estate and personal property being referred to herein collectively as the "Premises").

2. PURCHASE PRICE. Subject to any adjustments and prorations hereinafter described, Buyer agrees to pay for the Premises the sum of [REDACTED] (the "Purchase Price"), which shall be payable as follows:

(a) The sum of [REDACTED], being paid simultaneously with the execution of this Agreement, as earnest money deposit (the "Deposit"), which shall be held by Magnusson Balfour, (the "Escrow Agent"), in its non-interest bearing trust account pending Closing (defined below) and shall be credited towards the purchase price at Closing;

(b) The sum of [REDACTED] shall be paid to Seller at the Closing in the form of a Promissory Note (the "Promissory Note") bearing interest at the rate of six percent (6%) per annum simple interest, payable interest only on a monthly basis until the eighteen (18) month anniversary date of the Closing (the "Maturity Date"), when the balance of principal and any accrued but unpaid interest at said rate shall then be paid in full. In the event that the Buyer shall assign the contract to an entity, the Buyer shall personally guaranty the payment pursuant to the terms of the Promissory Note; and

(c) The remaining amount of the Purchase Price, after application of the Deposit and the delivery of the Promissory Note and all applicable closing prorations, shall be paid in full in immediately available funds at Closing.

3. TITLE. Seller shall convey the Premises to the Buyer at Closing in fee simple with good, marketable and insurable title, free and clear of all mortgages, security interests, liens, encroachments and encumbrances, except such encumbrances (such as for utilities) as shall be acceptable to Buyer in Buyer's sole discretion (the "Permitted Encumbrances"). Buyer shall have until July 15, 2017 to complete its examination of the title to the Premises.

In the event that Buyer determines upon examining title to the Premises that Seller would be unable to convey title as aforesaid, Seller shall be given a reasonable period of time after notice from Buyer, not to exceed sixty (60) days, in which to remedy any title defects. Seller agrees to take reasonable steps to remedy any such title defects, including, without limitation, by payment of any amounts necessary to cause the correction of any such defects. In the event that said defects cannot be corrected or remedied within said time period this Agreement shall terminate unless further extended by agreement of Buyer and Seller in writing. Buyer may, however, elect to close notwithstanding such defects as may exist and, in that case, there shall be no offset or reduction in the Purchase Price and Seller shall have no liability to the Buyer for any such title defects.

Seller agrees and represents that it will not further encumber or permit to be encumbered the Premises by any liens, mortgages, attachments, covenants, restrictions or easements after the date of this Agreement.

4. CLOSING.

(a) The closing shall take place at the offices of Norman, Hanson and DeTroy, LLC, Two Canal Plaza, Fourth Floor, Portland, Maine, no later than February 28, 2018 at a mutually convenient time (the "Closing" or "Closing Date"), or at some other time and place that the Buyer and the Seller shall mutually agree in advance and in writing, except that the Buyer may extend the date of Closing for up to an additional sixty (60) days in the event that despite Buyer's reasonable commercial efforts to obtain all required land-use permits and approvals for the development of the Project (as defined in this Agreement) Buyer has not obtained all such required permits and approvals by December 31, 2017. Buyer shall provide Seller written notice of the extension on or before January 10, 2018.

(b) At Closing, Seller shall execute and deliver to Buyer, against payment of the purchase price, a Quitclaim Deed with Covenant, conveying good, marketable and insurable title to the Premises, free and clear of all mortgages, liens, encroachments or other encumbrances in accordance with the Short Form Deeds Act, 33 M.R.S. §§ 761 et seq., (the "Deed"). Seller further agrees to execute and deliver to the Company at Closing the following documents: (i) a Certificate of Non-Foreign Status (as required by Internal Revenue Service regulations); (ii) a title insurance "Seller's Affidavit" regarding mechanics liens and persons in possession; (iii) an affidavit

regarding underground storage tanks (as required by Maine law); (iv) documents demonstrating Seller's authority to convey and good standing as evidenced by a copy of Seller's resolution authorizing the transaction contemplated herein and a copy of the relevant portions of its Operating Agreement; (v) such other documents as may be required to issue an owner's policy of title insurance in form reasonably acceptable to Buyer's counsel; (vi) such other documents as may be reasonably necessary to effect the transfers described in this Purchase and Sale Agreement; and (vii) such other documents as are reasonably required by Buyer's counsel at closing. The Seller shall also assign any leases or tenancies in the Premises and provide a rent roll and tender delivery of all security deposits for all leases or tenancies in the Premises.

5. RISK OF LOSS, DAMAGE AND INSURANCE.

(a) All risk of loss to the Premises prior to the Closing Date shall be borne by Seller, except and unless the loss was caused by Buyer or Buyer's employees, agents, or contractors. Seller shall keep the Premises insured against fire and other extended coverage risks up to and including the Closing Date.

(b) In the event that the improvements that are part of the Premises are destroyed prior to Closing, Seller shall have the right to terminate this Agreement and refund the Deposit and, in that case, it shall be solely entitled to any insurance proceeds payable for or on account of any such destruction. In the event Seller shall not so elect, Buyer shall be entitled to elect to (1) terminate this Agreement by written notice to Seller, or (2) receive any and all insurance proceeds payable for or on account of any such destruction.

(c) If, prior to the Closing, all or any material portion of the Premises shall be taken for any public use (other than minor takings for street widening) or access to or from the Premises shall be permanently taken or materially impaired, or any change(s) to public way(s) or the grade(s) thereof shall be made which materially and adversely affects or is likely to materially and adversely affect the commercial value of the Premises, then Seller shall be required to notify Buyer of the same by written notice the earlier of five (5) days after receipt of such notice or one (1) business day prior to closing. Additionally, if notice of any of the foregoing shall be made public or otherwise come to Buyer's attention Buyer shall have the election either (i) to terminate this Agreement, in which event this Agreement shall terminate, the Deposit shall be refunded to Buyer, and the parties shall have no further liability or responsibility to each other, or (ii) to consummate the sale without reduction of the Purchase Price on account of same, in which event Seller shall assign to Buyer all claims and rights, if any, on account of or arising out of any of the foregoing.

6. INSPECTIONS: DUE DILIGENCE.

(a) The Buyer may enter into any part of the Premises at all reasonable

times prior to 5:00 PM on December 31, 2017 in order to inspect the Premises, conduct surveys, building studies, inspections and assessments and to undertake zoning, land-use and environmental compliance assessments and to do such things and may conduct such investigations as Buyer shall elect. Buyer shall also be entitled to review all plans, specifications, studies, assessments (including environmental assessments) and all other documents in Seller's possession relating to the Premises, all of which shall be provided to Buyer by Seller within five (5) business days of request.

(b) Seller acknowledges that Buyer shall have the right in its sole and absolute discretion, either based on Buyer's disapproval of any of the reports or information received by Buyer relating to the Premises or to the feasibility of the Project (as defined in this Agreement) or based on Buyer's dissatisfaction with any inspection or investigation or for any other reason whatsoever to terminate this Agreement by delivering notice thereof to Seller at any time after execution of this Agreement and prior to 5:00 PM, December 31, 2017 (the "Due Diligence Period") which delivery shall be complete upon mailing or transmission by telefax. In the event Buyer so elects to terminate this Agreement within the Due Diligence Period, the Deposit shall be refunded to Buyer within three (3) business days of such notice and this Agreement shall terminate without further recourse or liability to the parties at law or in equity. In the event that Buyer fails to provide the Seller with any such termination notice on a timely basis, the Buyer shall have no right to terminate this Agreement for or on account of any matter pertaining to the condition of the Premises or their suitability for any particular purpose.

7. FINANCING CONTINGENCY; SECURITY FOR SELLER-FINANCING.

(a) Seller's and Buyer's obligations under this Agreement are subject to Buyer obtaining a financing commitment for [REDACTED] (the "Senior Debt") for the purchase of the Premises and the construction of the Project, as defined in Paragraph 8 of this Agreement, from a conventional bank or commercial lender (the "Project Lender") at prevailing rates, terms and conditions and also subject to the conditions set forth in Paragraph 7(b) of this Agreement. Buyer shall provide Seller with written evidence of its application for a financing commitment for such loan on or before July 15, 2017 and shall use reasonable commercial efforts to obtain the commitment for such acquisition and construction loan on or before October 15, 2017. In the event that despite Buyer's timely application and reasonable commercial efforts to obtain a financing commitment for such loan on or before October 15, 2017 Buyer is unable to do so, then either Buyer may terminate this Agreement by written notice to Seller on or before October 15, 2017, whereupon any payments made under this Agreement shall be forthwith refunded and Seller shall no longer have any obligation to sell the Premises to Buyer, and this Agreement shall be void and without recourse to the parties hereto.

(b) Seller agrees that the mortgage from Buyer to the Project Lender securing the Senior Debt (the "Senior Mortgage") shall be senior in priority to the

mortgage to Seller from Buyer securing the Promissory Note (the "Junior Mortgage") and the Junior Mortgage (or related Subordination Agreement between Seller, Project Lender and Buyer) shall contain such other and further standby and subordination requirements as the Project Lender may require as a condition of its commitment to lend the Senior Debt to Buyer. Buyer's mortgage to Seller securing the Promissory Note shall contain a lot or unit release provision pursuant to which the Seller will grant and execute partial releases of the mortgage securing the Promissory Note in exchange for partial release payments in the amount of \$52,000.00 per lot or unit, such partial releases to be in recordable form so as to accommodate sales of lots or units from the Premises.

(c) Peter R. Bouchard, a member of Buyer ("Bouchard"), shall provide Seller with personal financial statements within five (5) days of the execution of this Agreement. Seller shall have five (5) days to review the financial statements and terminate this Agreement if the financial statements do not meet its approval. Bouchard shall be personally liable with Buyer on the Promissory Note.

8. THE PROJECT: CONTINGENCY FOR PERMITS AND APPROVALS.

(a) Buyer shall diligently prosecute all required land-use, permitting and approval applications required by the City of Portland (and any other regulatory authority having jurisdiction) for the development of the Premises into seven (7) lots or condominium units (the "Project"), such lots or units to be in conformity with all applicable land-use, permitting and approval requirements. Buyer shall use reasonable commercial efforts to obtain all required land-use permits and approvals for the Project on or before December 31, 2017, at which time the Deposit shall become fully non-refundable. In the event that Buyer shall not have obtained all required permits and approvals for the Project by December 31, 2017, Buyer may extend the date of Closing for up to an additional sixty (60) days for payment of an additional non-refundable deposit of \$10,000.00 to the Seller. Buyer shall provide Seller written notice of the extension on or before January 10, 2018.

(b) If Buyer shall not have obtained all required permits and approvals for the development of the Project on or before the date for Closing (or the extended date for Closing as the case may be), then this Agreement shall terminate and the parties shall have no further liability or responsibility to one another. The refund of the Deposit in that case shall depend on whether the termination of the Agreement for any failure to obtain required permits and approvals occurred on or before December 31, 2017 (in which case the Deposit shall be refunded) or afterwards (in which case the Seller shall be entitled to retain the Deposit).

9. POSSESSION OF THE PREMISES. The Premises shall be delivered to the Buyer at Closing free and clear of all tenancies or occupancies by any other person or entity.

10. REPRESENTATIONS OF SELLER. Seller represents to the Buyer (as the sole representations made by it or its members relating to the subject matter of this Agreement) the following:

(a) Seller has received no written notice from the City of Portland of any alleged violation at the Premises respecting any zoning ordinances or laws.

(b) All outstanding bills and/or accounts payable concerning or otherwise relating to the Premises are either paid or will be paid prior to or at Closing, including without limitation all utility charges, all municipal assessments and all charges for services rendered or materials furnished with respect to the Premises, including, without limitation, regarding any services or materials for which a mechanic's lien could be claimed.

(c) There are no leases affecting the Premises as of the date hereof.

(d) Seller has received no written notice from any governmental entity or agency, nor does it have any knowledge of any special wastes, underground storage tanks, waste oil, petroleum and any other hazardous substances, materials or wastes in or on the Premises. The terms used in the foregoing sentence shall include, without limitation, all substances, materials, etc., designated by such terms under any laws, ordinances or regulations, whether federal, state or local.

(e) There are no outstanding or pending liens, claims, rights of first refusal, mortgages, encroachments or other encumbrances (other than utility easements) against the Premises.

(f) The Seller has taken all corporate actions necessary to authorize the execution and delivery of this Agreement and to perform all of its obligations due to the Buyer hereunder and it has the full right and power to consummate all of the transactions contemplated for it to be performed under this Agreement.

11. DEFAULT AND REMEDIES. In the event that Seller fails to close hereunder for a reason other than default of Buyer, Buyer shall have the right to specific performance or any other legal or equitable remedies and also may seek to recover damages, as well as the refund of the Deposit. In the event that Buyer defaults in the performance of its obligations hereunder, Seller shall retain the Deposit and shall have all other legal or equitable remedies.

12. CONDITIONS PRECEDENT TO BUYER'S OBLIGATION TO CLOSE. The obligation of Buyer to close is subject to the satisfaction at or before Closing of all of the following conditions:

(a) All representations of Seller contained in this Agreement shall be true

in all material aspects as of the Closing.

(b) The due diligence, financing and permitting and approval contingencies set forth in Paragraphs 6, 7 and 8 of this Agreement shall have been satisfied to Seller's reasonable satisfaction or, alternatively, Seller shall have waived any such unsatisfied contingency or contingencies.

13. BROKERAGE. Seller and the Buyer represent and warrant to each other that neither party has engaged the services of any real estate broker with respect to this transaction, other than Magnuson Balfour for Seller and Keller Williams for Buyer. Each party agrees to indemnify and hold harmless the other party from any claim made by any broker claiming by or through them. The foregoing indemnity shall include all legal fees and costs incurred in defending any claim therefor.

14. ADJUSTMENTS, PRORATIONS AND CLOSING COSTS.

(a) Real estate taxes, assessments and rental charges shall be prorated as of the Closing Date.

(b) Metered utilities, such as water and sewer, shall be paid by the Seller through the date of closing.

(c) The Maine real estate transfer tax shall be paid by the Seller and Buyer (or at their election, the Company), in accordance with 36 M.R.S. § 4641-A.

(d) The recording fee for the Deed will be paid by the Buyer. The recording fee for the Mortgage, and any related documents shall be paid by the Seller.

15. GENERAL PROVISIONS.

(a) Time. Time shall be of the essence of this Agreement. Despite the foregoing, however, the parties shall cooperate with one another for commercially reasonable extensions of time in the event that the request for the extension is made no fewer than ten (10) days before the expiration of the then applicable deadline.

(b) Notices. Any notice or communication given pursuant to this Agreement by either of the parties to the other shall be in writing and delivered in person or mailed by overnight courier, registered or certified mail, postage prepaid (mailed notices shall be deemed given on the third day after they are duly mailed), or telefax with record of transmission as follows:

TO SELLER:

Estate of Robert L. Adam
159 Lincoln Street #10
Westbrook, ME 04092

WITH A COPY TO:

Alan E. Wolf, Esq.
Law Office of Alan E. Wolf
P.O. Box 1292
Portland, ME 04104-1292

TO BUYER:

Mr. Peter R. Bouchard
25 Ledge Road
Cumberland Foreside, ME 04110

WITH A COPY TO:

Paul F. Driscoll, Esq.
Norman, Hanson & DeTroy, LLC
Two Canal Plaza
P.O. Box 4600
Portland, ME 04112-4600

Either party may change its address for the purposes of this subparagraph by giving the other party notice of the new address in accordance with this Paragraph 13.

(c) Binding Effect. This Agreement will inure to the benefit of, and bind, the respective successors and assigns of the Seller and the Buyer.

(d) Construction. As used in this Agreement, the singular number shall include the plural, the plural the singular, and the use of one gender shall be deemed applicable to all genders. This Agreement shall be governed by and construed in accordance with the laws of Maine. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof. It is hereby agreed that all provisions and representations set forth in this Agreement shall survive Closing.

(e) Counterparts/Facsimile Signatures. 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 and signatures appearing on such facsimile documents shall be treated as original signatures.

(f) Effective Date. The Effective Date of this Agreement shall be deemed to be the date first above written herein.

(g) Further Assurances. In addition to the actions recited herein and contemplated to be performed, executed and delivered by each party, each party shall perform, execute and deliver or cause to be performed, executed and delivered at the Closing or thereafter any and all further acts, deeds and assurances as the other party or the Escrow Agent may reasonably require to consummate or evidence the consummation of the transaction contemplated herein.

(h) **Invalid Provision.** If any provision of this Agreement is held to be illegal, invalid or unenforceable under present or future laws, and if such provision is not essential to the effectuation of the basic purposes of this Agreement, such provision shall be fully severable, this Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had never been a part of this Agreement, and the remaining provisions of this Agreement shall remain in full force and effect.

(i) **No Waiver.** The waiver by either party of the performance of any covenant, condition or promise shall not invalidate this Agreement, nor shall it be construed as a waiver of any other covenant, condition or promise herein. The waiver by any party of the time for performing any act shall not constitute a waiver of the time for performing any other act or any incidental act required to be performed at a later time. The delay or forbearance by either party in exercising any remedy or right, the time for the exercise of which is not specifically and expressly limited or specified in this Agreement shall not be considered a waiver of or an estoppel against the later exercise of such remedy or right.

16. **AGREEMENT OF ESCROW AGENT.** By executing this Agreement, Escrow Agent agrees to hold the Deposit in its non-interest bearing client trust account, which Deposit shall be disbursed in accordance with the terms of this Agreement.

17. **MEDIATION.** Any dispute or claim arising out of or relating to this contract or the property addressed in this contract shall be submitted to non-binding mediation a mutually acceptable mediator, with mediation to take place in Portland, Maine. Buyer and Seller are bound to mediate in good faith and pay their respective mediation fees. If a party does not agree first to go to mediation, then that party will be liable for the other party's legal fees in any subsequent litigation regarding that same matter in which the party who refused to go to mediation loses in that subsequent litigation. This clause shall survive the closing of the transaction.

IN WITNESS WHEREOF, Seller and Buyer have executed this Agreement as of the date first above written.

HARLEQUIN LLC

By: Elisabeth Gilly 6/19/2017
DocuSigned by:
115

Peter Bouchard 6/19/2017
DocuSigned by:
Peter Bouchard

ESCROW AGENT:

Scott Balfour

MAGNUSSON BALFOUR

By: SB Balfour
Its pres

EXHIBIT A – LEGAL DESCRIPTION

A certain lot or parcel of land located at 300 Allen Avenue in Portland, County of Cumberland and State of Maine being the lot of land delineated on the Plan of Existing Conditions and Boundary Survey made by Gorrill-Palmer Consulting Engineers dated June 6, 2003 and recorded in the Cumberland County Registry of Deeds in Plan Book 203, Page 461 and being more particularly described as follows:

Beginning at a ½ inch iron pipe found driven into the earth on the northwesterly sideline of Allen Avenue at the easterly corner of land now or formerly of Bernice E. Knox as described in a deed recorded in the Registry in Book 6312, Page 216; thence:

1. N 29° 52' 27" W a distance of Two Hundred Ninety-Two and 69/100 (292.69) feet by said Knox and land now or formerly of Garry J. Smith and Jane H. Smith as described in a deed recorded in the Registry in Book 18761, Page 72, by Short Street as delineated on a certain plan of The Homesteads dated September 1921 and recorded in Plan Book 14, Page 70, and by land now or formerly of David O. Dulac as described in a deed recorded in the Registry in Book 3274, Page 194 to a ½ inch iron pipe found driven into the earth; thence
2. N 48° 24' 37" E a distance of Sixty-One and 25/100 (61.25) feet by said Dulac and Hennessy Drive as delineated on the aforesaid plan of The Homesteads to a capped 5/8 inch rebar, P.L.S. No. 492, and land now or formerly of Davidson Realty, LLC as described in a deed recorded in the Registry in Book 14746, Page 29; thence
3. N 53° 28' 39" E a distance of Seventy-Two and 07/100 (72.07) feet by said Davidson Realty, LLC to a capped 5/8 inch rebar, P.L.S. No. 492; thence
4. S 27° 48' 17" E a distance of Thirty-Six and 77/100 (36.77) feet by said Davidson Realty, LLC to a capped 5/8 inch rebar, P.L.S. No. 492, and land now or formerly of John Matthews as described in a deed recorded in the Registry in Book 14756, Page 121; thence
5. S 28° 52' 57" E a distance of Thirty-Six and 77/100 (36.77) feet by said John Matthews to a capped 5/8 inch rebar, P.L.S. No. 492; thence
6. S 28° 51' 14" E a distance of Two Hundred and 21/100 (200.21) feet by said John Matthews to a six inch square monument on the northwesterly sideline of Allen Avenue; thence
7. S 47° 43' 50" W a distance of Six and 11/100 (6.11) feet by said Allen Avenue to an angle point on the northwesterly sideline of Allen Avenue; thence

8. S 42° 11' 20" W a distance of One Hundred Twenty-Six and 20/100 (126.20) feet by said Allen Avenue to the point of beginning.

Said premises are conveyed subject to an easement of sewer given by Mary J. Wilson to the Portland Home Building Association by deed recorded in the Registry in Book 1111, Page 300.

The use and enjoyment of said premises are subject to a restrictive covenant which shall remain in effect for a period of ninety-nine (99) years and shall commence on August 22, 2003 and shall terminate on August 22, 2102. Said restrictive covenant shall prevent the operation of a real estate brokerage practice from being conducted on the premises.

Said parcel contains 36, 44 3 sq. ft. and is the same parcel conveyed to Northgate Plaza Associates, LLC by Warranty Deed of OPM, Inc. recorded in the Cumberland County Registry of Deeds in Book 18718, Page 120. Bearings are referenced to Magnetic North.

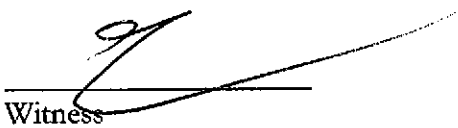
Being the same premises conveyed by Robert L. Adam to Harlequin LLC by Warranty Deed dated August 11, 2004 and recorded in the Cumberland County Registry of Deeds in Book 21661, Page 282.

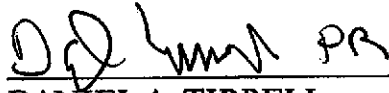
DLN:1001840019574

DEED OF SALE BY PERSONAL REPRESENTATIVE

That, **DANIEL A. TIRRELL**, duly appointed and Personal Representative of the Estate of **BERNICE E. KNOX**, deceased (testate), as shown by the probate records of the County of Cumberland, Maine (docket #2017-1417), and having given notice to each person succeeding to an interest in the real property described below at least ten (10) days prior to the sale, by the power conferred by the Maine Probate Code, and every other power, for consideration paid, grants to **ESTELLE ESTATES, LLC**, a Maine Limited Liability Company, whose mailing address is 39 Darling Avenue, South Portland, Maine, all of the decedent's interest in the premises located in the City of Portland, County of Cumberland and State of Maine, being more particularly described in Exhibit A attached hereto and made a part hereof.

WITNESS my hand this 19 day of January, 2018.

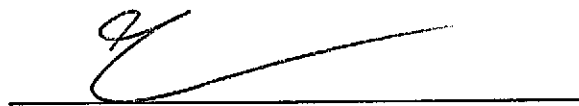

Witness


PR

DANIEL A. TIRRELL
Personal Representative of the
Estate of Bernice E. Knox, deceased

State of Maine
County of Cumberland

On January 19, 2018, then personally appeared the above-named **DANIEL A. TIRRELL**, in his capacity as Personal Representative of the Estate of Bernice E. Knox and acknowledged the foregoing instrument to be his free act and deed in his said capacity.


Notary Public/Attorney
Name:

Charles H. McLaughlin
Attorney At Law

MAINE REAL ESTATE TAX-Paid

EXHIBIT "A"**LEGAL DESCRIPTION****PARCEL ONE**

A certain lot or parcel of land situated in Portland, County of Cumberland, State of Maine, being **Lot No. 50** on a plan of "The Holmsteads," made by E. C. Jordan, C.E. dated September, 1921, recorded in the Cumberland County Registry of Deeds in Plan Book 14, Page 70, to which reference may be had for a more particular description.

PARCEL TWO

Also a certain lot or parcel of land with the buildings thereon, situated on the northerly side of Allen Avenue in said Portland, bounded and described as follows:

Commencing at the westerly corner of land now or formerly of Cyrus Abbott; thence westerly along said Allen Avenue seventy-five (75) feet; thence northerly on a line parallel with the westerly line of said Abbott's land one hundred thirty-five (135) feet; thence easterly on a line parallel with said road to said westerly line of said Abbott's land; thence southerly by said Abbott's land to the point of beginning. Containing ten thousand one hundred twenty-five (10,125) square feet.

PARCEL THREE

Also another certain lot or parcel of land situated in said Portland, being **Lot No. 51** on a "Plan of The Holmsteads" made by E. C. Jordan, C. E., dated September, 1921, and recorded in the Cumberland County Registry of Deeds in Plan Book 14, Page 70 to which reference may be had for a more particular description.

Being the same premises conveyed to Bernice E. Knox by deed dated October 29, 1983 and recorded in the Cumberland County Registry of Deeds in Book 6312, Page 216 and by deed dated December 14, 1999 and recorded in said Registry in Book 15223, Page 810. Bernice E. Knox died on September 22, 2017.

Sullivan Bill

From: Craig Church <cchurch@balfourcommercial.com>
Sent: Tuesday, January 9, 2018 3:59 PM
To: Sullivan Bill
Subject: RE: 300 Allen Ave & Hope Ave

Hi Bill,

Thanks for the heads up I had just got off the phone with Alan Wolfe and he suggested that I send you an email stating that I was in receipt of the \$10,000 for the extension of closing for up to 60 days for Allen Ave. Good to see great minds think alike.

Look forward to the feedback.

Craig S. Church
Commercial & Business Broker
Cell (207) 318-6498
cchurch@balfourcommercial.com



95 India Street
Portland, Maine 04101
Office (207) 774-7715 x 102
Fax (207) 879-9102
www.balfourcommercial.com

This message and any attachments may be privileged, confidential or proprietary. If you are not the intended recipient of this email or believe that you have received this correspondence in error, please contact the sender through the information provided above and permanently delete this message.

From: Sullivan Bill [mailto:bill@sullivanmulti.com]
Sent: Tuesday, January 09, 2018 3:32 PM
To: Craig Church <cchurch@balfourcommercial.com>
Cc: Cindy Kueck <cindy@sullivanmulti.com>
Subject: RE: 300 Allen Ave & Hope Ave

Craig,
I will be meeting with Peter tomorrow and will give you a full report no later than Thursday. I also would like to take the time to put in writing that the \$10,000 non-refundable check that I dropped off on Friday was to extend the closing date by 60 days for 300 Allen per the purchase and sale agreement.
Thanks,

Bill Sullivan
Broker



A Division of Keller Williams Realty
50 Sewall Street 2nd Flr
Portland, ME 04102
207-771-5556 Office
207-773-4647 Fax
www.sullivanmulti.com
www.sullivanmgmt.com

From: Craig Church [<mailto:cchurch@balfourcommercial.com>]
Sent: Tuesday, January 9, 2018 12:11 PM
To: Sullivan Bill <bill@sullivanmulti.com>
Subject: 300 Allen Ave & Hope Ave

Hi Bill,

Can you please detailed feedback as to where we stand on permitting for both properties.

Craig S. Church
Commercial & Business Broker
Cell (207) 318-6498
cchurch@balfourcommercial.com



95 India Street
Portland, Maine 04101
Office (207) 774-7715 x 102
Fax (207) 879-9102
www.balfourcommercial.com

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March 1, 2018

Portland Planning Board
389 Congress Street
Portland, ME 04101

To Whom It May Concern,

Please be advised that my office is in the process of underwriting the financing for the acquisition and development of the property located at 300 Allen Ave, Portland, Maine. At the request of the buyers LLC, Managing Partner and principal developer, Peter Bouchard, I am writing to inform you that through our underwriting due diligence we have documented and confirmed that Mr. Bouchard has the financial and technical ability to amend the 300 Allen Ave Mixed Use Development. Mr. Bouchard has been involved in the development of subdivisions containing over 250 units in the Portland area since 2005.

Please feel free to call with any questions.
Sincerely,

A handwritten signature in black ink, appearing to be "Deron Barton", with a horizontal line extending from the bottom of the signature.

Deron Barton
President/Owner

CC: File
P. Bouchard

March 1, 2018

Portland Planning Board
389 Congress Street
Portland, Maine 04101

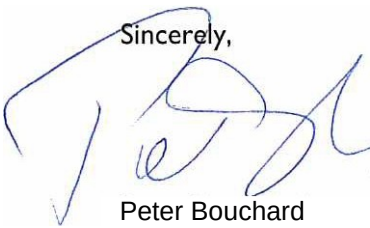
RE: 300 Allen Ave
Mixed Use Development

To Whom It May Concern,

Peter Bouchard, ESTELLE ESTATES, LLC, has the technical ability to complete the 300 Allen Ave Mixed Use Development. Mr. Bouchard has been involved in the development of a number of subdivisions and condominium developments in the greater Portland area, including the 42-unit Highland Commons in South Portland and a 3-condominium development at 107 India Street in Portland. Most recently, Mr. Bouchard completed Pond View Woods subdivision in Old Orchard Beach, which is a 32-lot subdivision.

Should you have any questions, please do not hesitate to contact me.

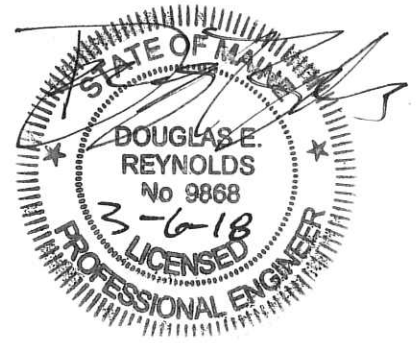
Sincerely,

A handwritten signature in blue ink, appearing to be 'P. Bouchard', is written over the word 'Sincerely,'.

Peter Bouchard

ESTELLE ESTATES, LLC

EROSION AND SEDIMENTATION CONTROL BASIC STANDARDS



I.1 Overview

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

Att. F

I.2 Introduction

ESTELLE ESTATES, LLC has retained Gorrill Palmer to prepare plans and permit applications for a proposed mixed use development at 300 and 292 Allen Avenue. The site is shown on Assessor's Map 344 E006, E005, E004, E003 and E002. 300 Allen Ave is approximately 36,443 sf (0.84 acres) in size and is located in the Residential R-5 zone and the Residence – Professional Zone. 292 Allen Ave is approximately 18,899 sf (0.43 acres) in size and is located in the Residential R-5 zone. Figure 1 is a map showing the project location. The developer is currently seeking a Level III Site Plan permit from the City of Portland. 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 development site comprises approximately 48,898 sf at 300 and 292 Allen Avenue in Portland, Maine. 300 Allen Ave is currently vacant with a landcover of brush. 292 Allen Ave currently contains a single family residential structure with developed lawn area. Abutting land uses include:

- North – Residential
- East – Residential
- South – Residential
- West – Residential

Topography in the area of the proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 33%. The steeper slopes are associated with a vegetated soil stockpile at the front of the site.

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:

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

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 13, Sep 11, 2017

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

Date(s) aerial images were photographed: Data not available.

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BgB	Belgrade very fine sandy loam, 0 to 8 percent slopes	3.9	22.3%
BuB	Lamoine silt loam, 3 to 8 percent slopes	8.9	51.0%
Sn	Scantic silt loam, 0 to 3 percent slopes	4.7	26.7%
Totals for Area of Interest		17.4	100.0%

Map Unit Descriptions

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

K VALUE		
Type	Subsurface	Substratum
Belgrade	0.64	0.49
Buxton	0.49	0.49
Scantic	0.49	0.49

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

1.3.2 Existing Erosion Problems

Gorrill-Palmer Consulting Engineers, Inc. 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 offsite wetlands.

1.3.4 Protected Natural Resources

Wetlands on-site at 300 Allen Ave have been delineated by Jones Associates of Auburn, Maine, and wetlands at 292 Allen Ave have been delineated by Boyle Associates. The wetlands are GPS located and are shown on project plans. The total area of wetlands located on the site is approximately 11,121 +/- s.f. (0.26 acres). It is anticipated that approximately 9,252 s.f. of wetlands will be impacted during development of the site. Based upon the FEMA maps, the site is not located within a Zone A 100-year floodplain.

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 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 from Allen 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 50 feet of an undisturbed wetland, which have been rough graded and are not located within a building pad, parking area, or access drive subbase area, shall receive mulch or erosion control mesh fabric within 48 hours of initial disturbance of soil. All areas within 50 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 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. Allen 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. Storm drain catch basin inlet protection shall be provided through the use of stone sediment barriers or approved sediment bags (such as Silt Sack). Installation details are provided in the plan set. The barriers shall be inspected after each rainfall and repairs made as necessary. Sediment shall be removed and the barrier restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the barrier. The barrier shall be removed when the tributary drainage area has been stabilized.

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

13. 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 50 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.
3. Catch basins shall be provided with sediment sumps and inlet hoods (the Snout) for all outlet pipes that are 18" in diameter or less.

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 Mixed Use Development and related infrastructure will commence in Summer 2018 and be completed by Winter of 2018.

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 Allen Avenue.
2. Install perimeter silt fence and/or wood waste berms prior to grubbing respective areas.
3. Clear and grub site. Install stone check dams at any evident concentrated flow discharge points.
4. Foundation preparation area shall be excavated for installation of the building footings. Building work will be on going through the remainder of the project.

5. Commence installation of drainage appurtenances.
6. Commence construction of the bioretention pond and grassed underdrain soil filters. The filter media shall not be installed until the tributary area has been stabilized.
7. Commence earthwork and grading to subgrade.
8. Commence installation of water and sewer lines.
9. Continue earthwork and grading to subgrade as necessary for construction.
10. Complete installation of underground utilities to within 5' of the buildings.
11. Install light pole foundations and light poles.
12. Complete remaining earthwork operations.
13. Complete installation of catch basins and appurtenances.
14. Install sub-base and base gravel within parking fields, walkways, and all driveways.
15. Install curbing in parking fields, driveways, and along the streets as needed.
16. Install base course paving for access drive and parking area as well as concrete surfaces.
17. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
18. Install surface course paving for access drive and parking areas. Stripe per plan.
19. Once the site is stabilized and a 90% catch of vegetation has been obtained, remove all temporary erosion control measures.
20. 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 50 feet of an undisturbed wetland and 7 days for all other areas. Areas within 50 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.

I.5 Erosion, Sedimentation and Stabilization Control Plan

The Erosion Control Plan is included in the plan set.

I.6 Details and Specifications

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

I.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.

I. 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 1st, 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 1st, loam or seed will not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until such time as the final treatment can be applied. If the date is after November 1st and if the exposed area has been 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.

1.8 Maintenance of facilities

The stormwater facilities will be maintained by the Applicant, ESTELLE ESTATES, 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.

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.

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 and hydrocarbons at the time of the inspection.

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.

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 – Bio-Filtration:

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.

Soil Filter – Vegetated 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 Bioretention Cell 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.

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. 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 and Parking Surfaces: 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.

Housekeeping

The following procedures are hereby established as a minimum for compliance with this section. For further information on the procedures listed below, refer to MDEP 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 A
Seeding Plan

SEEDING PLAN

Project: Mixed Use Development

Site Location: 300 Allen 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.		
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: Mixed Use Development

Site Location: 300 Allen 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.		
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: Mixed Use Development

Address: 300 Allen 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:

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

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.”

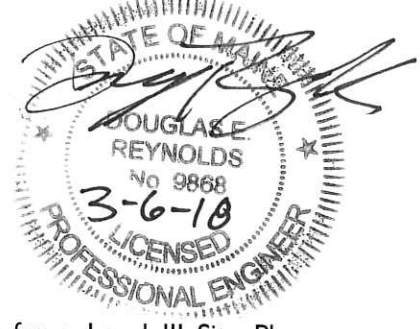
Signature

Typed Name

Title

Date

STORMWATER MANAGEMENT



12.1 Overview

Section 5 of the City of Portland Technical Manual states that applications for a Level III Site Plan Application shall submit a stormwater management plan pursuant to the regulations of MDEP Chapter 500 Stormwater Management Rules including General and Flooding Standards. Att. G

All development is required to comply with the Urban Impaired Stream Standard pursuant to MDEP Chapter 500 if located within the watershed of Capisic Brook, Fall Brook, or Nason's Brook.

12.2 Introduction

ESTELLE ESTATE, LLC has retained Gorrill Palmer to prepare plans and permit applications for a proposed mixed use development at 300 and 292 Allen Avenue. The site is shown on Assessor's Map 344 E006, E005, E004, E003 and E002. 300 Allen Ave is approximately 36,443 sf (0.84 acres) in size and is located in the Residential R-5 zone and the Residence – Professional Zone. 292 Allen Ave is approximately 18,899 sf (0.43 acres) in size and is located in the Residential R-5 zone. Figure 1 is a map showing the project location. The developer is currently seeking a Level III Site Plan permit from the City of Portland. 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 proposed mixed use development consisting of a 2,400 sf footprint office/professional services building, three 1,224 sf footprint duplex residential structures, two 1,836 sf footprint triplex residential structures, associated parking, and infrastructure at 300 and 292 Allen Avenue in Portland, Maine.

300 Allen Ave is currently vacant with a landcover of brush. 292 Allen Ave contains a single family residence with a paved driveway and the remaining land is vegetated. Topography in the area of the proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 33%. The steeper slopes are associated with a vegetated soil stockpile at the front of the site. Abutting land uses include:

- North – Residential
- West – Residential
- South – Residential
- East – Residential

The site is located within the Fall Brook watershed which is listed as an urban impaired stream.

The development of the site will create approximately 28,170 sf (0.65 acres) of impervious area with a total disturbed area of approximately 1.12 acres.

12.4 Surface Water

There are no lakes located on, adjacent to or downstream of the project site.

12.5 General Topography

Topography in the area of the proposed construction is flat except for a vegetated soil stockpile with flat slopes of approximately 0.5% to steep slopes of 33%. Elevations on-site range from 80' at the center of the site to 90' at the top of the stockpile.

12.6 Flooding

Based upon the FEMA maps, no part of the site is located within a Zone A 100-year floodplain.

12.7 Natural Drainage Ways

The project as currently proposed does not include alteration of any natural drainage ways.

12.8 Alterations to Land Cover

Changes in land cover will include removal of grassed areas through portions of the project site as well as a residential structure and the addition of paved surfaces, buildings, lawn, and landscaped areas.

12.9 Stormwater Management Control

As required by the City Ordinance, the project is required to meet the Basic, General, Flooding, and Urban Impaired Stream standards of MDEP Chapter 500.

The Basic Standard is presented in the Erosion and Sedimentation Control report included with this permit application. The General, Flooding, and Urban Impaired Stream Standards are presented as follows.

The development will utilize a Bioretention pond, Grassed Underdrained Soil Filters, and Drip Strips to provide water quality and quantity treatment.

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 four treatment measures listed in Chapter 500 and described in Volume III of the Stormwater BMP Manual are:

- Wetpond with detention above the permanent pool
- 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 and Quantity

The proposed development will be required to meet the BMP Standard under the General Standard, the Flooding Standard, and the Urban Impaired Stream 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 a Bioretention pond, Grassed Underdrained Soil Filters, and Drip Strips to provide water quality and quantity control. A payment will be made to City of Portland Compensation Fee Utilization Plan to satisfy the Urban Impaired Stream requirements.

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.

Bioretention Pond

Subcatchment 3 is tributary to the proposed Bioretention Pond #1. The tributary area consists of the landscaped area between the office and pond, the sidewalk in front and to the side of the office building and the pond itself.

Test pits have not been excavated at the pond locations, but given the soil type, it is assumed that the seasonal high groundwater is less than one foot below the pond bottom therefore an impermeable liner is proposed under the pond.

Bioretention ponds 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 subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped developed area. The surface area of the filter is required to be no less than the sum of 7% of the impervious area and 3% of the landscaped area draining to the filter. The channel protection volume is allowed to pond up to 6" deep within the bioretention pond. An additional 6" of storage within the soil filter is permitted. The pond outlet will be set at the channel protection volume elevation. A valve will be placed on the soil filter 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 bioretention pond 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 following table presents the Bioretention Pond information:

Table I		
Bioretention Pond #1		
	Required	Provided
Impervious Area		390 sq. ft.
Developed Area (non-impervious)		924 sq. ft.
Treatment Volume	63.3 cu. ft.	181.0 cu. ft.
Filter Surface Area		175 sq. ft.
7%(imp. Area) +3%(landscaped Area)	55.0 sq. ft.	175 sq. ft.
Cell Base Elevation		83.5 ft.

Given the small tributary area to bioretention pond #1, there is no formal overflow structure. The depth of ponding for the water quality volume is elevation 83.38 which is within the soil media.

Roof Dripline Filtration

Subcatchment 4 is tributary to the drip strips at the rear of the residential duplex units. The tributary area consists of the adjacent roof area.

Roof dripline filtration will be utilized at parts of the rear of the residential duplex units. The dripline provides treatment for the tributary roof area. The reservoir layer is 12" deep and the width varies to provide storage for 1" of runoff from the impervious surface assuming a 40% void ratio in the stone reservoir layer. The drip strips run adjacent to the tributary roof area that requires treatment as shown on the Water Quality Map. Each drip strip is sized independently based on the tributary roof area. The largest drip strip, located to the rear of the middle duplex, provides a minimum of 51.1 cf of storage, which is the required storage based upon 1" of runoff over the 17'x18' roof area.

Grassed Underdrained Soil Filter

Subcatchment 1A is tributary to the proposed Grassed Underdrain Soil #1. The tributary area consists of the roof areas of the triplex residential units, parking area, and the soil filter itself.

Subcatchment 1B is tributary to the proposed Grassed Underdrain Soil #2. The tributary area consists of the adjacent access drive, parking area, and the soil filter itself.

Subcatchment 2A is tributary to the proposed Grassed Underdrain Soil #3. The tributary area consists of the front roof half of the two residential duplex units, the roof of the office-professional building, the parking area, and the soil filter itself.

Subcatchment 2B is tributary to the proposed Grassed Underdrain Soil #4. The tributary area consists of the front roof half of the northern residential duplex unit, the adjacent parking area, and the soil filter itself.

Grassed Underdrains are defined in Volume III, Section 7.1 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 subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped developed area. The surface area of the filter is required to be no less than the sum of 5% of the impervious area and 2% of the landscaped area draining to the filter. The proposed grassed

underdrain soil filter sizes are less than the 3,000 square foot maximum size with a watershed less than 2.5 acres in accordance with Section 7 of the BMP Manual.

The channel protection volume is allowed to pond up to 18" deep within the grassed underdrain. Runoff from storms producing the water quality volume will be conveyed from the pond through the soil media and underdrain system. A valve will be placed on the soil filter 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. Yearly maintenance of the grassed underdrain 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 loamy coarse sand and 6" of loamy topsoil with a transition layer of 2" of the topsoil rototilled into the sand layer.

Runoff from larger storms will be conveyed from the filter by the spillway. The pond provides 1' of freeboard for the 25 year storm passing over the spillway. See attachment B. The following tables present information for the Soil Filters.

Table 2		
Grassed Underdrain Soil Filter #1		
	Required	Provided
Impervious Area		7,198 sq. ft.
Developed Area (non-impervious)		1,816 sq. ft.
Treatment Volume	661 cu. ft.	665 cu. ft.
Filter Surface Area	3,000 sq. ft. max	469 sq. ft.
5%(imp. Area) +2%(landscaped Area)	397 sq. ft.	469 sq. ft.
Pond Base Elevation		81.5 ft.
Channel Protection Volume elevation		82.57 ft.
Release Time	24-48 Hours	24 Hours
Overflow Elevation		83.29 ft.

Table 3		
Grassed Underdrain Soil Filter #2		
	Required	Provided
Impervious Area		2,287 sq. ft.
Developed Area (non-impervious)		1,066 sq. ft.
Treatment Volume	227 cu. ft.	411 cu. ft.
Filter Surface Area	3,000 sq. ft. max	138 sq. ft.
5%(imp. Area) +2%(landscaped Area)	136 sq. ft.	138 sq. ft.
Pond Base Elevation		81.0 ft.
Channel Protection Volume elevation		82.03 ft.
Release Time	24-48 Hours	24 Hours
Overflow Elevation		83.32 ft.

Table 4		
Grassed Underdrain Soil Filter #3		
	Required	Provided
Impervious Area		11,993 sq. ft.
Developed Area (non-impervious)		4,298 sq. ft.
Treatment Volume	1,143 cu. ft.	1,148 cu. ft.
Filter Surface Area	3,000 sq. ft. max	719 sq. ft.
5%(imp. Area) +2%(landscaped Area)	686 sq. ft.	719 sq. ft.
Pond Base Elevation		81.0 ft.
Channel Protection Volume elevation		82.08 ft.
Release Time	24-48 Hours	24 Hours
Overflow Elevation		83.28 ft.

Table 5		
Grassed Underdrain Soil Filter #4		
	Required	Provided
Impervious Area		3,833 sq. ft.
Developed Area (non-impervious)		1,936 sq. ft.
Treatment Volume	384 cu. ft.	412 cu. ft.
Filter Surface Area	3,000 sq. ft. max	295 sq. ft.
5%(imp. Area) +2%(landscaped Area)	231 sq. ft.	295 sq. ft.
Pond Base Elevation		80.75 ft.
Channel Protection Volume elevation		81.65 ft.
Release Time	24-48 Hours	24 Hours
Overflow Elevation		82.18 ft.

Watershed Maps are included in Attachment A. Stage/storage tables for the soil filter is included in Attachment B.

12.9.4 Conclusion – Overall Treatment

The following table summarizes the proposed treatment for the project. The total developed area does not include side slopes that will be mowed less than 2 times per year.

Table 6 – Overall Treatment		
	IMPERVIOUS	DEVELOPED (Impervious + Landscaped)
Area treated by Bioretention Pond #1 (sf)	390	1,314
Area treated by Drip Strips(sf)	1,071	1,242
Area treated by Grassed Underdrain Soil Filter #1 (sf)	7,198	9,014
Area treated by Grassed Underdrain Soil Filter #2 (sf)	2,287	3,353
Area treated by Grassed Underdrain Soil Filter #3 (sf)	11,993	16,291
Area treated by Grassed Underdrain Soil Filter #4 (sf)	3,833	5,769
Total Area Treated (sf)	26,772	36,983
Area Untreated (sf)	1,398	6,689
Total Area of Project (sf)	28,170	43,672
Percent Treated	95%	85%
Percent Required	95%	80%

The proposed development of 300 and 292 Allen Avenue will utilize a Bioretention Pond, Grassed Underdrain Soil Filters and Roof Dripline Filtration 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. As proposed, the development is controlling approximately 95% of the created impervious area, and approximately 85% of the developed area.

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 and D. The off-site areas were modeled as hydrologic soil type B and D based on the Medium Intensity Soil Survey. 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.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

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 13, Sep 11, 2017

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

Date(s) aerial images were photographed: Data not available.

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BgB	Belgrade very fine sandy loam, 0 to 8 percent slopes	3.9	22.3%
BuB	Lamoine silt loam, 3 to 8 percent slopes	8.9	51.0%
Sn	Scantic silt loam, 0 to 3 percent slopes	4.7	26.7%
Totals for Area of Interest		17.4	100.0%

Map Unit Descriptions

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

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

1. Cumberland 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 watersheds in the predevelopment condition as depicted on the Predevelopment Watershed Map.

The predevelopment was analyzed as two subcatchments. Two points of interest (POI) were analyzed.

Subcatchment 1 consists of the southwestern portion of the site. The subcatchment contains the area on site within the City of Portland easement and off-site area to the west. The off-site area consists of house lots and a gravel access drive. The subcatchment is tributary to a 12" culvert entering the existing stormdrain system crossing the site. The point of the culvert entering the storm drain system is designated as POI 1.

Subcatchment 2 is the site area tributary to the existing stormdrain crossing the site within the City of Portland easement. The subcatchment also contains an off-site area to the southeast of the site. The point of entry on the stormdrain system is designated as POI 2.

A watershed map for the predevelopment conditions is attached to this section as drawing number W1 in Attachment A. Table 7 presents the peak flow rates at the point of interest in the predevelopment condition.

Table 7 – Predevelopment Peak Flow Rates (cfs)			
Point of Interest	Peak Flow (cfs)		
	2 Year	10 Year	25 Year
	Pre	Pre	Pre
POI # 1	2.1	4.0	5.7
POI # 2	0.3	0.7	1.1

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

Postdevelopment Conditions

Analysis for the post development condition consists of determining post development peak flows and limiting the post development flows to predevelopment levels. Detention will be provided within the Grassed Underdrain Soil Filters and by restricting the outflow of Soil Filters #1, #3 and #4.

The two subcatchments described in the predevelopment section of the report change slightly in size in the post development condition. Both pre development subcatchments are split to differentiate area receiving stormwater treatment and areas left at the predevelopment condition. The overall subcatchment areas tributary to POI 1 and POI 2 remains the same as in the predevelopment condition.

Subcatchment 1 decreases in size due to the differentiation of areas receiving stormwater treatment. Subcatchment 1 is split into three subcatchments for the post development condition.

Subcatchment 1A is the area tributary to Grassed Underdrain Soil Filter #1 and contains impervious roof and parking lot areas as well as lawn area.

Subcatchment 1B is the area tributary to Grassed Underdrain Soil Filter #2 and includes the adjacent parking area and lawn area.

These subcatchments are routed to the existing stormdrain inlet on the west side of the pipe, POI 1.

Subcatchment 2 decreases in size due to the differentiation of areas receiving stormwater treatment. Subcatchment 2 is split into five subcatchments for the post development condition.

Subcatchment 2A is the area tributary to Grassed Underdrain Soil Filter #3 and contains impervious roof and parking area as well as lawn area.

Subcatchment 2B is the area tributary to Grassed Underdrain Soil Filter #4 and contains impervious roof and parking area as well as lawn area.

Subcatchment 3 is the area tributary to Bio Retention Cell #1 and contains impervious sidewalk area as well as lawn area.

Subcatchment 4 is the area tributary to the Roof Dripline Filtration System and contains impervious roof areas.

These subcatchments are routed to the existing stormdrain inlet on the east side of the pipe, POI 2.

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

A comparison of predevelopment and post development peak flow at the POI location without detention is presented in the following table.

Table 8 – Comparison of Peak flows without detention (cfs)						
Point of Interest	Peak Flow (cfs)					
	2 Year		10 Year		25 Year	
	Pre	Post	Pre	Post	Pre	Post
POI # 1	2.1	2.2	4.0	4.1	5.7	5.7
POI # 2	0.3	1.6	0.7	2.6	1.1	3.4

As can be seen from Table 8, detention is required to reduce the peak flow at POI 1 and POI 2 to at or below predevelopment levels.

The impervious area of the site is increased in the post development condition. Subcatchments 1A, 1B, 2A, 2B, 3, and 4 are routed through ponds. Subcatchments 1 and 2 are undetained.

The stormwater runoff from subcatchment 1A is routed through Grassed Underdrain Soil Filter #1. The outlet of the pond is the underdrain below the soil filter. The outflow was modeled as a constant exfiltration of 0.01 cfs. Runoff from larger storms enters the overflow catch basin which has its rim set at the water quality volume stage. The flow from the catch basin enters an outlet control structure where the outflow is regulated by an orifice. A weir within the structure will be set at the 25-year storm stage and will provide an overflow to the stormdrain system. The following table presents the pond performance.

Table 9 – Grassed Underdrain Soil Filter #1			
	Storm Event		
	2 Year	10 Year	25 Year
Peak Inflow (cfs)	0.64	0.99	1.27
Peak Outflow (cfs)	0.27	0.35	0.36
Stage (Max. Elevation)	82.64	83.01	83.29
Storage (cf)	723	1,047	1,322
Depth above base (ft)	1.14	1.51	1.79

The stormwater runoff from subcatchment 1B is routed through Grassed Underdrain Soil Filter #2. The Water Quality outlet of the pond is the underdrain below the soil filter. The outflow was modeled as a constant exfiltration of 0.01 cfs. No formal outlet control is proposed due to the small subcatchment area associated with Soil Filter #2. Runoff from larger storms will flow over an emergency spillway that is set at the 25-YR storm elevation. The following table presents the pond performance.

Table 10 – Grassed Underdrain Soil Filter #2			
	Storm Event		
	2 Year	10 Year	25 Year
Peak Inflow (cfs)	0.22	0.36	0.46
Peak Outflow (cfs)	0.01	0.01	0.01
Stage (Max. Elevation)	82.24	82.88	83.32
Storage (cf)	305	595	853
Depth above base (ft)	1.24	1.88	2.32

The stormwater runoff from subcatchment 2A is routed through Grassed Underdrain Soil Filter #3. The Water Quality outlet of the pond is the underdrain below the soil filter. The outflow was modeled as a constant exfiltration of 0.01 cfs. Runoff from larger storms enters the overflow catch basin which has its rim set at the water quality volume stage. The flow from the catch basin enters an outlet control structure where the outflow is regulated by an orifice. A weir within the structure will be set at the 25-year storm stage and will provide an overflow to the stormdrain system. Due to the small storage capacity of Soil Filter #3, the embankment berm has been reduced to a minimum of 2 ft in width in order to fit on the site. The following table presents the pond performance.

Table 11 – Grassed Underdrain Soil Filter #3			
	Storm Event		
	2 Year	10 Year	25 Year
Peak Inflow (cfs)	1.09	1.71	2.21
Peak Outflow (cfs)	0.21	0.22	0.23
Stage (Max. Elevation)	82.31	82.9	83.28
Storage (cf)	1,498	2,577	3,439
Depth above base (ft)	1.31	1.9	2.28

The stormwater runoff from subcatchment 2B is routed through Grassed Underdrain Soil Filter #4. The Water Quality outlet of the pond is the underdrain below the soil filter. The outflow was modeled as a constant exfiltration of 0.01 cfs. Runoff from larger storms enters the overflow catch basin which has its rim set at the water quality volume stage. The flow from the catch basin enters an outlet control structure where the outflow is regulated by an orifice. A weir within the structure will be set at the 25-year storm stage and will provide an overflow to the stormdrain system. Due to the small storage capacity of Soil Filter #4, the embankment berm has been reduced to a minimum of 2 ft in width in order to fit on the site. The following table presents the pond performance.

Table 12 – Grassed Underdrain Soil Filter #4			
	Storm Event		
	2 Year	10 Year	25 Year
Peak Inflow (cfs)	0.38	0.61	0.79
Peak Outflow (cfs)	0.12	0.21	0.21
Stage (Max. Elevation)	81.69	81.94	82.18
Storage (cf)	438	621	824
Depth above base (ft)	0.94	1.19	1.43

The stormwater runoff from subcatchment 3 is routed through Bioretention Pond #1. The outlet of the pond is the underdrain below the soil filter. The outflow was modeled as a constant exfiltration of 0.01 cfs. The following table presents the pond performance.

Table 13 – Bioretention Pond #1			
	Storm Event		
	2 Year	10 Year	25 Year
Peak Inflow (cfs)	0.07	0.12	0.16
Peak Outflow (cfs)	0.01	0.01	0.01
Stage (Max. Elevation)	83.3	83.68	83.94
Storage (cf)	52	122	188
Depth above base (ft)	0	0.18	0.44

The drip strip was modeled as a composite pond providing a total storage volume of the three drip strip treatment areas. The maximum stage for the 25 year storm is 0.23' below the surface of the drip strip.

The outflow from the ponds is routed to POI 2.

The following table presents a comparison of peak flow with detention.

Table 14 – Comparison of Peak flows with detention (cfs)						
Point of Interest	Peak Flow (cfs)					
	2 Year		10 Year		25 Year	
	Pre	Post	Pre	Post	Pre	Post
POI # 1	2.1	2.0	4.0	3.9	5.7	5.2
POI # 2	0.3	0.5	0.7	0.9	1.1	1.1

As can be seen from Table 14 above, the peak post development flow at POI #1 is at or below predevelopment levels. The peak post development flow at POI #2 is at or below predevelopment levels for the 25-year storm, but is slightly higher at the 2-year and 10-year storms. Given the post development reduction in peak flow for the 25-year storm, the small tributary area, and the low flows, the 0.2 cfs increase in peak flowS for the 2-year and 10-year storm, is believed to be insignificant.

12.9.6 Conclusion – Overall Water Quantity

The peak flow to the Point of Interests has been reduced to be at or below predevelopment peak levels with the exception of 2-year and 10-year storms for POI #2. The slight increase is believed to be insignificant given the small tributary areas and low flows.

12.9.7 Urban Impaired Stream Standard

The project is within the Fall Brook watershed and is therefore required to meet the Chapter 500 urban impaired stream standard. The City of Portland has a Compensation Fee Utilization Plan. The following table presents the required compensation fee for this project based upon MDEP Chapter 501.

Table 15 – Urban Impaired Stream Compensation Fee			
Type of Surface	Area (acres)	Fee Per Acre	Required Fee
Non-Roof Impervious	0.424	\$12,500	\$5,300
Roof	0.224	\$5,000	\$1,120
Landscaped Area	0.352	\$2,500	\$880
		Total	\$7,300

A compensation fee of \$7,300 will be paid to the City of Portland Compensation Fee Utilization Plan.

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 ESTELLE ESTATES, LLC, to prepare plans and permit applications for a proposed mixed use development, located at 300 and 292 Allen Avenue in Portland, Maine. The proposed development will include a 2,400 sf footprint office/professional services building, three 1,224 sf footprint duplex residential structures, two 1,836 sf triplex residential structures, associated parking, and infrastructure. A stormwater management plan pursuant to the regulations of MDEP Chapter 500 Stormwater Management Rules including General, Flooding, and Urban Impaired Stream Standards is required by the City of Portland. Based upon the attached calculations, the proposed development meets or exceeds the requirement of the General, Flooding, and Urban Impaired Stream Standard.

12.13 Attachments

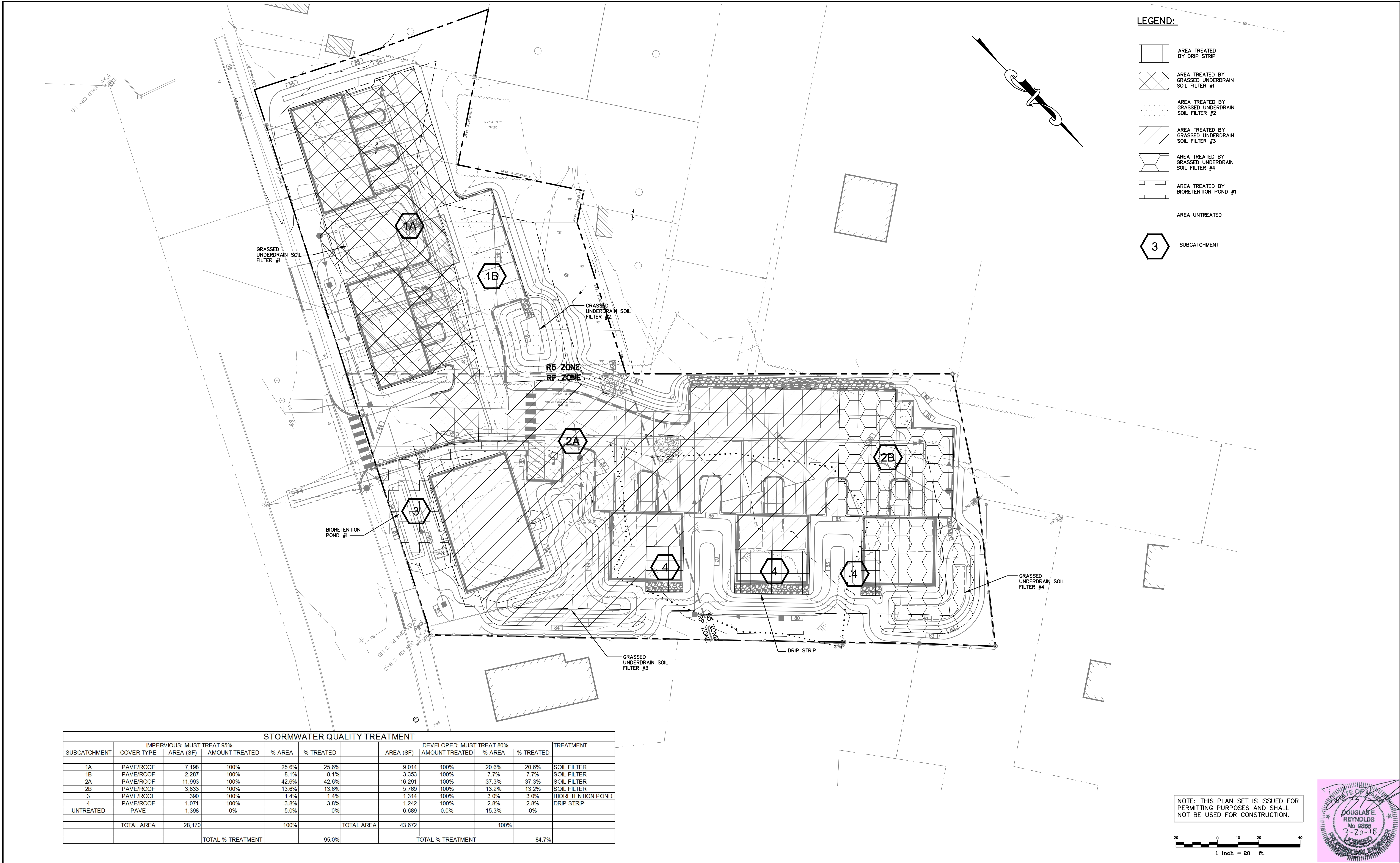
Attached to this section are the following items:

Attachment A – Watershed Maps (Pre, Post, Water Quality)

Attachment B – TR-20 Calculations

ATTACHMENT A

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Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: JWA	Draft: CG	Date: AUG 2016
Checked: AMP	Scale: AS NOTED	Job No.: 801.06
File Name: 801-06-WQ.dwg		
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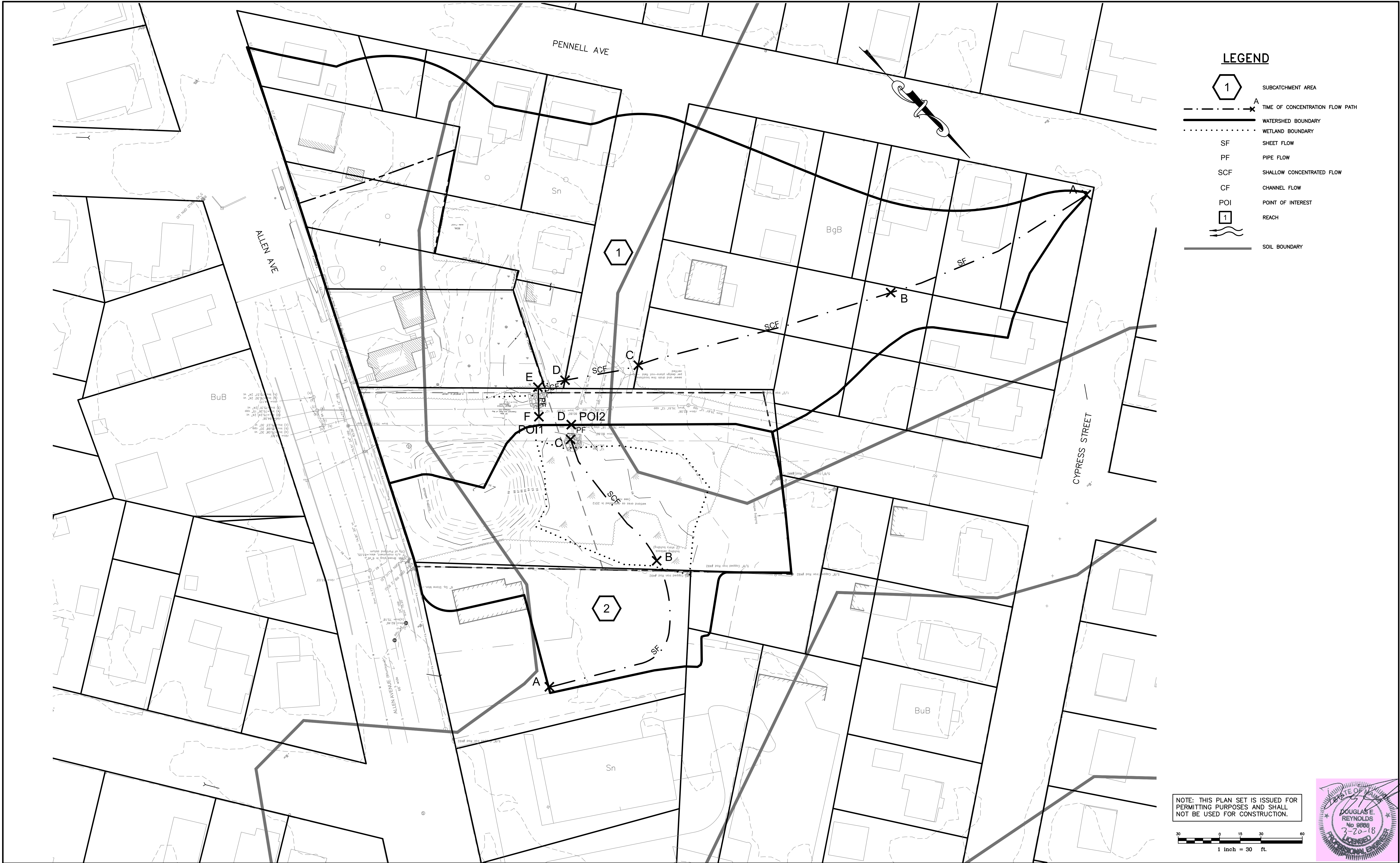
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www.gorrillpalmer.com
207.772.2515

Drawing Name:	Water Quality Map
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.

WQ

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Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

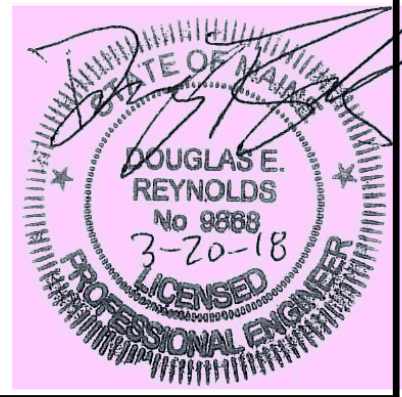
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Checked: AMP	Scale: 1"=30'	Job No.: 801.06
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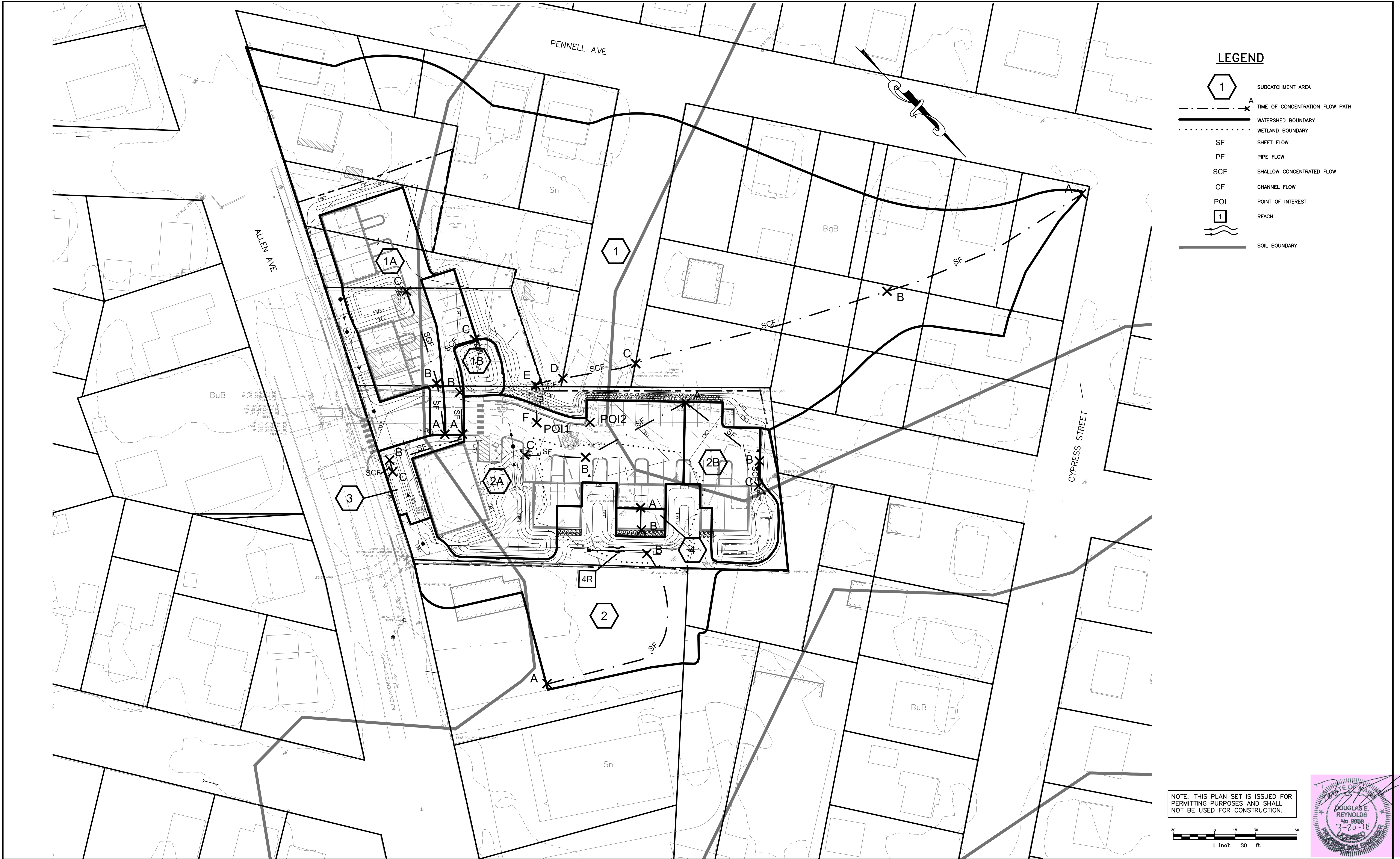
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207.772.2515

Drawing Name:	Pre Development Watershed Map
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.
W1



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Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

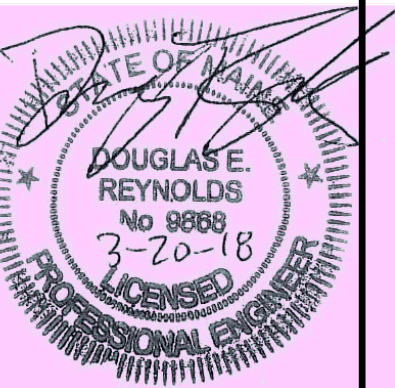
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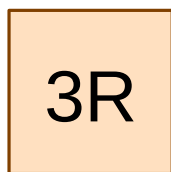
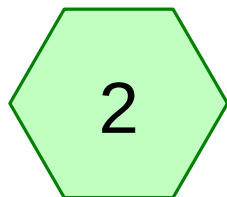
Relationships. Responsiveness. Results.
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Drawing Name:	Post Development Watershed Map
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

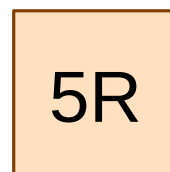
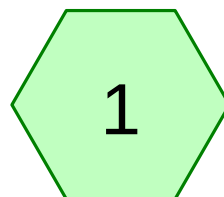
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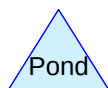
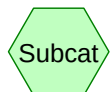
ATTACHMENT B



POI 2



POI1



Pre*Type III 24-hr 2-Year Storm Rainfall=3.10"*

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Page 2

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1:Runoff Area=103,170 sf 31.78% Impervious Runoff Depth=1.33"
Flow Length=440' Tc=29.5 min CN=80 Runoff=2.07 cfs 11,396 cf**Subcatchment2:**Runoff Area=37,650 sf 1.75% Impervious Runoff Depth=0.77"
Flow Length=255' Tc=54.0 min CN=70 Runoff=0.29 cfs 2,418 cf**Reach 3R: POI 2**Inflow=0.29 cfs 2,418 cf
Outflow=0.29 cfs 2,418 cf**Reach 5R: POI1**Inflow=2.07 cfs 11,396 cf
Outflow=2.07 cfs 11,396 cf**Total Runoff Area = 140,820 sf Runoff Volume = 13,813 cf Average Runoff Depth = 1.18"**
76.24% Pervious = 107,368 sf 23.76% Impervious = 33,452 sf

Pre*Type III 24-hr 10-Year Storm Rainfall=4.60"*

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Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1:Runoff Area=103,170 sf 31.78% Impervious Runoff Depth=2.55"
Flow Length=440' Tc=29.5 min CN=80 Runoff=4.03 cfs 21,898 cf**Subcatchment2:**Runoff Area=37,650 sf 1.75% Impervious Runoff Depth=1.74"
Flow Length=255' Tc=54.0 min CN=70 Runoff=0.72 cfs 5,475 cf**Reach 3R: POI 2**Inflow=0.72 cfs 5,475 cf
Outflow=0.72 cfs 5,475 cf**Reach 5R: POI1**Inflow=4.03 cfs 21,898 cf
Outflow=4.03 cfs 21,898 cf**Total Runoff Area = 140,820 sf Runoff Volume = 27,372 cf Average Runoff Depth = 2.33"**
76.24% Pervious = 107,368 sf 23.76% Impervious = 33,452 sf

Pre*Type III 24-hr 25-Year Storm Rainfall=5.80"*

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Page 4

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1:Runoff Area=103,170 sf 31.78% Impervious Runoff Depth=3.60"
Flow Length=440' Tc=29.5 min CN=80 Runoff=5.69 cfs 30,962 cf**Subcatchment2:**Runoff Area=37,650 sf 1.75% Impervious Runoff Depth=2.65"
Flow Length=255' Tc=54.0 min CN=70 Runoff=1.11 cfs 8,306 cf**Reach 3R: POI 2**Inflow=1.11 cfs 8,306 cf
Outflow=1.11 cfs 8,306 cf**Reach 5R: POI1**Inflow=5.69 cfs 30,962 cf
Outflow=5.69 cfs 30,962 cf**Total Runoff Area = 140,820 sf Runoff Volume = 39,268 cf Average Runoff Depth = 3.35"**
76.24% Pervious = 107,368 sf 23.76% Impervious = 33,452 sf

Pre*Type III 24-hr 25-Year Storm Rainfall=5.80"*

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Page 1

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1:Runoff Area=103,170 sf 31.78% Impervious Runoff Depth=3.60"
Flow Length=440' Tc=29.5 min CN=80 Runoff=5.69 cfs 30,962 cf**Subcatchment2:**Runoff Area=37,650 sf 1.75% Impervious Runoff Depth=2.65"
Flow Length=255' Tc=54.0 min CN=70 Runoff=1.11 cfs 8,306 cf**Reach 3R: POI 2**Inflow=1.11 cfs 8,306 cf
Outflow=1.11 cfs 8,306 cf**Reach 5R: POI1**Inflow=5.69 cfs 30,962 cf
Outflow=5.69 cfs 30,962 cf**Total Runoff Area = 140,820 sf Runoff Volume = 39,268 cf Average Runoff Depth = 3.35"**
76.24% Pervious = 107,368 sf 23.76% Impervious = 33,452 sf

Pre

Type III 24-hr 25-Year Storm Rainfall=5.80"

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Page 2

Summary for Subcatchment 1:

Runoff = 5.69 cfs @ 12.42 hrs, Volume= 30,962 cf, Depth= 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
2,750	91	Gravel roads, HSG D
37,329	75	1/4 acre lots, 38% imp, HSG B
48,967	87	1/4 acre lots, 38% imp, HSG D
684	85	Gravel roads, HSG B
4,500	48	Brush, Good, HSG B
8,940	73	Brush, Good, HSG D
103,170	80	Weighted Average
70,378		68.22% Pervious Area
32,792		31.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	150	0.0067	0.12		Sheet Flow, A-B Grass: Short n= 0.150 P2= 3.10"
7.7	200	0.0075	0.43		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.3	50	0.0300	2.60		Shallow Concentrated Flow, C-D Grassed Waterway Kv= 15.0 fps
0.2	20	0.0900	1.50		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
0.0	20	0.1566	17.95	14.10	Pipe Channel, E-F 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
29.5	440	Total			

Pre

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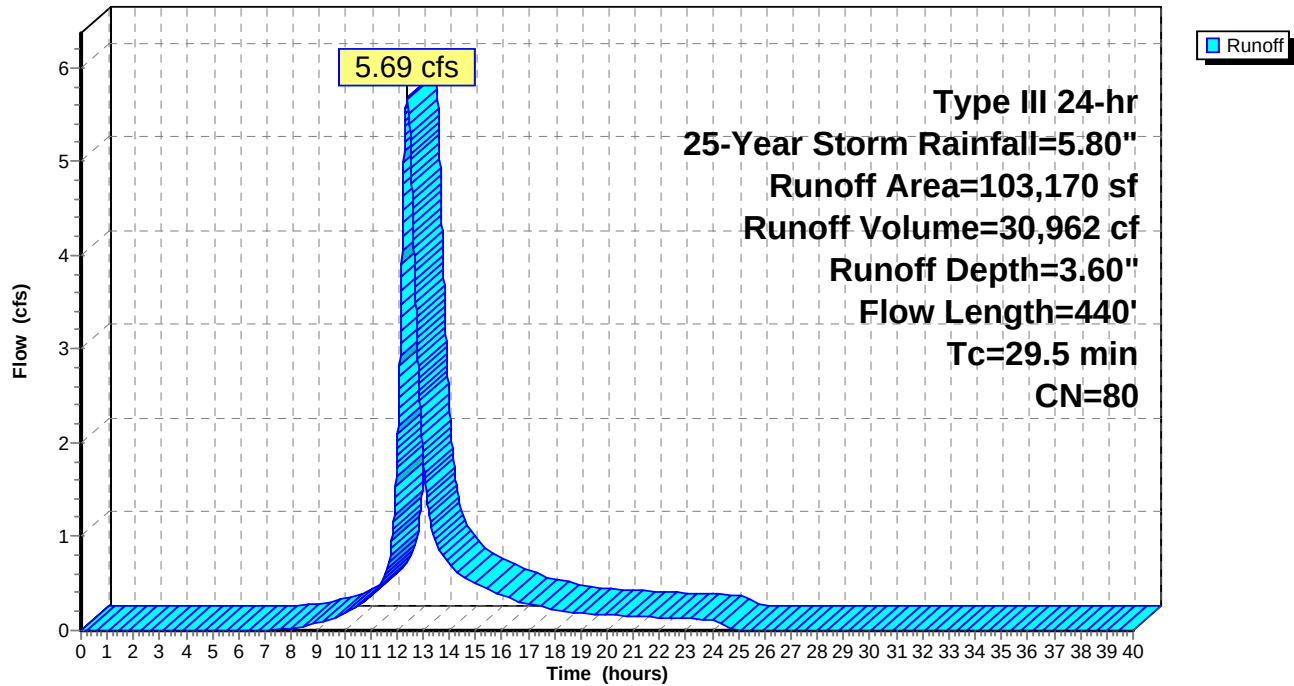
Type III 24-hr 25-Year Storm Rainfall=5.80"

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Page 3

Subcatchment 1:

Hydrograph



Pre

Type III 24-hr 25-Year Storm Rainfall=5.80"

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Page 4

Summary for Subcatchment 2:

Runoff = 1.11 cfs @ 12.78 hrs, Volume= 8,306 cf, Depth= 2.65"

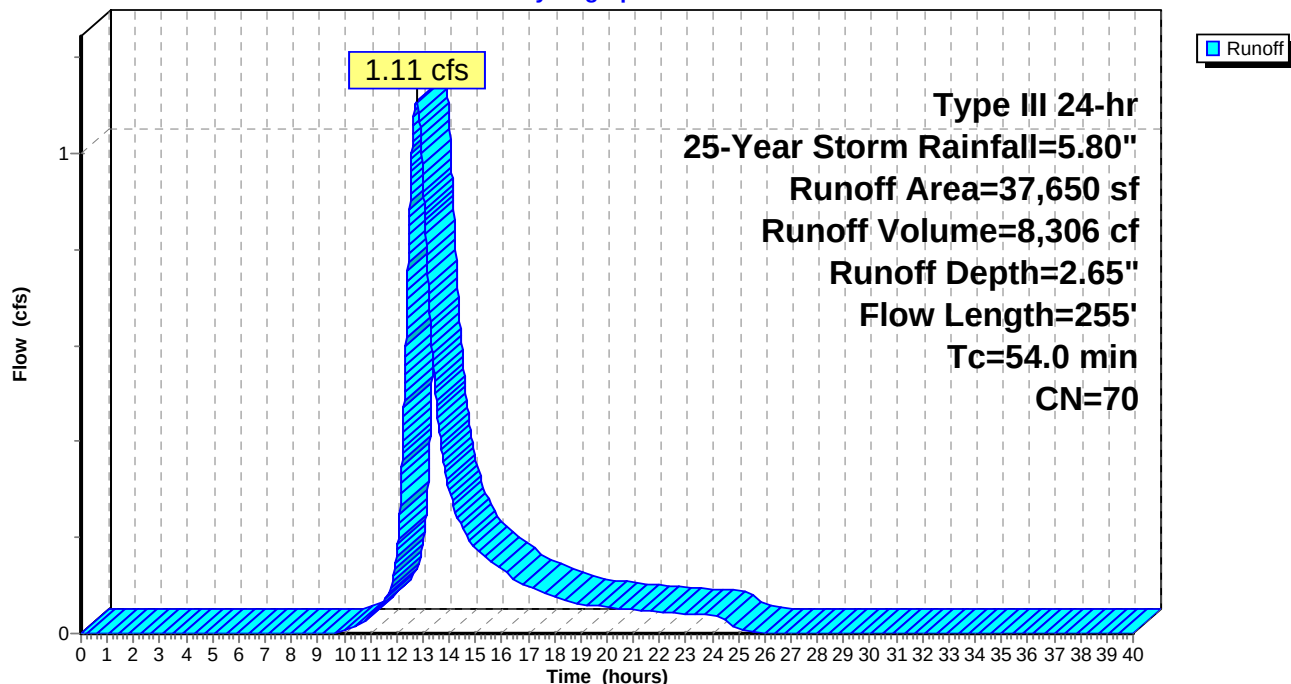
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
5,121	48	Brush, Good, HSG B
30,690	73	Brush, Good, HSG D
660	98	Paved parking & roofs
1,179	80	>75% Grass cover, Good, HSG D
37,650	70	Weighted Average
36,990		98.25% Pervious Area
660		1.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
52.5	150	0.0050	0.05		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.10"
1.5	95	0.0050	1.06		Shallow Concentrated Flow, B-C Grassed Waterway Kv= 15.0 fps
0.0	10	0.1260	16.10	12.65	Pipe Channel, C-D 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
54.0	255	Total			

Subcatchment 2:

Hydrograph



Pre

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Type III 24-hr 25-Year Storm Rainfall=5.80"

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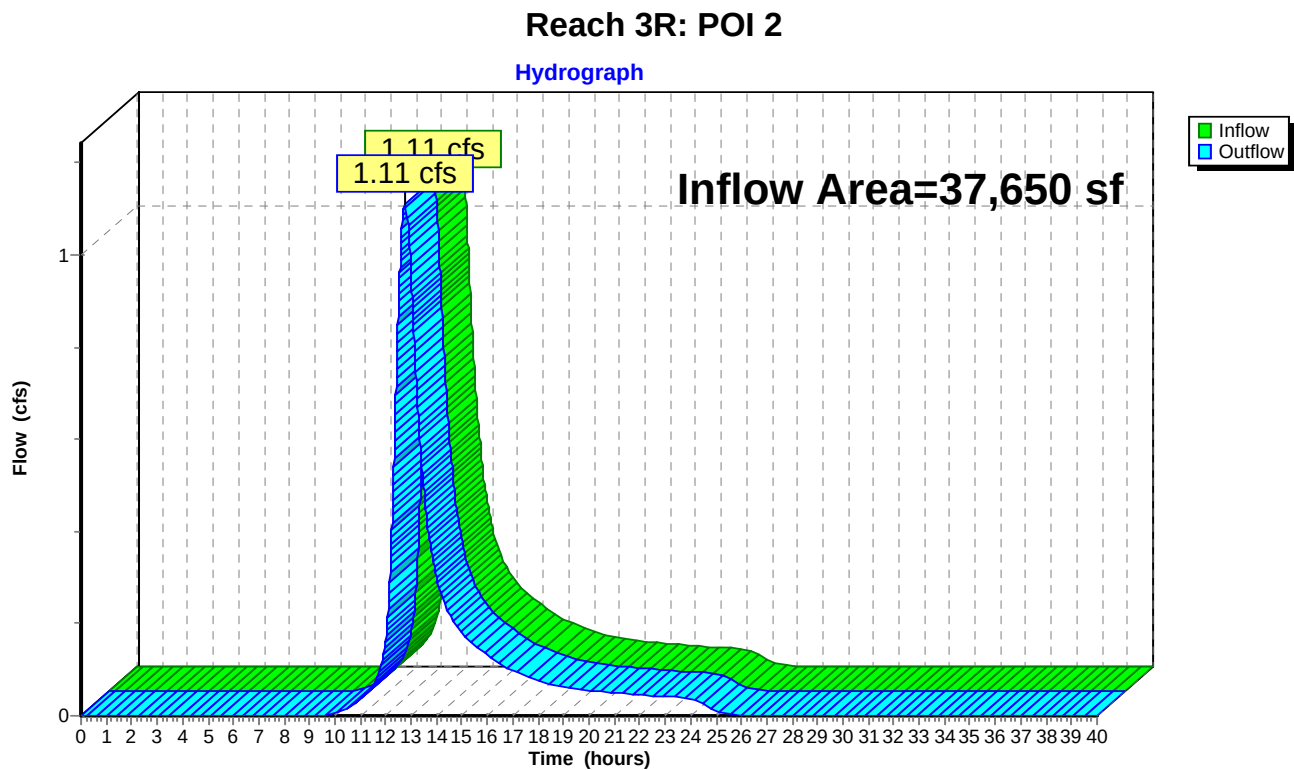
Page 5

Summary for Reach 3R: POI 2

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

Inflow Area = 37,650 sf, 1.75% Impervious, Inflow Depth = 2.65" for 25-Year Storm event
Inflow = 1.11 cfs @ 12.78 hrs, Volume= 8,306 cf
Outflow = 1.11 cfs @ 12.78 hrs, Volume= 8,306 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs



Pre

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Type III 24-hr 25-Year Storm Rainfall=5.80"

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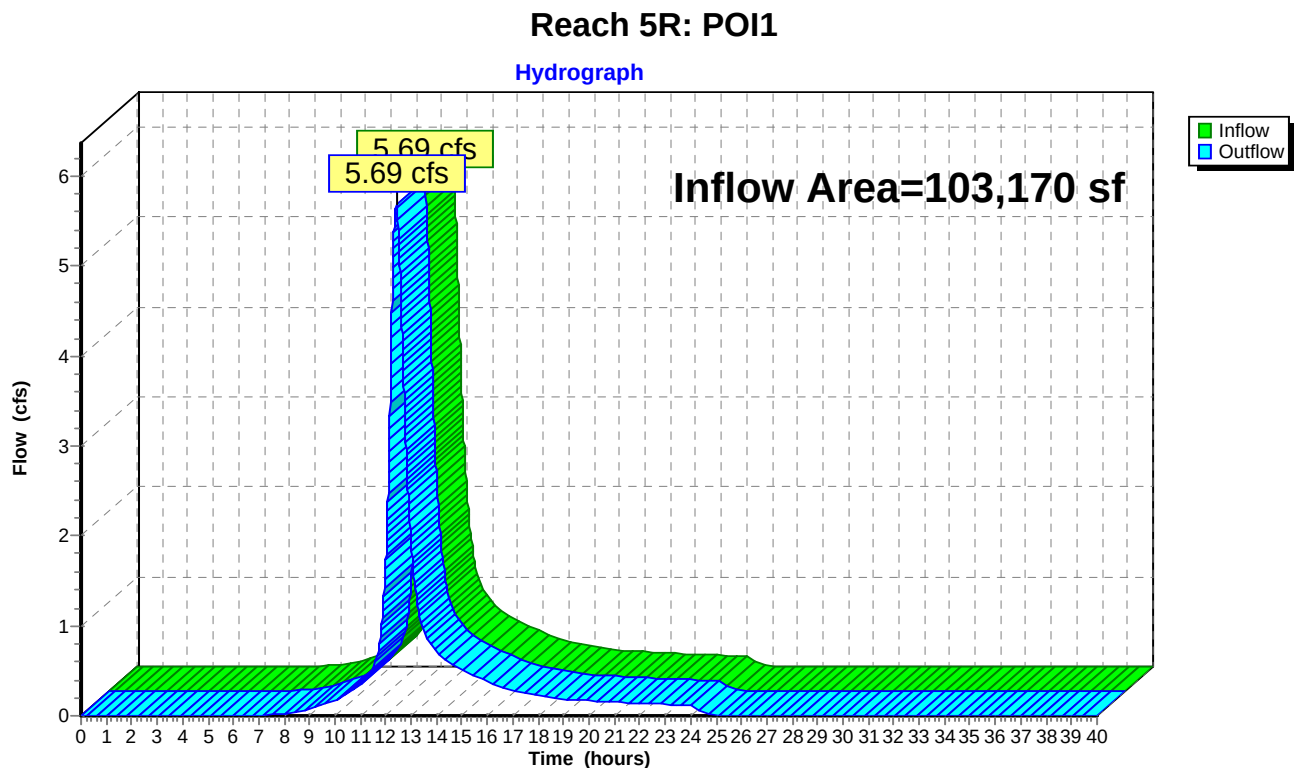
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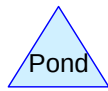
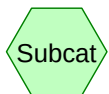
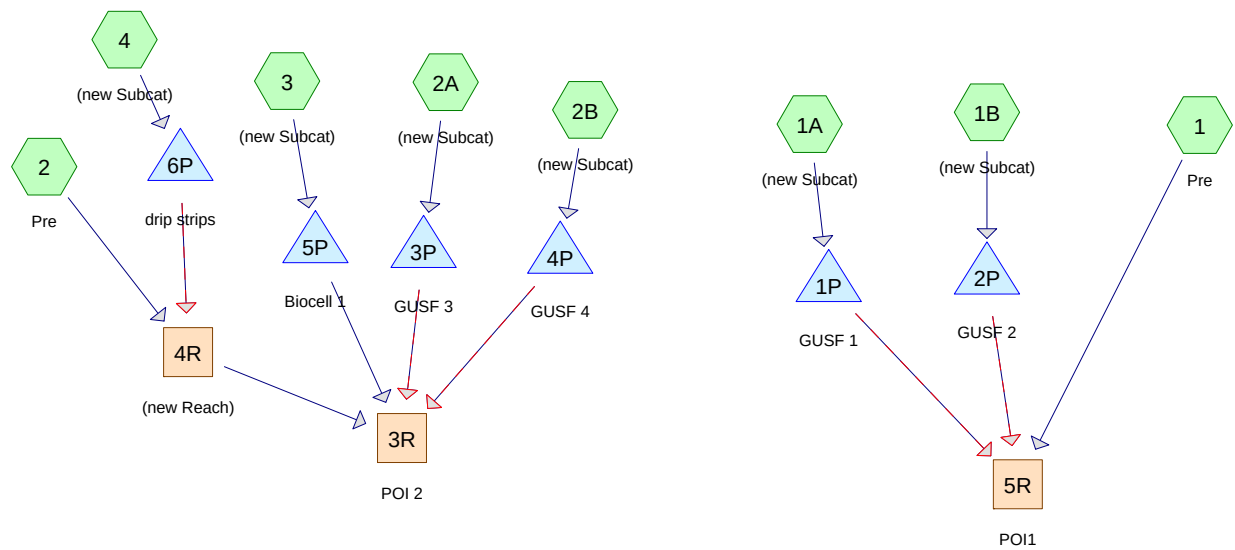
Summary for Reach 5R: POI1

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

Inflow Area = 103,170 sf, 31.78% Impervious, Inflow Depth = 3.60" for 25-Year Storm event
Inflow = 5.69 cfs @ 12.42 hrs, Volume= 30,962 cf
Outflow = 5.69 cfs @ 12.42 hrs, Volume= 30,962 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs





Post

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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

Subcatchment1: Pre Runoff Area=83,817 sf 36.79% Impervious Runoff Depth>1.34"
Flow Length=440' Tc=29.5 min CN=82 Runoff=1.86 cfs 0.215 af

Subcatchment1A: (new Subcat) Runoff Area=9,014 sf 79.85% Impervious Runoff Depth>2.32"
Flow Length=98' Tc=1.0 min CN=94 Runoff=0.64 cfs 0.040 af

Subcatchment1B: (new Subcat) Runoff Area=3,353 sf 68.21% Impervious Runoff Depth>2.13"
Flow Length=65' Slope=0.0100 '/' Tc=0.8 min CN=92 Runoff=0.22 cfs 0.014 af

Subcatchment2: Pre Runoff Area=16,532 sf 3.96% Impervious Runoff Depth>0.97"
Flow Length=150' Slope=0.0050 '/' Tc=52.5 min CN=76 Runoff=0.20 cfs 0.031 af

Subcatchment2A: (new Subcat) Runoff Area=16,291 sf 73.62% Impervious Runoff Depth>2.22"
Flow Length=120' Tc=1.6 min CN=93 Runoff=1.09 cfs 0.069 af

Subcatchment2B: (new Subcat) Runoff Area=5,769 sf 66.44% Impervious Runoff Depth>2.13"
Flow Length=90' Tc=1.2 min CN=92 Runoff=0.38 cfs 0.024 af

Subcatchment3: (new Subcat) Runoff Area=1,314 sf 29.68% Impervious Runoff Depth>1.56"
Flow Length=35' Tc=0.5 min CN=85 Runoff=0.07 cfs 0.004 af

Subcatchment4: (new Subcat) Runoff Area=1,242 sf 86.23% Impervious Runoff Depth>2.50"
Flow Length=17' Slope=0.5000 '/' Tc=0.1 min CN=96 Runoff=0.09 cfs 0.006 af

Reach 3R: POI 2 Inflow=0.46 cfs 0.098 af
Outflow=0.46 cfs 0.098 af

Reach 4R: (new Reach) Avg. Flow Depth=0.17' Max Vel=1.97 fps Inflow=0.21 cfs 0.037 af
15.0" Round Pipe n=0.013 L=138.0' S=0.0057 '/' Capacity=4.89 cfs Outflow=0.20 cfs 0.037 af

Reach 5R: POI1 Inflow=2.02 cfs 0.248 af
Outflow=2.02 cfs 0.248 af

Pond 1P: GUSF 1 Peak Elev=82.64' Storage=723 cf Inflow=0.64 cfs 0.040 af
Primary=0.01 cfs 0.011 af Secondary=0.26 cfs 0.014 af Outflow=0.27 cfs 0.025 af

Pond 2P: GUSF 2 Peak Elev=82.24' Storage=305 cf Inflow=0.22 cfs 0.014 af
Outflow=0.01 cfs 0.009 af

Pond 3P: GUSF 3 Peak Elev=82.31' Storage=1,498 cf Inflow=1.09 cfs 0.069 af
Primary=0.01 cfs 0.011 af Secondary=0.20 cfs 0.032 af Outflow=0.21 cfs 0.043 af

Pond 4P: GUSF 4 Peak Elev=81.69' Storage=438 cf Inflow=0.38 cfs 0.024 af
Primary=0.01 cfs 0.010 af Secondary=0.11 cfs 0.006 af Outflow=0.12 cfs 0.015 af

Pond 5P: Biocell 1 Peak Elev=83.30' Storage=52 cf Inflow=0.07 cfs 0.004 af
Outflow=0.01 cfs 0.004 af

Post*Type III 24-hr 2-YR Rainfall=3.10"*

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Page 2

Pond 6P: drip strips

Peak Elev=84.30' Storage=89 cf Inflow=0.09 cfs 0.006 af
Primary=0.01 cfs 0.006 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.006 af

Pond 14P: GUSF 4 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Pond 15P: GUSF 3 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Pond 17P: GUSF 1 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Total Runoff Area = 3.153 ac Runoff Volume = 0.402 af Average Runoff Depth = 1.53"
57.57% Pervious = 1.815 ac 42.43% Impervious = 1.338 ac

Post

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

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Page 3

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

Subcatchment1: Pre Runoff Area=83,817 sf 36.79% Impervious Runoff Depth>2.53"
Flow Length=440' Tc=29.5 min CN=82 Runoff=3.49 cfs 0.405 af

Subcatchment1A: (new Subcat) Runoff Area=9,014 sf 79.85% Impervious Runoff Depth>3.70"
Flow Length=98' Tc=1.0 min CN=94 Runoff=0.99 cfs 0.064 af

Subcatchment1B: (new Subcat) Runoff Area=3,353 sf 68.21% Impervious Runoff Depth>3.50"
Flow Length=65' Slope=0.0100 '/' Tc=0.8 min CN=92 Runoff=0.36 cfs 0.022 af

Subcatchment2: Pre Runoff Area=16,532 sf 3.96% Impervious Runoff Depth>2.01"
Flow Length=150' Slope=0.0050 '/' Tc=52.5 min CN=76 Runoff=0.41 cfs 0.064 af

Subcatchment2A: (new Subcat) Runoff Area=16,291 sf 73.62% Impervious Runoff Depth>3.60"
Flow Length=120' Tc=1.6 min CN=93 Runoff=1.71 cfs 0.112 af

Subcatchment2B: (new Subcat) Runoff Area=5,769 sf 66.44% Impervious Runoff Depth>3.50"
Flow Length=90' Tc=1.2 min CN=92 Runoff=0.61 cfs 0.039 af

Subcatchment3: (new Subcat) Runoff Area=1,314 sf 29.68% Impervious Runoff Depth>2.82"
Flow Length=35' Tc=0.5 min CN=85 Runoff=0.12 cfs 0.007 af

Subcatchment4: (new Subcat) Runoff Area=1,242 sf 86.23% Impervious Runoff Depth>3.89"
Flow Length=17' Slope=0.5000 '/' Tc=0.1 min CN=96 Runoff=0.14 cfs 0.009 af

Reach 3R: POI 2 Inflow=0.86 cfs 0.195 af
Outflow=0.86 cfs 0.195 af

Reach 4R: (new Reach) Avg. Flow Depth=0.25' Max Vel=2.44 fps Inflow=0.42 cfs 0.073 af
15.0" Round Pipe n=0.013 L=138.0' S=0.0057 '/' Capacity=4.89 cfs Outflow=0.42 cfs 0.073 af

Reach 5R: POI1 Inflow=3.85 cfs 0.464 af
Outflow=3.85 cfs 0.464 af

Pond 1P: GUSF 1 Peak Elev=83.01' Storage=1,047 cf Inflow=0.99 cfs 0.064 af
Primary=0.01 cfs 0.012 af Secondary=0.34 cfs 0.037 af Outflow=0.35 cfs 0.048 af

Pond 2P: GUSF 2 Peak Elev=82.88' Storage=595 cf Inflow=0.36 cfs 0.022 af
Outflow=0.01 cfs 0.010 af

Pond 3P: GUSF 3 Peak Elev=82.90' Storage=2,577 cf Inflow=1.71 cfs 0.112 af
Primary=0.01 cfs 0.012 af Secondary=0.21 cfs 0.074 af Outflow=0.22 cfs 0.086 af

Pond 4P: GUSF 4 Peak Elev=81.94' Storage=621 cf Inflow=0.61 cfs 0.039 af
Primary=0.01 cfs 0.011 af Secondary=0.20 cfs 0.019 af Outflow=0.21 cfs 0.029 af

Pond 5P: Biocell 1 Peak Elev=83.68' Storage=122 cf Inflow=0.12 cfs 0.007 af
Outflow=0.01 cfs 0.007 af

Post*Type III 24-hr 10-YR Rainfall=4.60"*

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Page 4

Pond 6P: drip strips

Peak Elev=84.55' Storage=162 cf Inflow=0.14 cfs 0.009 af
Primary=0.01 cfs 0.009 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.009 af

Pond 14P: GUSF 4 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Pond 15P: GUSF 3 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Pond 17P: GUSF 1 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Total Runoff Area = 3.153 ac Runoff Volume = 0.722 af Average Runoff Depth = 2.75"
57.57% Pervious = 1.815 ac 42.43% Impervious = 1.338 ac

Post

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

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Page 5

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

Subcatchment1: Pre	Runoff Area=83,817 sf 36.79% Impervious Runoff Depth>3.55" Flow Length=440' Tc=29.5 min CN=82 Runoff=4.86 cfs 0.569 af
Subcatchment1A: (new Subcat)	Runoff Area=9,014 sf 79.85% Impervious Runoff Depth>4.81" Flow Length=98' Tc=1.0 min CN=94 Runoff=1.27 cfs 0.083 af
Subcatchment1B: (new Subcat)	Runoff Area=3,353 sf 68.21% Impervious Runoff Depth>4.61" Flow Length=65' Slope=0.0100 '/ Tc=0.8 min CN=92 Runoff=0.46 cfs 0.030 af
Subcatchment2: Pre	Runoff Area=16,532 sf 3.96% Impervious Runoff Depth>2.94" Flow Length=150' Slope=0.0050 '/ Tc=52.5 min CN=76 Runoff=0.61 cfs 0.093 af
Subcatchment2A: (new Subcat)	Runoff Area=16,291 sf 73.62% Impervious Runoff Depth>4.71" Flow Length=120' Tc=1.6 min CN=93 Runoff=2.21 cfs 0.147 af
Subcatchment2B: (new Subcat)	Runoff Area=5,769 sf 66.44% Impervious Runoff Depth>4.61" Flow Length=90' Tc=1.2 min CN=92 Runoff=0.79 cfs 0.051 af
Subcatchment3: (new Subcat)	Runoff Area=1,314 sf 29.68% Impervious Runoff Depth>3.88" Flow Length=35' Tc=0.5 min CN=85 Runoff=0.16 cfs 0.010 af
Subcatchment4: (new Subcat)	Runoff Area=1,242 sf 86.23% Impervious Runoff Depth>4.99" Flow Length=17' Slope=0.5000 '/ Tc=0.1 min CN=96 Runoff=0.18 cfs 0.012 af
Reach 3R: POI 2	Inflow=1.07 cfs 0.273 af Outflow=1.07 cfs 0.273 af
Reach 4R: (new Reach)	Avg. Flow Depth=0.30' Max Vel=2.72 fps Inflow=0.62 cfs 0.103 af 15.0" Round Pipe n=0.013 L=138.0' S=0.0057 '/ Capacity=4.89 cfs Outflow=0.61 cfs 0.103 af
Reach 5R: POI1	Inflow=5.23 cfs 0.647 af Outflow=5.23 cfs 0.647 af
Pond 1P: GUSF 1	Peak Elev=83.29' Storage=1,322 cf Inflow=1.27 cfs 0.083 af Primary=0.01 cfs 0.012 af Secondary=0.35 cfs 0.055 af Outflow=0.36 cfs 0.068 af
Pond 2P: GUSF 2	Peak Elev=83.32' Storage=853 cf Inflow=0.46 cfs 0.030 af Outflow=0.01 cfs 0.011 af
Pond 3P: GUSF 3	Peak Elev=83.28' Storage=3,439 cf Inflow=2.21 cfs 0.147 af Primary=0.01 cfs 0.012 af Secondary=0.22 cfs 0.108 af Outflow=0.23 cfs 0.120 af
Pond 4P: GUSF 4	Peak Elev=82.18' Storage=824 cf Inflow=0.79 cfs 0.051 af Primary=0.01 cfs 0.011 af Secondary=0.20 cfs 0.030 af Outflow=0.21 cfs 0.041 af
Pond 5P: Biocell 1	Peak Elev=83.94' Storage=188 cf Inflow=0.16 cfs 0.010 af Outflow=0.01 cfs 0.008 af

Post*Type III 24-hr 25-YR Rainfall=5.80"*

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Page 6

Pond 6P: drip strips

Peak Elev=84.77' Storage=228 cf Inflow=0.18 cfs 0.012 af
Primary=0.01 cfs 0.010 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.010 af

Pond 14P: GUSF 4 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Pond 15P: GUSF 3 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Pond 17P: GUSF 1 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Total Runoff Area = 3.153 ac Runoff Volume = 0.993 af Average Runoff Depth = 3.78"
57.57% Pervious = 1.815 ac 42.43% Impervious = 1.338 ac

Post

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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

Subcatchment1: Pre	Runoff Area=83,817 sf 36.79% Impervious Runoff Depth>3.55" Flow Length=440' Tc=29.5 min CN=82 Runoff=4.86 cfs 0.569 af
Subcatchment1A: (new Subcat)	Runoff Area=9,014 sf 79.85% Impervious Runoff Depth>4.81" Flow Length=98' Tc=1.0 min CN=94 Runoff=1.27 cfs 0.083 af
Subcatchment1B: (new Subcat)	Runoff Area=3,353 sf 68.21% Impervious Runoff Depth>4.61" Flow Length=65' Slope=0.0100 '/' Tc=0.8 min CN=92 Runoff=0.46 cfs 0.030 af
Subcatchment2: Pre	Runoff Area=16,532 sf 3.96% Impervious Runoff Depth>2.94" Flow Length=150' Slope=0.0050 '/' Tc=52.5 min CN=76 Runoff=0.61 cfs 0.093 af
Subcatchment2A: (new Subcat)	Runoff Area=16,291 sf 73.62% Impervious Runoff Depth>4.71" Flow Length=120' Tc=1.6 min CN=93 Runoff=2.21 cfs 0.147 af
Subcatchment2B: (new Subcat)	Runoff Area=5,769 sf 66.44% Impervious Runoff Depth>4.61" Flow Length=90' Tc=1.2 min CN=92 Runoff=0.79 cfs 0.051 af
Subcatchment3: (new Subcat)	Runoff Area=1,314 sf 29.68% Impervious Runoff Depth>3.88" Flow Length=35' Tc=0.5 min CN=85 Runoff=0.16 cfs 0.010 af
Subcatchment4: (new Subcat)	Runoff Area=1,242 sf 86.23% Impervious Runoff Depth>4.99" Flow Length=17' Slope=0.5000 '/' Tc=0.1 min CN=96 Runoff=0.18 cfs 0.012 af
Reach 3R: POI 2	Inflow=1.07 cfs 0.273 af Outflow=1.07 cfs 0.273 af
Reach 4R: (new Reach)	Avg. Flow Depth=0.30' Max Vel=2.72 fps Inflow=0.62 cfs 0.103 af 15.0" Round Pipe n=0.013 L=138.0' S=0.0057 '/' Capacity=4.89 cfs Outflow=0.61 cfs 0.103 af
Reach 5R: POI1	Inflow=5.23 cfs 0.647 af Outflow=5.23 cfs 0.647 af
Pond 1P: GUSF 1	Peak Elev=83.29' Storage=1,322 cf Inflow=1.27 cfs 0.083 af Primary=0.01 cfs 0.012 af Secondary=0.35 cfs 0.055 af Outflow=0.36 cfs 0.068 af
Pond 2P: GUSF 2	Peak Elev=83.32' Storage=853 cf Inflow=0.46 cfs 0.030 af Outflow=0.01 cfs 0.011 af
Pond 3P: GUSF 3	Peak Elev=83.28' Storage=3,439 cf Inflow=2.21 cfs 0.147 af Primary=0.01 cfs 0.012 af Secondary=0.22 cfs 0.108 af Outflow=0.23 cfs 0.120 af
Pond 4P: GUSF 4	Peak Elev=82.18' Storage=824 cf Inflow=0.79 cfs 0.051 af Primary=0.01 cfs 0.011 af Secondary=0.20 cfs 0.030 af Outflow=0.21 cfs 0.041 af
Pond 5P: Biocell 1	Peak Elev=83.94' Storage=188 cf Inflow=0.16 cfs 0.010 af Outflow=0.01 cfs 0.008 af

Post*Type III 24-hr 25-YR Rainfall=5.80"*

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Page 3

Pond 6P: drip strips

Peak Elev=84.77' Storage=228 cf Inflow=0.18 cfs 0.012 af
Primary=0.01 cfs 0.010 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.010 af

Pond 14P: GUSF 4 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Pond 15P: GUSF 3 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Pond 17P: GUSF 1 WIER

Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0.000 af

Total Runoff Area = 3.153 ac Runoff Volume = 0.993 af Average Runoff Depth = 3.78"
57.57% Pervious = 1.815 ac 42.43% Impervious = 1.338 ac

Post

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

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Page 4

Summary for Subcatchment 1: Pre

Runoff = 4.86 cfs @ 12.40 hrs, Volume= 0.569 af, Depth> 3.55"

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 (sf)	CN	Description
2,750	91	Gravel roads, HSG D
37,329	75	1/4 acre lots, 38% imp, HSG B
40,669	87	1/4 acre lots, 38% imp, HSG D
1,200	98	Paved parking, HSG D
684	85	Gravel roads, HSG B
1,185	80	>75% Grass cover, Good, HSG D
83,817	82	Weighted Average
52,978		63.21% Pervious Area
30,839		36.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	150	0.0067	0.12		Sheet Flow, A-B Grass: Short n= 0.150 P2= 3.10"
7.7	200	0.0075	0.43		Shallow Concentrated Flow, B-C Woodland Kv= 5.0 fps
0.3	50	0.0300	2.60		Shallow Concentrated Flow, C-D Grassed Waterway Kv= 15.0 fps
0.2	20	0.0900	1.50		Shallow Concentrated Flow, D-E Woodland Kv= 5.0 fps
0.0	20	0.1566	17.95	14.10	Pipe Channel, E-F 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
29.5	440	Total			

Post

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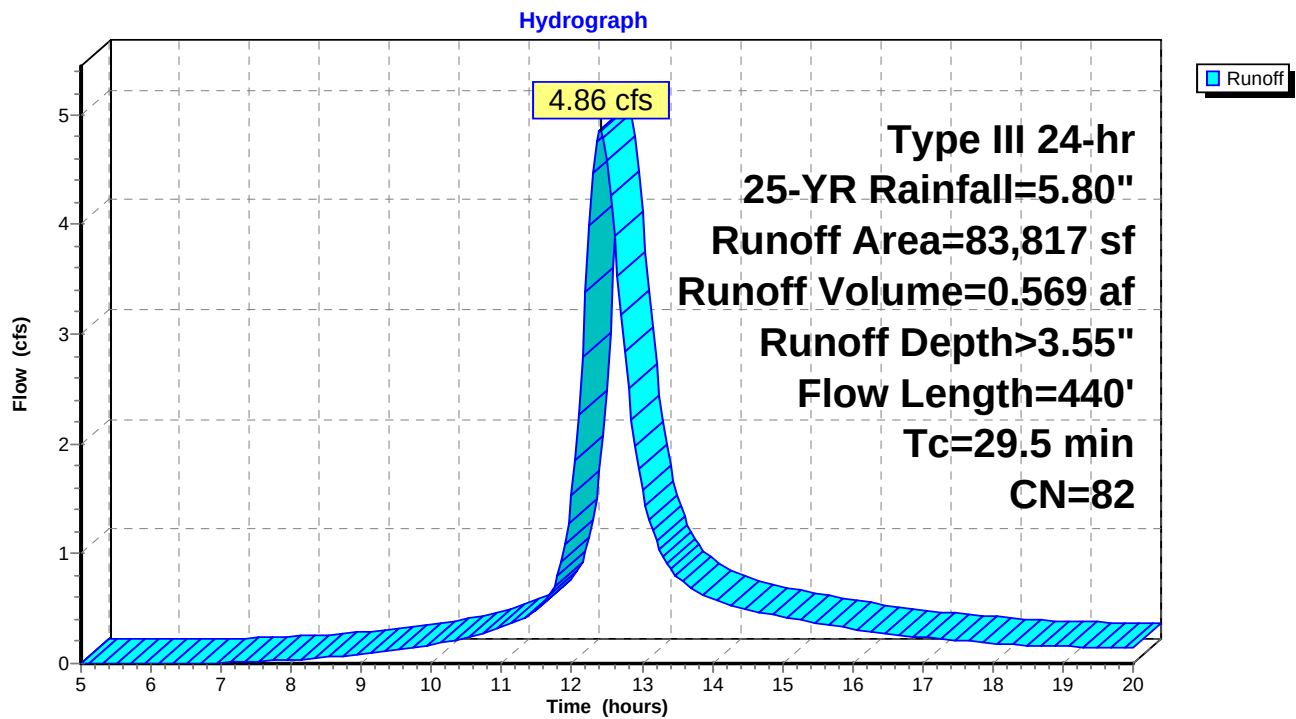
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Type III 24-hr 25-YR Rainfall=5.80"

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Page 5

Subcatchment 1: Pre



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

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Page 6

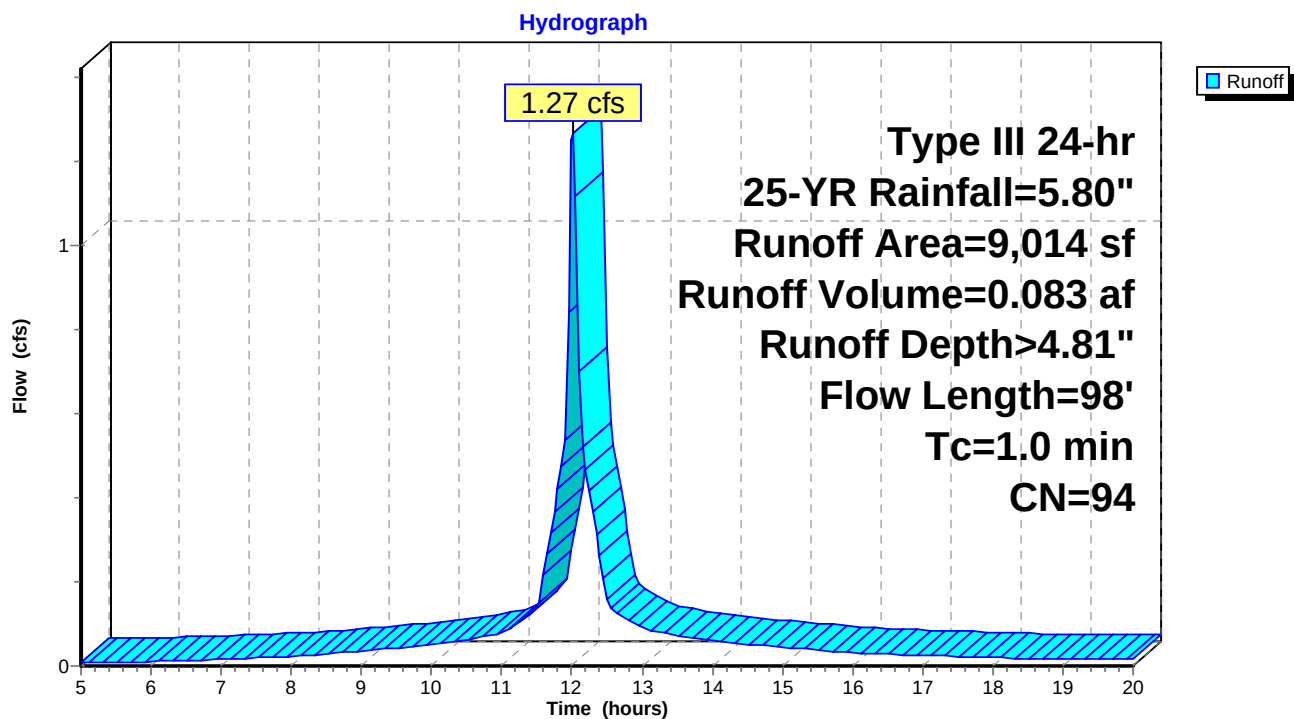
Summary for Subcatchment 1A: (new Subcat)[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 1.27 cfs @ 12.01 hrs, Volume= 0.083 af, Depth> 4.81"

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 (sf)	CN	Description
7,198	98	Paved parking, HSG D
1,816	80	>75% Grass cover, Good, HSG D
9,014	94	Weighted Average
1,816		20.15% Pervious Area
7,198		79.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	28	0.0219	1.09		Sheet Flow, A-B Smooth surfaces $n=0.011$ $P2=3.10"$
0.6	70	0.0100	2.03		Shallow Concentrated Flow, B-C Paved $K_v=20.3$ fps
1.0	98	Total			

Subcatchment 1A: (new Subcat)

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

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Page 7

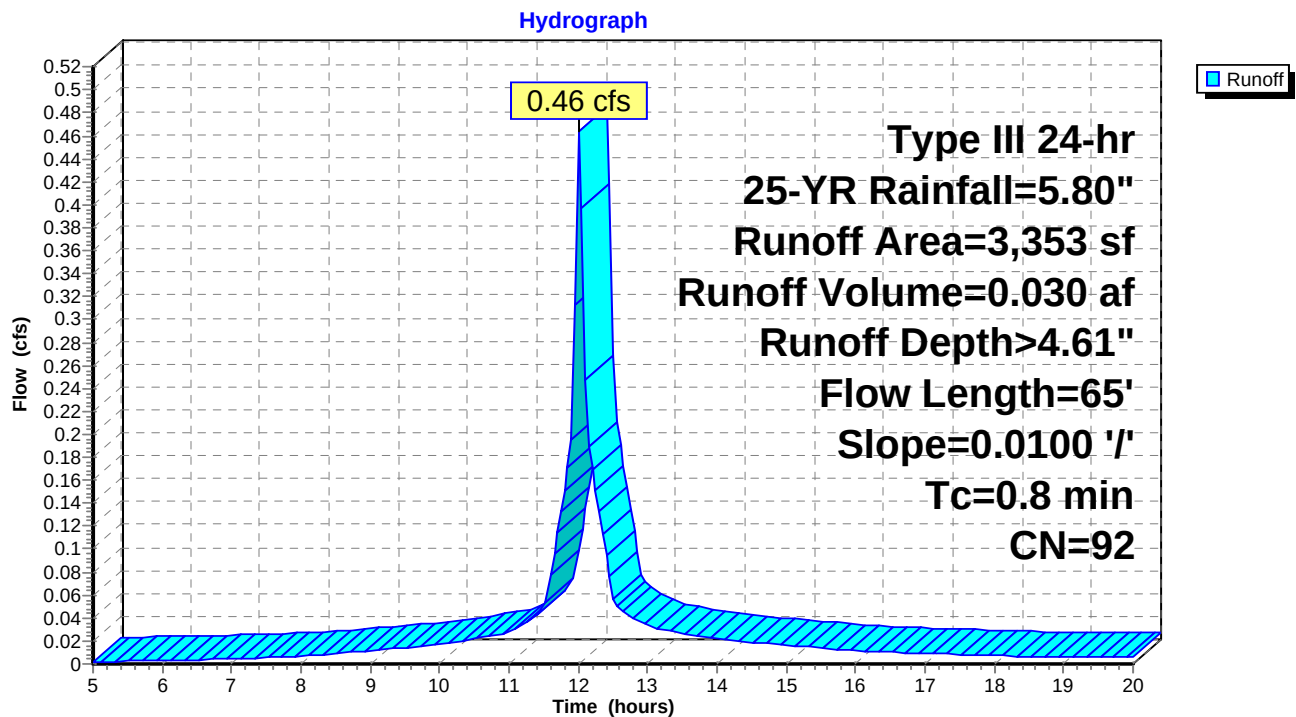
Summary for Subcatchment 1B: (new Subcat)[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.46 cfs @ 12.01 hrs, Volume= 0.030 af, Depth> 4.61"

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 (sf)	CN	Description
2,287	98	Paved parking, HSG D
1,066	80	>75% Grass cover, Good, HSG D
3,353	92	Weighted Average
1,066		31.79% Pervious Area
2,287		68.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	10	0.0100	0.65		Sheet Flow, A-B Smooth surfaces $n=0.011$ $P2=3.10"$
0.5	55	0.0100	2.03		Shallow Concentrated Flow, B-C Paved $K_v=20.3$ fps
0.8	65	Total			

Subcatchment 1B: (new Subcat)

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

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Page 8

Summary for Subcatchment 2: Pre

Runoff = 0.61 cfs @ 12.72 hrs, Volume= 0.093 af, Depth> 2.94"

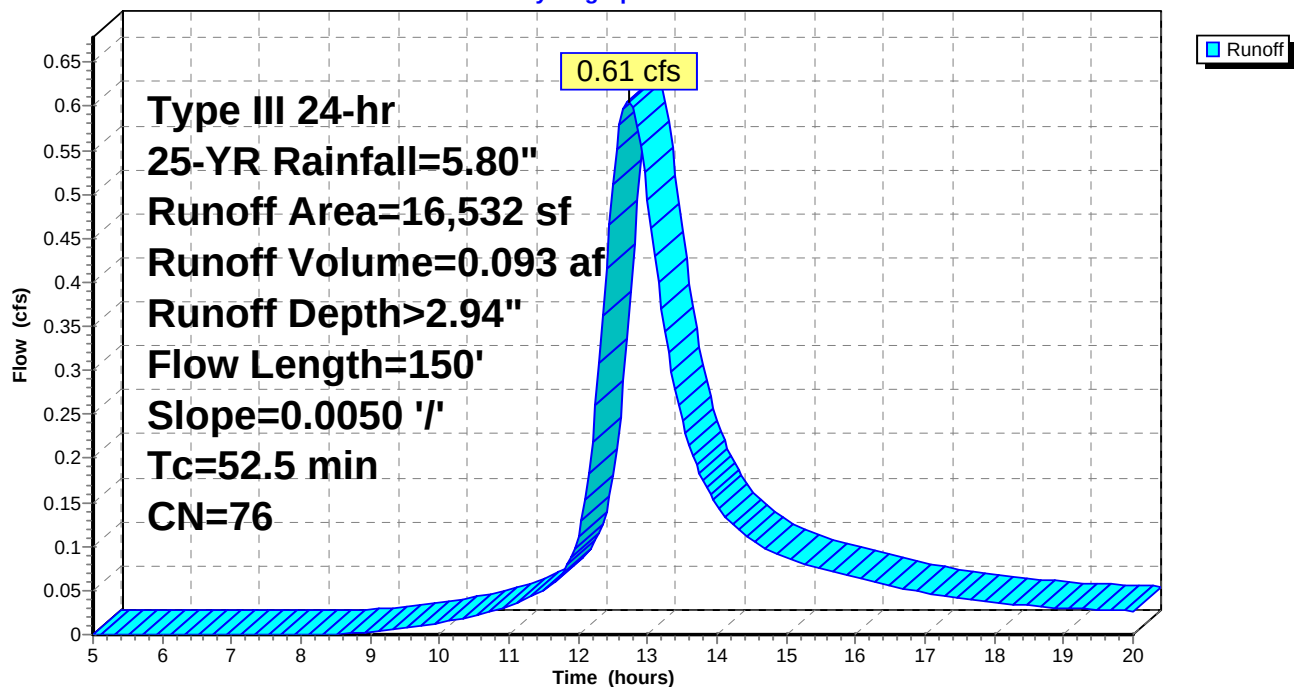
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
10,576	73	Brush, Good, HSG D
5,301	80	>75% Grass cover, Good, HSG D
655	98	Paved parking, HSG D
16,532	76	Weighted Average
15,877		96.04% Pervious Area
655		3.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
52.5	150	0.0050	0.05		Sheet Flow, A-B
Woods: Light underbrush n= 0.400 P2= 3.10"					

Subcatchment 2: Pre

Hydrograph



Post

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

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Page 9

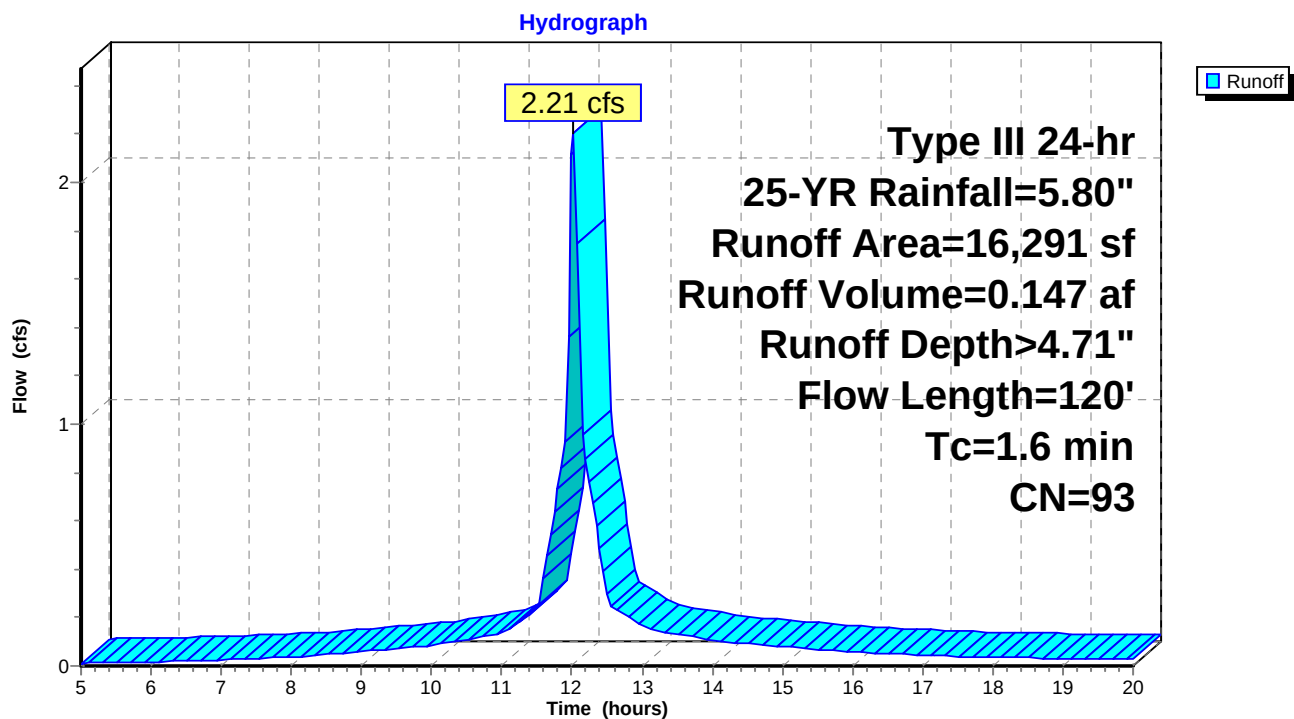
Summary for Subcatchment 2A: (new Subcat)[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 2.21 cfs @ 12.02 hrs, Volume= 0.147 af, Depth> 4.71"

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 (sf)	CN	Description
11,993	98	Paved parking, HSG D
4,298	80	>75% Grass cover, Good, HSG D
16,291	93	Weighted Average
4,298		26.38% Pervious Area
11,993		73.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0141	1.18		Sheet Flow, A-B
					Smooth surfaces $n=0.011$ $P2=3.10"$
0.2	20	0.0100	2.03		Shallow Concentrated Flow, B-C
					Paved $K_v=20.3$ fps
1.6	120	Total			

Subcatchment 2A: (new Subcat)

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

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Page 10

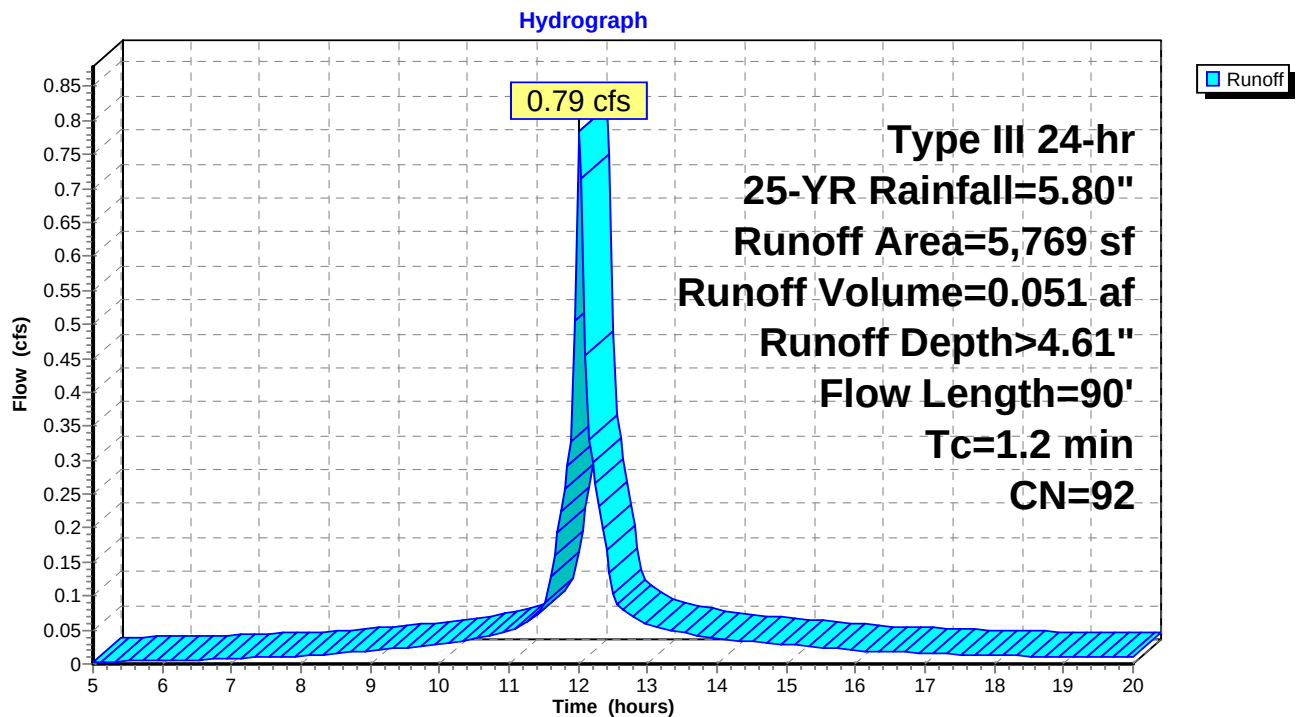
Summary for Subcatchment 2B: (new Subcat)[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.79 cfs @ 12.02 hrs, Volume= 0.051 af, Depth> 4.61"

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 (sf)	CN	Description
3,833	98	Paved parking, HSG D
1,936	80	>75% Grass cover, Good, HSG D
5,769	92	Weighted Average
1,936		33.56% Pervious Area
3,833		66.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	65	0.0141	1.08		Sheet Flow, A-B Smooth surfaces $n=0.011$ $P2=3.10"$
0.2	25	0.0100	2.03		Shallow Concentrated Flow, B-C Paved $K_v=20.3$ fps
1.2	90	Total			

Subcatchment 2B: (new Subcat)

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

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Page 11

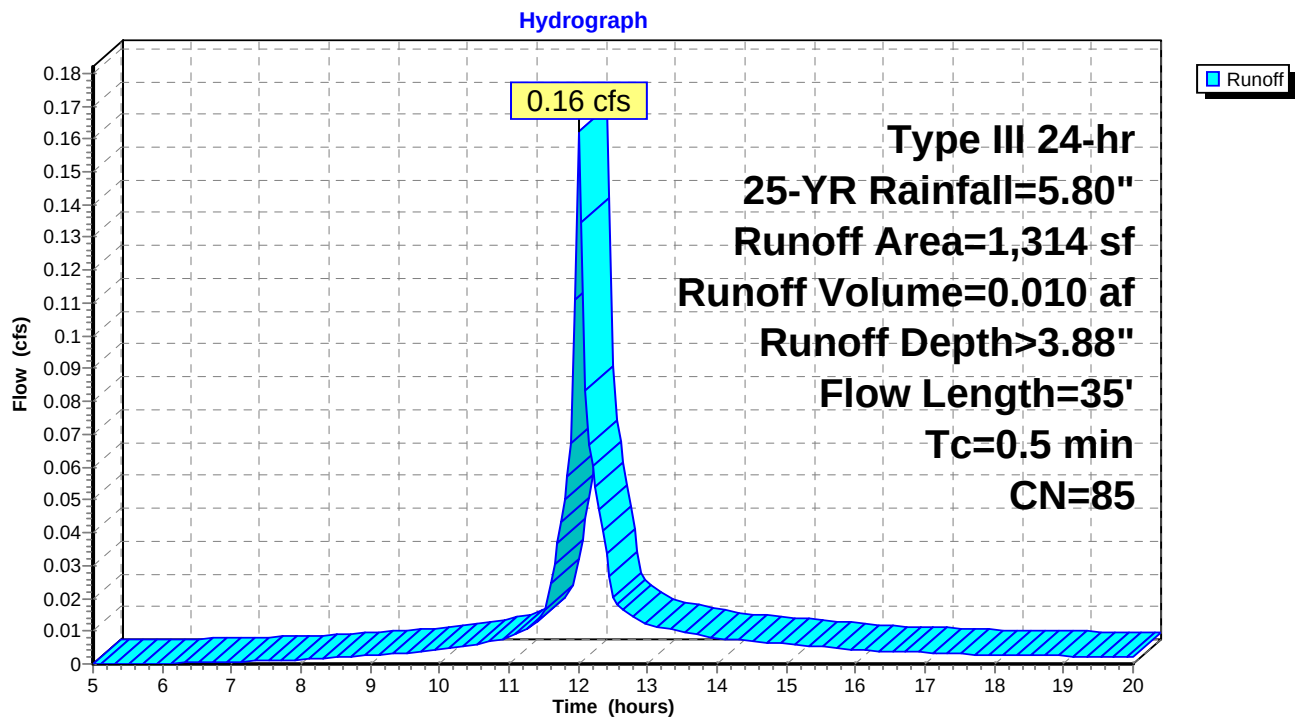
Summary for Subcatchment 3: (new Subcat)[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.16 cfs @ 12.01 hrs, Volume= 0.010 af, Depth> 3.88"

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 (sf)	CN	Description
390	98	Paved parking, HSG D
924	80	>75% Grass cover, Good, HSG D
1,314	85	Weighted Average
924		70.32% Pervious Area
390		29.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	25	0.0100	0.78		Sheet Flow, A-B Smooth surfaces $n=0.011$ $P2=3.10"$
0.0	10	0.3300	8.62		Shallow Concentrated Flow, B-C Grassed Waterway $K_v=15.0$ fps
0.5	35	Total			

Subcatchment 3: (new Subcat)

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Page 12

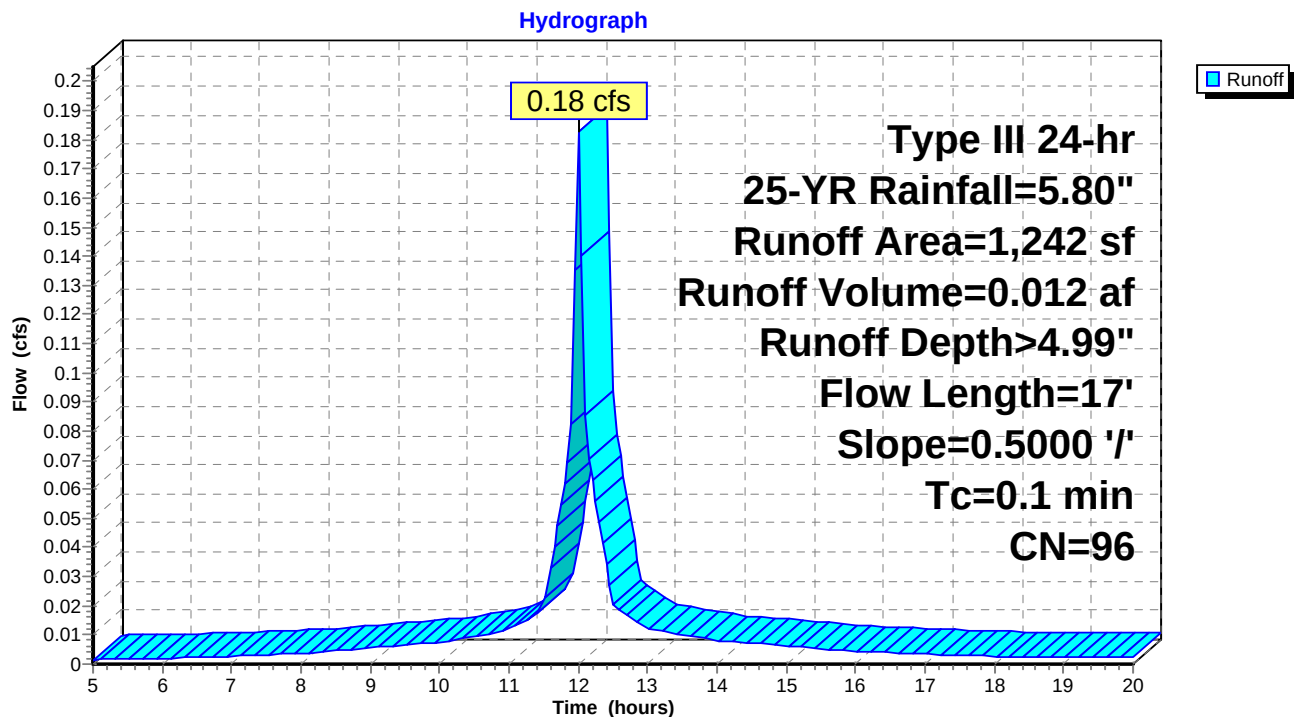
Summary for Subcatchment 4: (new Subcat)[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.18 cfs @ 12.00 hrs, Volume= 0.012 af, Depth> 4.99"

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 (sf)	CN	Description
1,071	98	Paved parking, HSG D
171	80	>75% Grass cover, Good, HSG D
1,242	96	Weighted Average
171		13.77% Pervious Area
1,071		86.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	17	0.5000	3.44		Sheet Flow, A-B
Smooth surfaces n= 0.011 P2= 3.10"					

Subcatchment 4: (new Subcat)

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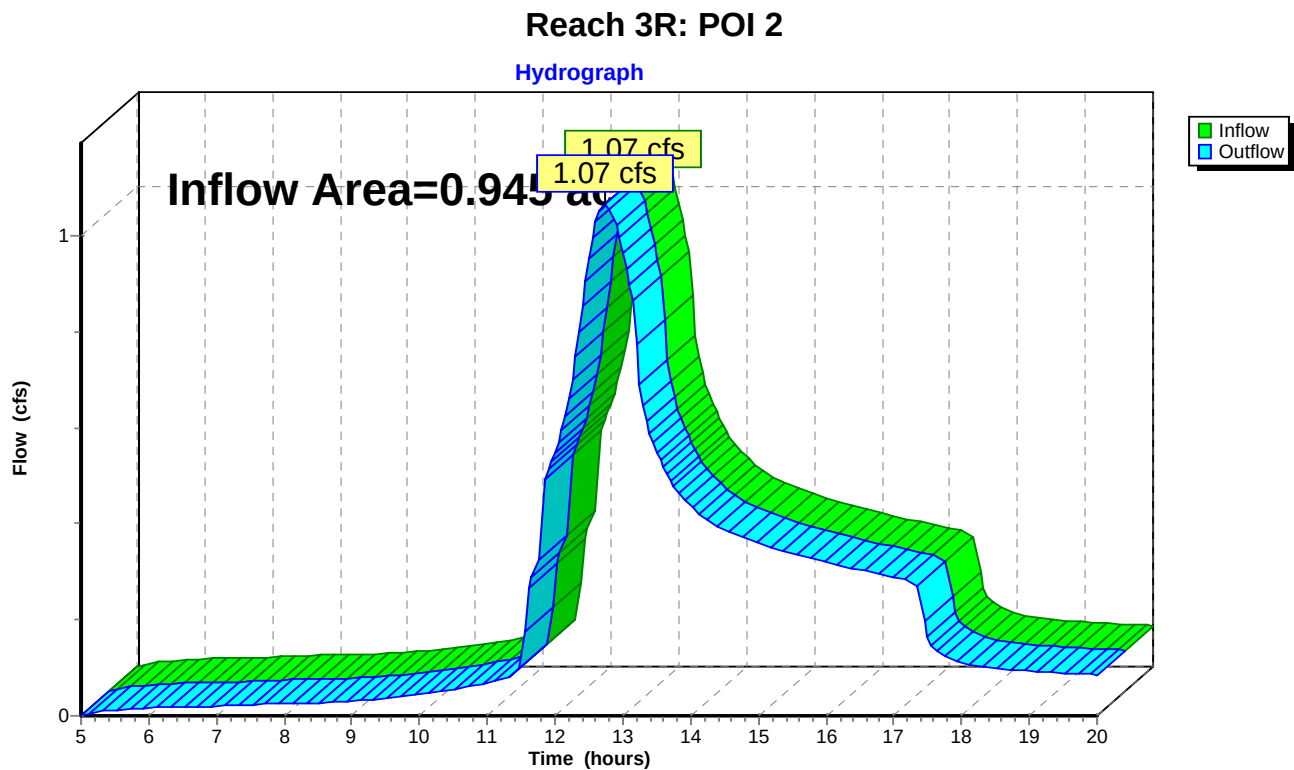
Page 13

Summary for Reach 3R: POI 2

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

Inflow Area = 0.945 ac, 43.60% Impervious, Inflow Depth > 3.46" for 25-YR event
Inflow = 1.07 cfs @ 12.74 hrs, Volume= 0.273 af
Outflow = 1.07 cfs @ 12.74 hrs, Volume= 0.273 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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Page 14

Summary for Reach 4R: (new Reach)

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.408 ac, 9.71% Impervious, Inflow Depth > 3.02" for 25-YR event
Inflow = 0.62 cfs @ 12.72 hrs, Volume= 0.103 af
Outflow = 0.61 cfs @ 12.74 hrs, Volume= 0.103 af, Atten= 0%, Lag= 1.4 min

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

Max. Velocity= 2.72 fps, Min. Travel Time= 0.8 min

Avg. Velocity = 1.23 fps, Avg. Travel Time= 1.9 min

Peak Storage= 31 cf @ 12.73 hrs

Average Depth at Peak Storage= 0.30'

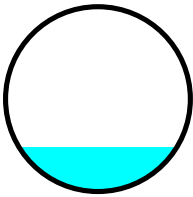
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 4.89 cfs

15.0" Round Pipe

n= 0.013 Corrugated PE, smooth interior

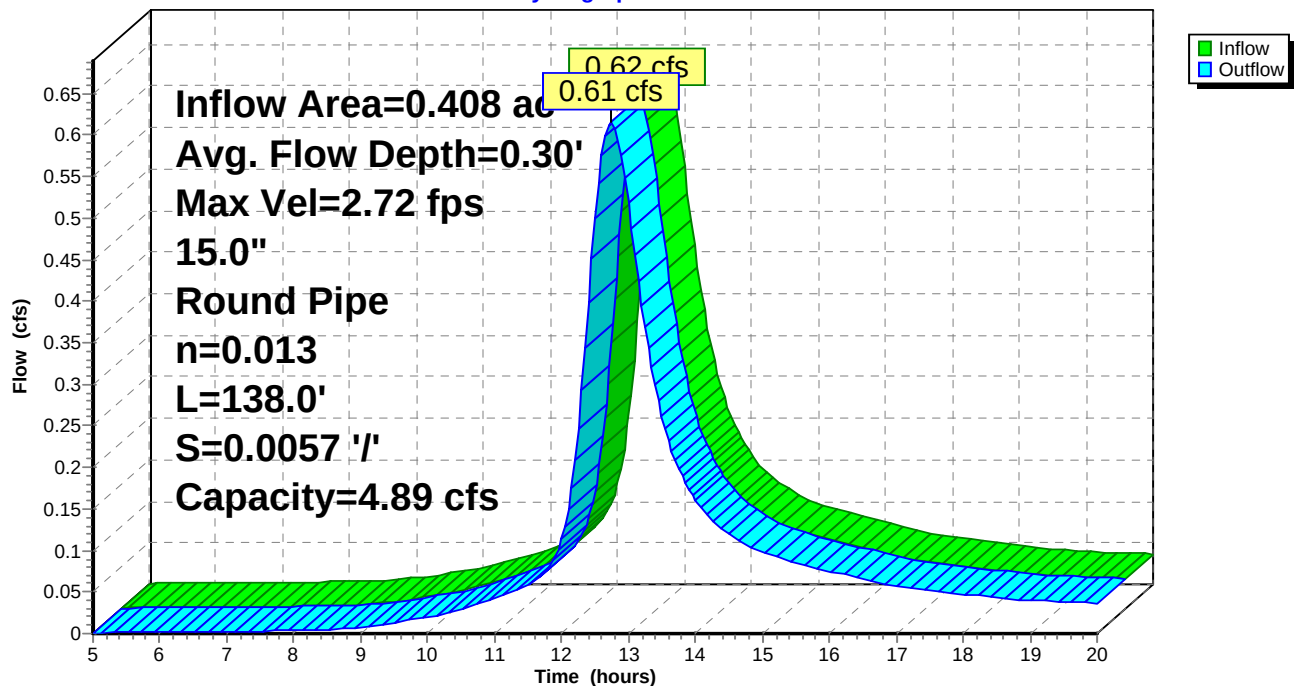
Length= 138.0' Slope= 0.0057 '/'

Inlet Invert= 77.23', Outlet Invert= 76.44'



Reach 4R: (new Reach)

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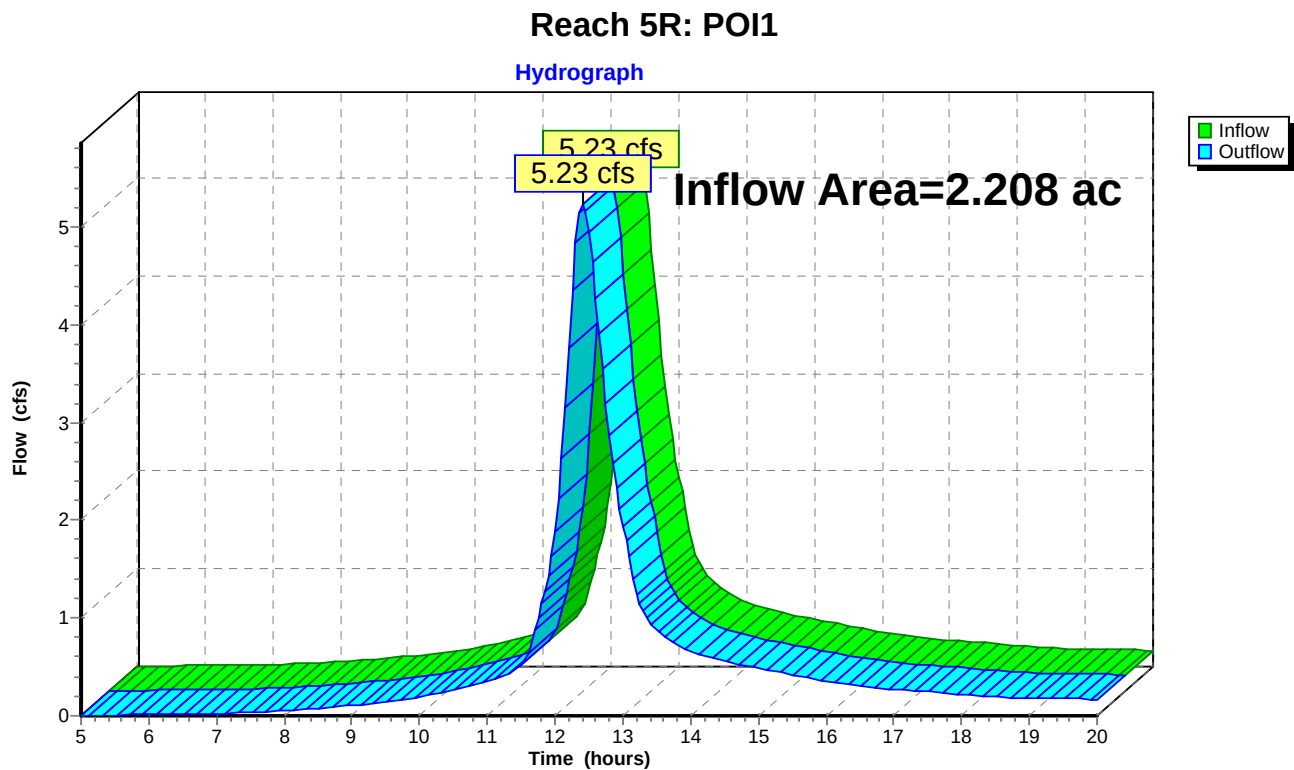
Page 15

Summary for Reach 5R: POI1

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

Inflow Area = 2.208 ac, 41.92% Impervious, Inflow Depth > 3.51" for 25-YR event
Inflow = 5.23 cfs @ 12.40 hrs, Volume= 0.647 af
Outflow = 5.23 cfs @ 12.40 hrs, Volume= 0.647 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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Page 16

Summary for Pond 1P: GUSF 1

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.207 ac, 79.85% Impervious, Inflow Depth > 4.81" for 25-YR event
 Inflow = 1.27 cfs @ 12.01 hrs, Volume= 0.083 af
 Outflow = 0.36 cfs @ 12.30 hrs, Volume= 0.068 af, Atten= 71%, Lag= 17.3 min
 Primary = 0.01 cfs @ 6.35 hrs, Volume= 0.012 af
 Secondary = 0.35 cfs @ 12.30 hrs, Volume= 0.055 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 83.29' @ 12.30 hrs Surf.Area= 1,053 sf Storage= 1,322 cf

Plug-Flow detention time= 94.0 min calculated for 0.068 af (81% of inflow)
 Center-of-Mass det. time= 42.0 min (783.8 - 741.8)

Volume	Invert	Avail.Storage	Storage Description		
#1	81.50'	2,914 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
81.50	469	87.0	0	0	469
82.00	607	96.0	268	268	608
83.00	943	120.0	769	1,037	1,034
84.50	1,587	161.0	1,877	2,914	1,975

Device	Routing	Invert	Outlet Devices
#1	Primary	81.50'	0.01 cfs Exfiltration at all elevations
#2	Device 3	82.57'	15.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Secondary	79.19'	2.6" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.01 cfs @ 6.35 hrs HW=81.53' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=0.35 cfs @ 12.30 hrs HW=83.29' (Free Discharge)
 ↑ **3=Orifice/Grate** (Orifice Controls 0.35 cfs @ 9.61 fps)
 ↑ **2=Orifice/Grate** (Passes 0.35 cfs of 5.00 cfs potential flow)

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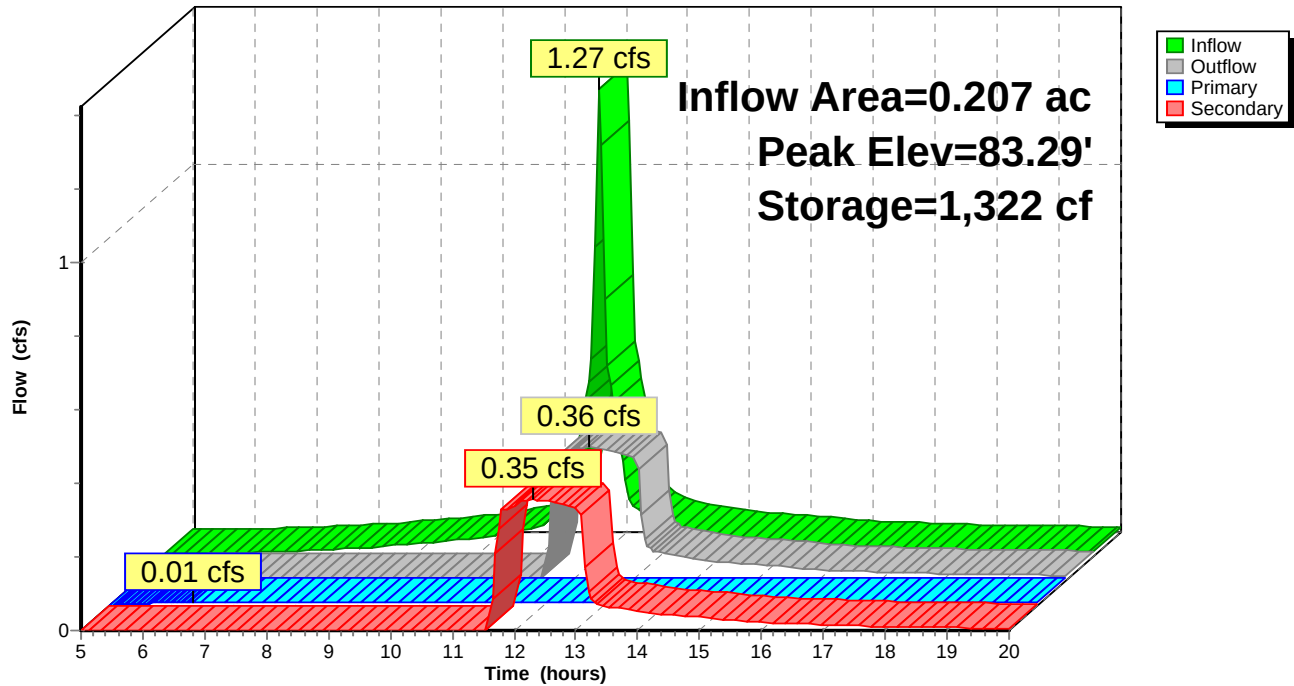
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Page 17

Pond 1P: GUSF 1

Hydrograph



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Page 18

Summary for Pond 2P: GUSF 2

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.077 ac, 68.21% Impervious, Inflow Depth > 4.61" for 25-YR event
 Inflow = 0.46 cfs @ 12.01 hrs, Volume= 0.030 af
 Outflow = 0.01 cfs @ 8.85 hrs, Volume= 0.011 af, Atten= 98%, Lag= 0.0 min
 Primary = 0.01 cfs @ 8.85 hrs, Volume= 0.011 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 83.32' @ 16.67 hrs Surf.Area= 657 sf Storage= 853 cf

Plug-Flow detention time= 172.3 min calculated for 0.011 af (36% of inflow)
 Center-of-Mass det. time= 60.6 min (807.9 - 747.3)

Volume	Invert	Avail.Storage	Storage Description			
#1	81.00'	978 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
81.00	138	49.0	0	0	138	
82.00	321	71.0	223	223	356	
83.00	563	90.0	436	660	613	
83.50	715	103.0	319	978	818	

Device	Routing	Invert	Outlet Devices											
#1	Primary	81.00'	0.01 cfs Exfiltration at all elevations											
#2	Primary	83.32'	10.0' long x 4.0' breadth Broad-Crested Rectangular Weir											
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00											
			2.50 3.00 3.50 4.00 4.50 5.00 5.50											
			Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.67 2.65 2.66 2.66											
			2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32											

Primary OutFlow Max=0.01 cfs @ 8.85 hrs HW=81.03' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.01 cfs)

└ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Post

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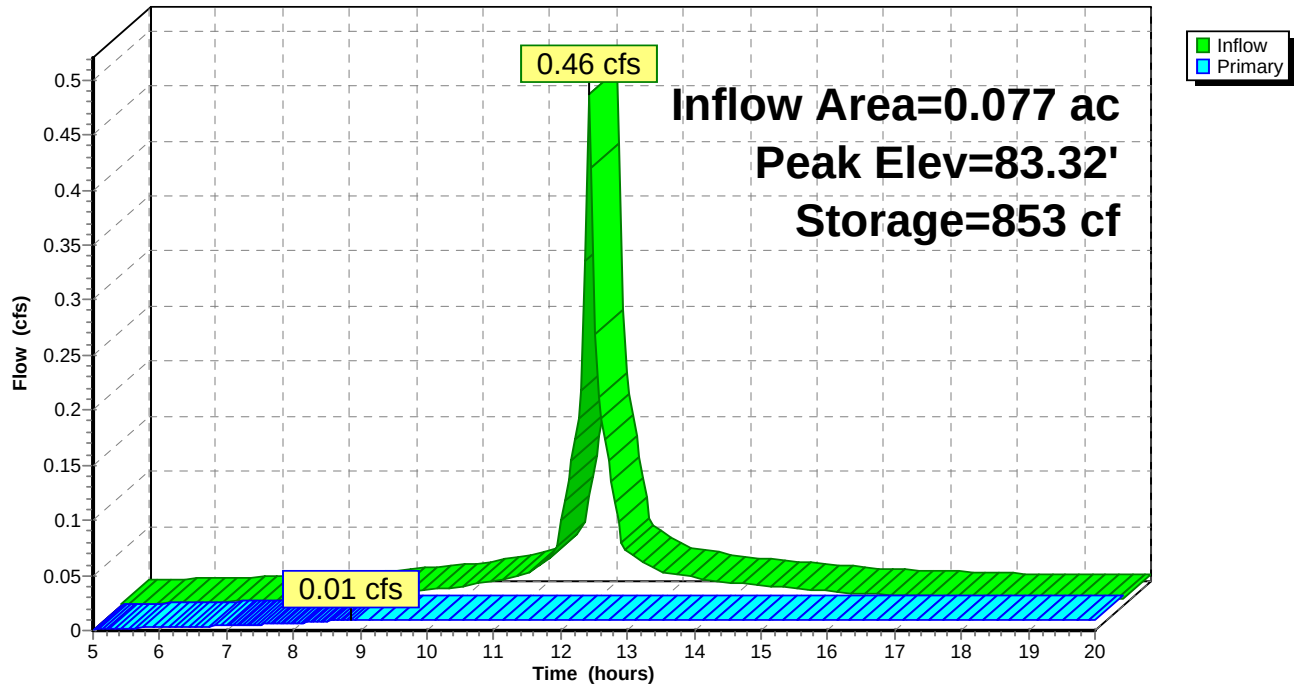
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Page 19

Pond 2P: GUSF 2

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Page 20

Summary for Pond 3P: GUSF 3

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.374 ac, 73.62% Impervious, Inflow Depth > 4.71" for 25-YR event
 Inflow = 2.21 cfs @ 12.02 hrs, Volume= 0.147 af
 Outflow = 0.23 cfs @ 12.64 hrs, Volume= 0.120 af, Atten= 89%, Lag= 36.6 min
 Primary = 0.01 cfs @ 5.85 hrs, Volume= 0.012 af
 Secondary = 0.22 cfs @ 12.64 hrs, Volume= 0.108 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 83.28' @ 12.64 hrs Surf.Area= 2,398 sf Storage= 3,439 cf

Plug-Flow detention time= 173.4 min calculated for 0.120 af (82% of inflow)
 Center-of-Mass det. time= 122.9 min (868.0 - 745.1)

Volume	Invert	Avail.Storage	Storage Description		
#1	81.00'	5,386 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
81.00	719	196.0	0	0	719
82.00	1,385	227.0	1,034	1,034	1,784
83.00	2,169	260.0	1,762	2,796	3,086
84.00	3,034	290.0	2,589	5,386	4,427

Device	Routing	Invert	Outlet Devices
#1	Primary	81.00'	0.01 cfs Exfiltration at all elevations
#2	Device 3	82.08'	15.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Secondary	78.73'	2.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.01 cfs @ 5.85 hrs HW=81.03' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=0.22 cfs @ 12.64 hrs HW=83.28' (Free Discharge)
 ↑ **3=Orifice/Grate** (Orifice Controls 0.22 cfs @ 10.18 fps)
 ↑ **2=Orifice/Grate** (Passes 0.22 cfs of 6.48 cfs potential flow)

Post

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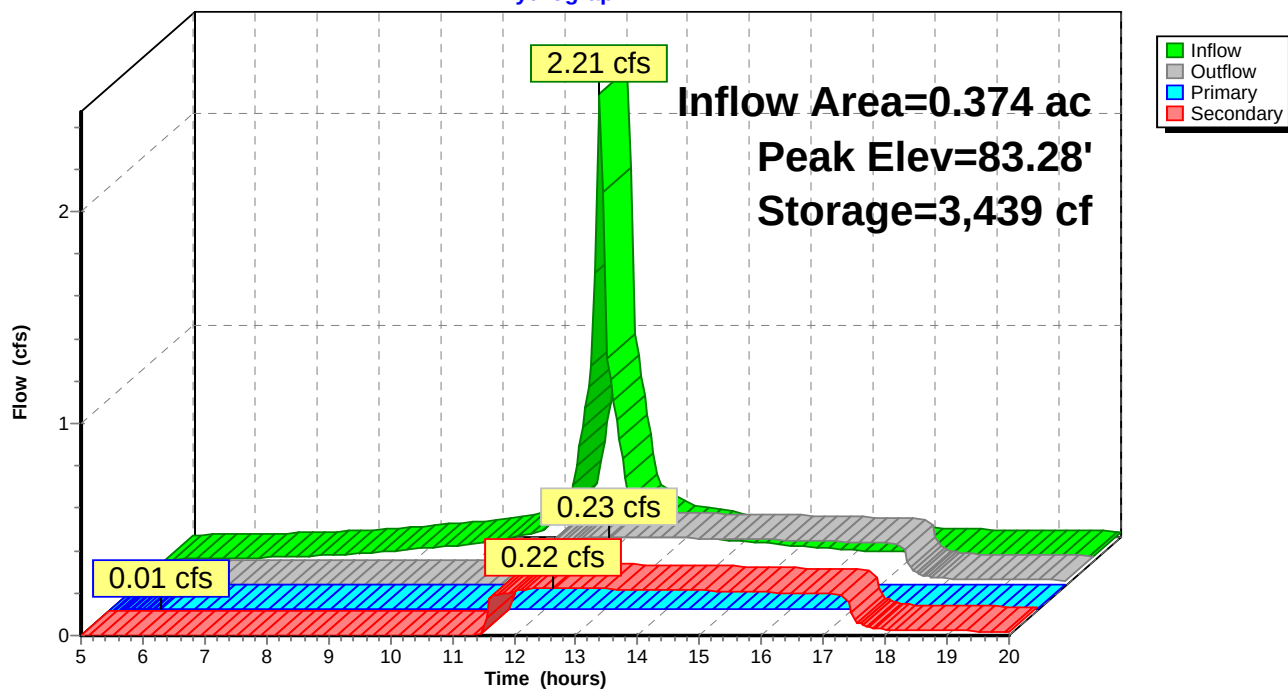
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Page 21

Pond 3P: GUSF 3

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Page 22

Summary for Pond 4P: GUSF 4

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.132 ac, 66.44% Impervious, Inflow Depth > 4.61" for 25-YR event
 Inflow = 0.79 cfs @ 12.02 hrs, Volume= 0.051 af
 Outflow = 0.21 cfs @ 12.33 hrs, Volume= 0.041 af, Atten= 73%, Lag= 18.6 min
 Primary = 0.01 cfs @ 7.80 hrs, Volume= 0.011 af
 Secondary = 0.20 cfs @ 12.33 hrs, Volume= 0.030 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 82.18' @ 12.33 hrs Surf.Area= 901 sf Storage= 824 cf

Plug-Flow detention time= 86.5 min calculated for 0.041 af (81% of inflow)
 Center-of-Mass det. time= 35.6 min (783.2 - 747.6)

Volume	Invert	Avail.Storage	Storage Description		
#1	80.75'	2,399 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
80.75	295	108.0	0	0	295
82.00	813	144.0	666	666	1,034
83.00	1,346	172.0	1,068	1,734	1,756
83.45	1,614	180.0	665	2,399	1,993

Device	Routing	Invert	Outlet Devices
#1	Primary	80.75'	0.01 cfs Exfiltration at all elevations
#2	Device 3	81.65'	15.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Secondary	78.30'	2.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.01 cfs @ 7.80 hrs HW=80.78' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=0.20 cfs @ 12.33 hrs HW=82.18' (Free Discharge)
 ↑ **3=Orifice/Grate** (Orifice Controls 0.20 cfs @ 9.39 fps)
 ↑ **2=Orifice/Grate** (Passes 0.20 cfs of 4.32 cfs potential flow)

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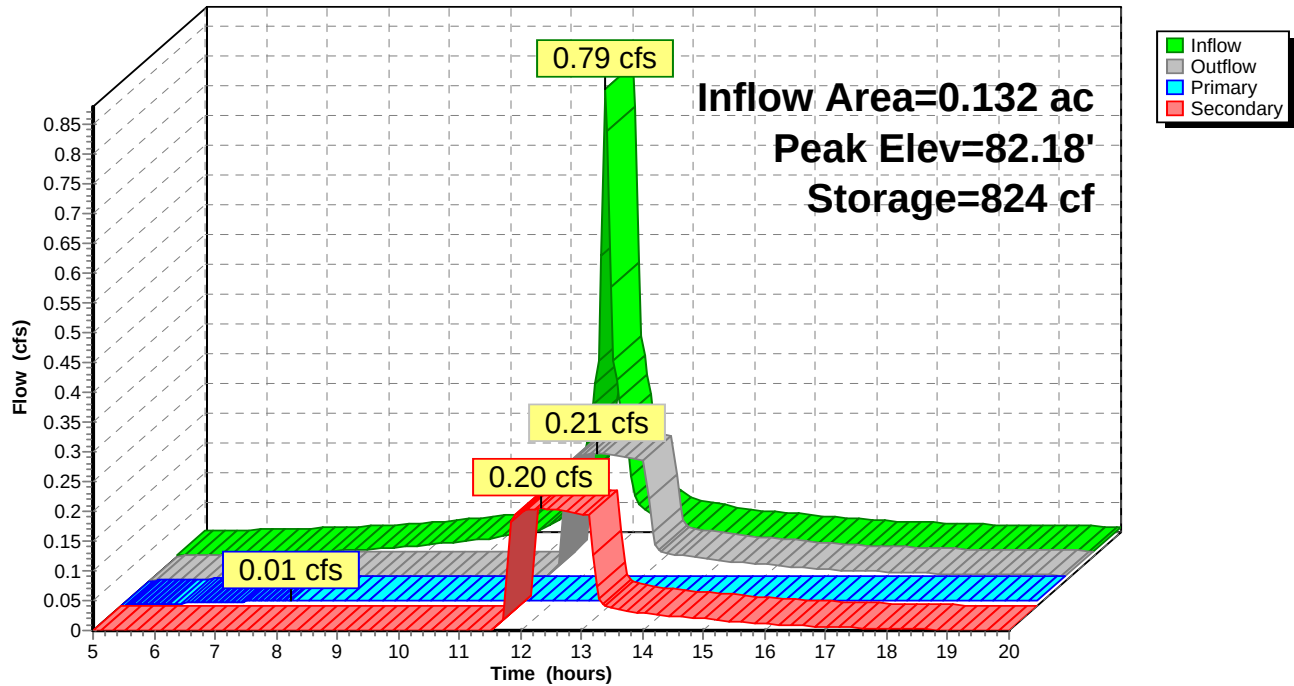
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Page 23

Pond 4P: GUSF 4

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Page 24

Summary for Pond 5P: Biocell 1

Inflow Area = 0.030 ac, 29.68% Impervious, Inflow Depth > 3.88" for 25-YR event
 Inflow = 0.16 cfs @ 12.01 hrs, Volume= 0.010 af
 Outflow = 0.01 cfs @ 11.20 hrs, Volume= 0.008 af, Atten= 94%, Lag= 0.0 min
 Primary = 0.01 cfs @ 11.20 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 83.94' @ 13.46 hrs Surf.Area= 288 sf Storage= 188 cf

Plug-Flow detention time= 162.6 min calculated for 0.008 af (87% of inflow)
 Center-of-Mass det. time= 122.1 min (887.9 - 765.9)

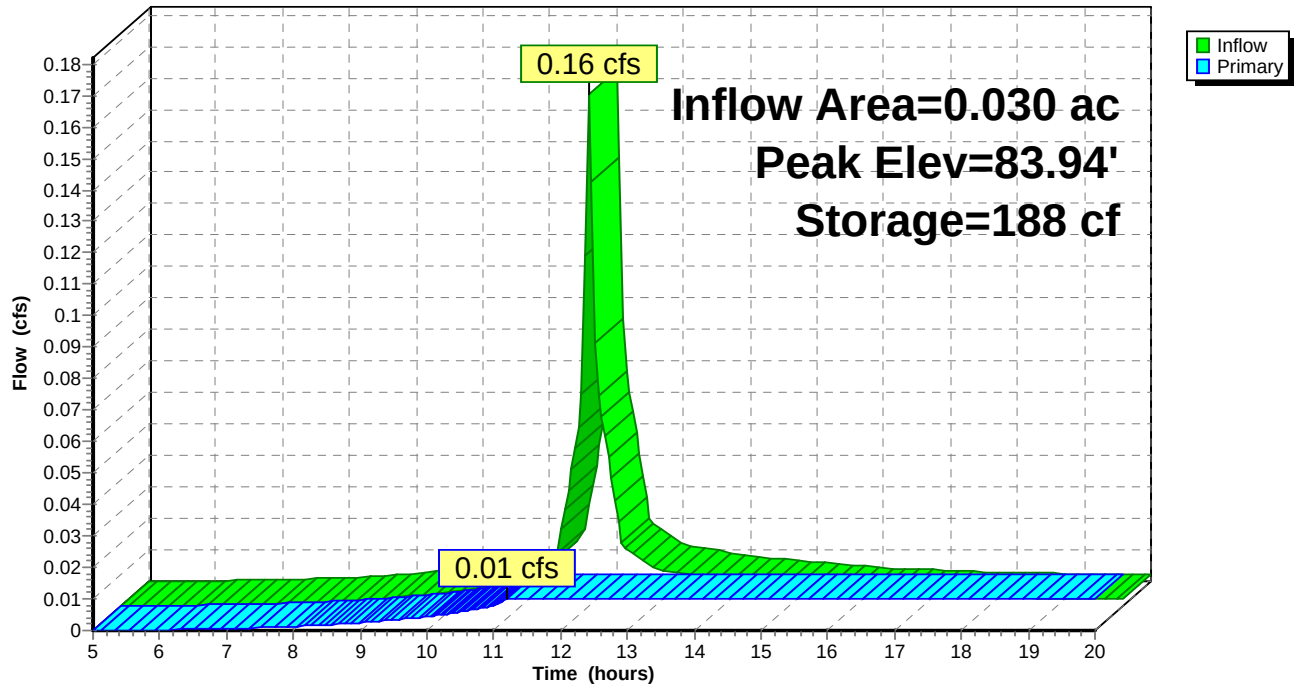
Volume	Invert	Avail.Storage	Storage Description			
#1	83.00'	392 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
83.00	175	80.0	0.0	0	0	175
83.01	175	80.0	33.4	1	1	176
83.50	175	80.0	100.0	86	86	215
84.00	304	92.0	100.0	118	205	385
84.50	451	104.0	100.0	188	392	578
Device	Routing	Invert	Outlet Devices			
#1	Primary	83.00'	0.01 cfs Exfiltration at all elevations			

Primary OutFlow Max=0.01 cfs @ 11.20 hrs HW=83.01' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Pond 5P: Biocell 1

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Page 26

Summary for Pond 6P: drip strips

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.029 ac, 86.23% Impervious, Inflow Depth > 4.99" for 25-YR event
 Inflow = 0.18 cfs @ 12.00 hrs, Volume= 0.012 af
 Outflow = 0.01 cfs @ 10.75 hrs, Volume= 0.010 af, Atten= 95%, Lag= 0.0 min
 Primary = 0.01 cfs @ 10.75 hrs, Volume= 0.010 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 84.77' @ 13.53 hrs Surf.Area= 295 sf Storage= 228 cf

Plug-Flow detention time= 159.5 min calculated for 0.010 af (81% of inflow)
 Center-of-Mass det. time= 106.8 min (842.1 - 735.4)

Volume	Invert	Avail.Storage	Storage Description
#1	84.00'	295 cf	8.20'W x 36.00'L x 1.00'H Prismatic

Device	Routing	Invert	Outlet Devices
#1	Primary	84.00'	0.01 cfs Exfiltration at all elevations
#2	Secondary	85.00'	36.0' long x 5.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
			2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.01 cfs @ 10.75 hrs HW=84.01' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.01 cfs)**Secondary OutFlow** Max=0.00 cfs @ 5.00 hrs HW=84.00' (Free Discharge)↑ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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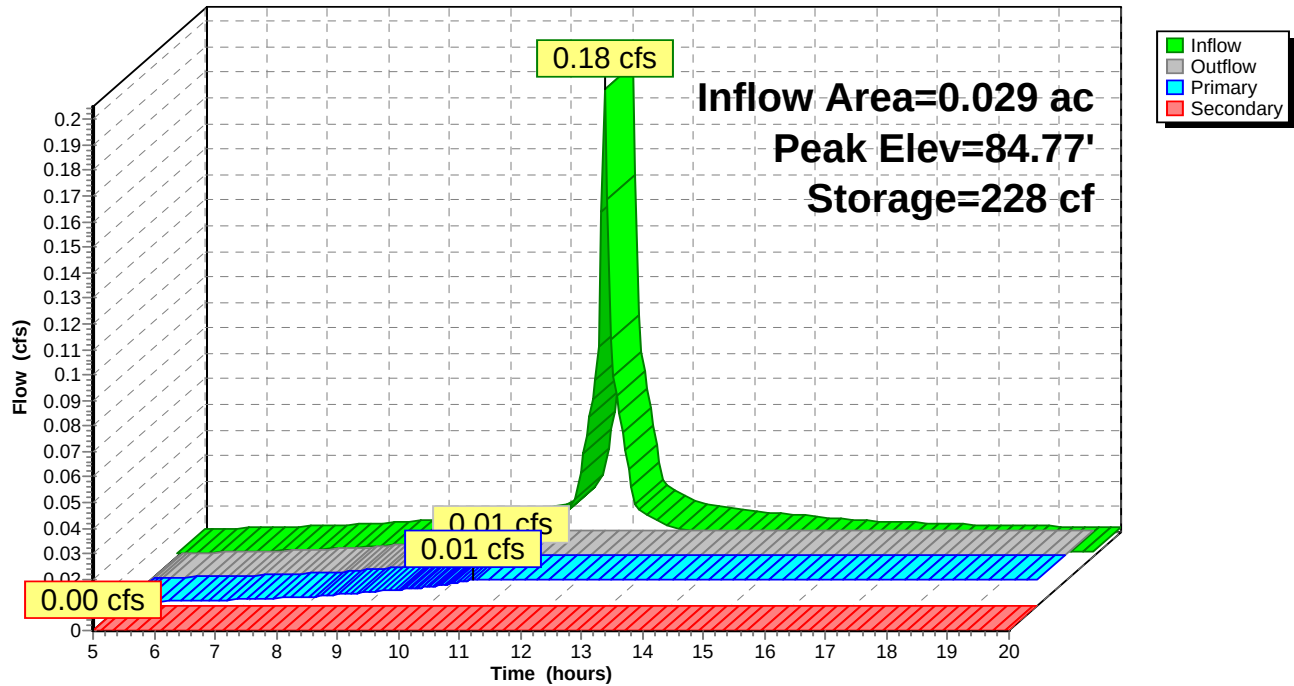
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Page 27

Pond 6P: drip strips

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Page 28

Summary for Pond 14P: GUSF 4 WIER

[43] Hint: Has no inflow (Outflow=Zero)

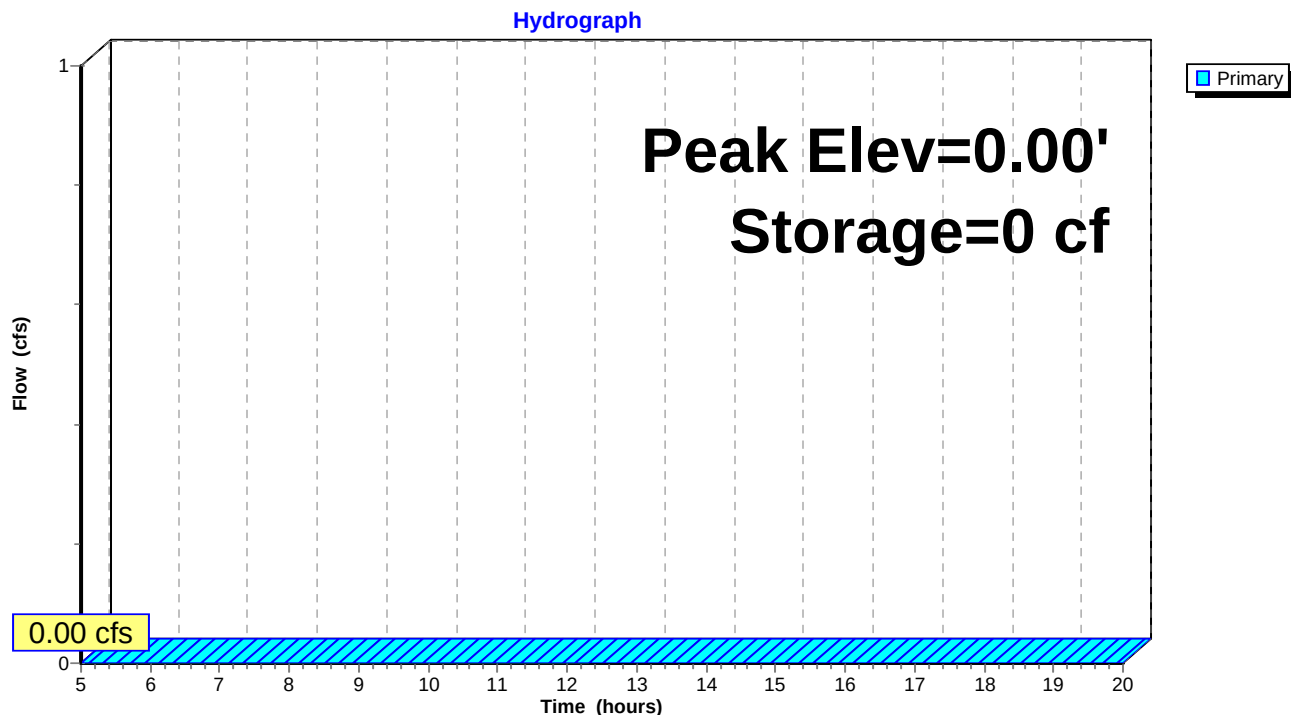
Volume	Invert	Avail.Storage	Storage Description
#1	80.75'	2,399 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
80.75	295	108.0	0	0	295
82.00	813	144.0	666	666	1,034
83.00	1,346	172.0	1,068	1,734	1,756
83.45	1,614	180.0	665	2,399	1,993

Device	Routing	Invert	Outlet Devices
#1	Primary	82.18'	6.0' long x 0.7' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)

1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 14P: GUSF 4 WIER

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Page 29

Summary for Pond 15P: GUSF 3 WIER

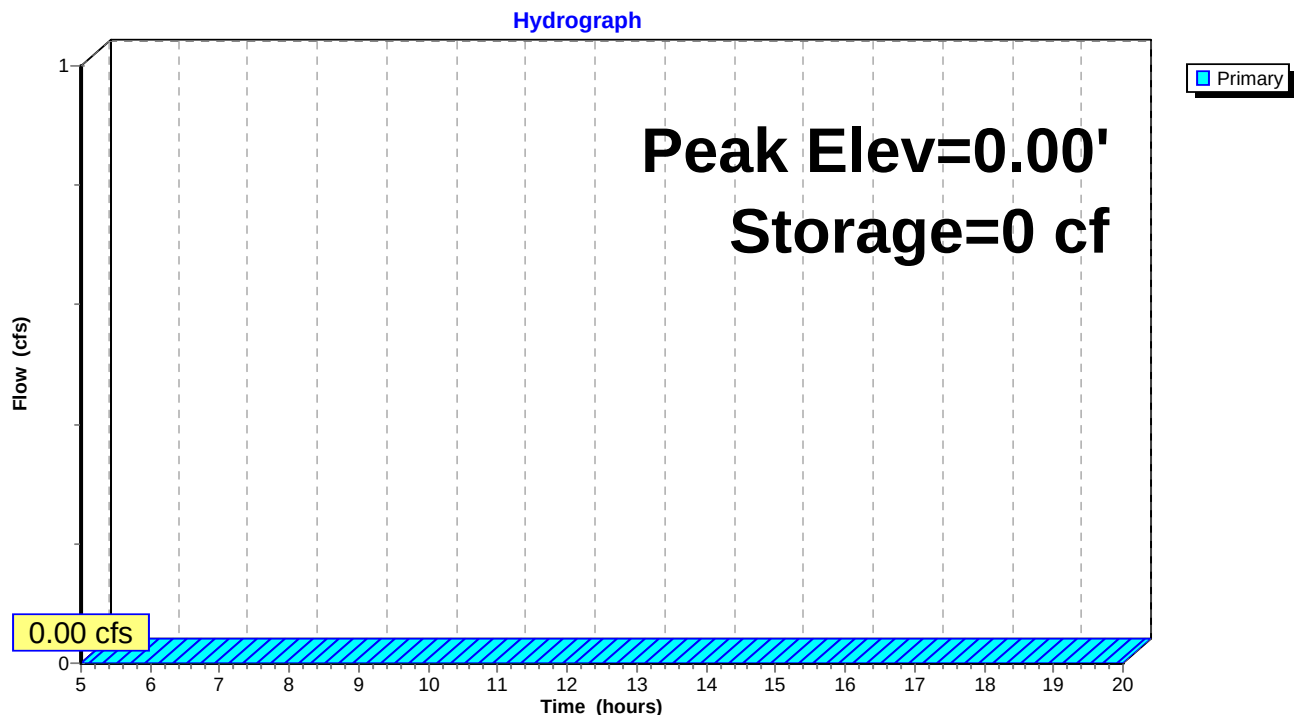
[43] Hint: Has no inflow (Outflow=Zero)

Volume	Invert	Avail.Storage	Storage Description			
#1	81.00'	5,386 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
81.00	719	196.0	0	0	719	
82.00	1,385	227.0	1,034	1,034	1,784	
83.00	2,169	260.0	1,762	2,796	3,086	
84.00	3,034	290.0	2,589	5,386	4,427	

Device	Routing	Invert	Outlet Devices											
#1	Primary	83.28'	6.0' long x 0.7' breadth Broad-Crested Rectangular Weir											
			Head (feet)	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00	2.50
			Coef. (English)	2.76	2.82	2.93	3.09	3.18	3.22	3.27	3.30	3.32	3.32	3.32

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)

1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 15P: GUSF 3 WIER

Post

Prepared by Gorrill Palmer

HydroCAD® 10.00-16 s/n 01265 © 2015 HydroCAD Software Solutions LLC

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

Printed 3/1/2018

Page 30

Summary for Pond 17P: GUSF 1 WIER

[43] Hint: Has no inflow (Outflow=Zero)

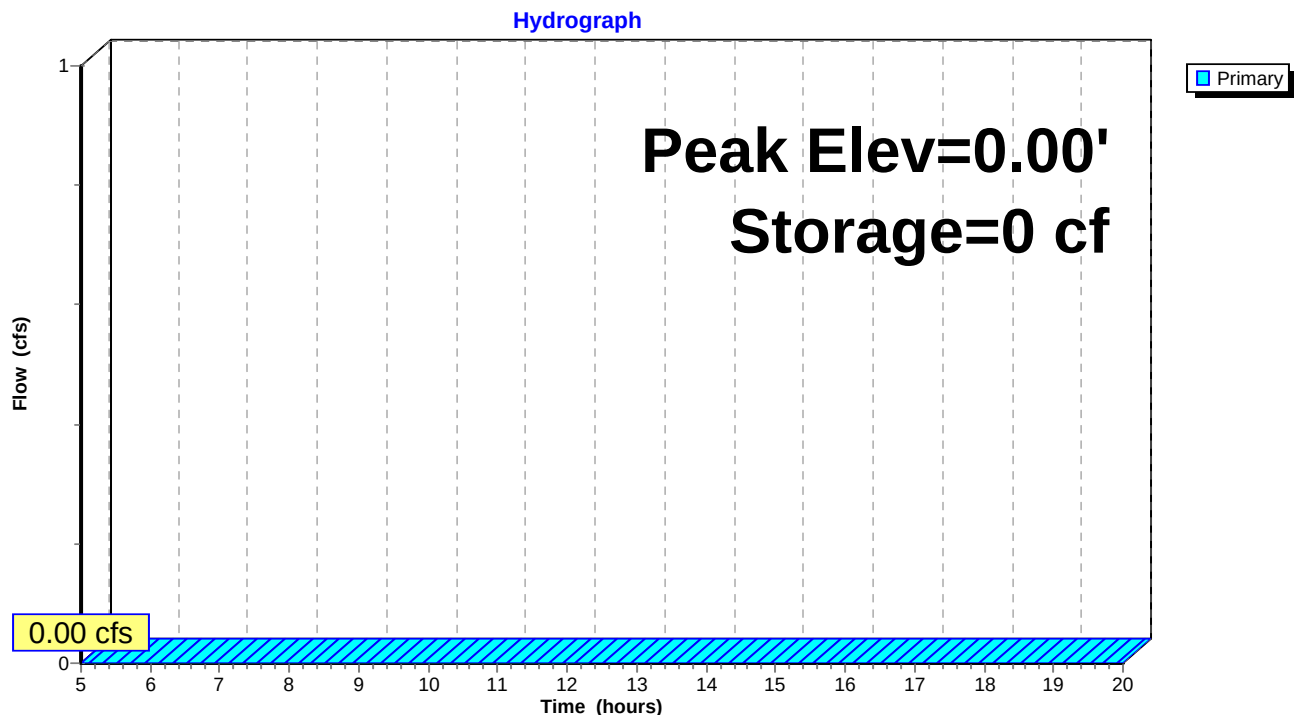
Volume	Invert	Avail.Storage	Storage Description
#1	81.50'	2,914 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
81.50	469	87.0	0	0	469
82.00	607	96.0	268	268	608
83.00	943	120.0	769	1,037	1,034
84.50	1,587	161.0	1,877	2,914	1,975

Device	Routing	Invert	Outlet Devices
#1	Primary	83.29'	6.0' long x 0.7' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)

1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 17P: GUSF 1 WIER



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

March 7, 2018

Mr. Kirk Mohny
State Historic Preservation Officer
Maine Historic Preservation Commission
55 Capitol Street, State House Station 65
Augusta, ME 04333-0065

Subject: Presence of Historical Areas
Mixed-Use Development
300 Allen Avenue, Portland, Maine

Dear Mr. Mohny,

ESTELLE ESTATES, LLC has retained Gorrill Palmer to prepare design plans and permit applications for a proposed mixed-use development at 300 Allen Avenue. The site is approximately 1.27 acres in size and is shown on Assessor's Map 344 E003, E004, and E006.

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

David Vitali
Design Engineer

Enclosure

DER/djv/U:\801.06 Allen Ave - Bouchard\IP Applications\Local\Resource Letters\Mohny_3-1-18.doc



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

March 7, 2018

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
Mixed-Use Development
300 Allen Avenue, Portland, Maine

Dear Mr. Perry,

ESTELLE ESTATES, LLC has retained Gorrill Palmer to prepare design plans and permit applications for a proposed mixed-use development at 300 Allen Avenue. The site is approximately 1.27 acres in size and is shown on Assessor's Map 344 E003, E004, and E006.

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

David Vitali
Design Engineer

Enclosure

DER/djv/U:\801.06 Allen Ave - Bouchard\IP Applications\Local\Resource Letters\Perry_3-1-18.doc



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

March 7, 2018

Ms. Lisa St. Hilaire
Maine Natural Areas Program
93 State House Station
Augusta, ME 04333-0093

Subject: Endangered or Threatened Species
Mixed-Use Development
300 Allen Avenue, Portland, Maine

Dear Ms. St. Hilaire,

ESTELLE ESTATES, LLC has retained Gorrill Palmer to prepare design plans and permit applications for a proposed mixed-use development at 300 Allen Avenue. The site is approximately 1.27 acres in size and is shown on Assessor's Map 344 E003, E004, and E006.

The project site is shown on the attached Location Map.

As required by the reviewing authorities, Gorrill Palmer requests information from your department regarding the presence of any federally listed endangered or threatened species 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

David Vitali
Design Engineer

Enclosure

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

March 5, 2018

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

Re: Proposed Mixed Use Development
300 Allen Avenue, Portland
Letter of Ability to Serve

Dear Jamie:

ESTELLE ESTATES, LLC has retained Gorrill Palmer to prepare plans and permit applications for a proposed mixed-use development at 300 Allen Avenue. The site includes three existing lots and is shown on Assessor's Map 344 E003, E004, and E006. The total area of the site is 55,342 sf (1.27 acres). Lots E003 and E004 are entirely in the Residential R-5 zone and Lot E006 is located within both the R-5 Zone and the Residence – Professional 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 300 Allen Avenue and consists of Tax Map 344 E003, E004, and E006 as shown on the Portland Assessor's Map. The site is approximately 1.27 acres in size and has approximately 275 feet of frontage along Allen Avenue.

The project site at Lot 344 E006 is currently vacant with a landcover of brush. Lot 344 E004 consists of a single-family residential building with a separate garage and Lot 344 E003 is a fully developed, vacant grassed lawn. Topography in the area of proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 33%. The steeper slopes are associated with a vegetated soil stockpile at the front of the site. Abutting land uses include:

- North – Residential
- West – Residential
- South – Residential
- East – Residential

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

Project Description

The project is a proposed mixed-use development consisting of a 2,400 sf footprint office/professional services building, three 1,224 sf footprint duplex residential structures, two 1,836 sf triplex residential structures, associated parking, and infrastructure. Existing electric service is located on the opposite side of Allen Ave. An existing utility pole with sidewalk guy wire is located along the site frontage. Due to the location of the existing utility pole at the proposed entrance, the preliminary utility plan depicts a



relocated pole with sidewalk guy wire and overhead service extended to the new pole. The new pole is proposed to have a pole mounted transformer and underground service to the site.

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/office developments within the Greater Portland area.

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:

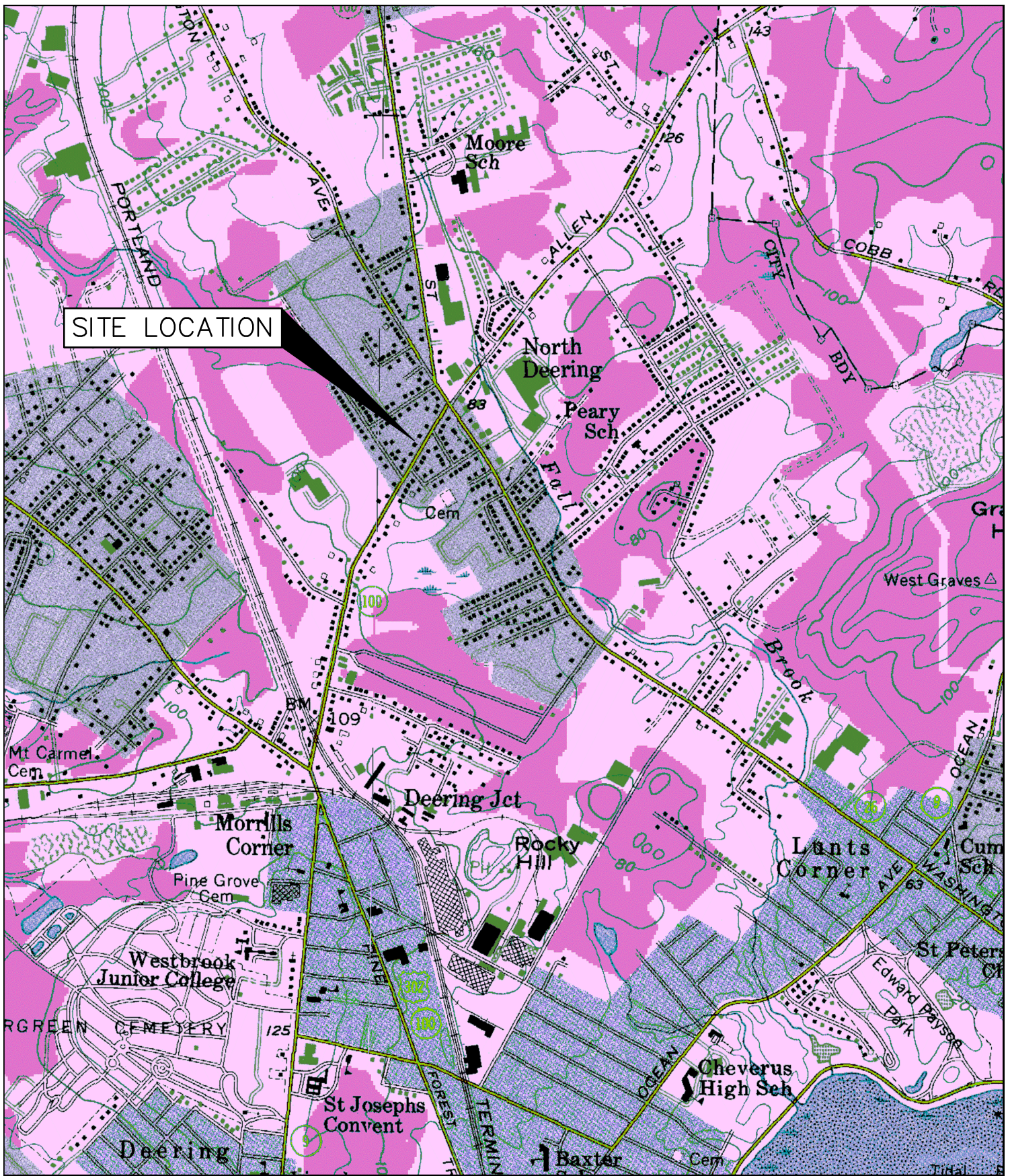
- Indication as to the acceptability of the proposed layout.
- Indication of the Utility Company responsible for the setting of poles in this area.
- Information as to any easements that you may require on-site.
- Any estimate of connection fees
- Any other information that you believe would be useful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

Sincerely,

Gorrill-Palmer

David Vitali

Copy: Peter Bouchard, ESTELLE ESTATES, LLC



U.S.G.S. Location Map
 300 Allen Ave - Portland, Maine
 U.S.G.S. Portland West, State-7.5 Minute Series (Topographic)

Design: DJV	Date: FEB 2018
Draft: CG	Job No.: 801.06
Checked: DER	Scale: None
File Name: 801-06-LocMap.dwg	

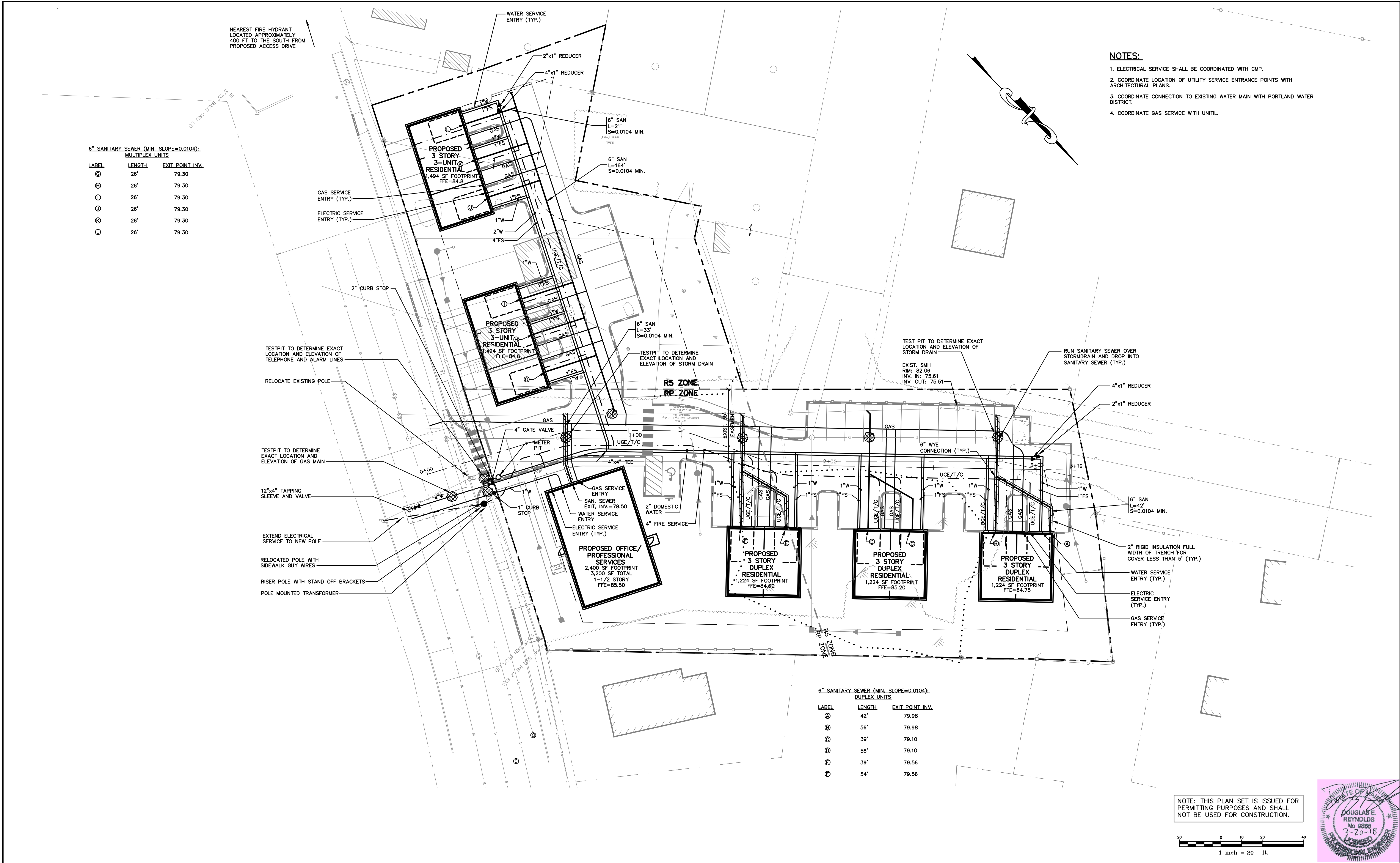


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Figure

1

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Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: DJV	Draft: CG	Date: FEB 2018
Checked: DER	Scale: 1"=20'	Job No.: 801.06
File Name: 801-06-UTIL.dwg		
This plan shall not be modified without written permission from Gorrill-Palmer Consulting Engineers, Inc.(GPCEI). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GPCEI.		



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Drawing Name:	Utility Plan
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.	C102
-------------	------

March 20, 2018

Mr. Bill Bennett
Pine Tree Waste
87 Pleasant Hill Road
Scarborough, ME 04074

Subject: 300 Allen Avenue
Portland, Maine
Ability to Serve Letter

Dear Mr. Bennett:

ESTELLE ESTATES, LLC has retained Gorrill Palmer to prepare plans and permit applications for a proposed Mixed-Use Development on Allen Avenue in Portland. The site is shown on City of Portland Tax Map 344 E003, E004, AND E006, approximately 1.27 acres and is located on the western side of Allen Avenue approximately 0.1 miles south of the intersection of Allen Avenue and Washington Avenue in Portland. Refer to Figure 1 – Location Map following this page for the project location and the attached Site Plan.

As required by the reviewing authorities, we are writing to request a letter indicating the ability of Casella Waste to serve this project. A preliminary plan is enclosed for your review.

Project Description

The development of the site is anticipated to include one office/professional building, three duplex residential units, and two triplex units with associated parking and infrastructure. The existing site contains a combination of a vacant lot and developed single family lot with a grassed lawn.

Ability to Serve

Using typical solid waste generation rates, it is anticipated that the construction of the new facility could result in the following quantities:

- Stumps & Grubbings – Approximately 280 c.y. (assumes 0.7 acres and 400 c.y./acre)
- Construction Waste – Approximately 67 c.y. (assumes 10,000 sf of building area and 10 c.y./1500sf)
- Commercial Solid Waste, Recyclable – Approximately 20 c.y. per month (assumes 10,000 sf of building area and 2 c.y./1000 sf)
- Commercial Solid Waste, Non- Recyclable – Approximately 24 c.y. per month (assumes 10,000 sf of building area and 2.4 c.y./1000 sf)

In support of the applications to the reviewing authorities, we are writing to request a letter indicating the ability Casella Waste to serve this project for the collection and transport of the construction waste to an approved location licensed by the MDEP to accept construction debris. It is our understanding that Casella would be able to provide the necessary containers on-site to collect the construction debris and can also transport the waste to the licensed facility.



According to our calculations above, the facility would be producing an average of 24 c.y. per month of commercial solid waste. We are writing to request the ability of Casella to serve this project for the collection and transport of the solid waste to an approved location. An email response is sufficient.

Please contact me if you have any questions relative to this matter.

Sincerely,

Gorrill Palmer

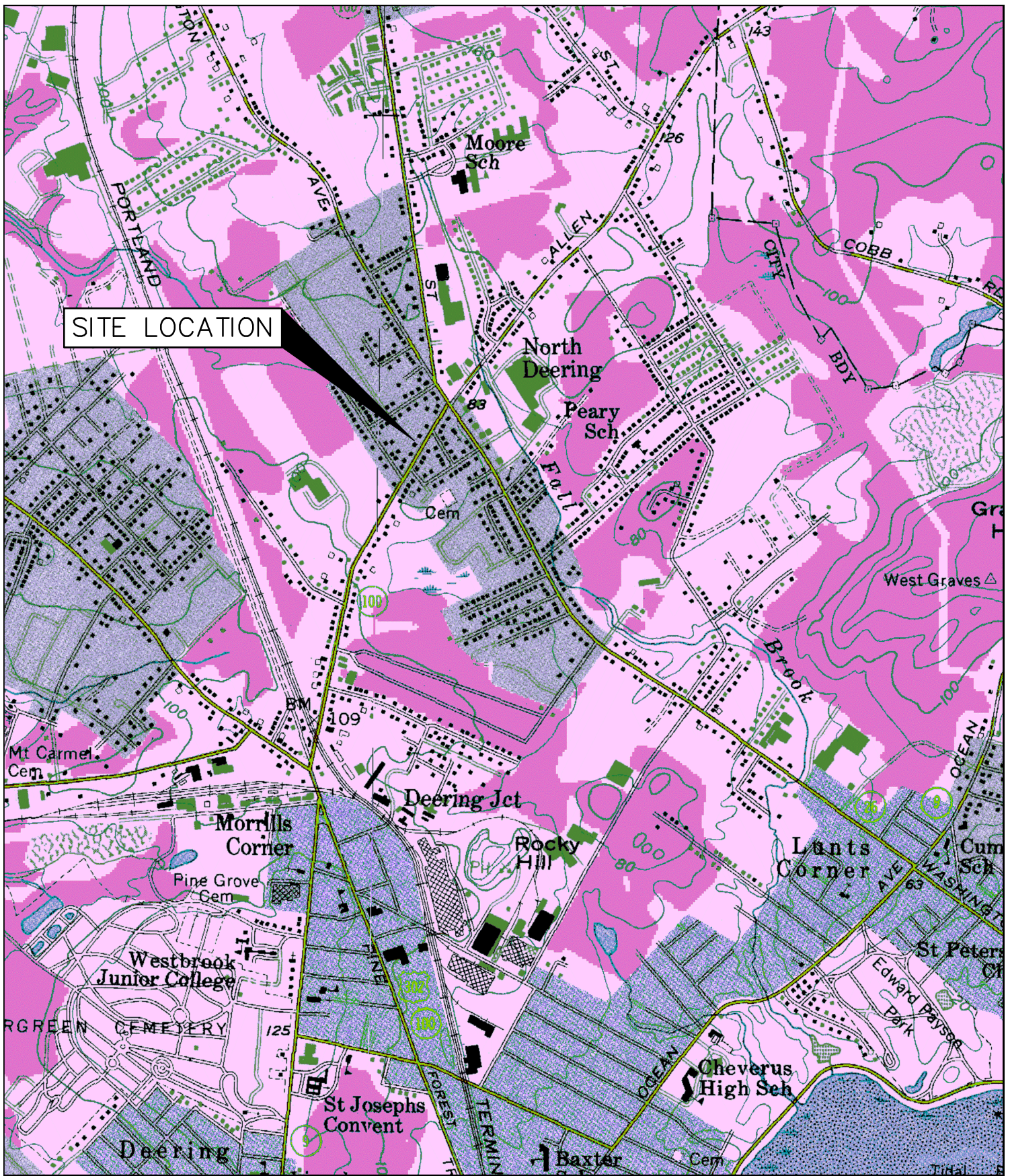
A handwritten signature in black ink that reads 'David Vitali'. The signature is written in a cursive, flowing style.

David Vitali, Design Engineer
dvitali@gorrillpalmer.com

Enclosure

Copy: Peter Bouchard, ESTELLE ESTATES, LLC

DER/djv/U:\801.06 Allen Ave - Bouchard\H Utilities\Solid Waste\Solid Waste 03-01-18.doc



U.S.G.S. Location Map
 300 Allen Ave - Portland, Maine
 U.S.G.S. Portland West, State-7.5 Minute Series (Topographic)

Design: DJV	Date: FEB 2018
Draft: CG	Job No.: 801.06
Checked: DER	Scale: None
File Name: 801-06-LocMap.dwg	

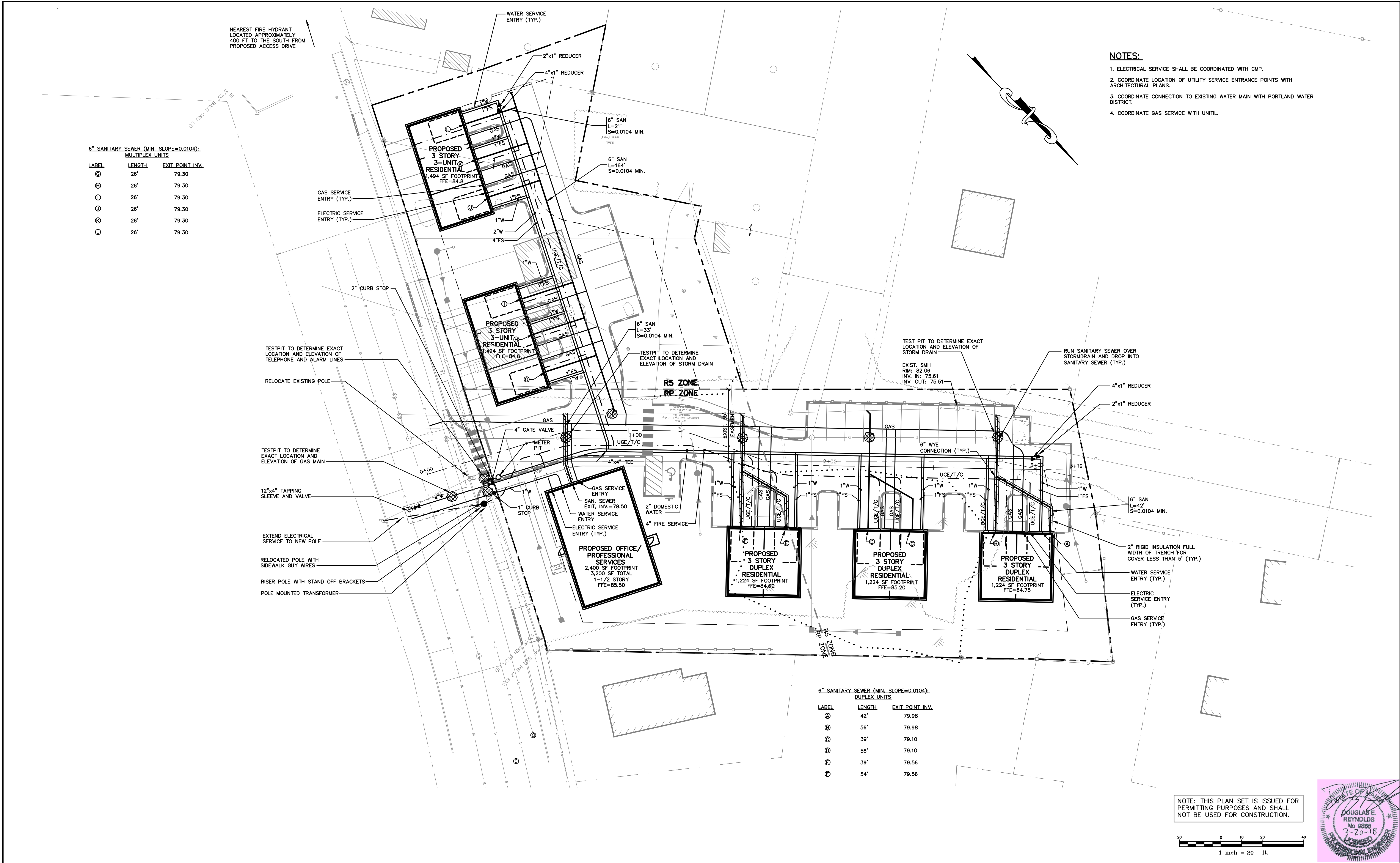


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Figure

1

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Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: DJV	Draft: CG	Date: FEB 2018
Checked: DER	Scale: 1"=20'	Job No.: 801.06
File Name: 801-06-UTIL.dwg		
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207.772.2515

Drawing Name:	Utility Plan
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.	C102
-------------	------

March 5, 2018

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

Re: Proposed Mixed Use Development
300 Allen Avenue, Portland
Letter of Ability to Serve

Dear Mr. Roland:

ESTELLE ESTATES, LLC has retained Gorrill Palmer to prepare plans and permit applications for a proposed mixed-use development at 300 Allen Avenue. The site includes three existing lots and is shown on Assessor's Map 344 E003, E004, and E006. The total area of the site is 55,342 sf (1.27 acres). Lots E003 and E004 are entirely in the Residential R-5 zone and Lot E006 is located within both the R-5 Zone and the Residence – Professional 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 300 Allen Avenue and consists of Tax Map 344 E003, E004, and E006 as shown on the Portland Assessor's Map. The site is approximately 1.27 acres in size and has approximately 275 feet of frontage along Allen Avenue.

The project site at Lot 344 E006 is currently vacant with a landcover of brush. Lot 344 E004 consists of a two-story residential building with a separate garage and Lot 344 E003 is a fully developed, vacant grassed lawn. Topography in the area of proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 33%. The steeper slopes are associated with a vegetated soil stockpile at the front of the site. Abutting land uses include:

- North – Residential
- West – Residential
- South – Residential
- East – Residential

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

Project Description

The development of the site is anticipated to include one office/professional building, three duplex residential units, and two triplex residential units with water service by the Portland Water District and wastewater service by the City of Portland. It is anticipated that the units and office building would be sprinklered for fire protection.



Existing Service

An existing 12" sanitary sewer is located onsite within an easement to the City of Portland. The project proposes to connect the sanitary sewer service from each duplex building as well as the office/professional building to the existing 12" sewer as depicted on the enclosed preliminary utility plan. The triplex units along Allen Avenue will convey the sewer services to a 6" or 8" sewer pipe that is proposed to connect to the existing 12" sanitary sewer.

Anticipated Flows

The anticipated wastewater generation for the development was computed using the Maine Subsurface Waste Water Disposal Rules Section 4.E.1 for multiple family dwelling units and Table 4C. 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.

<i>Anticipated Wastewater Generation</i>		
	Average Daily Wastewater Generation (gpd)	Peak Daily Wastewater Generation (gpd)
Proposed 12-unit Residential duplex/multiplex	1,200	2,160
Proposed Office/Professional Building	67	120
Total	1,267	2,280

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 District 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.

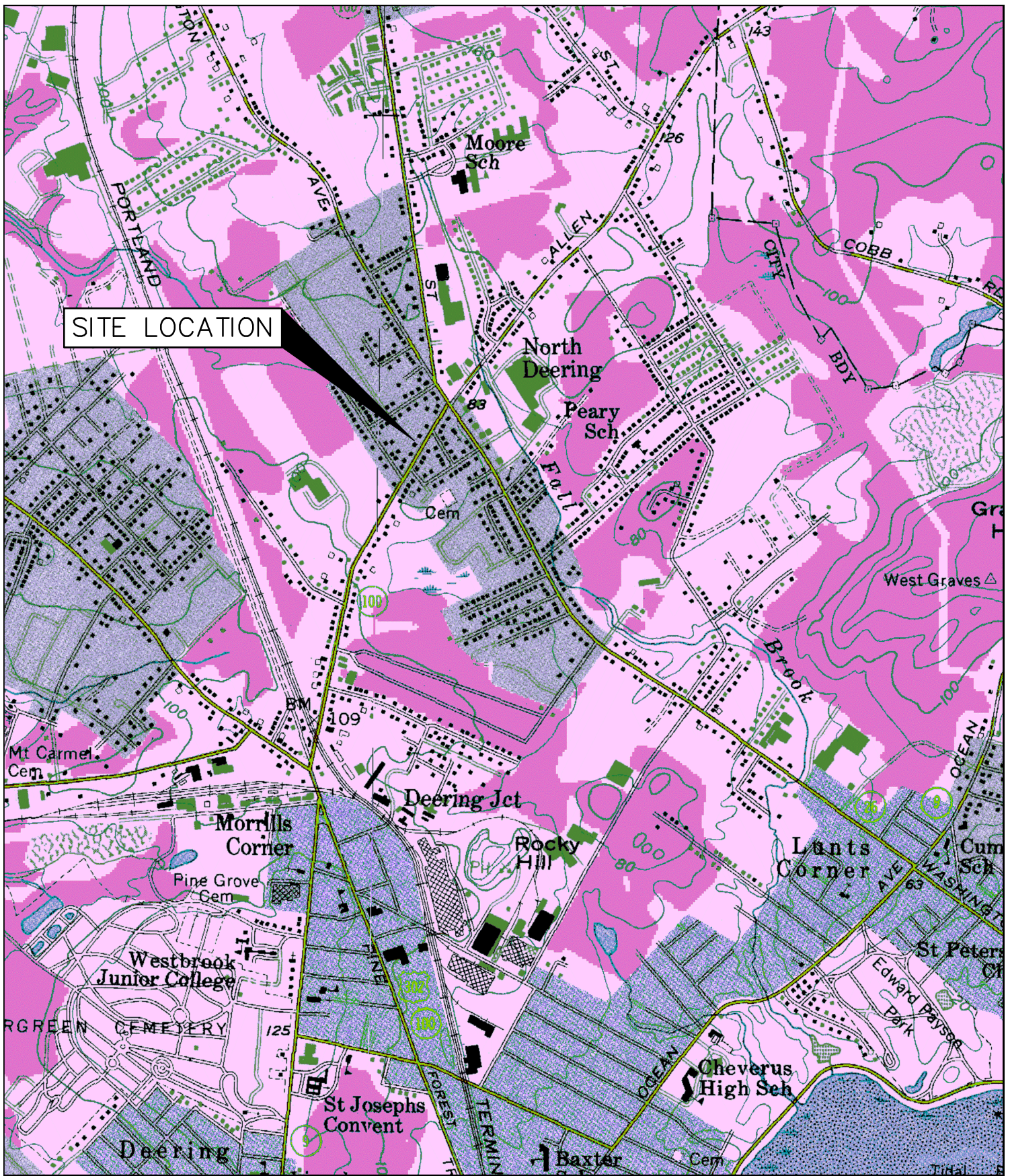
Sincerely,

Gorrill-Palmer

A handwritten signature in black ink that reads "David Vitali". The signature is written in a cursive, flowing style.

David Vitali

Copy: Peter Bouchard, ESTELLE ESTATES, LLC



U.S.G.S. Location Map
 300 Allen Ave - Portland, Maine
 U.S.G.S. Portland West, State-7.5 Minute Series (Topographic)

Design: DJV	Date: FEB 2018
Draft: CG	Job No.: 801.06
Checked: DER	Scale: None
File Name: 801-06-LocMap.dwg	



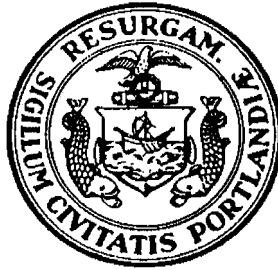
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Figure

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: 02/28/2018

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

Site Address: 300 Allen Avenue

Chart Block Lot Number: 344 E003, E004, E006

Proposed Use: Office/Professional/Residential

Previous Use: E003 - grassed lawn, E004 - single family, E006 - vacant

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.

Existing 12" sewer within existing City Easement that crosses the site

Site Category
Commercial (see part 4 below)
Industrial (complete part 5 below)
Governmental
Residential
Other (specify)

X
X

From MSWDR
Table 4A for a
Single Family
Dwelling Unit with
3 Bedrooms

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: ESTELLE ESTATES, LLC

Owner/Developer Address: 39 Darling Avenue, South Portland, ME 04106

Phone: _____ Fax: _____ E-mail: _____

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: 2,280 peak, 1,267 average GPD

Peaking Factor/ Peak Times: 180%

Specify the source of design guidelines: (i.e. X "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify)

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: _____

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.



JOB	801.06 - 300 Allen Avenue - Portland		
SHEET NO.	1	OF	1
CALCULATED BY	DJV	DATE	2/27/2017
CHECKED BY		DATE	
SCALE	N/A		

Task: Determine daily water demand/wastewater generation for proposed development of Mixed Use Development.

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:
Twelve residential multiplex units with two bedrooms per unit.
3,000 sf Office/Professional building, Assume 10 employees.

Multiple Family Dwelling Units **12** units
with 2 bedroom/Unit = **24** bedrooms

Calculations:

Duplex/Multiplex From Ref. 1, Section 4.E.1, peak flow rate
90 gpd/bedroom

Peak Water/Wastewater Generation: 2160 gpd

Average Water/Wastewater Generation (Ref. 2): 1200 gpd
(peak flow =180% of average flow)

Office/Professional From Ref. 1, Table 4C, place of employment with no showers, peak flow rate
12 gpd/employee

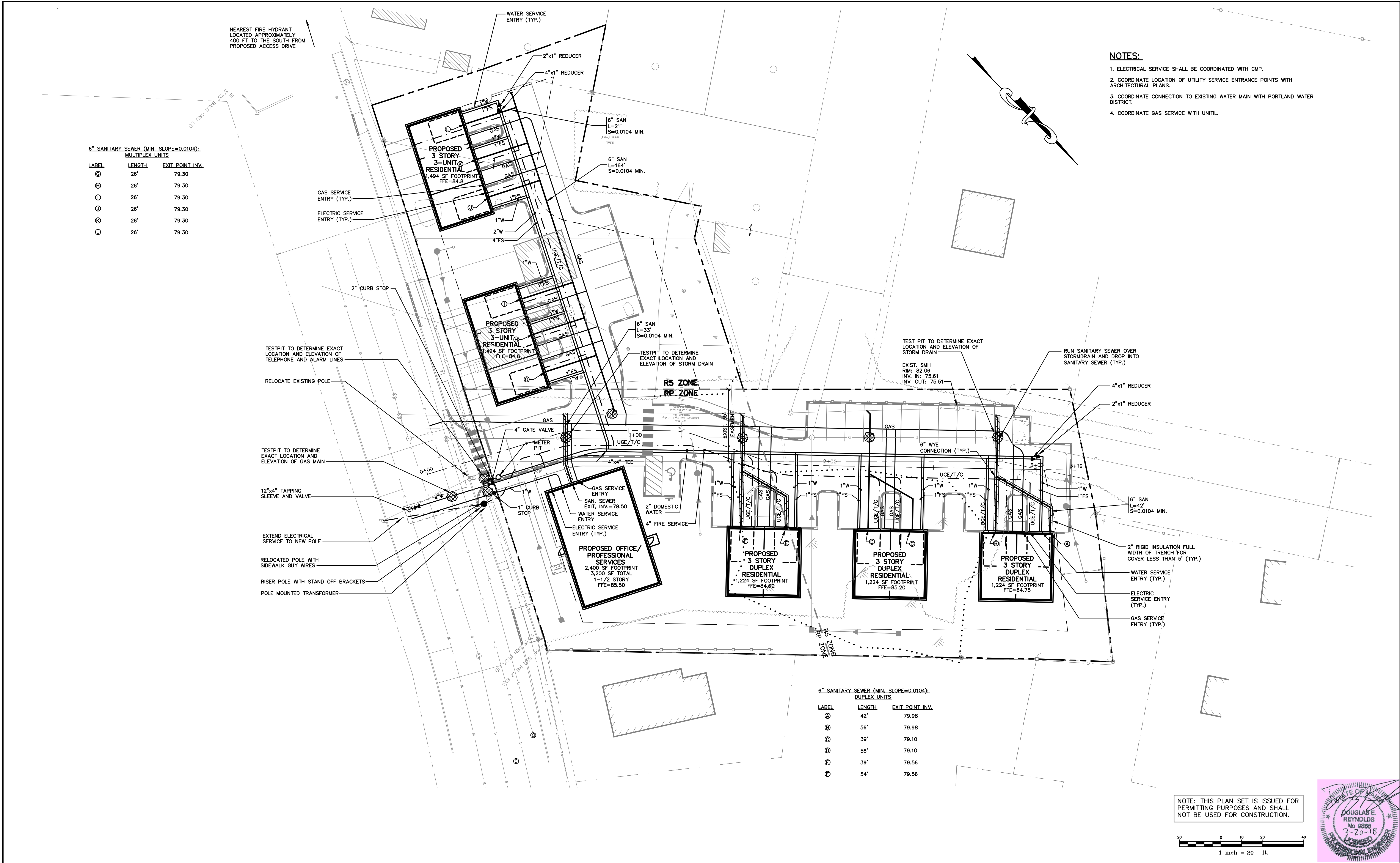
Peak Water/Wastewater Generation: 120 gpd

Average Water/Wastewater Generation (Ref. 2): 67 gpd
(peak flow =180% of average flow)

Average Daily Water/Wastewater Generation for Proposed Development: 1267 gpd

Peak Daily Water/Wastewater Generation for Proposed Development: 2280 gpd

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Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: DJV	Draft: CG	Date: FEB 2018
Checked: DER	Scale: 1"=20'	Job No.: 801.06
File Name: 801-06-UTIL.dwg		
This plan shall not be modified without written permission from Gorrill-Palmer Consulting Engineers, Inc.(GPCEI). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GPCEI.		



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Drawing Name:	Utility Plan
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.	C102
-------------	------

March 5, 2018

Jay Arnold
Portland Water District
225 Douglas Street
Portland, Maine 04104

Re: Proposed Mixed Use Development
300 Allen Avenue, Portland
Letter of Ability to Serve

Dear Mr. Arnold:

ESTELLE ESTATES, LLC has retained Gorrill Palmer to prepare plans and permit applications for a proposed mixed-use development at 300 Allen Avenue. The site includes three existing lots and is shown on Assessor's Map 344 E003, E004, and E006. The total area of the site is 55,342 sf (1.27 acres). Lots E003 and E004 are entirely in the Residential R-5 zone and Lot E006 is located within both the R-5 Zone and the Residence – Professional 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 300 Allen Avenue and consists of Tax Map 344 E003, E004, and E006 as shown on the Portland Assessor's Map. The site is approximately 1.27 acres in size and has approximately 275 feet of frontage along Allen Avenue.

The project site at Lot 344 E006 is currently vacant with a landcover of brush. Lot 344 E004 consists of a two-story residential building with a separate garage and Lot 344 E003 is a fully developed, vacant grassed lawn. Topography in the area of proposed construction varies from flat slopes of approximately 0.5% to steep slopes of 33%. The steeper slopes are associated with a vegetated soil stockpile at the front of the site. Abutting land uses include:

- North – Residential
- West – Residential
- South – Residential
- East – Residential

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

Project Description

The development of the site is anticipated to include one office/professional building, three duplex residential units, and two triplex residential units with water service by the Portland Water District and wastewater service by the City of Portland. It is anticipated that the units and office building would be sprinklered for fire protection.



Existing Service

An existing 12" water main is located in the east side of Allen Avenue. As discussed at a meeting with the District on September 14, 2016, a 1" service from the main will serve the office building, and a 4" service off the main will provide fire and domestic service to the 12 residential units. The 4" service diverges into a 2" domestic service and a 4" fire service at the property line to supply each residential unit as depicted on the enclosed preliminary utility plan.

Anticipated Flows

The anticipated wastewater generation for the development was computed using the Maine Subsurface Waste Water Disposal Rules Section 4.E.1 for multiple family dwelling units and Table 4C. 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.

<i>Anticipated Wastewater Generation</i>		
	Average Daily Wastewater Generation (gpd)	Peak Daily Wastewater Generation (gpd)
Proposed 12-unit Residential duplex/multiplex	1,200	2,160
Proposed Office/Professional Building	67	120
Total	1,267	2,280

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 the Portland Water District to serve the proposed 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 near 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.

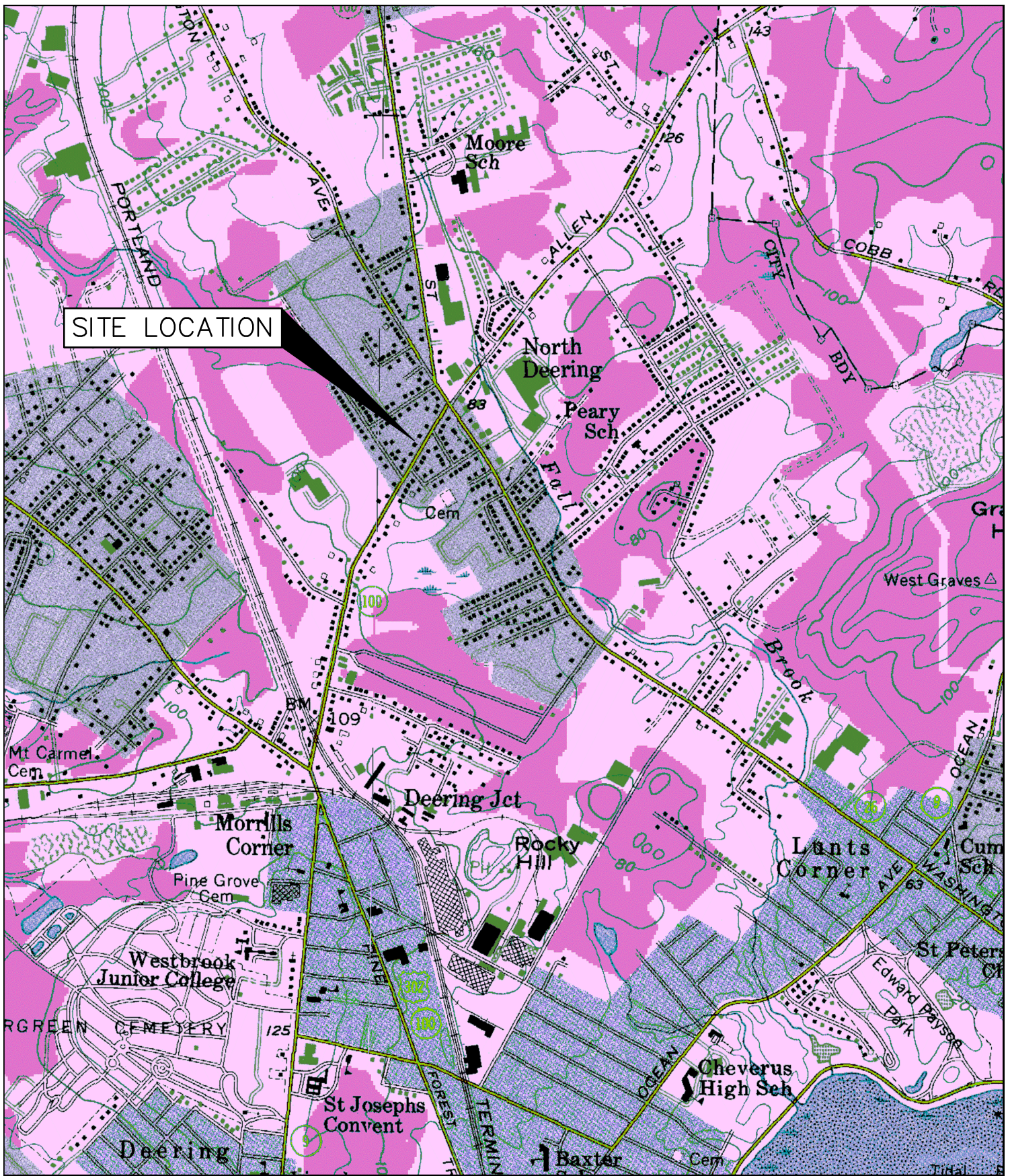
Sincerely,

Gorrill-Palmer

A handwritten signature in black ink that reads "David Vitali".

David Vitali

Copy: Peter Bouchard, ESTELLE ESTATES, LLC



U.S.G.S. Location Map
 300 Allen Ave - Portland, Maine
 U.S.G.S. Portland West, State-7.5 Minute Series (Topographic)

Design: DJV	Date: FEB 2018
Draft: CG	Job No.: 801.06
Checked: DER	Scale: None
File Name: 801-06-LocMap.dwg	



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Figure

1



JOB	801.06 - 300 Allen Avenue - Portland		
SHEET NO.	1	OF	1
CALCULATED BY	DJV	DATE	2/27/2017
CHECKED BY		DATE	
SCALE	N/A		

Task: Determine daily water demand/wastewater generation for proposed development of Mixed Use Development.

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:
Twelve residential multiplex units with two bedrooms per unit.
3,000 sf Office/Professional building, Assume 10 employees.

Multiple Family Dwelling Units **12** units
with 2 bedroom/Unit = **24** bedrooms

Calculations:

Duplex/Multiplex From Ref. 1, Section 4.E.1, peak flow rate
90 gpd/bedroom

Peak Water/Wastewater Generation: 2160 gpd

Average Water/Wastewater Generation (Ref. 2): 1200 gpd
(peak flow =180% of average flow)

Office/Professional From Ref. 1, Table 4C, place of employment with no showers, peak flow rate
12 gpd/employee

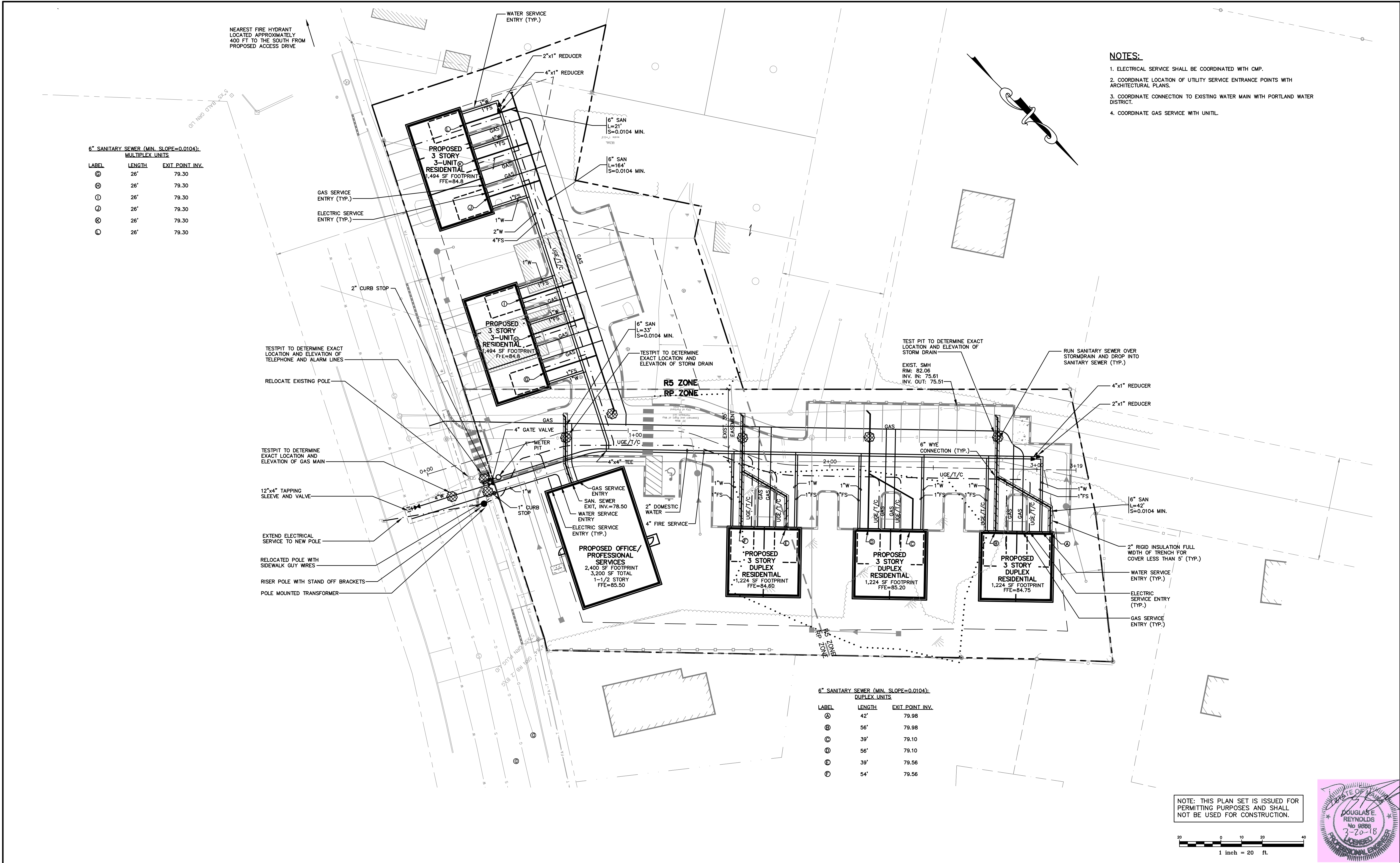
Peak Water/Wastewater Generation: 120 gpd

Average Water/Wastewater Generation (Ref. 2): 67 gpd
(peak flow =180% of average flow)

Average Daily Water/Wastewater Generation for Proposed Development: 1267 gpd

Peak Daily Water/Wastewater Generation for Proposed Development: 2280 gpd

C:\CAD WORKING\801.06 - 300 Allen Ave\DWG\801-06-UTIL.dwg - Mar 20, 2018 - 11:18am



Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: DJV	Draft: CG	Date: FEB 2018
Checked: DER	Scale: 1"=20'	Job No.: 801.06
File Name: 801-06-UTIL.dwg		
This plan shall not be modified without written permission from Gorrill-Palmer Consulting Engineers, Inc.(GPCEI). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GPCEI.		



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Drawing Name:	Utility Plan
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.	C102
-------------	------

Portland, Maine



Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

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

Please confirm by electronically checking the boxes to the left

Tab 1 – General Application Documents

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

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

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

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

Tab 2 - TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ☐ ☐ ☐	Transportation Analysis- Traffic Impact (14-526 (a) 1) - Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts - Traffic Impact Study (Technical Manual, Section 1) if applicable
Yes NA Plan ☐ ☐ ☐	Access and Circulation (14-526 (a) 2 a) - Access and internal circulation, addressing ADA access - Access and egress impacts on traffic flows - Description and use of drive-up features, if applicable
Yes NA Plan ☐ ☐ ☐	Loading and Servicing (14-526 (a) 2 b) - Loading and servicing needs, route and travel way geometrics for deliveries - Turning templates for delivery vehicles, if applicable
Yes NA Plan ☐ ☐ ☐	Sidewalks (14-526 (a) 2 c) - Sidewalks and condition along street frontages and internal walkways - Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
Yes NA Plan ☐ ☐ ☐	Public Transit (14-526 (a) 3), if applicable - Existing available transit services - Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ☐ ☐ ☐	Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c) - Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements - Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
Yes NA Plan ☐ ☐ ☐	Bicycle Parking (14-526 (a) 4 b) - Address bicycle parking requirements and identify locations on-site - Construction details for bike racks (Technical Manual, Section 1)
Yes NA Plan ☐ ☐ ☐	Snow Storage (14-526 (a) 4 d) Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ☐ ☐ ☐	Traffic Demand Management (TDM) (14-526 (a) 5), if applicable Develop TDM with Trip Reduction Targets and Strategies

Tab 3 - ENVIRONMENTAL AND LANDSCAPE FEATURES			
Check list			Assess/Provide/Document:
Yes	NA	Plan	Preservation of Significant Natural Features (14-526 (b) 1), if applicable - Trees, plants, habitats listed on State or Federal list of endangered or threatened - High and moderate value waterfowl and wading habitat - Aquifers on Casco Bay Islands - Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) - Proposed preservation areas and protection measures - Documentation from environmental consultants, determinations from applicable state agencies
Yes	NA	Plan	Landscaping and Landscape Preservation (14-526 (b) 2 a) - Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) - Protection measures of existing vegetation during construction - Protection measures within Shoreland Zone, if applicable
Yes	NA	Plan	Site Landscaping (14-526 (b) 2 b) - Screening and buffering of service areas and between non-residential and residential uses - Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes	NA	Plan	Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable Landscaped islands within parking areas (Technical Manual, Section 4)
Yes	NA	Plan	Street Trees (14-526 (b) 2 b iii) - Existing Heritage or Feature Trees on site and measures to preserve - Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable
Tab 4 - ENVIRONMENTAL AND STORMWATER			
Check list			Assess/Provide/Document:
Yes	NA	Plan	Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a) - Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable - Erosion control plan and measures - Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable - Subsurface sanitary sewage disposal and groundwater protection

Tab 5 - PUBLIC INFRASTRUCTURE AND SAFETY			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	Consistency with City Master Plans (14-526 (c) 1) - Identify consistency with master plans - Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
☐	☐	☐	
Yes	NA	Plan	Public Safety and Fire Prevention (14-526 (c)) - Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) - Emergency vehicle access - Address consistency with public safety standards (Technical Manual, Section 3) - Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
☐	☐	☐	
Yes	NA	Plan	Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9) - Electrical services, including providing underground services - Identify existing and proposed connections for public utilities and required public utility upgrades - Sewer line connections are required, if there is a main within 200 feet - Proposed solid waste management facilities on-site and management for the site - Written evidence of the ability to serve from utility companies, as applicable
☐	☐	☐	
Tab 6 - SITE DESIGN			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	Massing, Ventilations and Wind Impact (14-526 (d) 1) - Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable - Bulk, location or height impacts on adjoining structures - Identify and locate HVAC equipment and venting away from public spaces and residential properties - Identify screening and manufacturing specifications for noise, if applicable
☐	☐	☐	
Yes	NA	Plan	Shadows (14-526 (d) 2), if applicable Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
☐	☐	☐	
Yes	NA	Plan	Snow and Ice Loading (14-526 (d) 3) Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
☐	☐	☐	
Yes	NA	Plan	View Corridors (14-526 (d) 4), if applicable Protection of designated view corridors (Portland Design Manual, Appendix 1)
☐	☐	☐	

Yes NA Plan ☐ ☐ ☐	Historic Resources (14-526 (d) 5), if applicable - Identify developments within Historic Districts or affecting Designated Landmarks - Certificate of Appropriateness or other evidence - Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required - Address preservation and documentation of Archaeological Resources
Yes NA Plan ☐ ☐ ☐	Exterior Lighting (14-526 (d) 6) - Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) - Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes NA Plan ☐ ☐ ☐	Noise and Vibration (14-526 (d) 7) Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes NA Plan ☐ ☐ ☐	Signage and Wayfinding (14-526 (d) 8), if applicable - Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff - Proposed commercial and directional signage on site
Yes NA Plan ☐ ☐ ☐	Zone Related Design Standards (14-526 (d) 5) - Address Historic Preservation Design Review, if applicable - Address any applicable design review standards by zone - Address submission requirements from Design Manual, page 1, addressing neighborhood context - Description of exterior materials, color, finish, and samples
Tab 7 - Construction Management Plan	
Check list	
Yes NA Plan ☐ ☐ ☐	Construction Management Plan Construction Management Document and Plan

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

☒	GRADING and DRAINAGE PLAN including:
	- Existing grades and drainage - Proposed grades - Proposed stormwater management meeting Technical Manual (Section 5) standards - Location and proposed alteration of a water course - Preservation or alteration of wetlands
☒	EROSION CONTROL
	Must be in compliance with Technical Manual, Section 5
☒	LANDSCAPE PLAN including:
	- Existing vegetation to be preserved and preservation measures - Proposed landscaping and buffers - Planting schedule
☐	RECORDING PLAT , if applicable
	IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☒	ARCHITECTURAL PLANS & RENDERINGS including:
	- Exterior building elevations, color renderings, illustrations of all sides - Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening - Provide context drawings, if applicable (Design Manual, page 1) - Floor plans

Portland, Maine



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ZONING ANALYSIS Relevant Zone(s) RP/R5

All Projects:

	Required	Proposed
Lot Size	6,000sf/54,000sf	55,342sf
Area Per Dwelling Unit	NA/4,500sf	4,500sf
Minimum Street Frontage	60'/50'	276.5'
Front Yard Minimum	12.5'/20'	> 20'
Front Yard Maximum	NA/NA	NA
Rear Yard	20'	20'
Yard Right	12'/12'	> 12'
Yard Left	14'/14'	> 14'
Side Street Setback	15'/15'	NA
Step Back	NA/NA	NA
Maximum Lot Coverage	0.65/0.40	0.18
Minimum Lot Coverage	NA/NA	NA
Maximum Height	45' (35')	< 35'
Open Space	NA (NA)	NA
Maximum Impervious Area	0.80 (NA)	0.53
Pavement Setback	NA/NA	NA
Floor Area Ratio	0.65/0.40	0.18
Off Street Parking Spaces	8 (24)	12 (30)
Loading Bays	NA	NA
Other 1		
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

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**NPRA Tier I
Application for
300 Allen Avenue
Portland, Maine**

PREPARED FOR:
Estelle Estates, LLC
South Portland, Maine

April 2018

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



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

April 5, 2018

On Call Analyst
Maine Department of Environmental Protection
312 Canco Road
Portland, ME 04103

Subject: 300 Allen Avenue
NRPA TIER I Permit Application

To whom it may concern,

The attached application is for an NRPA Tier I permit for 300 Allen Avenue in Portland.

Copies of the application have been sent to the Army Corps of Engineers, the City of Portland, and the Maine Historic Preservation Commission.

A check for \$75 is attached for the application fee.

Two copies of the application and plans are included for your use.

If you have any further questions please contact us.

Sincerely,

Gorrill Palmer

A handwritten signature in blue ink, appearing to read 'D Reynolds'.

Douglas Reynolds, PE
Project Manager

Copy: Peter Bouchard, Estelle Estates, LLC

DER/djg/U:\801.06 Allen Ave - Bouchard\IP Applications\State\NRPA Tier I\Cover Letter 4-2-18.doc

Table of Contents

1. Narrative
2. NRPA Tier I Application
3. Agent Authorization Letter
4. Wetland Photos
5. Title / Right / Interest
6. Figure #1: Wetland Impact
7. MHPC Letter & Response
8. Drawing #1: Wetland Impact Plan

I. Narrative

NRPA PERMIT APPLICATION

Introduction

Gorrill Palmer has been retained by Estelle Estates, LLC to prepare plans and permit applications for the construction of 12 residential units as well as a small office building located at 300 and 292 Allen Avenue in Portland, ME.

At this time, Estelle Estates, LLC has directed us to submit a NRPA permit application. Since the development of the site is proposed to impact 9,159 square feet of scrub shrub wetland, a Tier I application is appropriate for this development. The following narrative provides additional details for the project.

Site and Development Description

The total area of the project parcels is 55,432 square feet. 300 Allen Ave is currently vacant and contains a vegetated soil stockpile in the easterly section of the site. Development is also proposed on the adjacent lot located at 292 and 280 Allen Ave. Currently, a single-family building with a garage and fully developed lawn cover is present at the adjacent lot. The sites drain to the two existing culvert inlets located at the center of the site within the City of Portland utility easement.

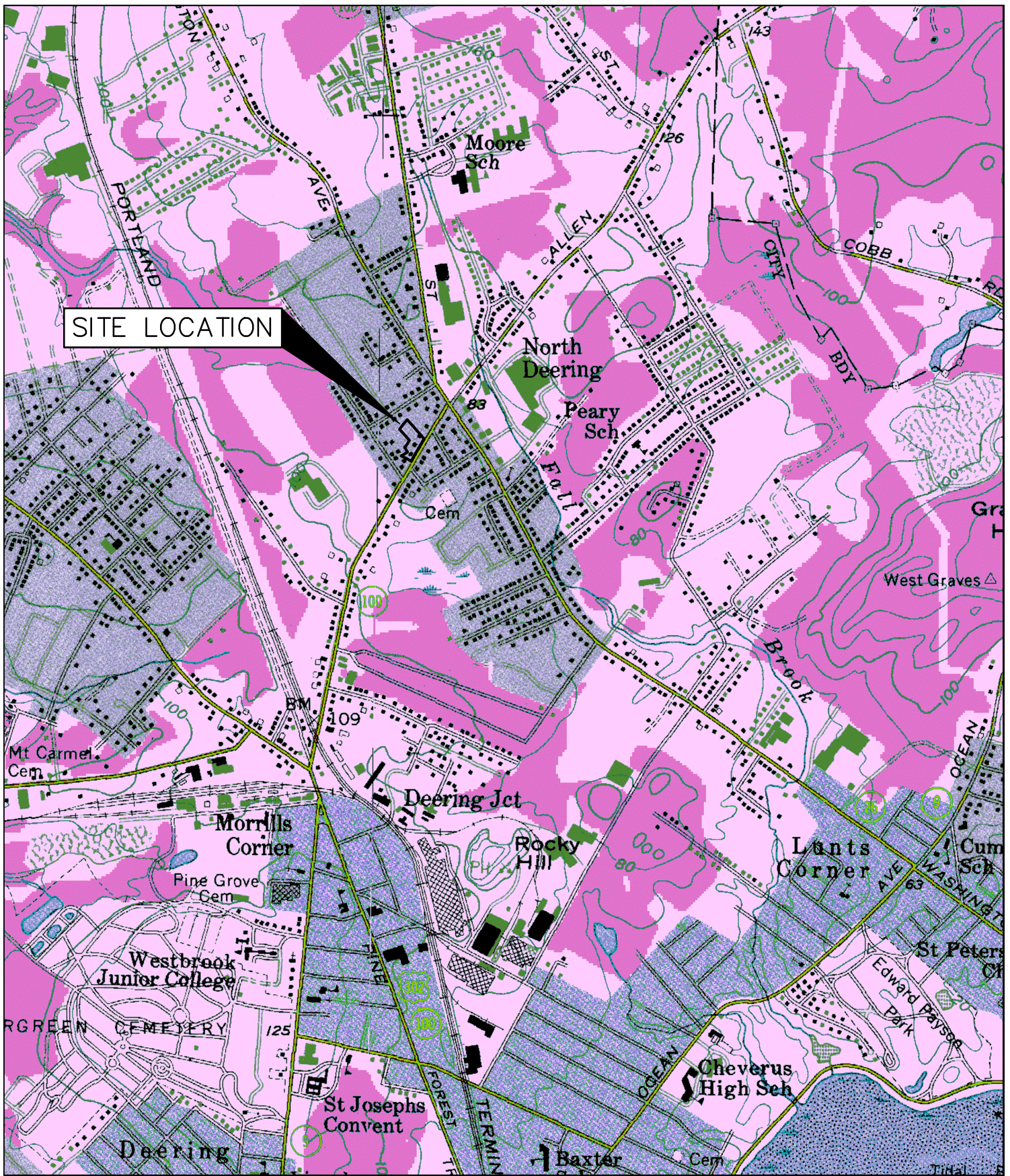
The development includes the creation of three duplex residential units with a footprint of 1,224 sf each, two triplex residential units with a footprint of 1,494 sf each, and an office/professional services building of 2,400 sf footprint with associated parking and infrastructure. Wetlands on-site were delineated by Jones Associates in July 2016 for 300 Allen Ave and Boyle Associates in January of 2018 for 292 Allen Ave.

The affected wetlands occur in the center of the parcel and along the western boundary of the parcel. The wetlands in this area are scrub shrub/emergent marsh wetlands. No vernal pools or rare or unusual plant or animal species were observed at the site.

Wetland Impact

The wetlands impacted on site associated with the construction of the duplexes and associated parking, as well as the construction of a grassed underdrain soil filter for Water Quality purposes. Given the small size of the site, wetland impacts were unavoidable. To minimize impacts, the access drive, parking and duplexes are pushed as far south-west on the site as practical. Side slopes within the wetlands have been steeped from 3:1 to 2:1 where possible.

The wetland areas proposed to be impacted by the project are depicted on the Wetland Impact Plan following this page. As can be seen, the proposed development will result in approximate 9,159 square feet of wetland impact.



U.S.G.S. Location Map
 300 Allen Ave - Portland, Maine
 U.S.G.S. Portland West, State-7.5 Minute Series (Topographic)

Design: DJV	Date: FEB 2018
Draft: CG	Job No.: 801.06
Checked: DER	Scale: None
File Name: 801-06-LocMap.dwg	



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Figure

1

2. NRPA TIER I APPLICATION

APPLICATION FOR A NATURAL RESOURCES PROTECTION ACT PERMIT

→ PLEASE TYPE OR PRINT IN **BLACK INK ONLY**

1. Name of Applicant:		Peter Bouchard, Estelle Estates, LLC		5. Name of Agent:		Gorrill Palmer							
2. Applicant's Mailing Address:		39 Darling Avenue, South Portland, ME, 04106		6. Agent's Mailing Address:		707 Sable Oaks Drive - Suite 30 South Portland, ME 04106							
3. Applicant's Daytime Phone #:		207-956-8404		7. Agent's Daytime Phone #:		207-772-2515							
4. Applicant's Email Address: Required from either applicant or agent:		peter@bouchard.us		8. Agent's E-mail Address:		dreynolds@gorrillpalmer.com							
9. Location of Activity: (Nearest Road, Street, Rt.#)		300 Allen Ave		10. Town:		Portland							
11. County:		Cumberland											
12. Type of Resource: (Check all that apply)		☐ River, stream or brook ☐ Great Pond ☐ Coastal Wetland ☒ Freshwater Wetland ☐ Wetland Special Significance ☐ Significant Wildlife Habitat ☐ Fragile Mountain		13. Name of Resource:		Unnamed							
				14. Amount of Impact: (Sq.Ft.)		Fill: 9,159 Dredging/Veg Removal/Other:							
15. Type of Wetland: (Check all that apply)		☐ Forested ☒ Scrub Shrub ☐ Emergent ☐ Wet Meadow ☐ Peatland ☐ Open Water ☐ Other _____		FOR FRESHWATER WETLANDS <table border="1"> <thead> <tr> <th>Tier 1</th> <th>Tier 2</th> <th>Tier 3</th> </tr> </thead> <tbody> <tr> <td> ☐ 0 - 4,999 sq ft. ☒ 5,000-9,999 sq ft ☐ 10,000-14,999 sq ft </td> <td> ☐ 15,000 – 43,560 sq. ft. </td> <td> ☐ > 43,560 sq. ft. or smaller than 43,560 sq. ft., not eligible for Tier 1 </td> </tr> </tbody> </table>				Tier 1	Tier 2	Tier 3	☐ 0 - 4,999 sq ft. ☒ 5,000-9,999 sq ft ☐ 10,000-14,999 sq ft	☐ 15,000 – 43,560 sq. ft.	☐ > 43,560 sq. ft. or smaller than 43,560 sq. ft., not eligible for Tier 1
Tier 1	Tier 2	Tier 3											
☐ 0 - 4,999 sq ft. ☒ 5,000-9,999 sq ft ☐ 10,000-14,999 sq ft	☐ 15,000 – 43,560 sq. ft.	☐ > 43,560 sq. ft. or smaller than 43,560 sq. ft., not eligible for Tier 1											
16. Brief Activity Description		Construction of three duplex residential units, two triplex residential units, an professional office building and associated infrastructure											
17. Size of Lot or Parcel & UTM Locations:		☒ 55,342 square feet, or ☐ _____ acres		UTM Northing: 4839187.9 UTM Easting: 396090.2									
18. Title, Right or Interest:		☒ own ☐ lease ☐ purchase option ☐ written agreement											
19. Deed Reference Numbers:		Book#: 34605 Page: 338		20. Map and Lot Numbers:		Map #: 344 Lot #: E006							
21. DEP Staff Previously Contacted:				22. Part of a larger project:		☐ Yes ☒ No							
23. Resubmission of Application?		☐ Yes → ☒ No		If yes, previous application #		Previous project manager:							
24. Written Notice of Violation?		☐ Yes → ☒ No		If yes, name of DEP enforcement staff involved:		25. Previous Wetland Alteration: ☐ Yes ☒ No							
26. Detailed Directions to the Project Site:		Going north on I-295, take Exit 8 onto Washington Ave. Go 2.1 miles then take a left on Allen Ave. Go 600 feet and the site will be on the right.											
27. TIER 1		TIER 2/3 AND INDIVIDUAL PERMITS											
☒ Title, right or interest documentation ☒ Topographic Map ☒ Narrative Project Description ☒ Plan or Drawing (8 1/2" x 11") ☒ Photos of Area ☒ Statement of Avoidance & Minimization ☒ Statement/Copy of cover letter to MHPC		☐ Title, right or interest documentation ☐ Topographic Map ☐ Copy of Public Notice/Public Information Meeting Documentation ☐ Wetlands Delineation Report (Attachment 1) that contains the information listed under Site Conditions ☐ Alternatives Analysis (Attachment 2) including description of how wetland impacts were Avoided/Minimized		☐ Erosion Control/Construction Plan ☐ Functional Assessment (Attachment 3), if required ☐ Compensation Plan (Attachment 4), if required ☐ Appendix A and others, if required ☐ Statement/Copy of cover letter to MHPC ☐ Description of Previously Mined Peatland, if required									
28. FEES Amount Enclosed:													

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following :

DEP SIGNATORY REQUIREMENT

PRIVACY ACT STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor a permit be issued.

CORPS SIGNATORY REQUIREMENT

USC Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry shall be fined not more than \$10,000 or imprisoned not more than five years or both. I authorize the Corps to enter the property that is subject to this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

DEP SIGNATORY REQUIREMENT

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the address located on the front page of this application (see #4 for the applicant and #8 for the agent)."


SIGNATURE OF AGENT/APPLICANT

Date: 3-28-18


Signature of Agent

Date: 3-28-18

NOTE: Any changes in activity plans must be submitted to the DEP and the Corps in writing and must be approved by both agencies prior to implementation. Failure to do so may result in enforcement action and/or the removal of the unapproved changes to the activity.

(yellow)

Peter Bouchard
25 Ledge Rd
Cumberland Foreside, ME 04110

52-7445/2112

9548

PAY
TO THE
ORDER OF

Treasurer State of Maine
Seventy Five

\$ *75*

DOLLARS



Security features
are included.
Details on back.

TD Bank

[Signature]

FOR

⑆211274450⑆ 2427275224⑆

9548

3. Agent Authorization Letter

March 1, 2018

Re: **Agent Authorization**
Mixed Use Development
Portland, Maine

To Whom it May Concern:

Peter Bouchard ("Developer") is in the process of developing a site (the "Site") in the state of Maine, Cumberland County, located at 300 and 292 Allen Ave, in Portland. On behalf of the Developer, I hereby authorize Gorrell Palmer, (the "Engineer") to act as agent for the purpose of obtaining permits and approvals related to the development of the Site.

In such capacity, the Engineer's authority is expressly limited to signing and delivering applications for permits and approvals that are related to the development of the Site, advancing nominal funds as are required to file such applications and to representation at meetings and hearings for the applications. The Engineer is not authorized to negotiate on the Developer's behalf or to bind or obligate the Developer in any manner whatsoever, including without limitation accruing any obligations on the Developer's behalf to pay for or construct improvements without additional authorization in writing.

This authorization is effective as of the date of this correspondence and will remain valid until revoked in writing.

Sincerely,


ESTELLE ESTATES, LLC

Peter Bouchard

4. Wetland Photos

300 Allen Avenue NRPA Permit Application



Wetlands in central portion of site facing northwest.



Wetlands along property line facing southwest

5. Title / Right / Interest

AGREEMENT FOR THE PURCHASE AND SALE OF REAL ESTATE

AGREEMENT made and entered into this 19th day of June, 2017, by and between HARLEQUIN LLC, a Maine limited liability company with its principal place of business in Portland, County of Cumberland and State of Maine (the "Seller") and ESTELLE ESTATES, LLC, a Maine limited liability company with its principal place of business in South Portland, County of Cumberland and State of Maine (the "Buyer").

WITNESSETH AS FOLLOWS:

1. PURCHASE AND SALE. Seller agrees to sell, and Buyer agrees to buy, on and subject to the terms and conditions hereinafter set forth certain real estate, together with the buildings and improvements located thereon and also owned by the Seller located at 300 Allen Avenue, in Portland, County of Cumberland and State of Maine, as more particularly described in a Warranty Deed from Robert L. Adam to the Seller dated August 11, 2004 and recorded at the Cumberland County Registry of Deeds in Book 21661, Page 282, a copy of which is attached hereto as Exhibit A and made a part hereof (such real estate and personal property being referred to herein collectively as the "Premises").

2. PURCHASE PRICE. Subject to any adjustments and prorations hereinafter described, Buyer agrees to pay for the Premises the sum of [REDACTED] (the "Purchase Price"), which shall be payable as follows:

(a) The sum of [REDACTED], being paid simultaneously with the execution of this Agreement, as earnest money deposit (the "Deposit"), which shall be held by Magnusson Balfour, (the "Escrow Agent"), in its non-interest bearing trust account pending Closing (defined below) and shall be credited towards the purchase price at Closing;

(b) The sum of [REDACTED] shall be paid to Seller at the Closing in the form of a Promissory Note (the "Promissory Note") bearing interest at the rate of six percent (6%) per annum simple interest, payable interest only on a monthly basis until the eighteen (18) month anniversary date of the Closing (the "Maturity Date"), when the balance of principal and any accrued but unpaid interest at said rate shall then be paid in full. In the event that the Buyer shall assign the contract to an entity, the Buyer shall personally guaranty the payment pursuant to the terms of the Promissory Note; and

(c) The remaining amount of the Purchase Price, after application of the Deposit and the delivery of the Promissory Note and all applicable closing prorations, shall be paid in full in immediately available funds at Closing.

3. TITLE. Seller shall convey the Premises to the Buyer at Closing in fee simple with good, marketable and insurable title, free and clear of all mortgages, security interests, liens, encroachments and encumbrances, except such encumbrances (such as for utilities) as shall be acceptable to Buyer in Buyer's sole discretion (the "Permitted Encumbrances"). Buyer shall have until July 15, 2017 to complete its examination of the title to the Premises.

In the event that Buyer determines upon examining title to the Premises that Seller would be unable to convey title as aforesaid, Seller shall be given a reasonable period of time after notice from Buyer, not to exceed sixty (60) days, in which to remedy any title defects. Seller agrees to take reasonable steps to remedy any such title defects, including, without limitation, by payment of any amounts necessary to cause the correction of any such defects. In the event that said defects cannot be corrected or remedied within said time period this Agreement shall terminate unless further extended by agreement of Buyer and Seller in writing. Buyer may, however, elect to close notwithstanding such defects as may exist and, in that case, there shall be no offset or reduction in the Purchase Price and Seller shall have no liability to the Buyer for any such title defects.

Seller agrees and represents that it will not further encumber or permit to be encumbered the Premises by any liens, mortgages, attachments, covenants, restrictions or easements after the date of this Agreement.

4. CLOSING.

(a) The closing shall take place at the offices of Norman, Hanson and DeTroy, LLC, Two Canal Plaza, Fourth Floor, Portland, Maine, no later than February 28, 2018 at a mutually convenient time (the "Closing" or "Closing Date"), or at some other time and place that the Buyer and the Seller shall mutually agree in advance and in writing, except that the Buyer may extend the date of Closing for up to an additional sixty (60) days in the event that despite Buyer's reasonable commercial efforts to obtain all required land-use permits and approvals for the development of the Project (as defined in this Agreement) Buyer has not obtained all such required permits and approvals by December 31, 2017. Buyer shall provide Seller written notice of the extension on or before January 10, 2018.

(b) At Closing, Seller shall execute and deliver to Buyer, against payment of the purchase price, a Quitclaim Deed with Covenant, conveying good, marketable and insurable title to the Premises, free and clear of all mortgages, liens, encroachments or other encumbrances in accordance with the Short Form Deeds Act, 33 M.R.S. §§ 761 et seq., (the "Deed"). Seller further agrees to execute and deliver to the Company at Closing the following documents: (i) a Certificate of Non-Foreign Status (as required by Internal Revenue Service regulations); (ii) a title insurance "Seller's Affidavit" regarding mechanics liens and persons in possession; (iii) an affidavit

regarding underground storage tanks (as required by Maine law); (iv) documents demonstrating Seller's authority to convey and good standing as evidenced by a copy of Seller's resolution authorizing the transaction contemplated herein and a copy of the relevant portions of its Operating Agreement; (v) such other documents as may be required to issue an owner's policy of title insurance in form reasonably acceptable to Buyer's counsel; (vi) such other documents as may be reasonably necessary to effect the transfers described in this Purchase and Sale Agreement; and (vii) such other documents as are reasonably required by Buyer's counsel at closing. The Seller shall also assign any leases or tenancies in the Premises and provide a rent roll and tender delivery of all security deposits for all leases or tenancies in the Premises.

5. RISK OF LOSS, DAMAGE AND INSURANCE.

(a) All risk of loss to the Premises prior to the Closing Date shall be borne by Seller, except and unless the loss was caused by Buyer or Buyer's employees, agents, or contractors. Seller shall keep the Premises insured against fire and other extended coverage risks up to and including the Closing Date.

(b) In the event that the improvements that are part of the Premises are destroyed prior to Closing, Seller shall have the right to terminate this Agreement and refund the Deposit and, in that case, it shall be solely entitled to any insurance proceeds payable for or on account of any such destruction. In the event Seller shall not so elect, Buyer shall be entitled to elect to (1) terminate this Agreement by written notice to Seller, or (2) receive any and all insurance proceeds payable for or on account of any such destruction.

(c) If, prior to the Closing, all or any material portion of the Premises shall be taken for any public use (other than minor takings for street widening) or access to or from the Premises shall be permanently taken or materially impaired, or any change(s) to public way(s) or the grade(s) thereof shall be made which materially and adversely affects or is likely to materially and adversely affect the commercial value of the Premises, then Seller shall be required to notify Buyer of the same by written notice the earlier of five (5) days after receipt of such notice or one (1) business day prior to closing. Additionally, if notice of any of the foregoing shall be made public or otherwise come to Buyer's attention Buyer shall have the election either (i) to terminate this Agreement, in which event this Agreement shall terminate, the Deposit shall be refunded to Buyer, and the parties shall have no further liability or responsibility to each other, or (ii) to consummate the sale without reduction of the Purchase Price on account of same, in which event Seller shall assign to Buyer all claims and rights, if any, on account of or arising out of any of the foregoing.

6. INSPECTIONS: DUE DILIGENCE.

(a) The Buyer may enter into any part of the Premises at all reasonable

times prior to 5:00 PM on December 31, 2017 in order to inspect the Premises, conduct surveys, building studies, inspections and assessments and to undertake zoning, land-use and environmental compliance assessments and to do such things and may conduct such investigations as Buyer shall elect. Buyer shall also be entitled to review all plans, specifications, studies, assessments (including environmental assessments) and all other documents in Seller's possession relating to the Premises, all of which shall be provided to Buyer by Seller within five (5) business days of request.

(b) Seller acknowledges that Buyer shall have the right in its sole and absolute discretion, either based on Buyer's disapproval of any of the reports or information received by Buyer relating to the Premises or to the feasibility of the Project (as defined in this Agreement) or based on Buyer's dissatisfaction with any inspection or investigation or for any other reason whatsoever to terminate this Agreement by delivering notice thereof to Seller at any time after execution of this Agreement and prior to 5:00 PM, December 31, 2017 (the "Due Diligence Period") which delivery shall be complete upon mailing or transmission by telefax. In the event Buyer so elects to terminate this Agreement within the Due Diligence Period, the Deposit shall be refunded to Buyer within three (3) business days of such notice and this Agreement shall terminate without further recourse or liability to the parties at law or in equity. In the event that Buyer fails to provide the Seller with any such termination notice on a timely basis, the Buyer shall have no right to terminate this Agreement for or on account of any matter pertaining to the condition of the Premises or their suitability for any particular purpose.

7. FINANCING CONTINGENCY; SECURITY FOR SELLER-FINANCING.

(a) Seller's and Buyer's obligations under this Agreement are subject to Buyer obtaining a financing commitment for [REDACTED] (the "Senior Debt") for the purchase of the Premises and the construction of the Project, as defined in Paragraph 8 of this Agreement, from a conventional bank or commercial lender (the "Project Lender") at prevailing rates, terms and conditions and also subject to the conditions set forth in Paragraph 7(b) of this Agreement. Buyer shall provide Seller with written evidence of its application for a financing commitment for such loan on or before July 15, 2017 and shall use reasonable commercial efforts to obtain the commitment for such acquisition and construction loan on or before October 15, 2017. In the event that despite Buyer's timely application and reasonable commercial efforts to obtain a financing commitment for such loan on or before October 15, 2017 Buyer is unable to do so, then either Buyer may terminate this Agreement by written notice to Seller on or before October 15, 2017, whereupon any payments made under this Agreement shall be forthwith refunded and Seller shall no longer have any obligation to sell the Premises to Buyer, and this Agreement shall be void and without recourse to the parties hereto.

(b) Seller agrees that the mortgage from Buyer to the Project Lender securing the Senior Debt (the "Senior Mortgage") shall be senior in priority to the

mortgage to Seller from Buyer securing the Promissory Note (the "Junior Mortgage") and the Junior Mortgage (or related Subordination Agreement between Seller, Project Lender and Buyer) shall contain such other and further standby and subordination requirements as the Project Lender may require as a condition of its commitment to lend the Senior Debt to Buyer. Buyer's mortgage to Seller securing the Promissory Note shall contain a lot or unit release provision pursuant to which the Seller will grant and execute partial releases of the mortgage securing the Promissory Note in exchange for partial release payments in the amount of \$52,000.00 per lot or unit, such partial releases to be in recordable form so as to accommodate sales of lots or units from the Premises.

(c) Peter R. Bouchard, a member of Buyer ("Bouchard"), shall provide Seller with personal financial statements within five (5) days of the execution of this Agreement. Seller shall have five (5) days to review the financial statements and terminate this Agreement if the financial statements do not meet its approval. Bouchard shall be personally liable with Buyer on the Promissory Note.

8. THE PROJECT: CONTINGENCY FOR PERMITS AND APPROVALS.

(a) Buyer shall diligently prosecute all required land-use, permitting and approval applications required by the City of Portland (and any other regulatory authority having jurisdiction) for the development of the Premises into seven (7) lots or condominium units (the "Project"), such lots or units to be in conformity with all applicable land-use, permitting and approval requirements. Buyer shall use reasonable commercial efforts to obtain all required land-use permits and approvals for the Project on or before December 31, 2017, at which time the Deposit shall become fully non-refundable. In the event that Buyer shall not have obtained all required permits and approvals for the Project by December 31, 2017, Buyer may extend the date of Closing for up to an additional sixty (60) days for payment of an additional non-refundable deposit of \$10,000.00 to the Seller. Buyer shall provide Seller written notice of the extension on or before January 10, 2018.

(b) If Buyer shall not have obtained all required permits and approvals for the development of the Project on or before the date for Closing (or the extended date for Closing as the case may be), then this Agreement shall terminate and the parties shall have no further liability or responsibility to one another. The refund of the Deposit in that case shall depend on whether the termination of the Agreement for any failure to obtain required permits and approvals occurred on or before December 31, 2017 (in which case the Deposit shall be refunded) or afterwards (in which case the Seller shall be entitled to retain the Deposit).

9. POSSESSION OF THE PREMISES. The Premises shall be delivered to the Buyer at Closing free and clear of all tenancies or occupancies by any other person or entity.

10. REPRESENTATIONS OF SELLER. Seller represents to the Buyer (as the sole representations made by it or its members relating to the subject matter of this Agreement) the following:

(a) Seller has received no written notice from the City of Portland of any alleged violation at the Premises respecting any zoning ordinances or laws.

(b) All outstanding bills and/or accounts payable concerning or otherwise relating to the Premises are either paid or will be paid prior to or at Closing, including without limitation all utility charges, all municipal assessments and all charges for services rendered or materials furnished with respect to the Premises, including, without limitation, regarding any services or materials for which a mechanic's lien could be claimed.

(c) There are no leases affecting the Premises as of the date hereof.

(d) Seller has received no written notice from any governmental entity or agency, nor does it have any knowledge of any special wastes, underground storage tanks, waste oil, petroleum and any other hazardous substances, materials or wastes in or on the Premises. The terms used in the foregoing sentence shall include, without limitation, all substances, materials, etc., designated by such terms under any laws, ordinances or regulations, whether federal, state or local.

(e) There are no outstanding or pending liens, claims, rights of first refusal, mortgages, encroachments or other encumbrances (other than utility easements) against the Premises.

(f) The Seller has taken all corporate actions necessary to authorize the execution and delivery of this Agreement and to perform all of its obligations due to the Buyer hereunder and it has the full right and power to consummate all of the transactions contemplated for it to be performed under this Agreement.

11. DEFAULT AND REMEDIES. In the event that Seller fails to close hereunder for a reason other than default of Buyer, Buyer shall have the right to specific performance or any other legal or equitable remedies and also may seek to recover damages, as well as the refund of the Deposit. In the event that Buyer defaults in the performance of its obligations hereunder, Seller shall retain the Deposit and shall have all other legal or equitable remedies.

12. CONDITIONS PRECEDENT TO BUYER'S OBLIGATION TO CLOSE. The obligation of Buyer to close is subject to the satisfaction at or before Closing of all of the following conditions:

(a) All representations of Seller contained in this Agreement shall be true

in all material aspects as of the Closing.

(b) The due diligence, financing and permitting and approval contingencies set forth in Paragraphs 6, 7 and 8 of this Agreement shall have been satisfied to Seller's reasonable satisfaction or, alternatively, Seller shall have waived any such unsatisfied contingency or contingencies.

13. BROKERAGE. Seller and the Buyer represent and warrant to each other that neither party has engaged the services of any real estate broker with respect to this transaction, other than Magnuson Balfour for Seller and Keller Williams for Buyer. Each party agrees to indemnify and hold harmless the other party from any claim made by any broker claiming by or through them. The foregoing indemnity shall include all legal fees and costs incurred in defending any claim therefor.

14. ADJUSTMENTS, PRORATIONS AND CLOSING COSTS.

(a) Real estate taxes, assessments and rental charges shall be prorated as of the Closing Date.

(b) Metered utilities, such as water and sewer, shall be paid by the Seller through the date of closing.

(c) The Maine real estate transfer tax shall be paid by the Seller and Buyer (or at their election, the Company), in accordance with 36 M.R.S. § 4641-A.

(d) The recording fee for the Deed will be paid by the Buyer. The recording fee for the Mortgage, and any related documents shall be paid by the Seller.

15. GENERAL PROVISIONS.

(a) Time. Time shall be of the essence of this Agreement. Despite the foregoing, however, the parties shall cooperate with one another for commercially reasonable extensions of time in the event that the request for the extension is made no fewer than ten (10) days before the expiration of the then applicable deadline.

(b) Notices. Any notice or communication given pursuant to this Agreement by either of the parties to the other shall be in writing and delivered in person or mailed by overnight courier, registered or certified mail, postage prepaid (mailed notices shall be deemed given on the third day after they are duly mailed), or telefax with record of transmission as follows:

TO SELLER:

Estate of Robert L. Adam
159 Lincoln Street #10
Westbrook, ME 04092

WITH A COPY TO:

Alan E. Wolf, Esq.
Law Office of Alan E. Wolf
P.O. Box 1292
Portland, ME 04104-1292

TO BUYER:

Mr. Peter R. Bouchard
25 Ledge Road
Cumberland Foreside, ME 04110

WITH A COPY TO:

Paul F. Driscoll, Esq.
Norman, Hanson & DeTroy, LLC
Two Canal Plaza
P.O. Box 4600
Portland, ME 04112-4600

Either party may change its address for the purposes of this subparagraph by giving the other party notice of the new address in accordance with this Paragraph 13.

(c) Binding Effect. This Agreement will inure to the benefit of, and bind, the respective successors and assigns of the Seller and the Buyer.

(d) Construction. As used in this Agreement, the singular number shall include the plural, the plural the singular, and the use of one gender shall be deemed applicable to all genders. This Agreement shall be governed by and construed in accordance with the laws of Maine. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof. It is hereby agreed that all provisions and representations set forth in this Agreement shall survive Closing.

(e) Counterparts/Facsimile Signatures. 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 and signatures appearing on such facsimile documents shall be treated as original signatures.

(f) Effective Date. The Effective Date of this Agreement shall be deemed to be the date first above written herein.

(g) Further Assurances. In addition to the actions recited herein and contemplated to be performed, executed and delivered by each party, each party shall perform, execute and deliver or cause to be performed, executed and delivered at the Closing or thereafter any and all further acts, deeds and assurances as the other party or the Escrow Agent may reasonably require to consummate or evidence the consummation of the transaction contemplated herein.

(h) **Invalid Provision.** If any provision of this Agreement is held to be illegal, invalid or unenforceable under present or future laws, and if such provision is not essential to the effectuation of the basic purposes of this Agreement, such provision shall be fully severable, this Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had never been a part of this Agreement, and the remaining provisions of this Agreement shall remain in full force and effect.

(i) **No Waiver.** The waiver by either party of the performance of any covenant, condition or promise shall not invalidate this Agreement, nor shall it be construed as a waiver of any other covenant, condition or promise herein. The waiver by any party of the time for performing any act shall not constitute a waiver of the time for performing any other act or any incidental act required to be performed at a later time. The delay or forbearance by either party in exercising any remedy or right, the time for the exercise of which is not specifically and expressly limited or specified in this Agreement shall not be considered a waiver of or an estoppel against the later exercise of such remedy or right.

16. **AGREEMENT OF ESCROW AGENT.** By executing this Agreement, Escrow Agent agrees to hold the Deposit in its non-interest bearing client trust account, which Deposit shall be disbursed in accordance with the terms of this Agreement.

17. **MEDIATION.** Any dispute or claim arising out of or relating to this contract or the property addressed in this contract shall be submitted to non-binding mediation a mutually acceptable mediator, with mediation to take place in Portland, Maine. Buyer and Seller are bound to mediate in good faith and pay their respective mediation fees. If a party does not agree first to go to mediation, then that party will be liable for the other party's legal fees in any subsequent litigation regarding that same matter in which the party who refused to go to mediation loses in that subsequent litigation. This clause shall survive the closing of the transaction.

IN WITNESS WHEREOF, Seller and Buyer have executed this Agreement as of the date first above written.

HARLEQUIN LLC

By: Elisabeth Gilly 6/19/2017
DocuSigned by:
115

Peter Bouchard 6/19/2017
DocuSigned by:
Peter Bouchard

ESCROW AGENT:

Scott Balfour

MAGNUSSON BALFOUR

By: SB Balfour
Its pres

EXHIBIT A – LEGAL DESCRIPTION

A certain lot or parcel of land located at 300 Allen Avenue in Portland, County of Cumberland and State of Maine being the lot of land delineated on the Plan of Existing Conditions and Boundary Survey made by Gorrill-Palmer Consulting Engineers dated June 6, 2003 and recorded in the Cumberland County Registry of Deeds in Plan Book 203, Page 461 and being more particularly described as follows:

Beginning at a ½ inch iron pipe found driven into the earth on the northwesterly sideline of Allen Avenue at the easterly corner of land now or formerly of Bernice E. Knox as described in a deed recorded in the Registry in Book 6312, Page 216; thence:

1. N 29° 52' 27" W a distance of Two Hundred Ninety-Two and 69/100 (292.69) feet by said Knox and land now or formerly of Garry J. Smith and Jane H. Smith as described in a deed recorded in the Registry in Book 18761, Page 72, by Short Street as delineated on a certain plan of The Homesteads dated September 1921 and recorded in Plan Book 14, Page 70, and by land now or formerly of David O. Dulac as described in a deed recorded in the Registry in Book 3274, Page 194 to a ½ inch iron pipe found driven into the earth; thence
2. N 48° 24' 37" E a distance of Sixty-One and 25/100 (61.25) feet by said Dulac and Hennessy Drive as delineated on the aforesaid plan of The Homesteads to a capped 5/8 inch rebar, P.L.S. No. 492, and land now or formerly of Davidson Realty, LLC as described in a deed recorded in the Registry in Book 14746, Page 29; thence
3. N 53° 28' 39" E a distance of Seventy-Two and 07/100 (72.07) feet by said Davidson Realty, LLC to a capped 5/8 inch rebar, P.L.S. No. 492; thence
4. S 27° 48' 17" E a distance of Thirty-Six and 77/100 (36.77) feet by said Davidson Realty, LLC to a capped 5/8 inch rebar, P.L.S. No. 492, and land now or formerly of John Matthews as described in a deed recorded in the Registry in Book 14756, Page 121; thence
5. S 28° 52' 57" E a distance of Thirty-Six and 77/100 (36.77) feet by said John Matthews to a capped 5/8 inch rebar, P.L.S. No. 492; thence
6. S 28° 51' 14" E a distance of Two Hundred and 21/100 (200.21) feet by said John Matthews to a six inch square monument on the northwesterly sideline of Allen Avenue; thence
7. S 47° 43' 50" W a distance of Six and 11/100 (6.11) feet by said Allen Avenue to an angle point on the northwesterly sideline of Allen Avenue; thence

8. S 42° 11' 20" W a distance of One Hundred Twenty-Six and 20/100 (126.20) feet by said Allen Avenue to the point of beginning.

Said premises are conveyed subject to an easement of sewer given by Mary J. Wilson to the Portland Home Building Association by deed recorded in the Registry in Book 1111, Page 300.

The use and enjoyment of said premises are subject to a restrictive covenant which shall remain in effect for a period of ninety-nine (99) years and shall commence on August 22, 2003 and shall terminate on August 22, 2102. Said restrictive covenant shall prevent the operation of a real estate brokerage practice from being conducted on the premises.

Said parcel contains 36, 44 3 sq. ft. and is the same parcel conveyed to Northgate Plaza Associates, LLC by Warranty Deed of OPM, Inc. recorded in the Cumberland County Registry of Deeds in Book 18718, Page 120. Bearings are referenced to Magnetic North.

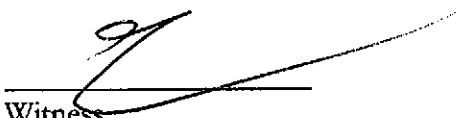
Being the same premises conveyed by Robert L. Adam to Harlequin LLC by Warranty Deed dated August 11, 2004 and recorded in the Cumberland County Registry of Deeds in Book 21661, Page 282.

DLN:1001840019574

DEED OF SALE BY PERSONAL REPRESENTATIVE

That, **DANIEL A. TIRRELL**, duly appointed and Personal Representative of the Estate of **BERNICE E. KNOX**, deceased (testate), as shown by the probate records of the County of Cumberland, Maine (docket #2017-1417), and having given notice to each person succeeding to an interest in the real property described below at least ten (10) days prior to the sale, by the power conferred by the Maine Probate Code, and every other power, for consideration paid, grants to **ESTELLE ESTATES, LLC**, a Maine Limited Liability Company, whose mailing address is 39 Darling Avenue, South Portland, Maine, all of the decedent's interest in the premises located in the City of Portland, County of Cumberland and State of Maine, being more particularly described in Exhibit A attached hereto and made a part hereof.

WITNESS my hand this 19 day of January, 2018.

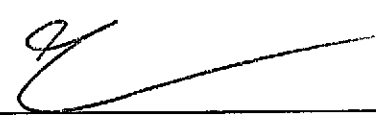

Witness



DANIEL A. TIRRELL
Personal Representative of the
Estate of Bernice E. Knox, deceased

State of Maine
County of Cumberland

On January 19, 2018, then personally appeared the above-named **DANIEL A. TIRRELL**, in his capacity as Personal Representative of the Estate of Bernice E. Knox and acknowledged the foregoing instrument to be his free act and deed in his said capacity.



Notary Public/Attorney
Name:

Charles H. McLaughlin
Attorney At Law

MAINE REAL ESTATE TAX-Paid

EXHIBIT "A"**LEGAL DESCRIPTION****PARCEL ONE**

A certain lot or parcel of land situated in Portland, County of Cumberland, State of Maine, being **Lot No. 50** on a plan of "The Holmsteads," made by E. C. Jordan, C.E. dated September, 1921, recorded in the Cumberland County Registry of Deeds in Plan Book 14, Page 70, to which reference may be had for a more particular description.

PARCEL TWO

Also a certain lot or parcel of land with the buildings thereon, situated on the northerly side of Allen Avenue in said Portland, bounded and described as follows:

Commencing at the westerly corner of land now or formerly of Cyrus Abbott; thence westerly along said Allen Avenue seventy-five (75) feet; thence northerly on a line parallel with the westerly line of said Abbott's land one hundred thirty-five (135) feet; thence easterly on a line parallel with said road to said westerly line of said Abbott's land; thence southerly by said Abbott's land to the point of beginning. Containing ten thousand one hundred twenty-five (10,125) square feet.

PARCEL THREE

Also another certain lot or parcel of land situated in said Portland, being **Lot No. 51** on a "Plan of The Holmsteads" made by E. C. Jordan, C. E., dated September, 1921, and recorded in the Cumberland County Registry of Deeds in Plan Book 14, Page 70 to which reference may be had for a more particular description.

Being the same premises conveyed to Bernice E. Knox by deed dated October 29, 1983 and recorded in the Cumberland County Registry of Deeds in Book 6312, Page 216 and by deed dated December 14, 1999 and recorded in said Registry in Book 15223, Page 810. Bernice E. Knox died on September 22, 2017.

Sullivan Bill

From: Craig Church <cchurch@balfourcommercial.com>
Sent: Tuesday, January 9, 2018 3:59 PM
To: Sullivan Bill
Subject: RE: 300 Allen Ave & Hope Ave

Hi Bill,

Thanks for the heads up I had just got off the phone with Alan Wolfe and he suggested that I send you an email stating that I was in receipt of the \$10,000 for the extension of closing for up to 60 days for Allen Ave. Good to see great minds think alike.

Look forward to the feedback.

Craig S. Church
Commercial & Business Broker
Cell (207) 318-6498
cchurch@balfourcommercial.com



95 India Street
Portland, Maine 04101
Office (207) 774-7715 x 102
Fax (207) 879-9102
www.balfourcommercial.com

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From: Sullivan Bill [mailto:bill@sullivanmulti.com]
Sent: Tuesday, January 09, 2018 3:32 PM
To: Craig Church <cchurch@balfourcommercial.com>
Cc: Cindy Kueck <cindy@sullivanmulti.com>
Subject: RE: 300 Allen Ave & Hope Ave

Craig,
I will be meeting with Peter tomorrow and will give you a full report no later than Thursday. I also would like to take the time to put in writing that the \$10,000 non-refundable check that I dropped off on Friday was to extend the closing date by 60 days for 300 Allen per the purchase and sale agreement.
Thanks,

Bill Sullivan
Broker



A Division of Keller Williams Realty
50 Sewall Street 2nd Flr
Portland, ME 04102
207-771-5556 Office
207-773-4647 Fax
www.sullivanmulti.com
www.sullivanmgmt.com

From: Craig Church [<mailto:cchurch@balfourcommercial.com>]
Sent: Tuesday, January 9, 2018 12:11 PM
To: Sullivan Bill <bill@sullivanmulti.com>
Subject: 300 Allen Ave & Hope Ave

Hi Bill,

Can you please detailed feedback as to where we stand on permitting for both properties.

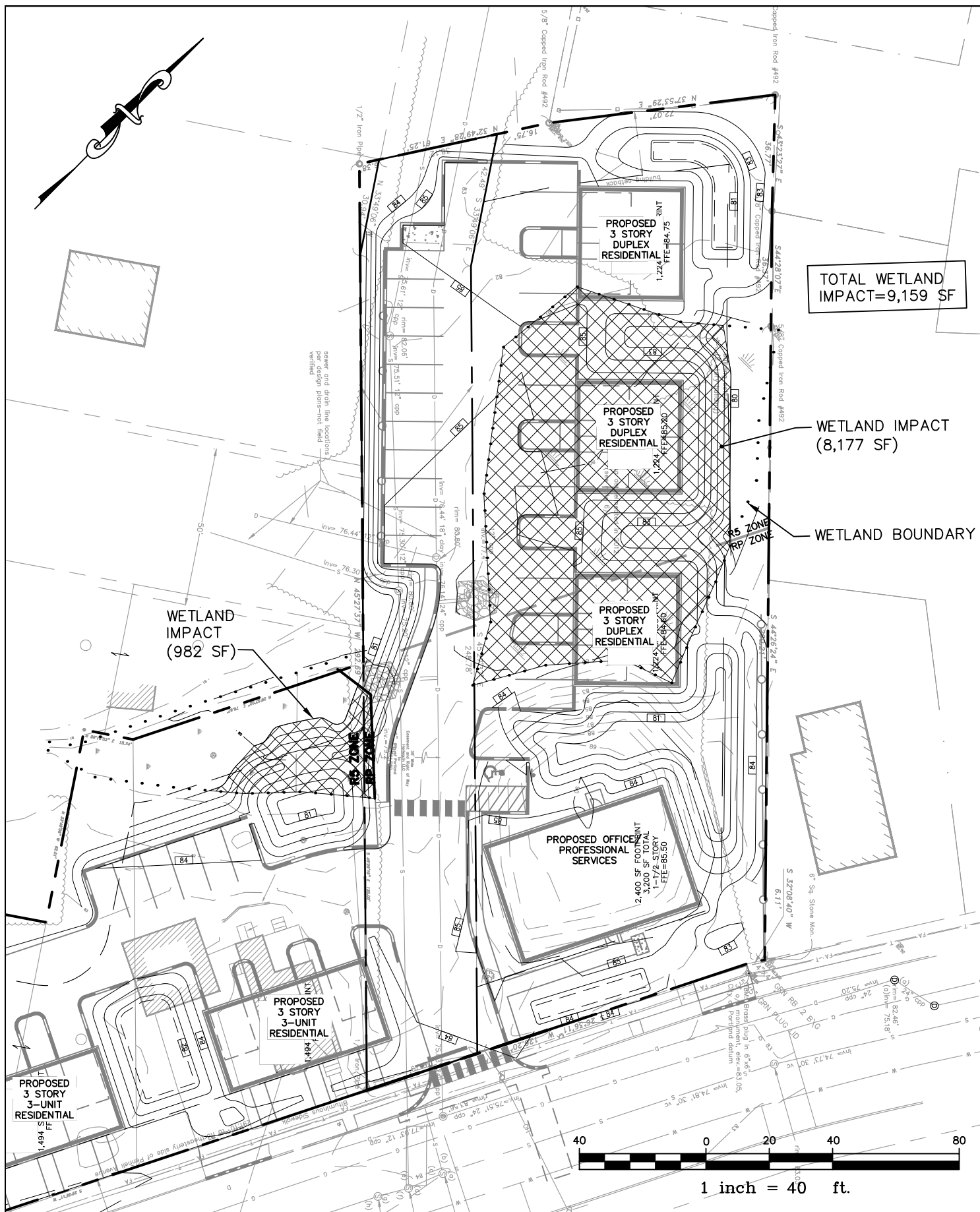
Craig S. Church
Commercial & Business Broker
Cell (207) 318-6498
cchurch@balfourcommercial.com



95 India Street
Portland, Maine 04101
Office (207) 774-7715 x 102
Fax (207) 879-9102
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6. Figure #1: Wetland Impact



7. MHPC Letter & Response



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

April 5, 2018

Mr. Kirk F. Mohny
Director and State Historic Preservation Officer
Maine Historic Preservation Commission
55 Capitol Street, State House Station 65
Augusta, ME 04333

Subject: Presence of Historical Areas
300 Allen Ave Development – Portland, Maine

Dear Mr. Mohny:

Estelle Estates, LLC has retained Gorrill Palmer to prepare design plans and permit modifications for the construction of three duplex residential units, two triplex residential units, and a professional office building with associated infrastructure on Lot E006, Tax Map 344 in Portland, Maine. The permit applications will include permitting for the addition of the residential units and parking. The attached Figure shows the project location.

As part of the Natural Resource Protection Act Tier I permit application, Gorrill Palmer requests information from MHPC relative to the presence of any nearby structure or area with historical, architectural or archeological significance as defined by the National Historic Preservation Act of 1966.

Thank you for your consideration. If you have any questions regarding the proposed project, please contact our office at (207) 772-2515. Your response may be mailed to our office or emailed to dgagnon@gorrillpalmer.com

Sincerely,

Gorrill Palmer

Drew Gagnon, EI
Project Engineer

Enclosure

DJG/djgU:\3270 - Mt. Ararat High School - PDT - Land Development Services\P Applications\State\MDEP\NRPA\Baseball and Athletic Fields\Mohny_3-30-17 Cover Letter to MHPC.doc

801.06/p



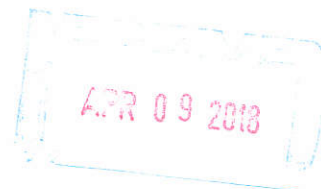
MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

PAUL R. LEPAGE
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

April 4, 2018

Mr. David Vitali
Gorrill Palmer
707 Sable Oaks Drive, Suite 30
South Portland, ME 04106



Project: MHPC #0376-18 Estelle Estates LLC; 300 Allen Avenue
Mixed Use Development

Town: Portland, ME

Dear Mr. Vitali:

In response to your recent request, I have reviewed the information received March 26, 2018 to initiate consultation on the above referenced project.

In order to continue consultation, please provide photographs of any buildings 50 years or older on or adjacent to the proposed project. In addition, please provide plans of the proposed development, if available.

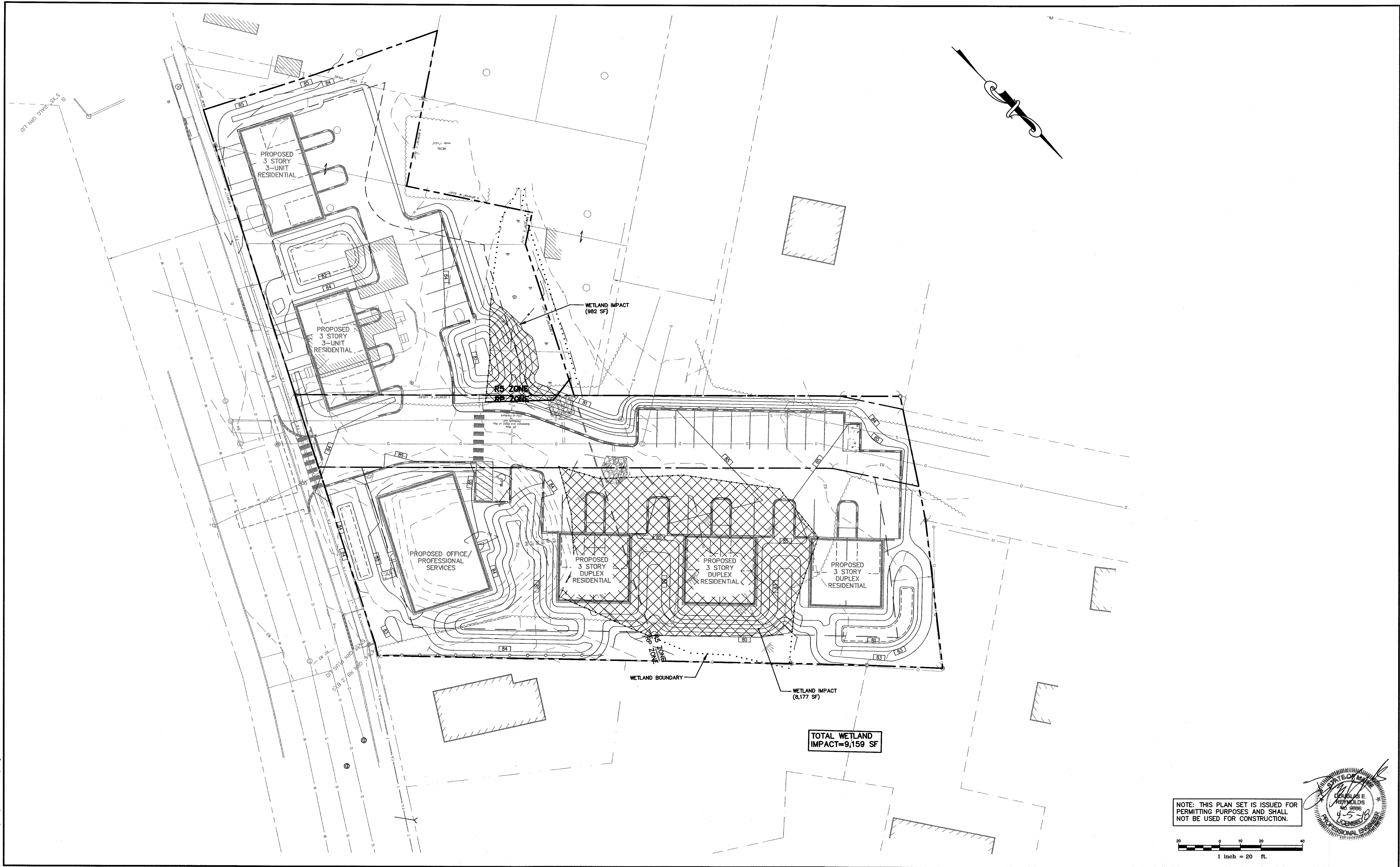
We look forward to continuing the consultation with you. If you have any questions regarding this matter, please contact Megan M. Hopkin of this office with questions at megan.m.hopkin@maine.gov.

Sincerely,

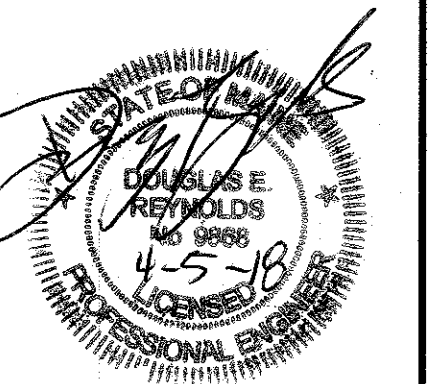
Kirk F. Mohney
State Historic Preservation Officer

8. Drawing #1: Wetland Impact Plan

C:\CAD WORKING\801.06 - 300 Allen Ave\DWG\801-06-WetImp.dwg - Mar 28, 2018 - 10:46am



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



Rev.	Date	Revision

NRPA TIER 1 APPLICATION	3/30/18	DER
LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: DJG	Draft: CG	Date: NOV 2017
Checked: DER	Scale: 1"=20'	Job No.: 801.06
File Name: 801-06-WetImp.dwg		
This plan shall not be modified without written permission from Gorrill-Palmer Consulting Engineers, Inc.(GPCEI). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GPCEI.		



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207.772.2515

Drawing Name:	Wetland Impact Plan
Project:	Mixed Use Development 300 Allen Ave, Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.
1

PROJECT PARCEL SITE
PORTLAND ASSESSOR'S
MAP & LOT NUMBERS

MAP	LOT
344	E006001
344	E003
344	E004

Applicant:

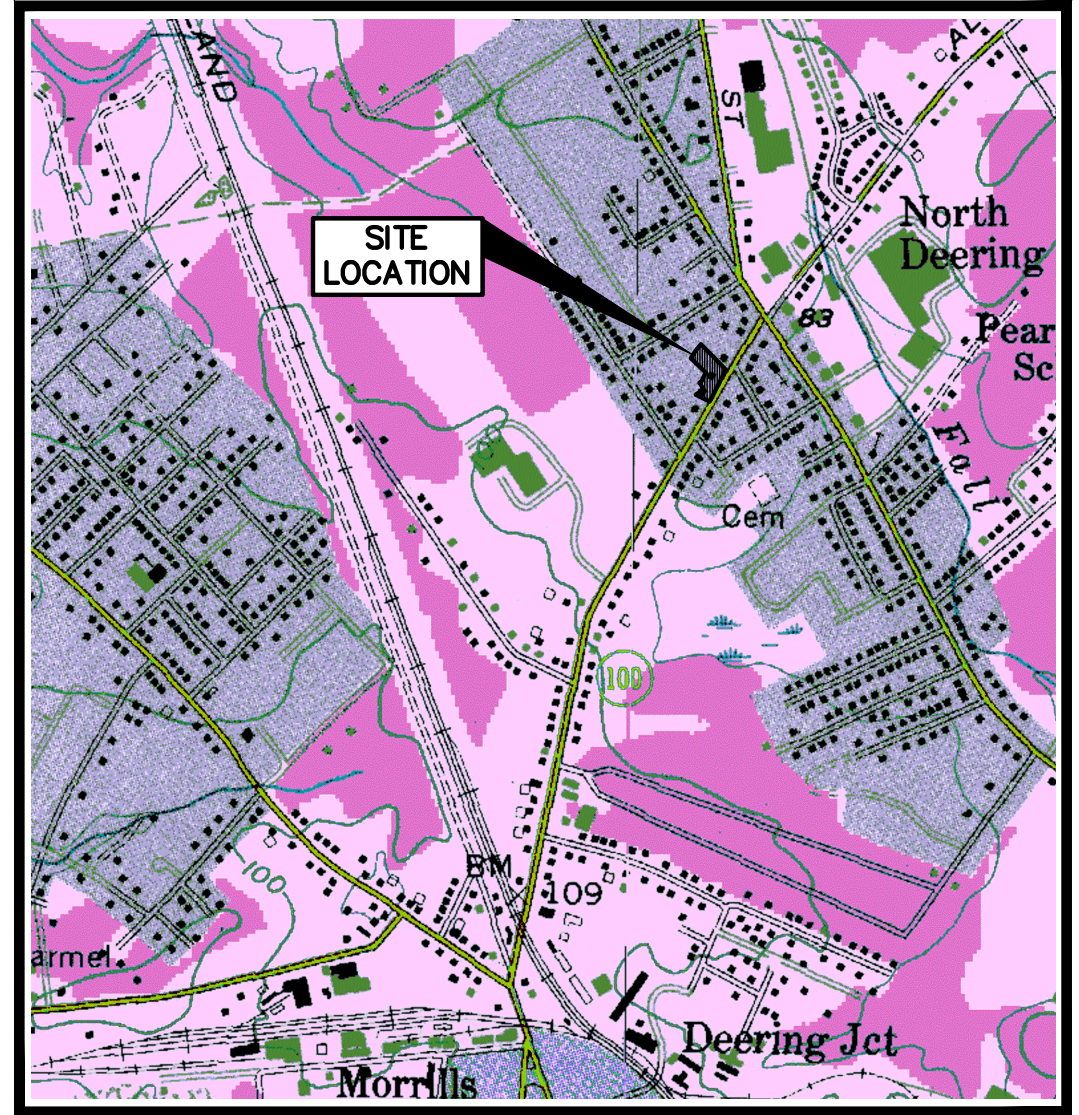
ESTELLE ESTATES, LLC
39 Darling Ave
South Portland, ME 04106
ATTN: Peter Bouchard

MIXED USE DEVELOPMENT 300 ALLEN AVENUE PORTLAND, MAINE

PREPARED BY:



Relationships. Responsiveness. Results.
www.gorrillpalmer.com
207.712.2515



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

1. TOPOGRAPHIC DATA BOUNDARY SURVEY AND EXISTING CONDITIONS WERE PREPARED BY TITCOMB ASSOCIATES OF FALMOUTH, MAINE IN JUNE OF 2016.
2. 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.
3. 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.
4. 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.
5. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND CITY OF PORTLAND SPECIFICATIONS.
6. WETLANDS ON THIS PLAN WERE DELINEATED BY JONES ASSOCIATES OF AUBURN, MAINE.
7. WETLANDS ON THIS PLAN WERE GPS LOCATED BY JONES ASSOCIATES OF AUBURN, MAINE.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF A SITE PLAN APPROVAL AND CONDITIONAL USE APPROVAL FROM THE CITY OF PORTLAND AS WELL AS AN NPRA TIER 1 PERMIT FROM MDEP WHICH WILL BE MADE A PART OF THE CONTRACT BID DOCUMENTS. THE CONSTRUCTION WILL BE GOVERNED BY THE CITY OF PORTLAND ZONING AND SUBDIVISION ORDINANCES WHICH ARE AVAILABLE FOR VIEWING AT THE OFFICE OF THE ENGINEER OR THE MUNICIPAL OFFICE.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

LAYOUT NOTES

1. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB.
2. OFFSETS TO CATCH BASINS AND MANHOLES ARE TO THE CENTER OF THE FRAME.
3. 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.
4. 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.
5. PROPOSED RIGHT OF WAY MONUMENTS AND PROPERTY LINE PINS SHALL BE INSTALLED UNDER THE DIRECTION OF A MAINE LICENSED LAND SURVEYOR.

UTILITY NOTES

1. 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.
2. THE LOCATION OF THE PROPOSED UNDERGROUND ELECTRICAL SERVICE IS APPROXIMATE AND THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION WITH CENTRAL MAINE POWER COMPANY.
3. THRUST BLOCKS OR LOOKING RETAINER GLANDS SHALL BE PLACED ON THE WATER DISTRIBUTION LINES AT ALL BENDS, TEES, FIRE HYDRANTS, VALVES, CHANGES IN DIRECTION, ETC. THE THRUST BLOCKS OR LOOKING RETAINER GLANDS SHALL MEET THE REQUIREMENTS OF THE PORTLAND WATER DISTRICT STANDARDS.
4. 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.

GRADING AND DRAINAGE NOTES

1. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE SHALL BE IN ACCORDANCE WITH MDT 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 HANCOX
2. 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.
3. 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

1. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE SITE.
2. PRIOR TO BEGINNING ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES AND THE CONSTRUCTION ENTRANCE.
3. 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 REPORT PREPARED FOR THIS PROJECT.
4. PRIOR TO PAVING, THE CONTRACTOR SHALL FLUSH SILT FROM ALL STORM DRAIN LINES.
5. ALL STORM DRAIN INLETS & OUTLETS ARE TO RECEIVE RIPRAP PROTECTION APRONS DURING CONSTRUCTION.
6. ALL CATCH BASINS WITH OUTLET PIPES 15" DIAMETER OR LESS SHALL BE PROVIDED WITH OUTLET HOOD (SNOUT) PER DETAIL.
7. SILT FENCES SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL REPORT.
8. 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.
9. 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.
10. A FULL EROSION CONTROL REPORT ACCOMPANIES THIS PLAN SET AND IS CONTAINED ON THE DRAWINGS OF THIS PLAN SET.
11. THE MAINTENANCE SCHEDULE FOR THE CATCH BASIN SEDIMENT SUMP IS AS FOLLOWS:
THESE DEVICES SHALL BE INSPECTED IN APRIL AND OCTOBER OF EACH YEAR. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE CATCH BASIN WHEN THE DEPTH OF THE SEDIMENT IS GREATER THAN ONE FOOT. THE SEDIMENT WILL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.
12. 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 (e.g. MDEP) MAY RESULT IN MONETARY PENALTIES. THE CONTRACTOR SHALL BE ASSESSED ALL SUCH PENALTIES AT NO COST TO THE OWNER OR PERMITTEE.
13. ALL NON-PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE LOAMED AND SEEDED, UNLESS OTHERWISE DIRECTED BY THE OWNER.
14. ALL DISTURBED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL PRIOR TO PERMANENT SEEDING.

CALL BEFORE YOU DIG
1-888-344-7233

UTILITIES

WATER:

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PORTLAND, MAINE 04102
(207) 761-8300
CONTACT: JAY ARNOLD

SEWER:

CENTRAL MAINE 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
CONTACT: MARTY PEASE

CABLE:

TIME WARNER CABLE
118 JOHNSON ROAD
PORTLAND, MAINE 04102
(207) 775-3431
CONTACT: RICK PELLITTER

PERMITS

TYPE OF PERMIT

MDEP NPRA TIER 1 PERMIT APPLICATION	
LEVEL III SITE PLAN APPLICATION	
CONDITIONAL USE APPLICATION	
INCLUSIONARY USE APPLICATION	

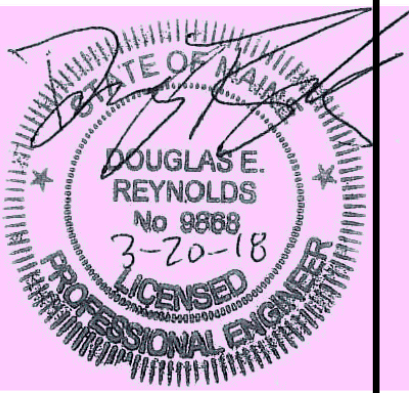
GOVERNING BODY

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 312 CANCO ROAD PORTLAND, ME 04103 (207) 822-6300	
CITY OF PORTLAND PLANNING AND URBAN DEVELOPMENT 389 CONGRESS STREET PORTLAND, MAINE 04101-3509 (207) 874-8703	
CITY OF PORTLAND PLANNING AND URBAN DEVELOPMENT 389 CONGRESS STREET PORTLAND, MAINE 04101-3509 (207) 874-8703	
CITY OF PORTLAND PLANNING AND URBAN DEVELOPMENT 389 CONGRESS STREET PORTLAND, MAINE 04101-3509 (207) 874-8703	

STATUS

ANTICIPATED SUBMITTAL: MARCH 2018	
ANTICIPATED SUBMITTAL: MARCH 2018	
ANTICIPATED SUBMITTAL: MARCH 2018	
ANTICIPATED SUBMITTAL: MARCH 2018	

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



Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: DJG	Draft: CG	Date: MARCH 2018
Checked: DER	Scale: NTS	Job No.: 801.06
File Name: 801-06-COVER.dwg		
This plan shall not be modified without written permission from Gorrill-Palmer Consulting Engineers, Inc.(GPCEI). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GPCEI.		

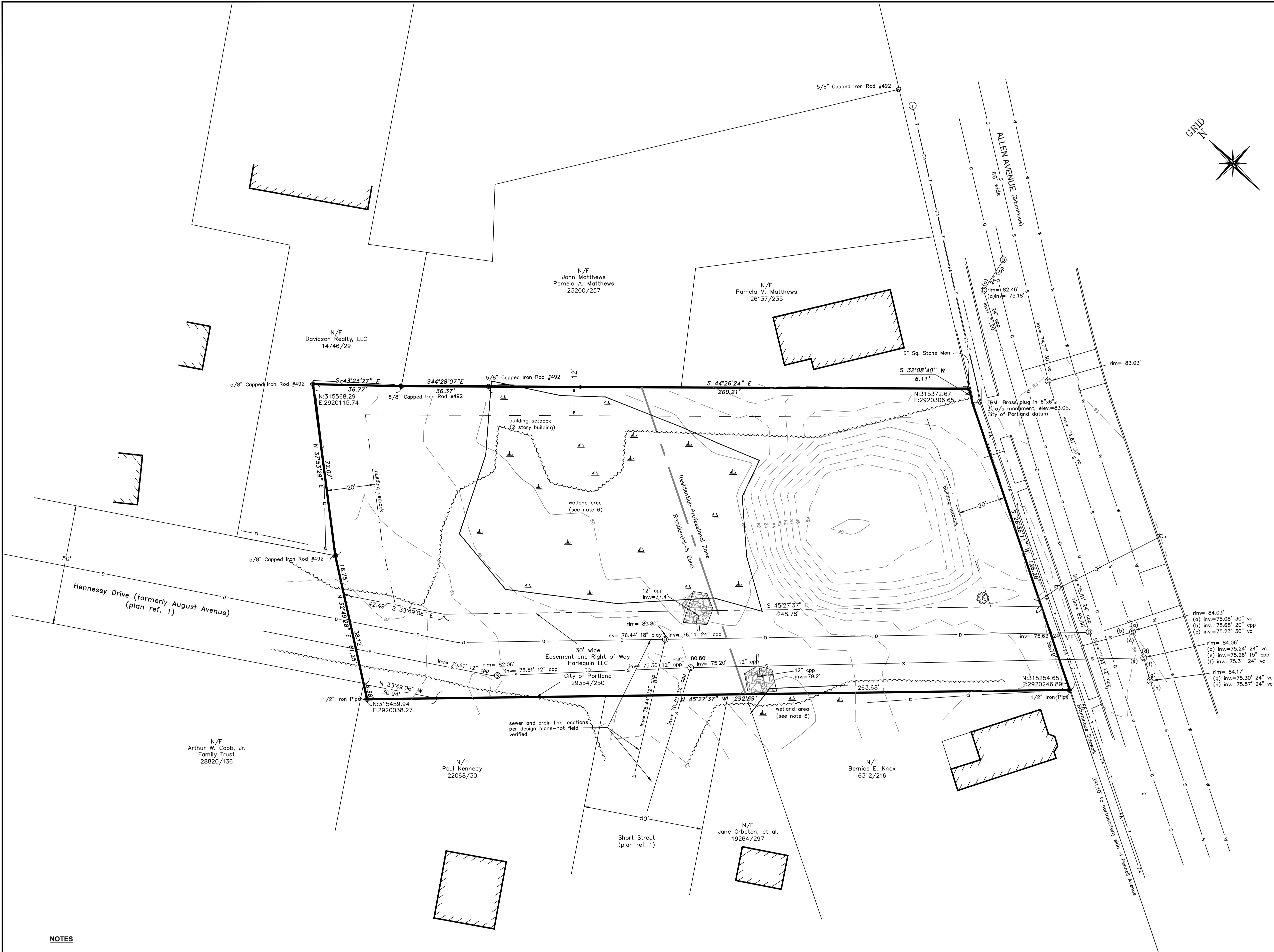


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207.772.2515

Drawing Name:	Cover Sheet, General Notes, & Legend
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.

C001



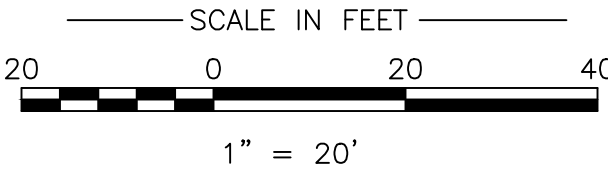
LEGEND	
	Monument — found
	Iron marker — found
	Utility pole
	Property line
	Lot line
	Chain link fence
	Board fence
	Curb
	Edge of pavement
	Edge of gravel
	Tree line
	Contours (1ft)
	Contours (5ft)
	Sewer manhole
	Gas valve
	Water valve
	Water line
	Sewer line
	Gas line
	Underground telephone line
	Overhead electric line
	Storm drain line
	Underground fire alarm line
	Telephone manhole
	Storm drain manhole
	Now or formerly of
	Deed reference (Book/Page)
	Deciduous tree
	Rip Rap
	Wetland
	Existing building

OWNERS OF RECORD

Harlequin LLC
Book 21661, Page 282

AREA

36,443 square feet / 0.84 acres

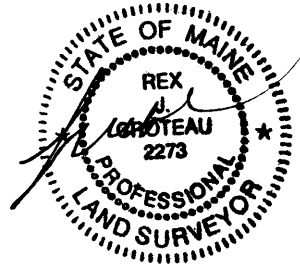


NOTES

- (1) Book and Page references are to the Cumberland County Registry of Deeds, unless otherwise specified.
- (2) Bearings and coordinate values are referenced grid north of the Maine State Plane Coordinate System, West Zone (NAD83) as derived from the Allen Avenue and Short Street CSO survey provided to the City of Portland by Titcomb Associates.
- (3) Elevations are referenced to the City of Portland datum. Project benchmark as provided by the City of Portland is labeled near the easterly corner of the surveyed property.
- (4) The historical deeds for this parcel call for monumentation which was not recovered, and is missing or destroyed. The boundaries delineated hereon are based on abutting surveys and the lines of possession, acquiesced to by the abutters. In order to fully establish the boundaries as delineated hereon it is recommended that deeds be exchanged with the abutters, based on this survey.
- (5) Property lies within Zone C based on FIRM Community #230051 Panel #0007 -B, dated July 17, 1986. It does not lie within a special flood hazard area.
- (6) Wetland boundaries were identified and delineated by Jones Associates Inc in July 2016.

REFERENCES

- (1) Plan of The Holmsteads dated September 1921 and recorded in Plan Book 14 page 70.
- (2) Plan of Sarah J. Cowen Lot by Albert W. Hume dated October 12, 1978.
- (3) Property Plan for James Davison by A.R.C.C. dated April 8, 1999.
- (4) Standard Boundary Survey for John Matthews by A.R.C.C. dated September 5, 2001.
- (5) Partial copy of Portland Sewer System Infiltration-Inflow Analysis for the Portland Water District dated 1988.
- (6) Deed of Mary J. Wilson to Portland Home Building Association for a 24 inch sewer line, dated August 21, 1922 and recorded in Book 1111, Page 300.
- (7) Existing Conditions & Boundary Survey made for Gornill-Plamer Consulting Engineers by Titcomb Associates, dated June 16, 2003, recorded in Plan Book 203, Page 461.

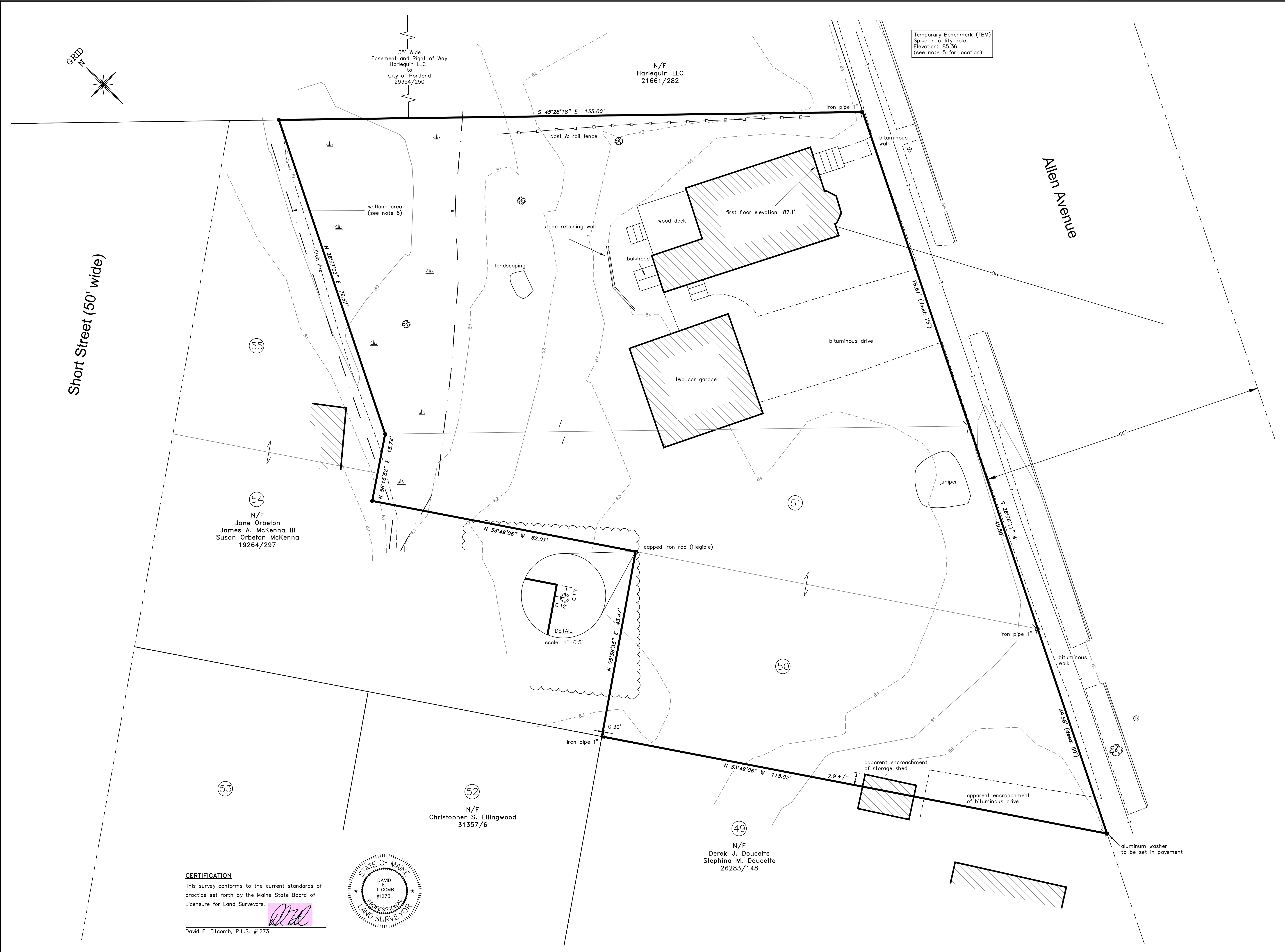


CERTIFICATION

This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.

Rex J. Croteau, P.L.S. #2273

Rev. 1	09/08/16	updated wetlands, notes 2 and 6		RJC
PLAN OF Existing Conditions Survey				
300 Allen Avenue		Portland, Maine		
MADE FOR Robert Adam				
159 Lincoln Street		Westbrook, Maine		
JOB# 201079.1	DATE: June 16, 2016		SCALE: 1"=20'	
BOOK# 711	 <i>Titcomb Associates</i> 133 Gray Road, Falmouth, Maine 04105 (207)797-9199 www.titcombsurvey.com			
LP\201079_2				
FILE# 8305				



VICINITY MAP

No Scale

ALLEN AVENUE

WASHINGTON AVENUE

LOCUS PARCEL

LEGEND

- Iron marker - found
- Iron marker - set (#5 rebar)
- Property line (locus)
- Property line (abutter)
- Wood fence
- Edge of pavement/walk
- Curb
- Water shutoff
- Drain manhole
- Overhead utility line
- Underground telephone line
- Contours (5ft)
- N/F 1234/567
- Deed reference (Book/Page)
- Tree line
- Wetlands
- Deciduous tree
- Existing building
- Lot number "The Holmsteads"

NOTES

- 1) Book and Page references are to the Cumberland County Registry of Deeds.
- 2) Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.
- 3) Elevations are based on City of Portland datum.
- 4) Utility information on this plan is approximate, based on location of visible features. Dig Safe and/or the appropriate utilities should be contacted prior to any construction.
- 5) Temporary benchmark is located 43' north of site on west side of Allen Avenue.
- 6) Wetland boundaries were identified and delineated by Boyle Associates in December 2017 and wetland flags located by Titcomb Associates.

PLAN REFERENCES

- 1) Plan of The Holmsteads made for The City and Suburban Land Trust by E.C. Jordan & Co. dated September, 1921. Recorded in Plan Book 14, Page 70.
- 2) Plan of Existing Conditions Survey made for Robert Adam by Titcomb Associates dated June 16, 2016 and revised through September 8, 2016.
- 3) ALTA/ASCM Land Title Survey of Land of Lockard & Davison Realty LLC made for The Richmond Company, Inc. by Titcomb Associates dated November 16, 2016.

AREA

18,901 square feet, 0.43 acres

OWNER OF RECORD

Bernice E. Knox
Book 6312, Page 216
Book 15223, Page 80 (lot 50)

SCALE IN FEET

10 0 10 20

1" = 10'

PLAN OF

Boundary & Existing Conditions Survey

292 Allen Avenue Portland, Maine

MADE FOR

Gorrill Palmer

707 Soble Oaks Road, Suite 30 South Portland, Maine

JOB #217111 DATE: December 8, 2017 SCALE: 1" = 10'

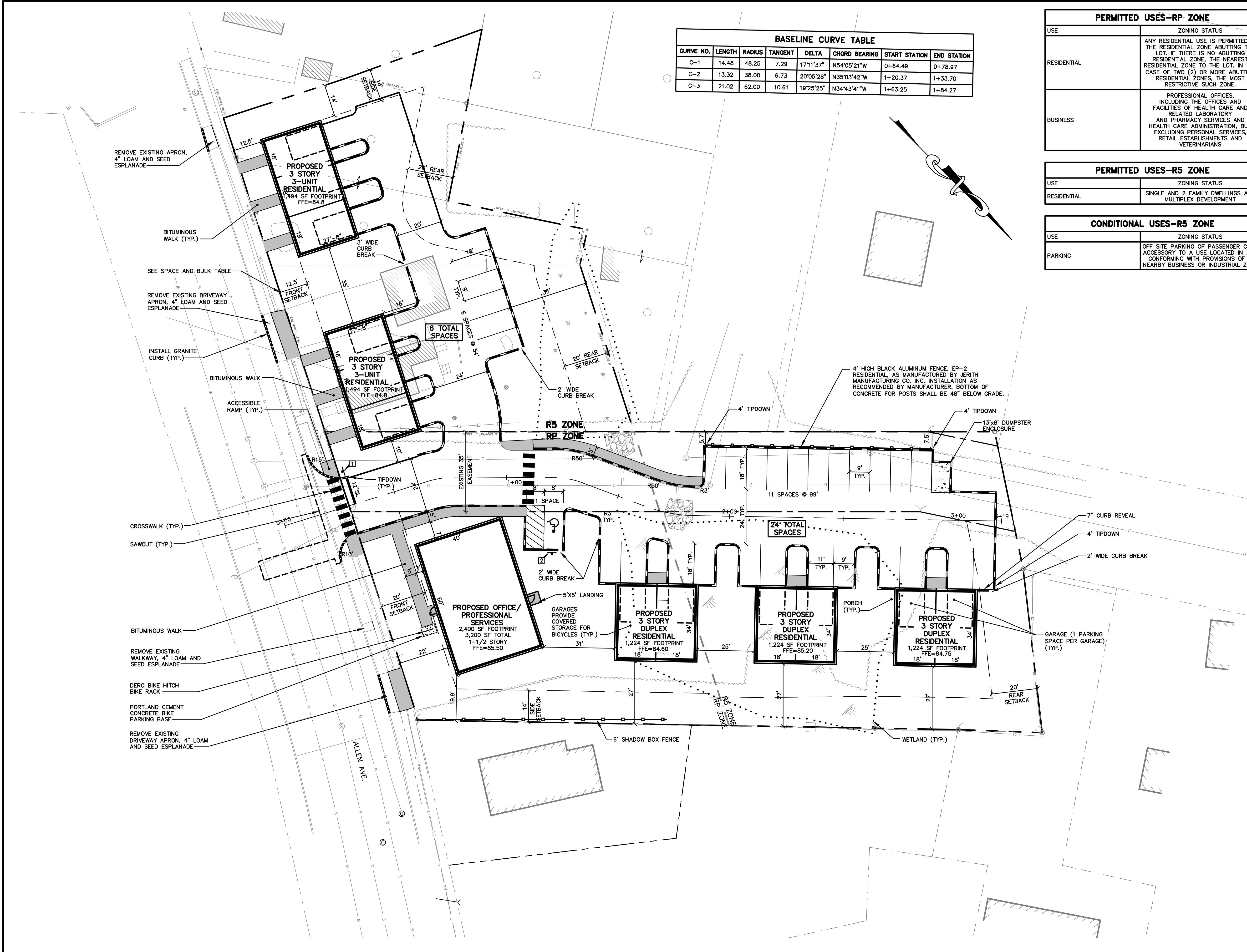
BOOK #908

217111.dwg

Titcomb Associates

133 Gray Road, Falmouth, Maine 04105
(207)797-9199 www.titcombsurvey.com

C:\CAD WORKING\801.06 - 300 Allen Ave\DWG\801-06-SP.dwg - Mar 20, 2018 - 11:18am



BASELINE CURVE TABLE							
CURVE NO.	LENGTH	RADIUS	TANGENT	DELTA	CHORD BEARING	START STATION	END STATION
C-1	14.48	48.25	7.29	17°11'37"	N54°05'21"W	0+64.49	0+78.97
C-2	13.32	38.00	6.73	20°05'28"	N35°03'42"W	1+20.37	1+33.70
C-3	21.02	62.00	10.61	19°25'25"	N34°43'41"W	1+63.25	1+84.27

PERMITTED USES-RP ZONE	
USE	ZONING STATUS
RESIDENTIAL	ANY RESIDENTIAL USE IS PERMITTED IN THE RESIDENTIAL ZONE ABUTTING THE LOT. IF THERE IS NO ABUTTING RESIDENTIAL ZONE, THE NEAREST RESIDENTIAL ZONE TO THE LOT. IN THE CASE OF TWO (2) OR MORE ABUTTING RESIDENTIAL ZONES, THE MOST RESTRICTIVE SUCH ZONE.
BUSINESS	PROFESSIONAL OFFICES, INCLUDING THE OFFICES AND FACILITIES OF HEALTH CARE AND RELATED LABORATORY AND PHARMACY SERVICES AND HEALTH CARE ADMINISTRATION, BUT EXCLUDING PERSONAL SERVICES, RETAIL ESTABLISHMENTS AND VETERINARIANS

PERMITTED USES-R5 ZONE	
USE	ZONING STATUS
RESIDENTIAL	SINGLE AND 2 FAMILY DWELLINGS AND MULTIPLEX DEVELOPMENT

CONDITIONAL USES-R5 ZONE	
USE	ZONING STATUS
PARKING	OFF SITE PARKING OF PASSENGER CARS ACCESSORY TO A USE LOCATED IN AND CONFORMING WITH PROVISIONS OF A NEARBY BUSINESS OR INDUSTRIAL ZONE

SPACE AND BULK STANDARDS			
RP AND R5 ZONE	RP ZONE REQUIRED	R5 ZONE REQUIRED	PROVIDED
MIN. LOT AREA PER DWELLING: MULTIPLEX (x12) 4,500 SF/PER DWELLING UNIT W/ MULTIPLEX DEVELOPMENT HAVING >250 FT. STREET FRONTAGE		54,000 SF	55,342 S.F.
MIN. FRONTAGE	60'	50'	276.5'
MIN. LOT WIDTH	60'	90'	128'
MAX. FLOOR AREA RATIO/LOT COVERAGE	0.65	0.40	0.18
MAX. IMPERVIOUS SURFACE RATIO	0.80	NA	.53
BUILDING SETBACKS			
FRONT	*12.5'	20'/**5'	>20'
**SIDE			
1 STORY	10'	8'	NA
1 1/2 STORY	NA	8'	8'
2 STORIES	12'	12'	>12'
2 1/2 STORIES	NA	14'	>14'
3 STORIES OR MORE	14'	14'	>14'
ACCESSORY	7'	***5'	
REAR PRINCIPAL/ACCESSORY	20'/7'	20'	20'
MAX. STRUCTURE HEIGHT	45'	35'	<35'
* THE FRONT YARD NEED NOT EXCEED THE AVERAGE DEPTH OF IMMEDIATELY ABUTTING FRONT YARDS (YARD DEPTH AT 278 ALLEN AVE=13'; YARD DEPTH AT 292 ALLEN AVE=12'; AVERAGE YARD DEPTH=12.5')			
** THE WIDTH OF ONE (1) SIDE YARD MAY BE REDUCED ONE (1) FOOT FOR EACH FOOT THAT THE OTHER SIDE YARD IS CORRESPONDINGLY INCREASED, PROVIDED, HOWEVER, NO SIDE YARD SHALL BE REDUCED TO LESS THAN SEVEN (7) FEET IN WIDTH			
*** WITH GROUND COVERAGE OF 144 SF OR LESS			

NOTES:

- EXISTING CURBING IN THE RIGHT-OF-WAY IS THE PROPERTY OF THE CITY OF PORTLAND. ANY REMOVED GRANITE CURBING SHALL BE TRANSPORTED TO THE CITY STOCKYARD ON OUTER CONGRESS STREET.
- PRIOR TO CONSTRUCTION, A CONSTRUCTION MANAGEMENT PLAN PREPARED BY THE GENERAL CONTRACTOR SHALL BE SUBMITTED TO THE CITY OF PORTLAND PLANNING DIVISION FOR REVIEW. THE CONSTRUCTION MANAGEMENT PLAN SHALL ADDRESS THE FOLLOWING:
 - ANTICIPATED PROJECT START DATE
 - ANTICIPATED PROJECT END DATE
 - CONSTRUCTION SEQUENCE
 - PEDESTRIAN CIRCULATION PLAN
- SNOW SHALL BE REMOVED FROM THE SITE BY THE SNOW REMOVAL CONTRACTOR AND DISPOSED OF ACCORDING TO APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
- EACH OFFICE/RESIDENTIAL UNIT IS RESPONSIBLE FOR THEIR SOLID WASTE DISPOSAL.

SITE DATA		
ZONE: RP	REQUIRED	PROVIDED
PARKING		
NEW STRUCTURE		
TOTAL PARKING OFFICES (3,200 SF) (1 SP/400 SF)	8	12
RESIDENTIAL (2 SP/DWELLING UNIT)	24	30
TOTAL	28	42
BARRIER FREE	1	1

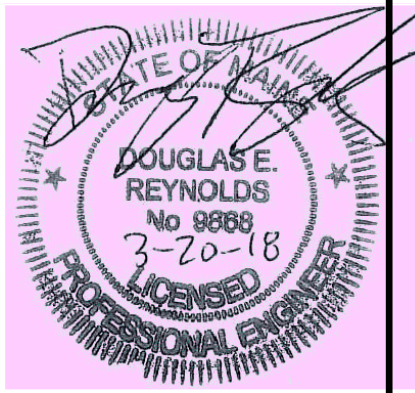
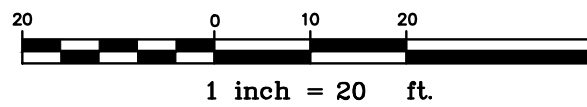
PAVEMENT LEGEND	
ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS:	
	BITUMINOUS WALKWAY

CURBING LEGEND	
	BITUMINOUS CURB
	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

SIGN LEGEND	
	R1-1 30"x 30"
	R7-8 12"x 18"
1	2

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



Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: DJG	Draft: CG	Date: NOV 2017
Checked: DER	Scale: 1"=20'	Job No.: 801.06
File Name: 801-06-SP.dwg		
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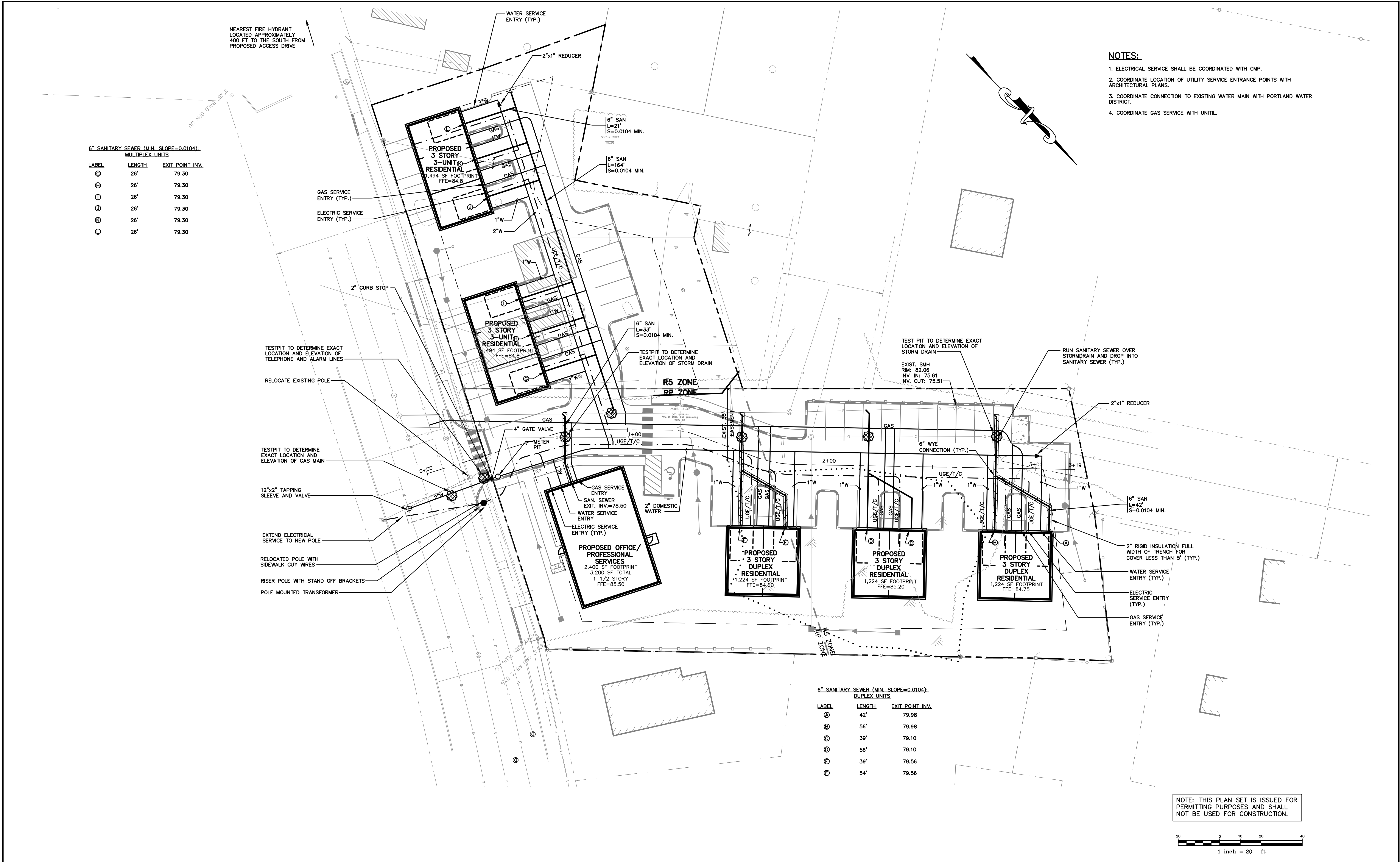


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207.772.2515

Drawing Name:	Site Plan
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.
C101

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Rev.	Date	Revision

NRPA TIER 1 APPLICATION	3/30/18	DER
LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: DJV	Draft: CG	Date: FEB 2018
Checked: DER	Scale: 1"=20'	Job No.: 801.06
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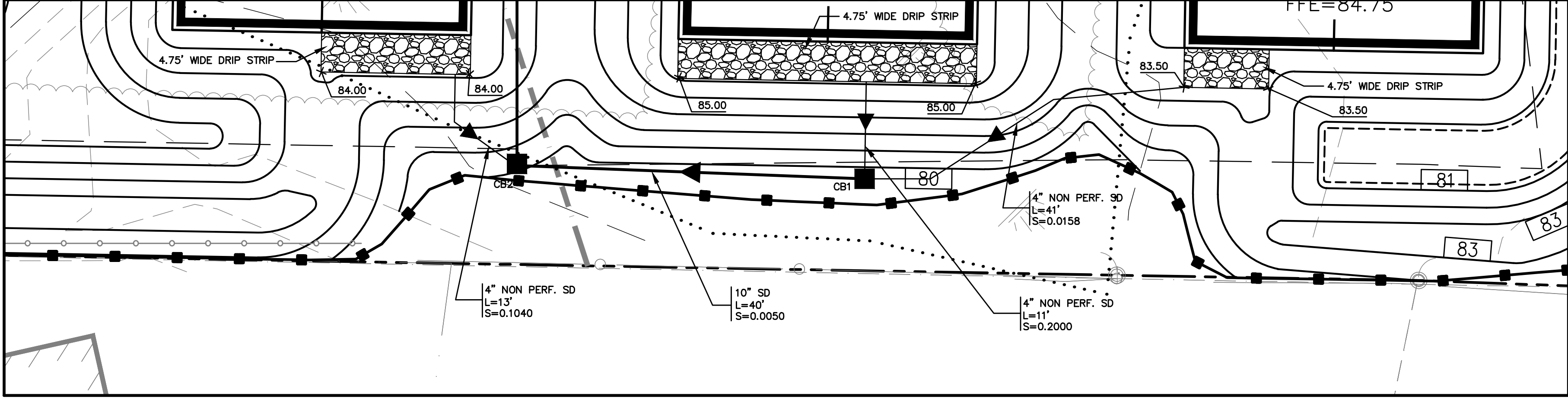
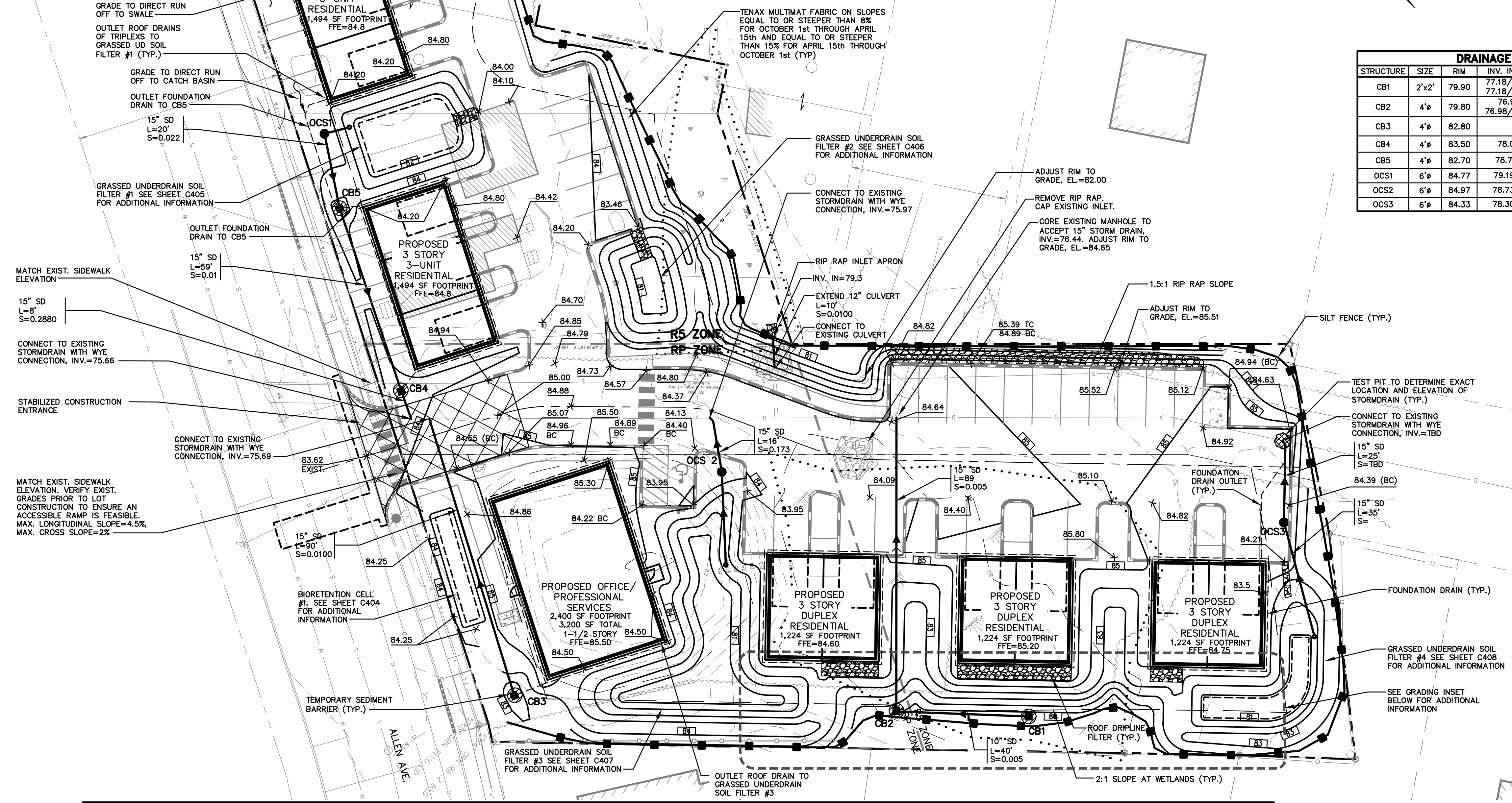
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Drawing Name:	Utility Plan
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

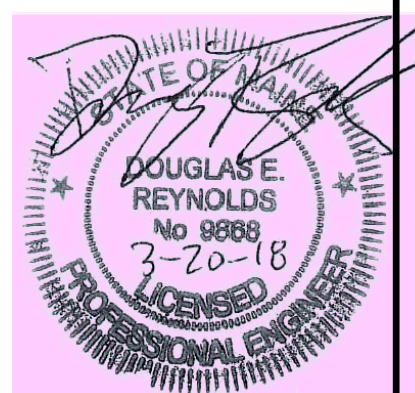
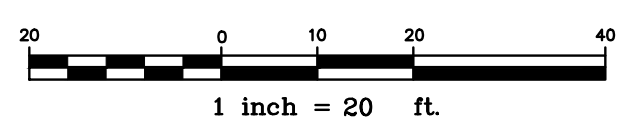
Drawing No.
C102

- NOTES:
1. DRIP STRIP IS PART OF THE STORMWATER MANAGEMENT PLAN FOR THIS SITE AND CAN NOT BE COVERED BY AN IMPERVIOUS SURFACE OR ALTERED. ROOF GUTTERS SHALL NOT BE INSTALLED ON ROOFLINE TRIBUTARY TO DRIP STRIP.
 2. FOUNDATION DRAINS SHALL BE CONNECTED TO SUMP IN BASEMENT. SUMP PUMPS SHALL DISCHARGE TO STORM DRAIN SYSTEM.

DRAINAGE STRUCTURE SCHEDULE					
STRUCTURE	SIZE	RIM	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)	COMMENTS
CB1	2'x2'	79.90	77.18/4"(DRIP STRIP) 77.18/4"(DRIP STRIP)	77.18/10"(CB2)	TYPE "F"
CB2	4"	79.80	76.98/10"(CB1) 76.98/4"(DRIP STRIP)	76.88/15"(EXIST. DMH)	BEEHIVE GRATE
CB3	4"	82.80	-	77.84/15"(EXIST. SD)	BEEHIVE GRATE
CB4	4"	83.50	78.06/15"(CB5)	77.96/15"(EXIST. SD)	BEEHIVE GRATE
CB5	4"	82.70	78.75/15"(OCS1)	78.65/15"(CB4)	BEEHIVE GRATE
OCS1	6"	84.77	79.19/15"(GUSF1)	79.19/15"(CB5)	
OCS2	6"	84.97	78.73/15"(GUSF3)	78.93/15"(EXIST)	
OCS3	6"	84.33	78.30/15"(GUSF4)	78.20/15"(EXIST)	



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



GRADING INSET
1"=10'

Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: DJG Draft: CG Date: OCT 2017
Checked: DER Scale: AS NOTED Job No.: 801.06
File Name: 801-06-GRADING.dwg
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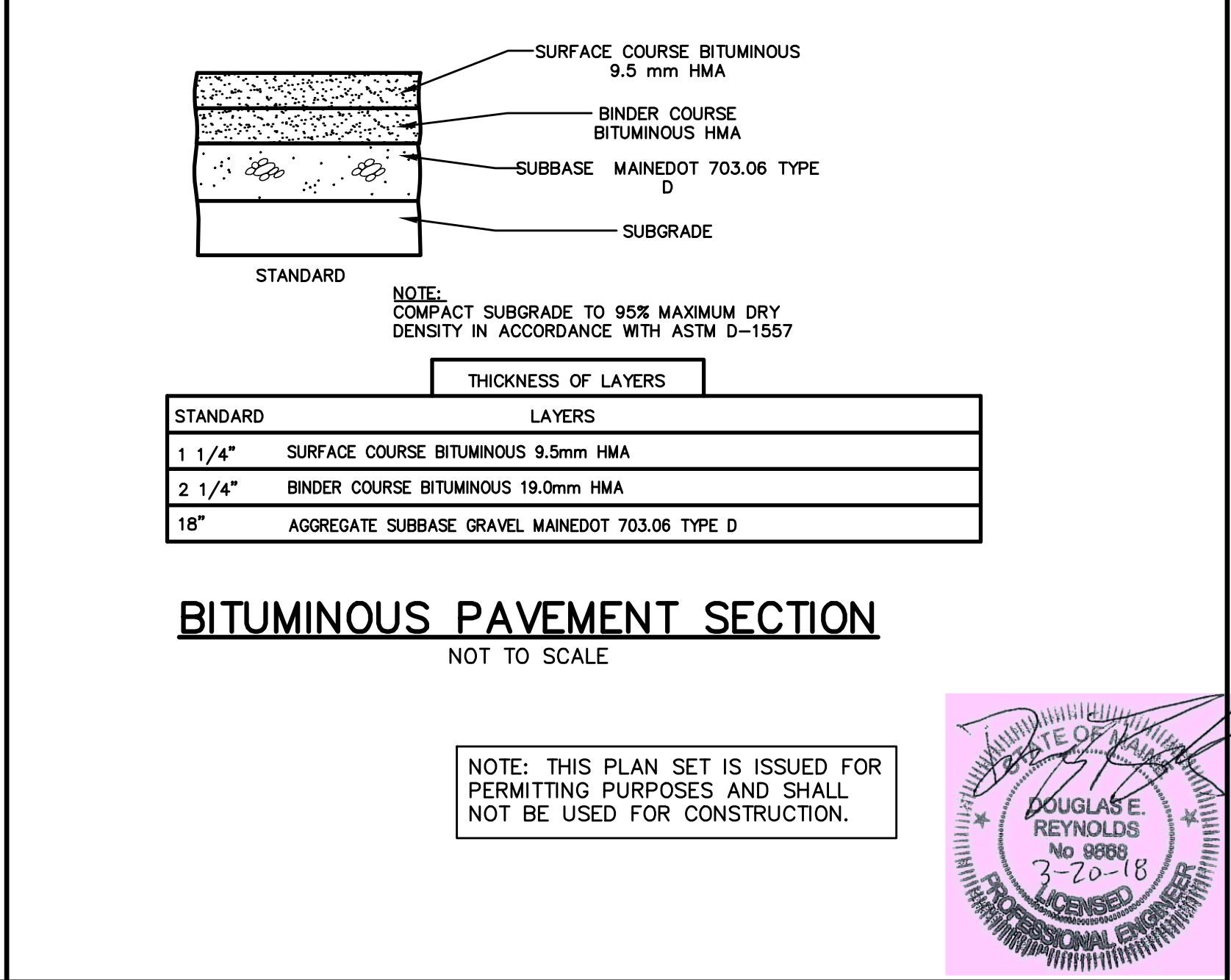
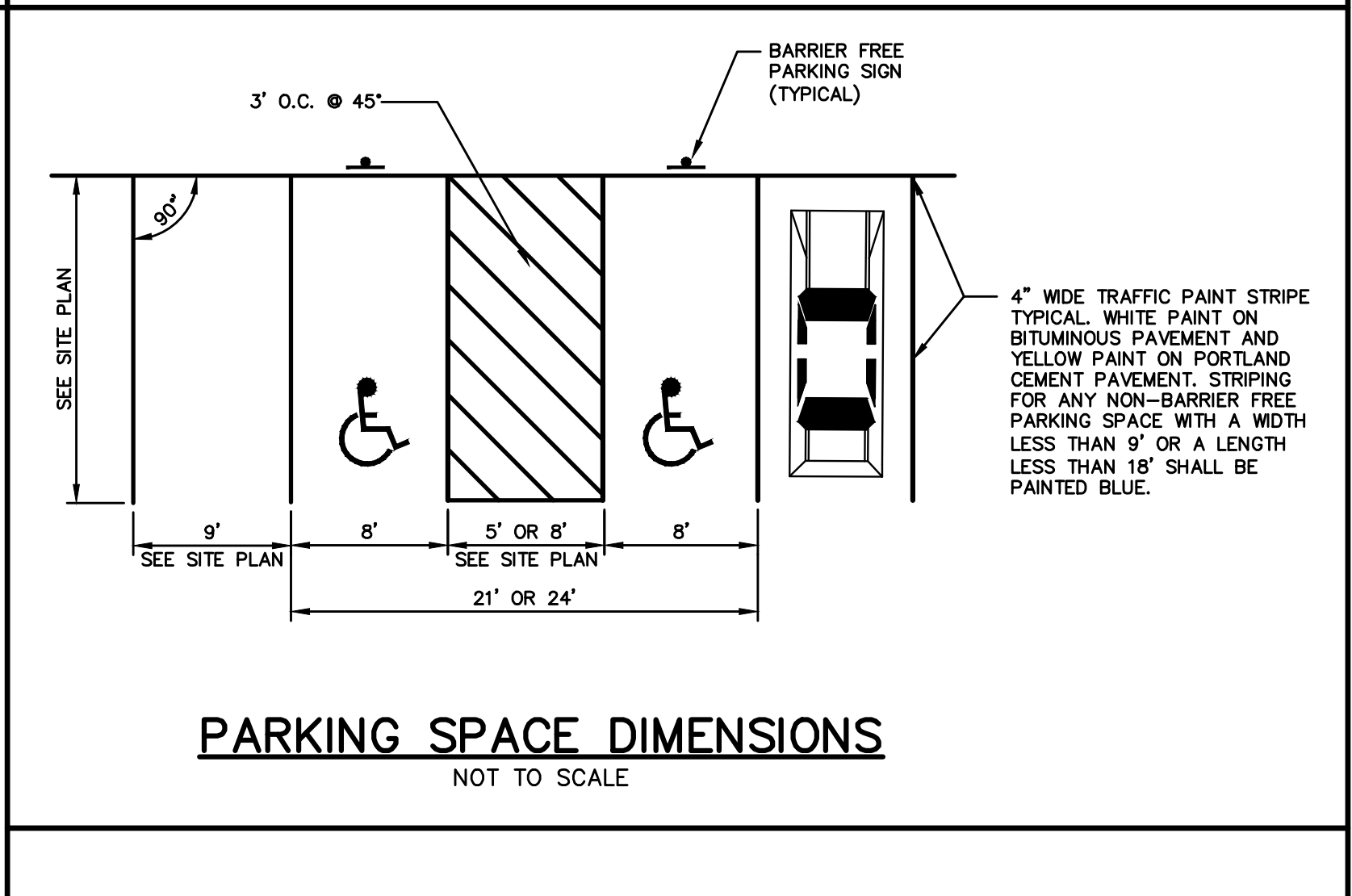
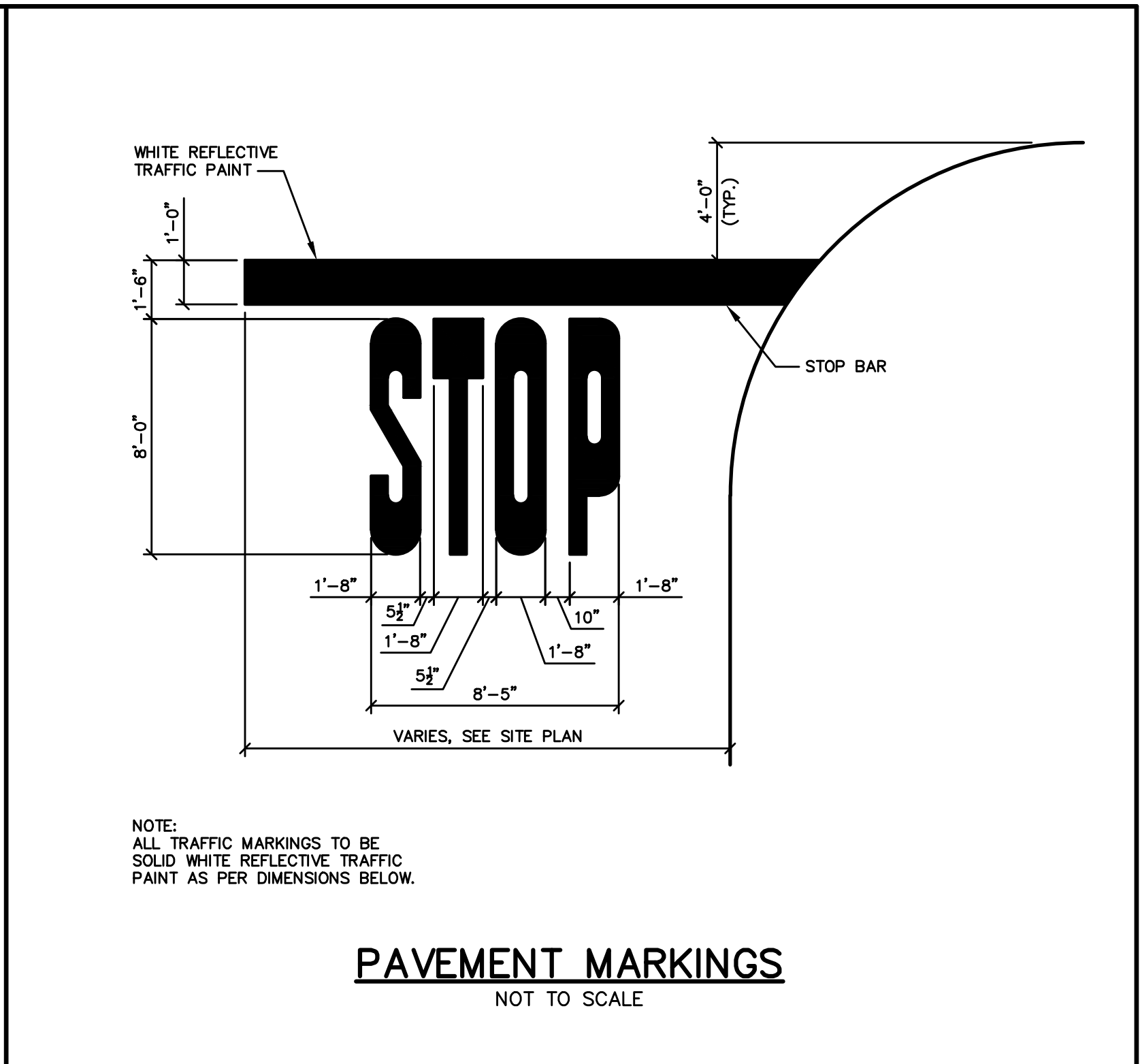
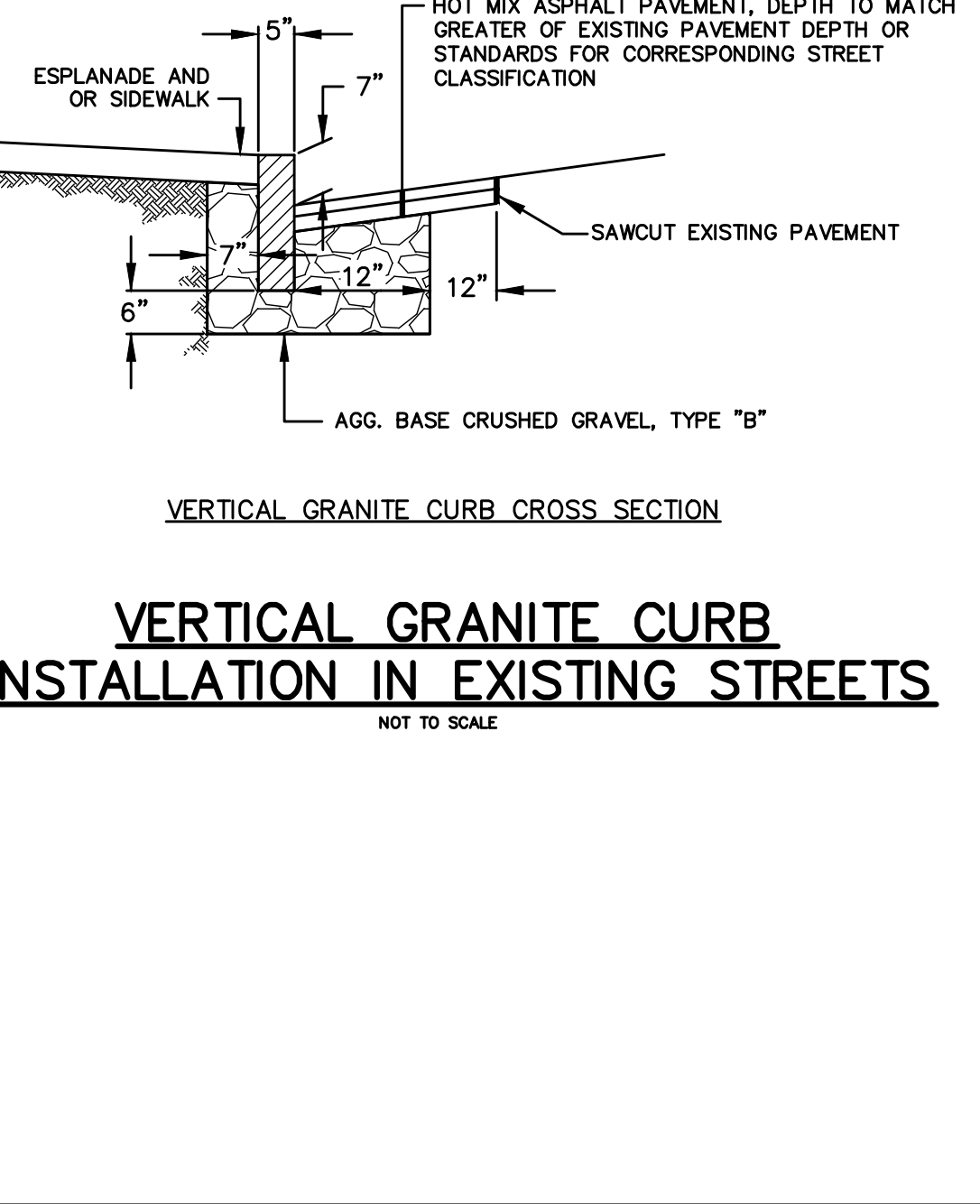
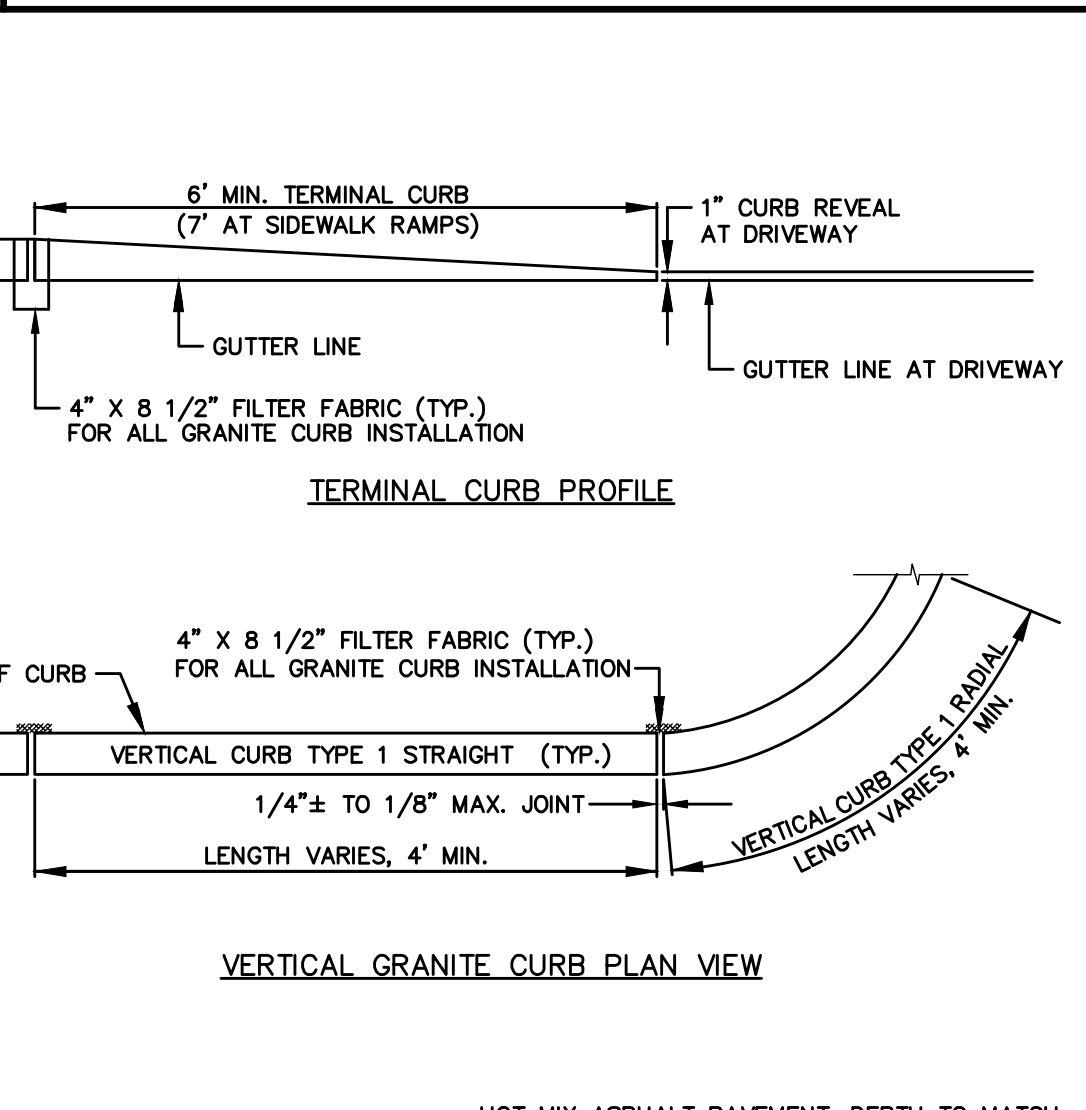
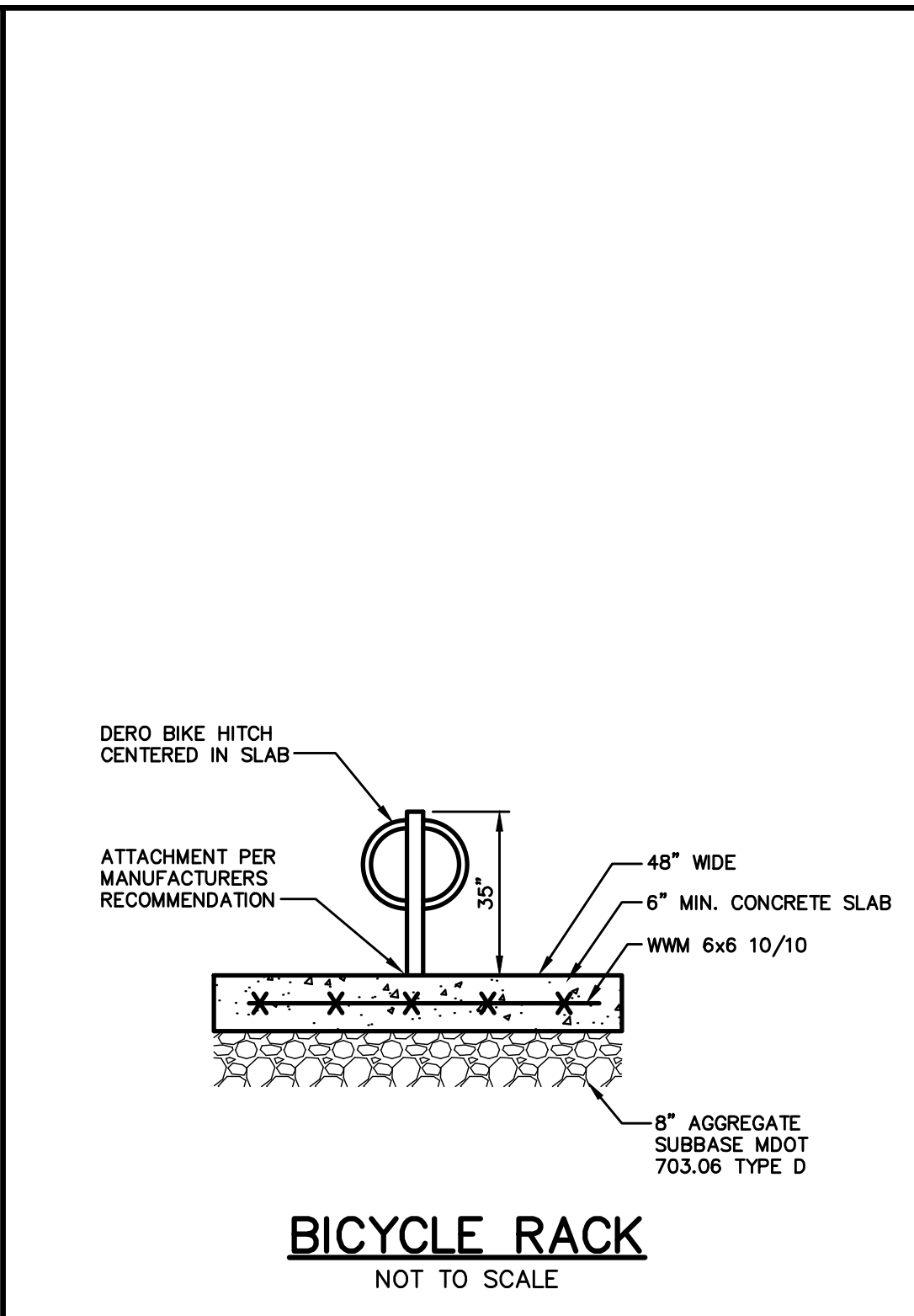
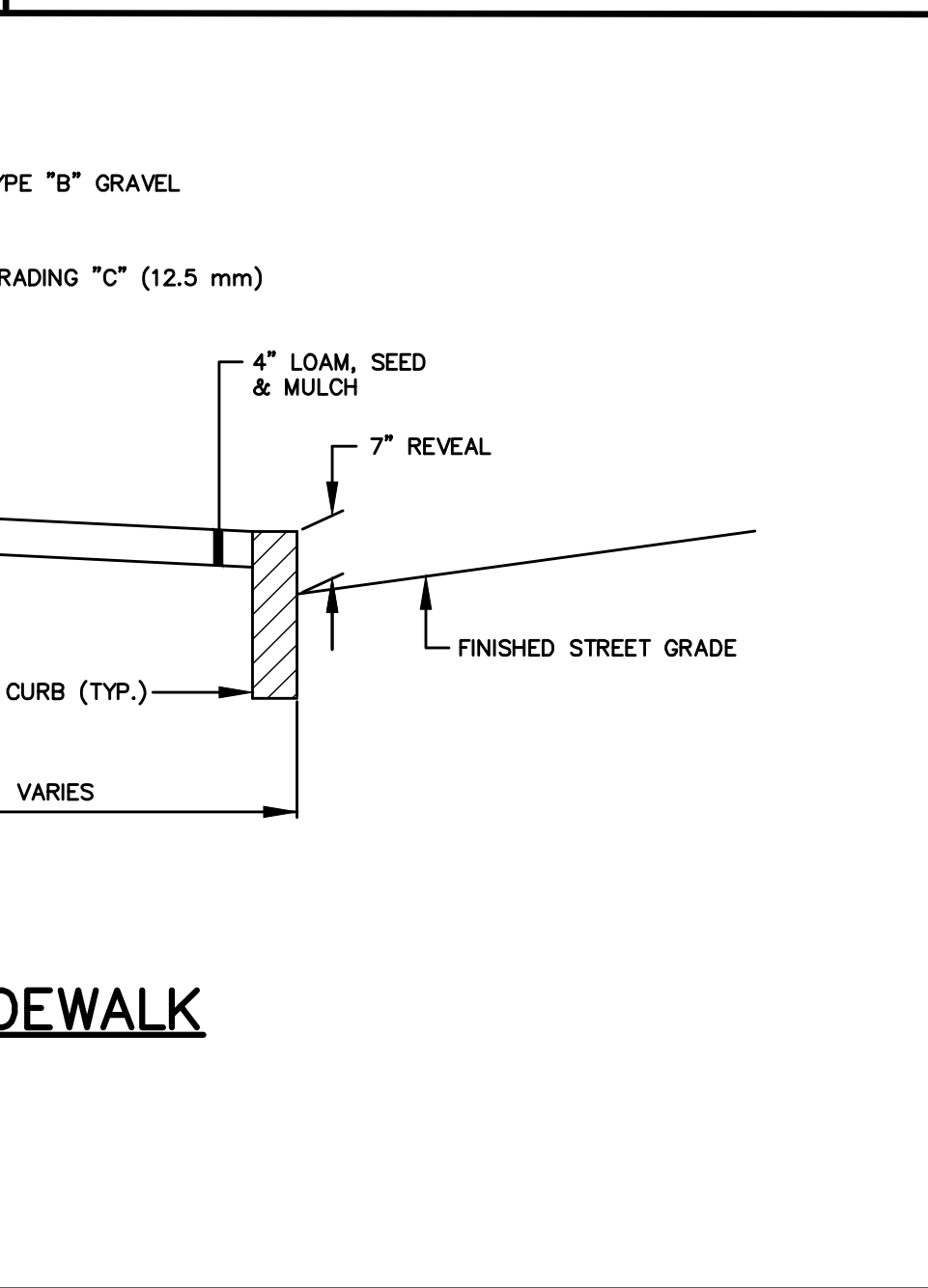
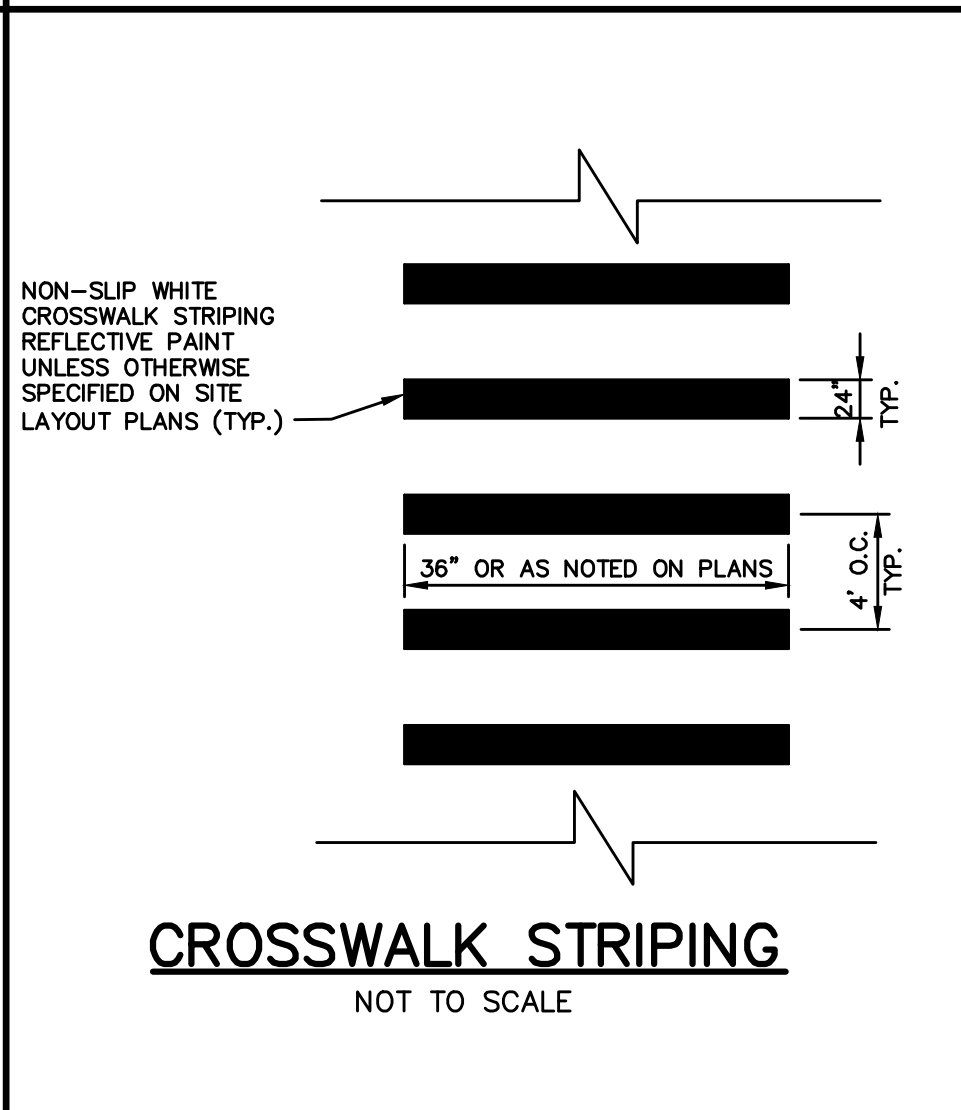
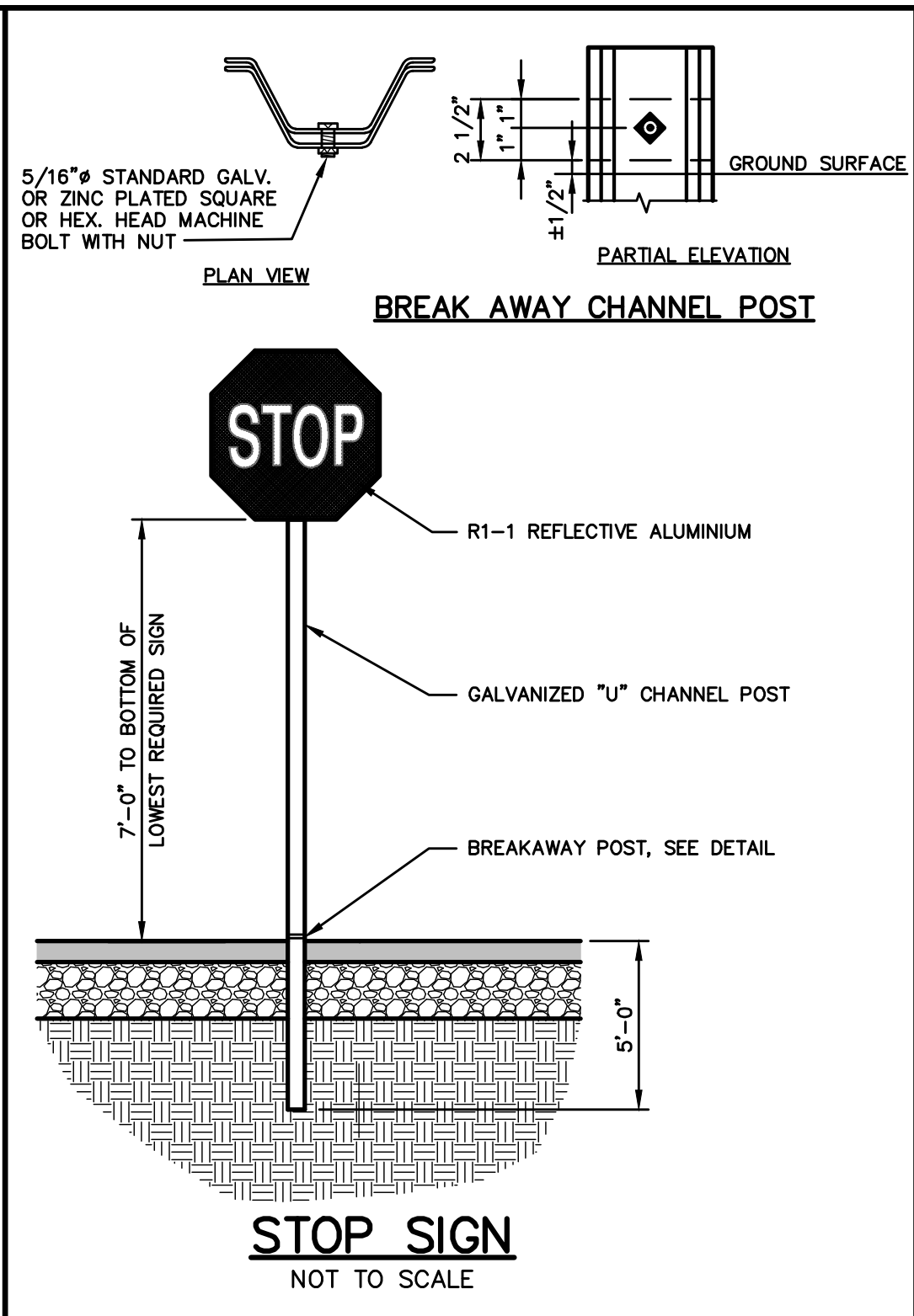
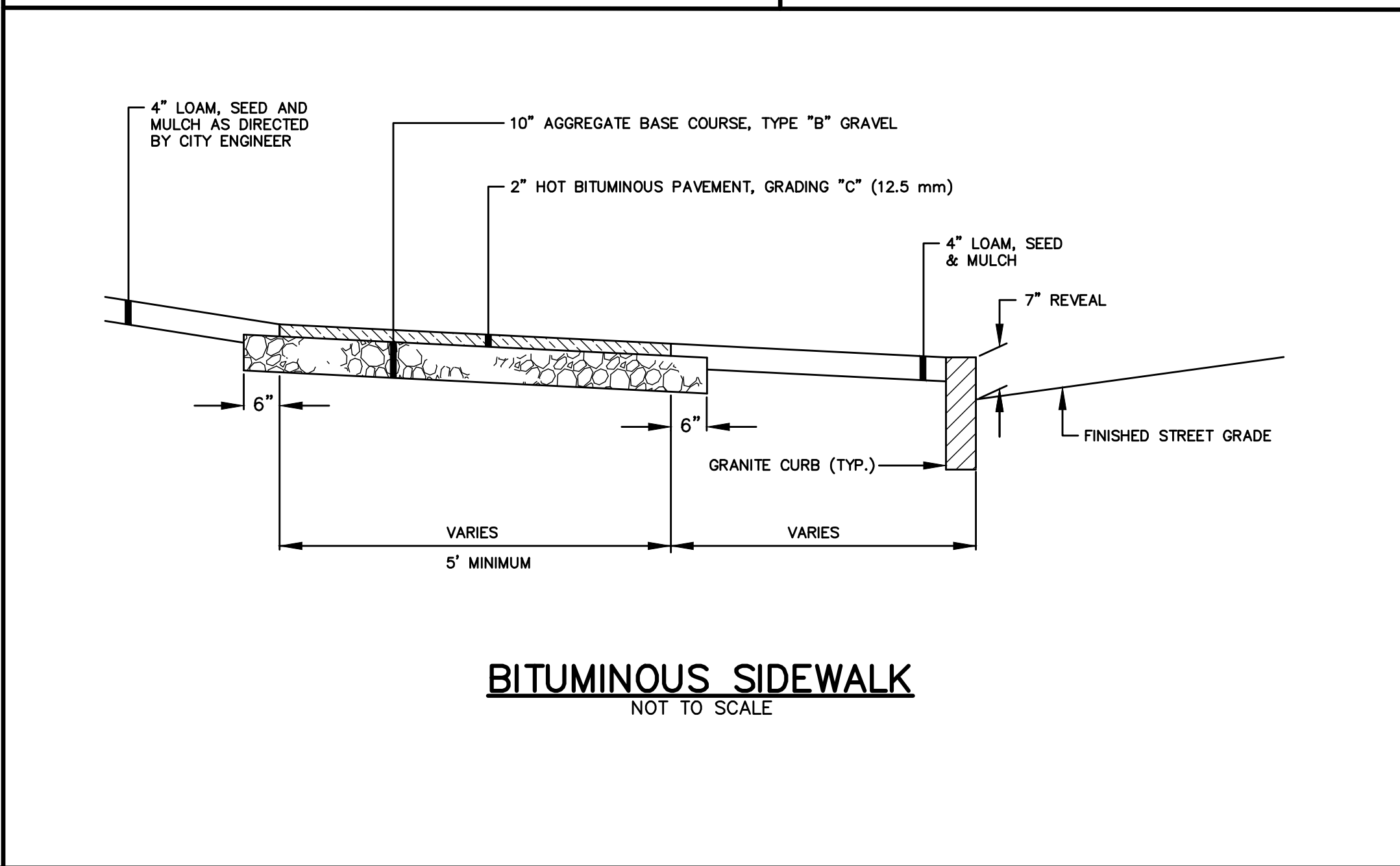
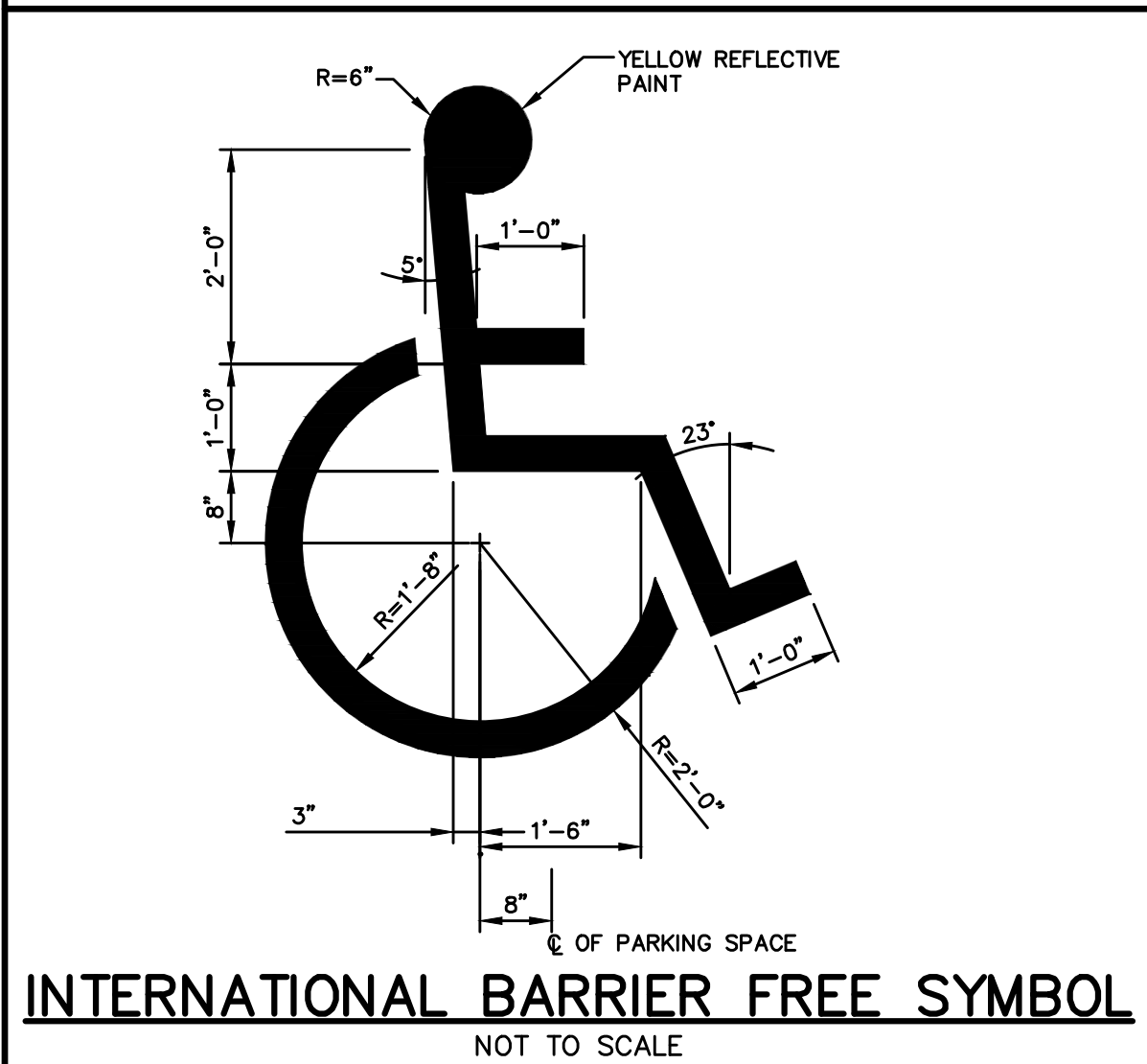
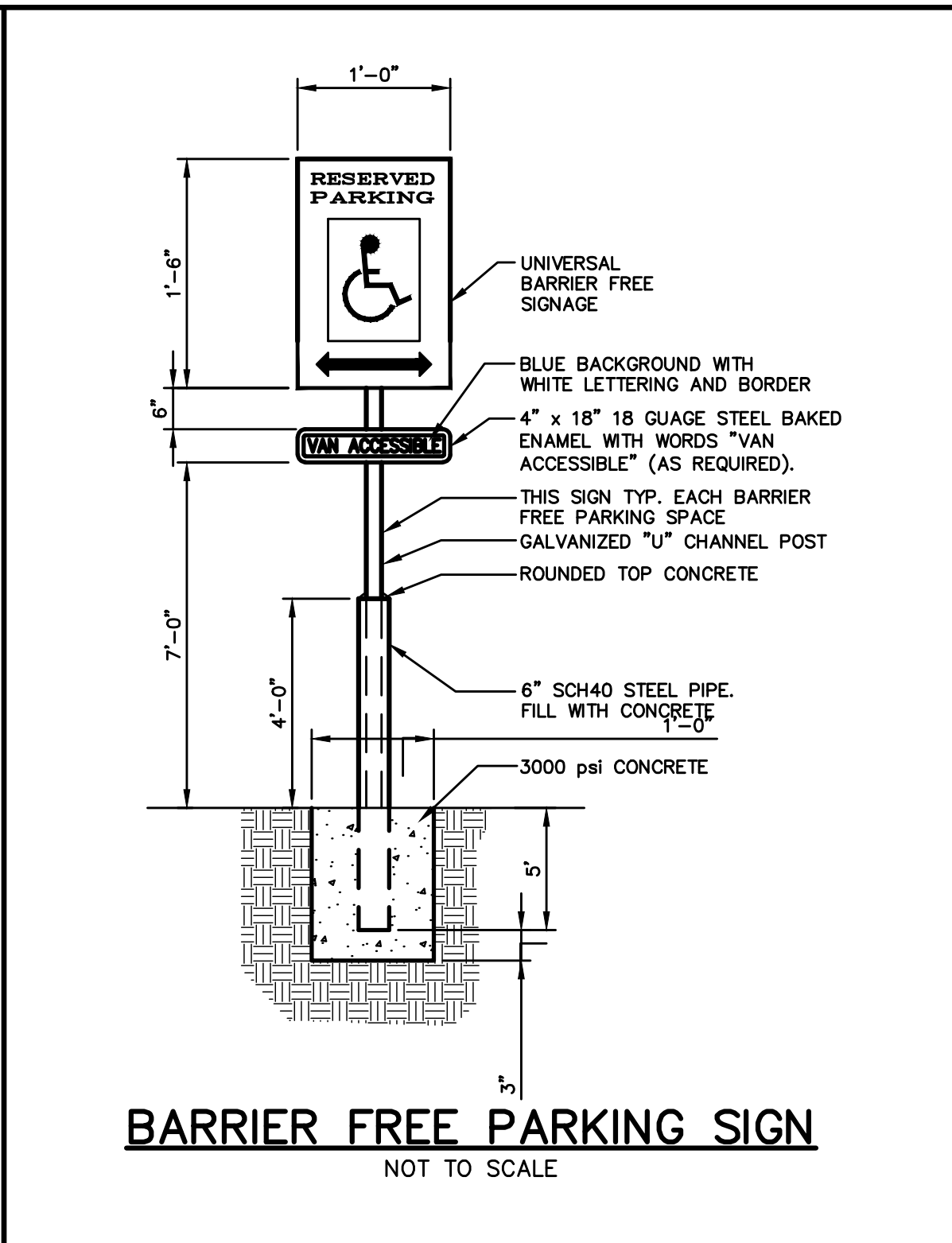
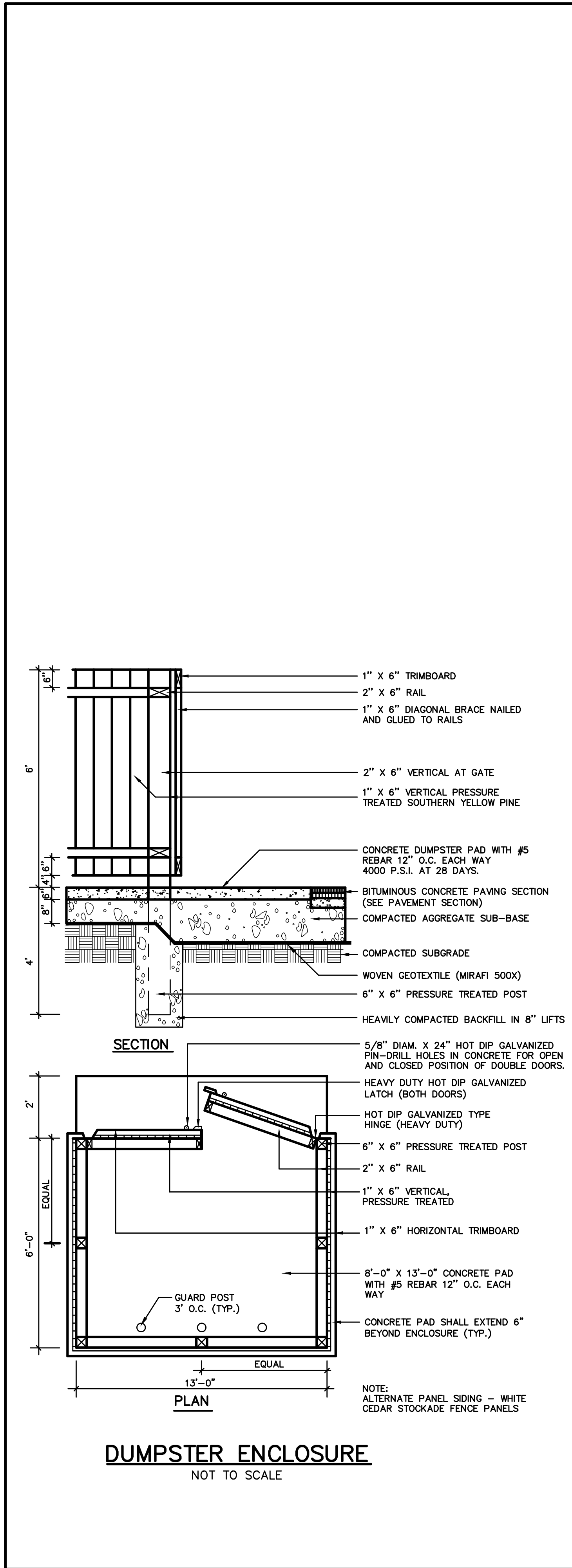


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Drawing Name:	Grading, Drainage, and Erosion Control Plan
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.	C103
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Rev.	Date	Revision
1		
2		
3		
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LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

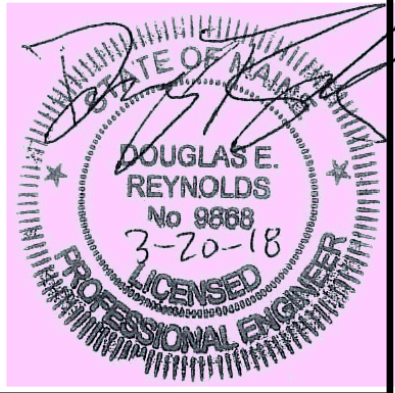
Design: JWA	Draft: CG	Date: AUG 2016
Checked: AMP	Scale: NTS	Job No.: 801.06
File Name: 801-06-DETAIL.dwg		
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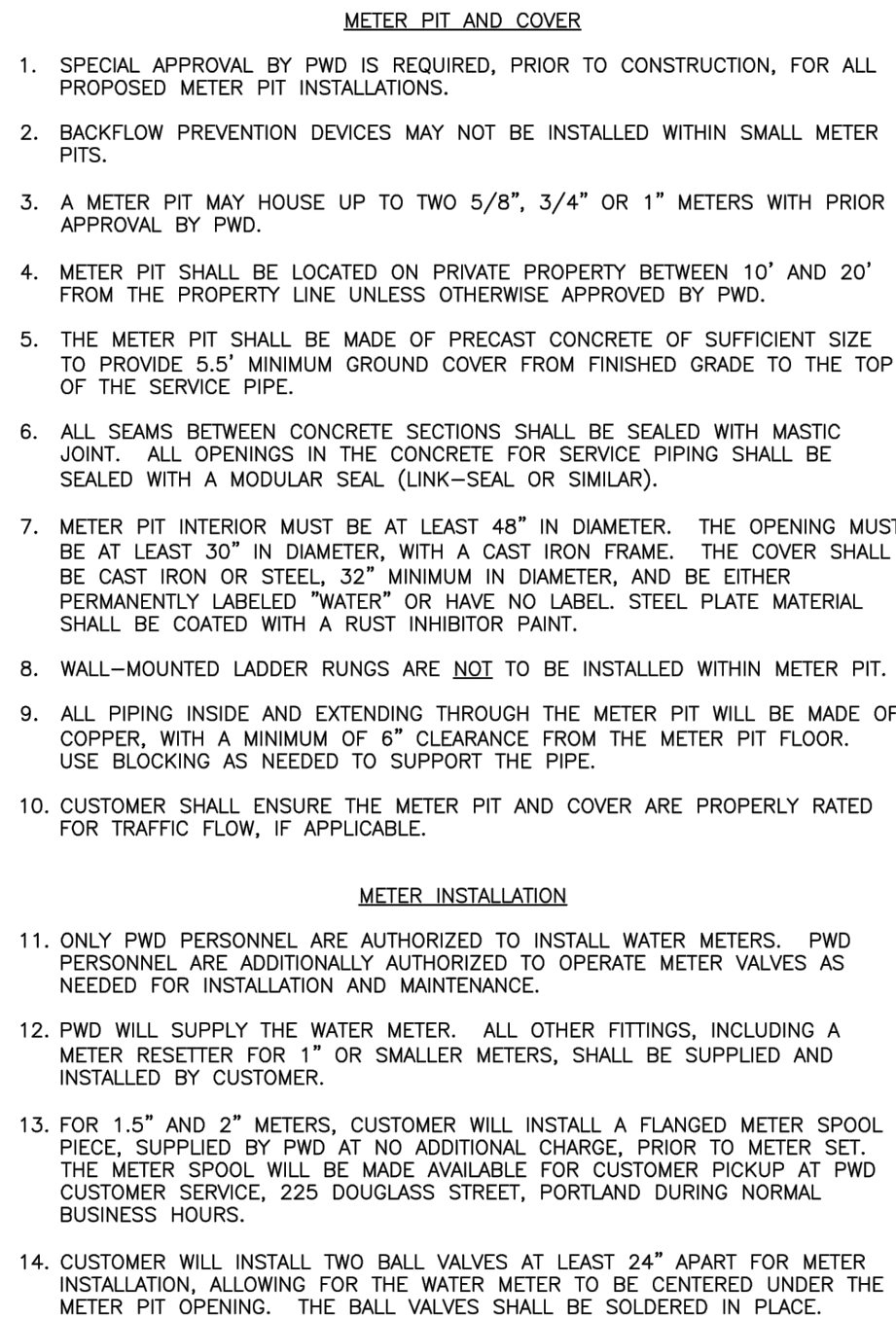


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Drawing Name:	Site Details
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.
C401





THRUST/RETAINER GLAND SCHEDULE		
1/4 BEND	90°	USE POURED IN-PLACE THRUST BLOCK WITH RETAINERS
1/8 BEND	45°	THRUST BLOCK WITH RETAINERS
1/16 BEND	22 1/2°	THRUST BLOCK
1/32 BEND	11 1/4°	THRUST BLOCK

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR
DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

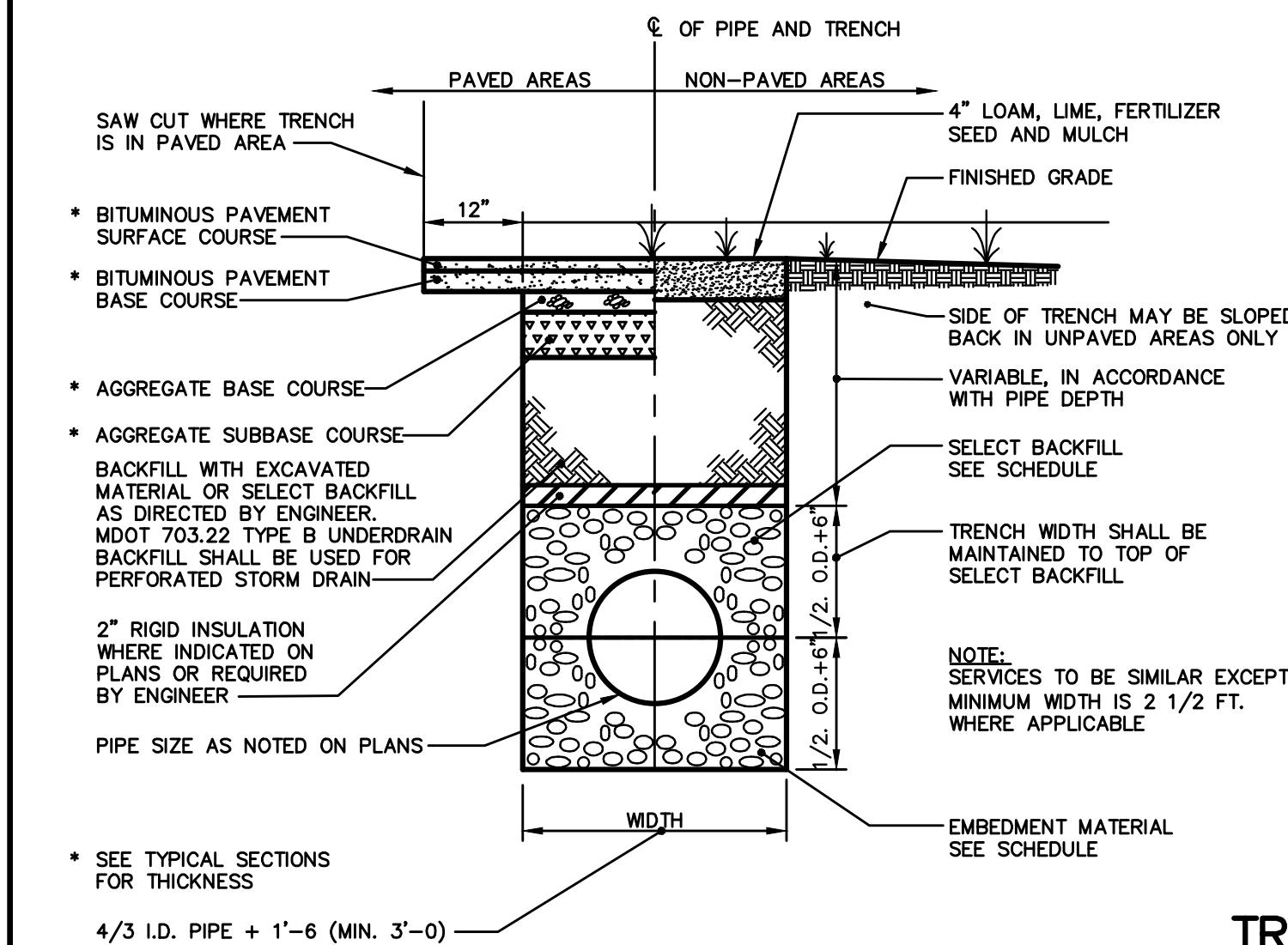
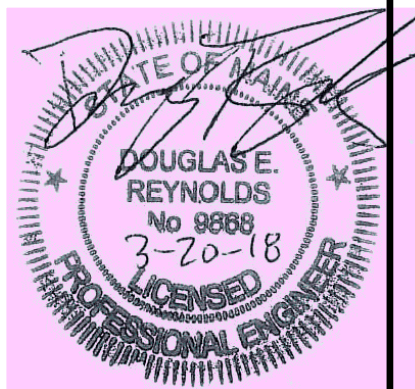
THRUST BLOCK PLACEMENT ON BENDS

NOT TO SCALE

1. THE BEARING SURFACE OF THE THRUST BLOCK SHALL BE THE SURFACE AREA OF THE THRUST BLOCK WHICH IS CAST AGAINST THE TRENCH WALL. THE BEARING SURFACE SHALL NOT EXCEED THE FOLLOWING LOADINGS:
- | <u>IN-SITU CONDITION</u> | <u>ALLOWABLE</u> |
|--------------------------|------------------|
| BEDROCK | 3,000 psf |
| SAND OR OUTWASH DEPOSITS | 1,500 psf |
| OTHER SOILS | 1,000 psf |
- THE THRUST SHALL BE COMPUTED ON THE BASIS OF 150 psi x THE CROSS SECTIONAL AREA OF THE PIPE. A THRUST BLOCK FOR A 1/4 BEND ON AN 8" WATER MAIN BEARING AGAINST CLAY WOULD REQUIRE A BEARING SURFACE OF 7.5 s.f.
- $$150 \text{ psi} \times 50 \text{ sq. in.} = 7.5 \text{ s.f.}$$
- $$1,000 \text{ psf}$$
2. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.
3. ANY WORK RELATED TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE SCARBOROUGH WATER AND SEWER DISTRICT SPECIFICATIONS.
- 

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

THRUST BLOCK NOTES



TRENCH SECTION

N.T.S

SCHEDULE OF TRENCH BACKFILL		
TYPE OF PIPE	EMBEDMENT MATERIAL	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC-SDR 35 HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
PERFORATED PVC-SDR35 HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

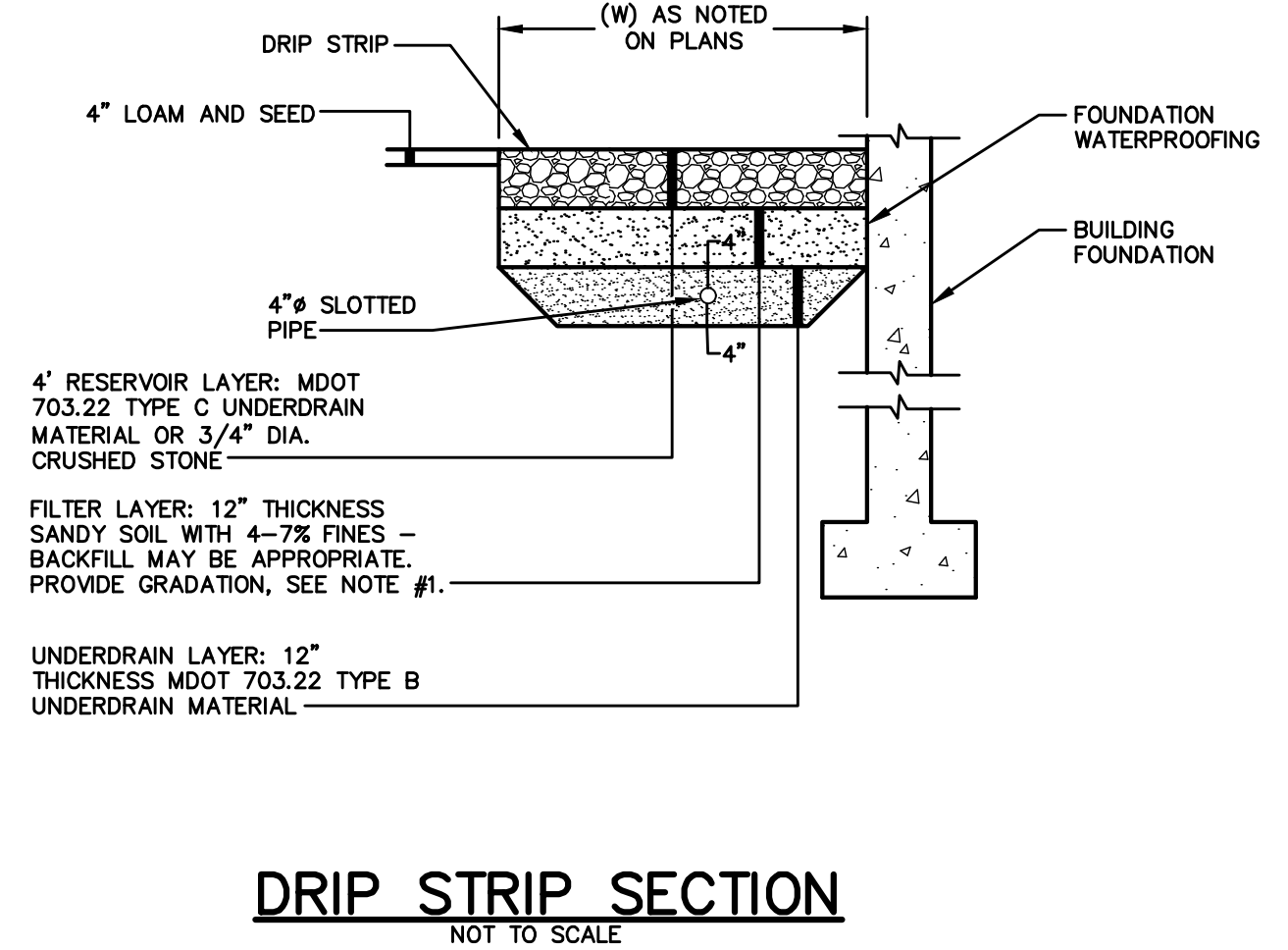
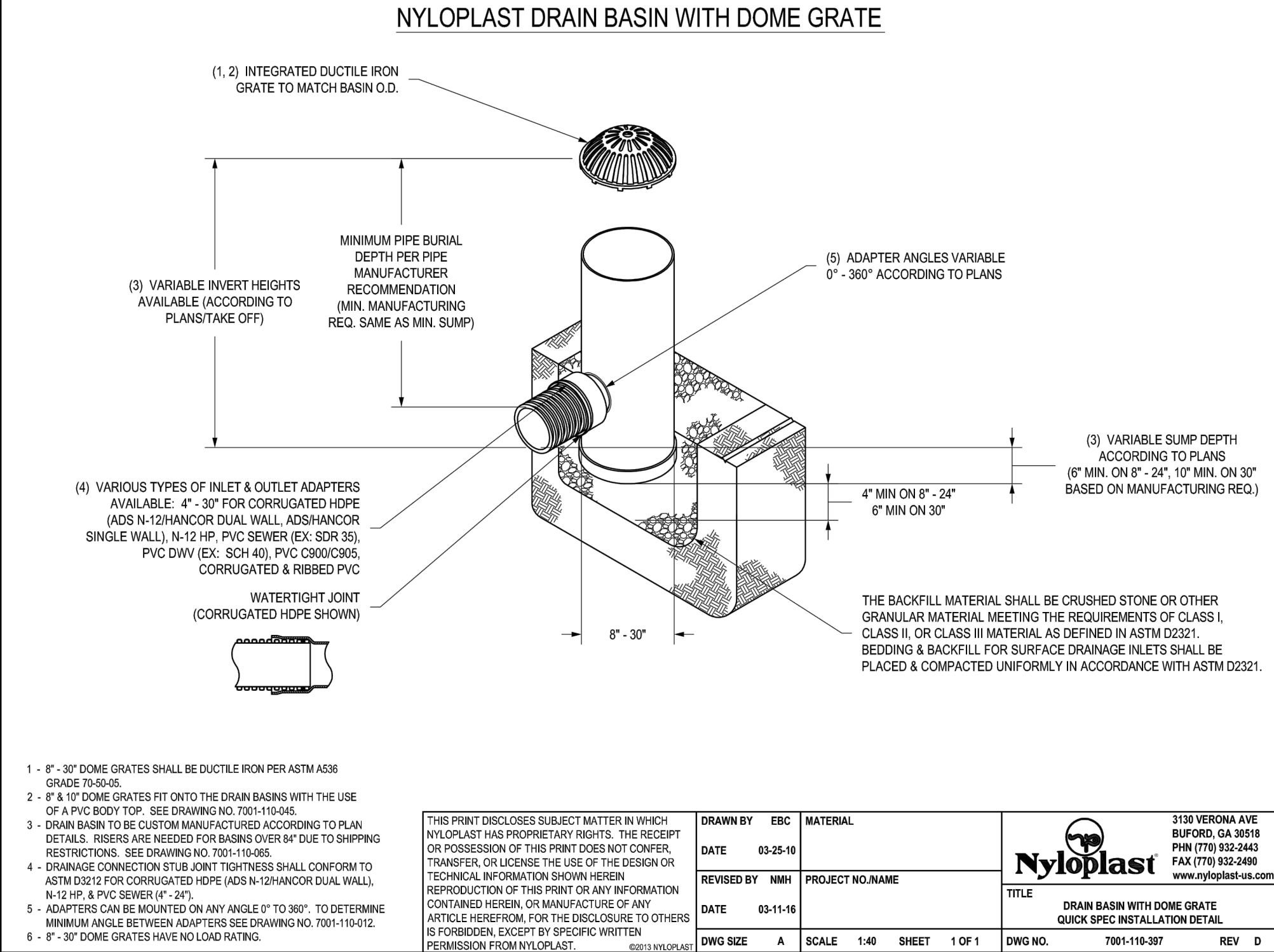
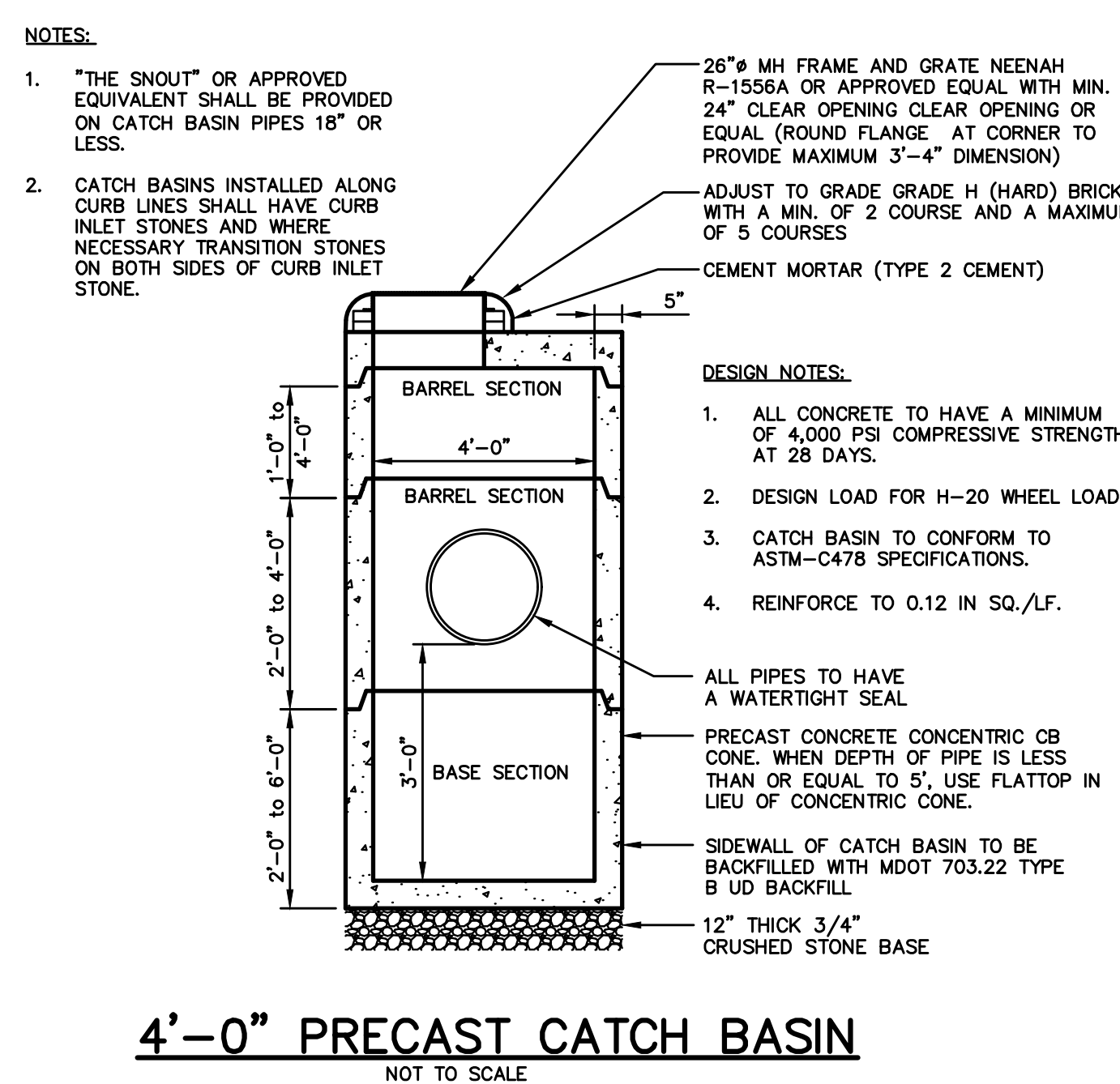
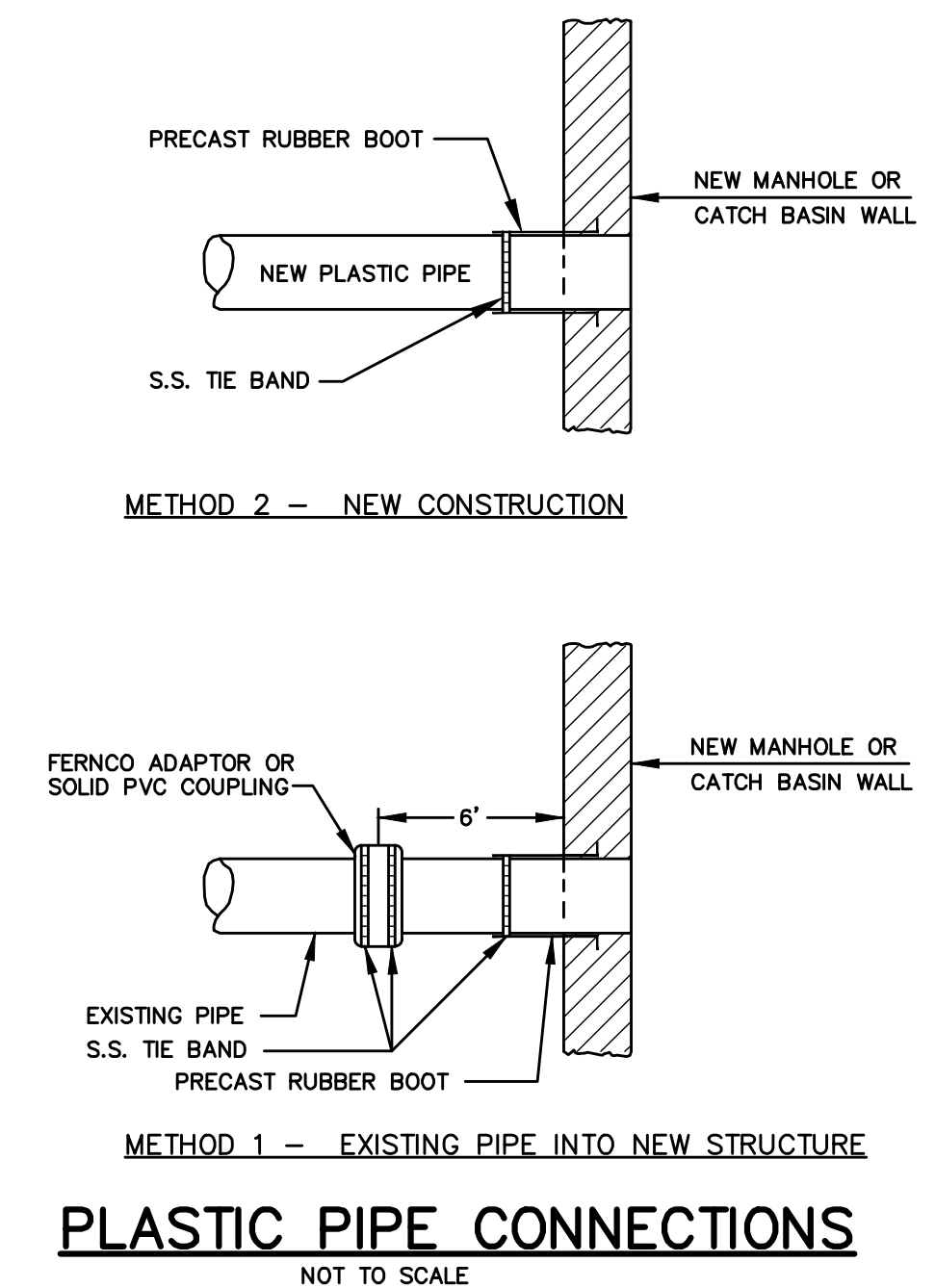
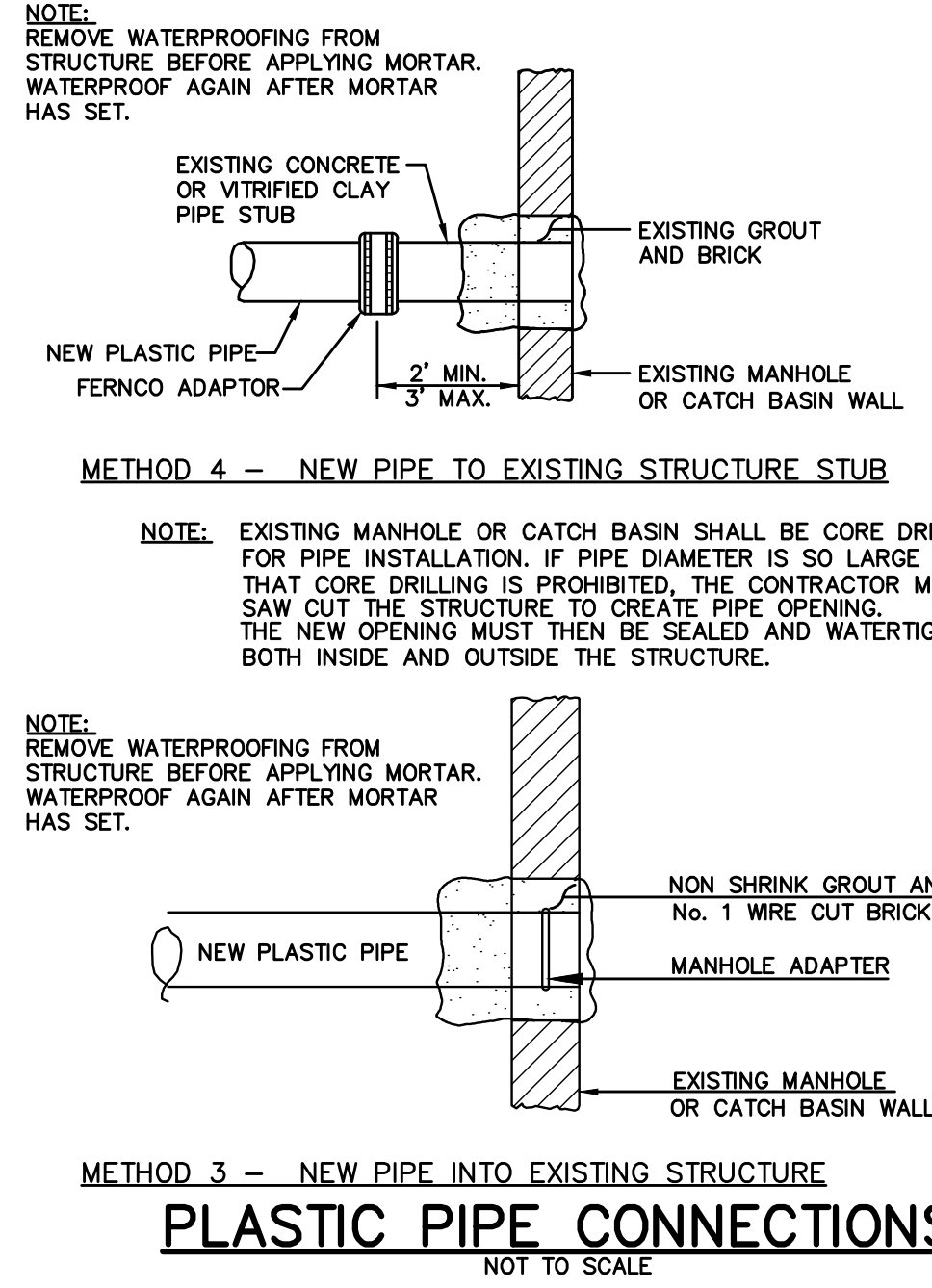
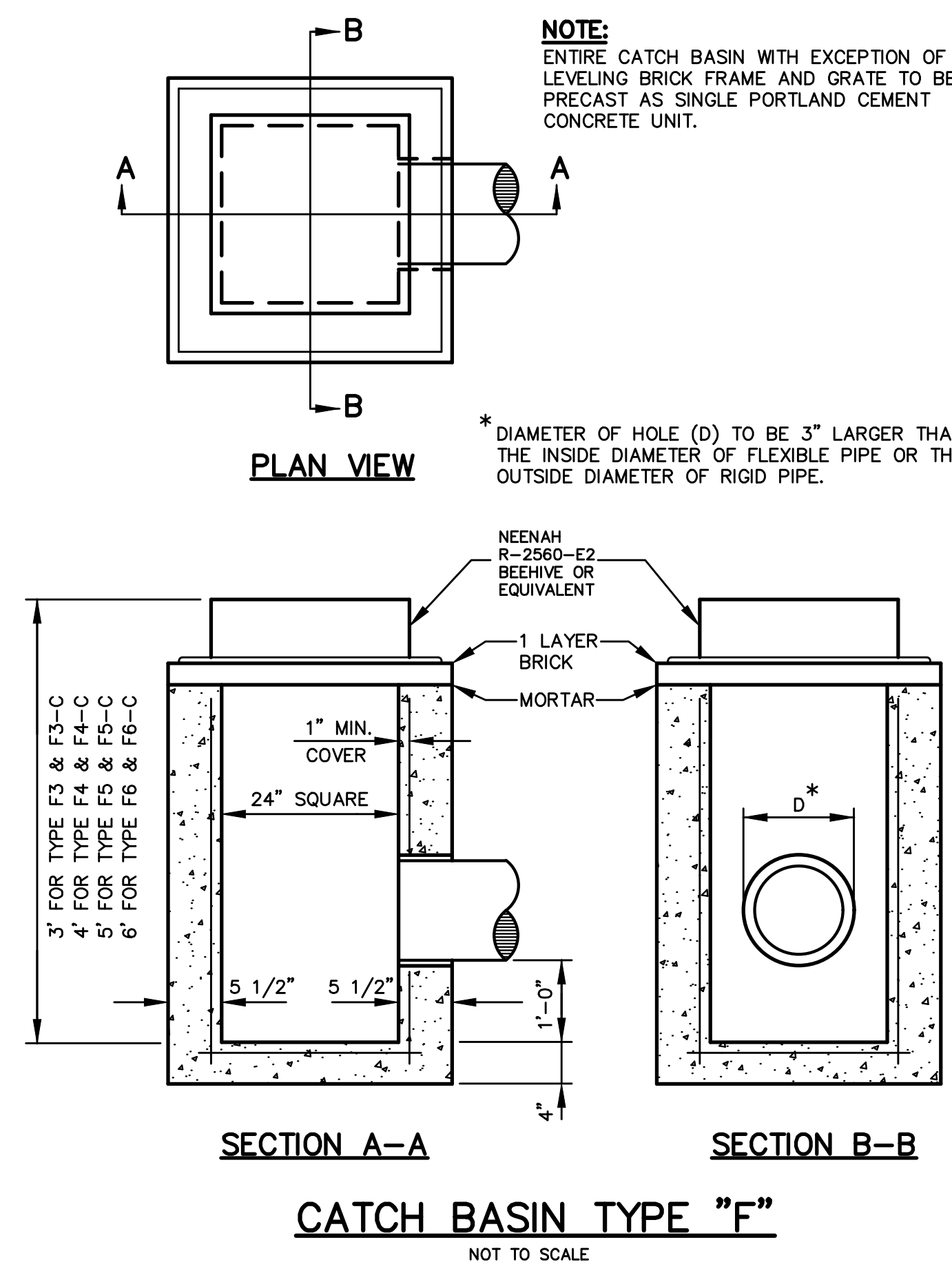
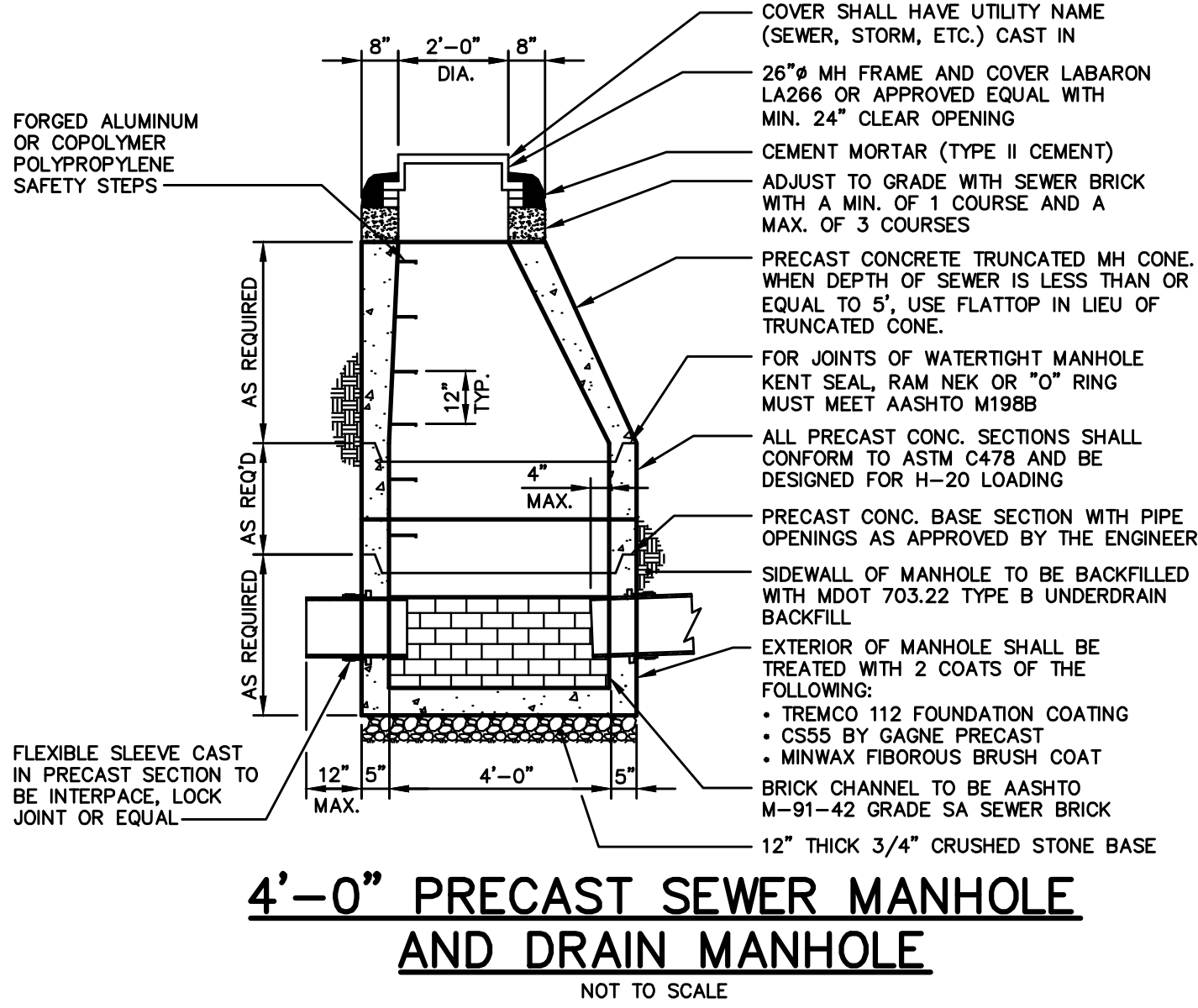
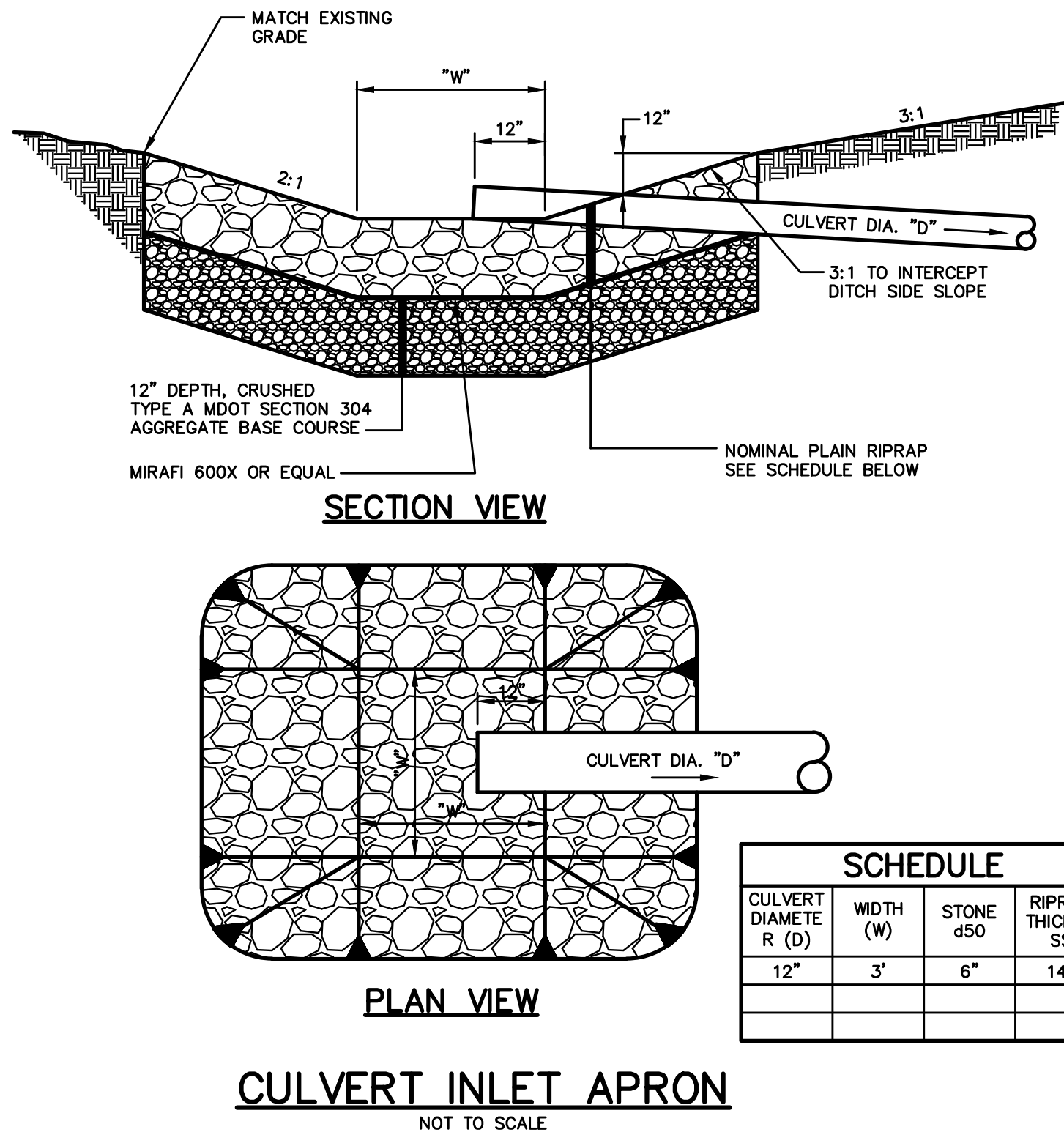
NOTE:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES, 12" BELOW FINISH GRADE.

<u>MINIMUM COVER</u>	<u>PIPE</u>	
2'-0"	DRAIN (1)	(1) COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" RIGID INSULATION.
5'-5"	WATER	COVER BETWEEN 3' AND 4' SHALL
5'-0"	SEWER	INCLUDE 2" RIGID INSULATION.

(1) COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" RIGID INSULATION.
COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION.

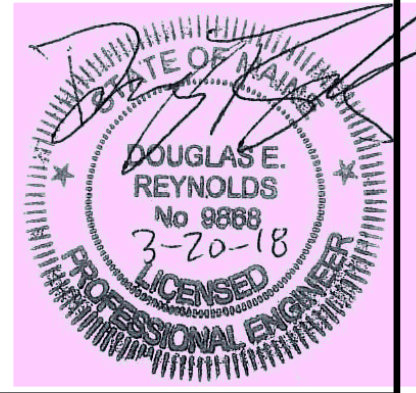
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DRIP STRIP NOTES:

1. FILTER LAYER SHALL CONSIST OF A SANDY SOIL WITH BETWEEN 4% AND 7% FINES (PASSING #200 SIEVE).
2. SUBMIT RESULTS OF FIELD AND LABORATORY TESTING TO PROJECT ENGINEER.
3. SUBMIT 75 LB. SAMPLE OF EACH TYPE OF MATERIAL IN AIR TIGHT CONTAINERS TO TESTING FACILITY.
4. THE FOLLOWING MATERIAL SHALL BE SUBMITTED:
A. RESERVOIR LAYER MATERIAL
B. FILTER LAYER MATERIAL
C. UNDERDRAIN LAYER
5. PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136-STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES, ON EACH TYPE OF THE SAMPLE MATERIAL AND SUBMIT RESULTS TO PROJECT ENGINEER.

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



Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
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Checked: AMP
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Draft: CG
Scale: NTS
Job No.: 801.06

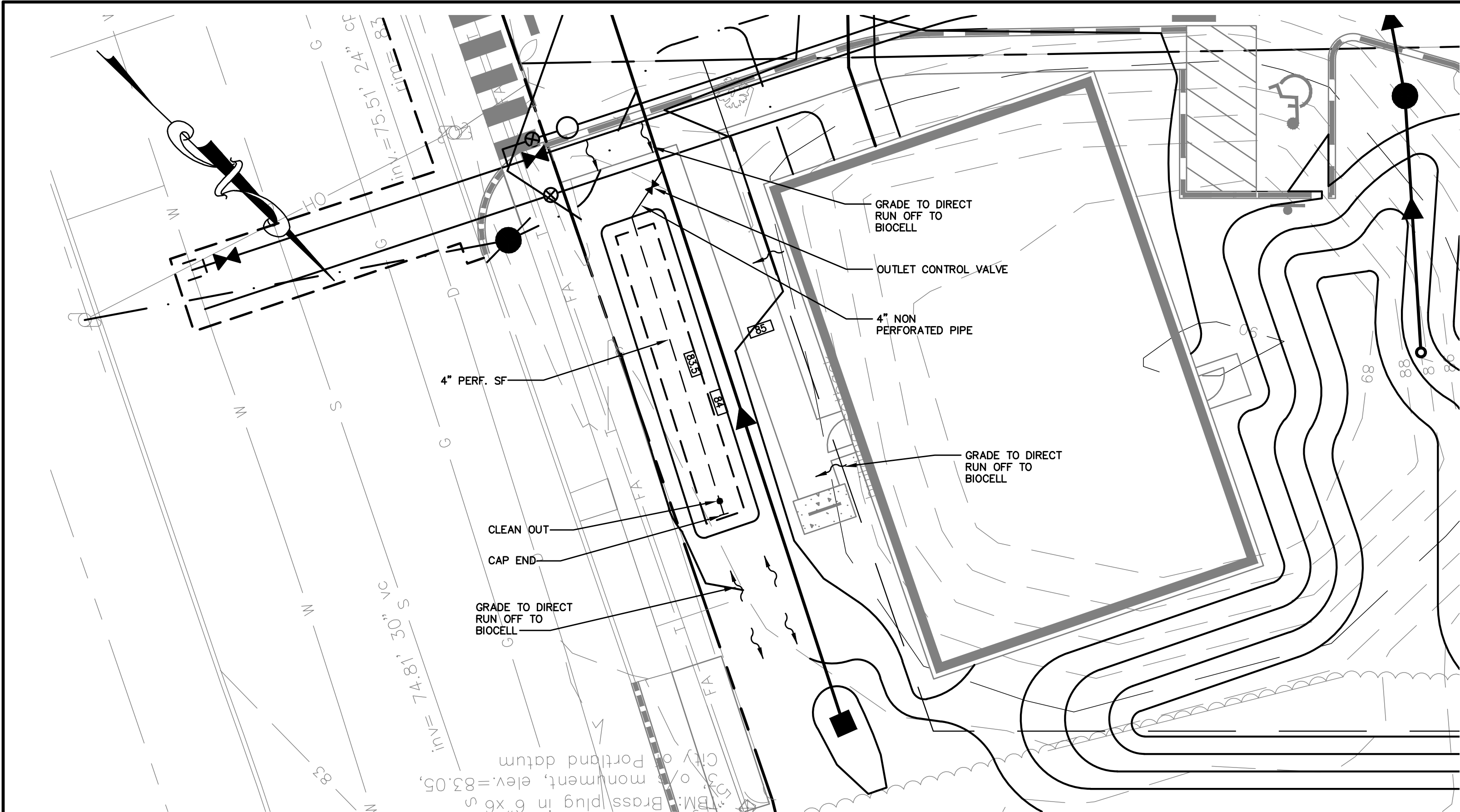
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Drawing Name:	Drainage Details
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.
C403



**BIO RETENTION POND #1
PROJECT DETAILS**

1"=10'

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 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

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

SCHEDULE A		
ITEM DESCRIPTION		GRASSED UNDERDRAIN DIMENSION / ELEVATION
A	CHANNEL PROTECTION VOLUME STAGE	83.38
B	TOP SOIL FILTER	83.50
C	TOP UNDERDRAIN BEDDING STONE	82.00
D	PIPE INVERT: 4" PERF. UD	81.33
E	BOTTOM UNDERDRAIN BEDDING	81.00

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.

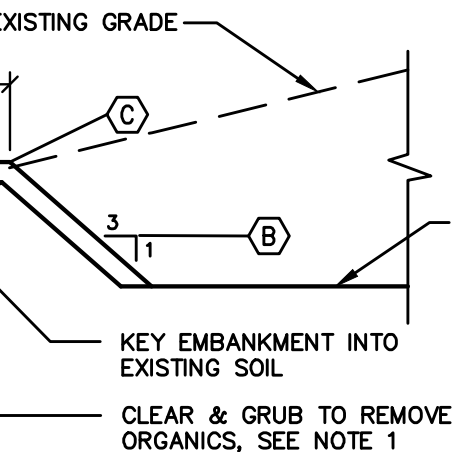
NOTE: CONTRACTOR SHALL NOTIFY PROJECT ENGINEER 48 HOURS PRIOR TO THE MILESTONES LISTED ABOVE TO ALLOW FOR INSPECTION.

NOTES:

1. EMBANKMENT FOOTPRINT SHALL BE CLEARED OF TRASH/DEBRIS AND ANY ROCKS GREATER THAN 6", BE FREE OF ANY STANDING WATER, BE GRADED TO BE NO STEEPER THAN 1H:1V, BE SCARIFIED PRIOR TO EMBANKMENT FILL PLACEMENT, AND BE INSPECTED AND APPROVED BY THE PROJECT ENGINEER BEFORE FILL PLACEMENT BEGINS.

4" LOAM & SEED, MULCH & FERTILIZER

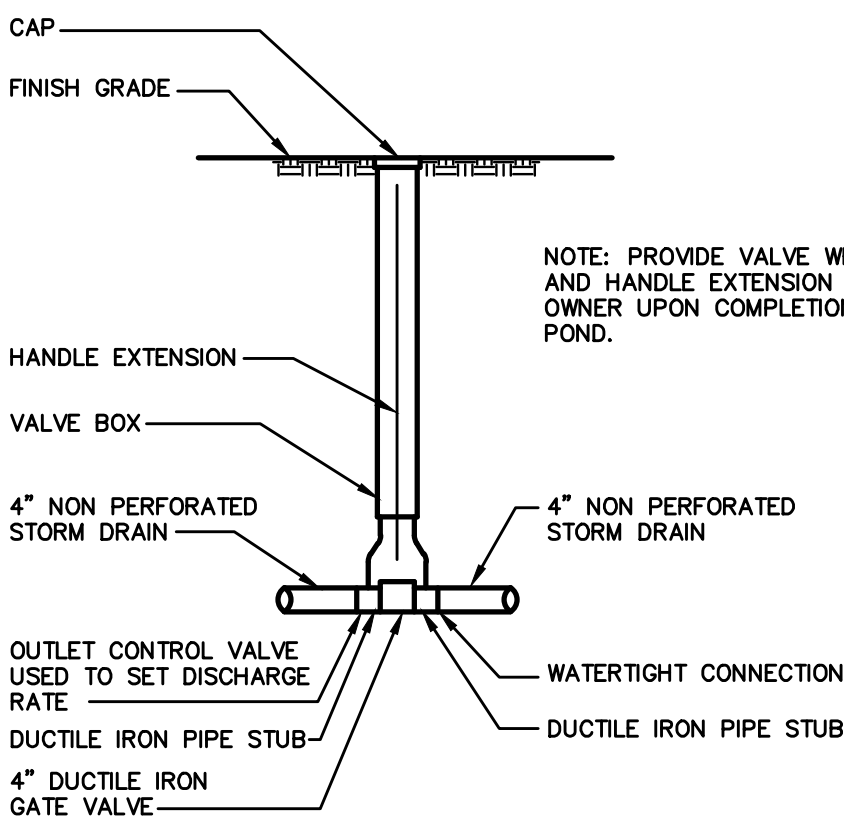
COMPACTED EMBANKMENT MATERIAL, MEETING MDOT SECTION 703.19 GRANULAR BORROW MODIFIED TO HAVE 100% PASSING THE 6" SIEVE. (COMPACTED TO 95% OF MODIFIED PROCTOR). SUBMIT EMBANKMENT MATERIAL GRADATION TO PROJECT ENGINEER PRIOR TO CONSTRUCTING EMBANKMENT.



**BERM
CONSTRUCTION**
NOT TO SCALE

SCHEDULE B - EMBANKMENT SCHEDULE	
ITEM DESCRIPTION	DIMENSION/ELEVATION
A) POND BASE ELEVATION	83.50
B) PEAK ELEVATION - CHANNEL PROTECTION VOLUME	83.38
C) TOP OF BERM	84.00

TYPICAL POND CROSS SECTION
NOT TO SCALE



OUTLET VALVE
NOT TO SCALE

BIO RETENTION CELL NOTES:

SOIL SPECIFICATIONS:

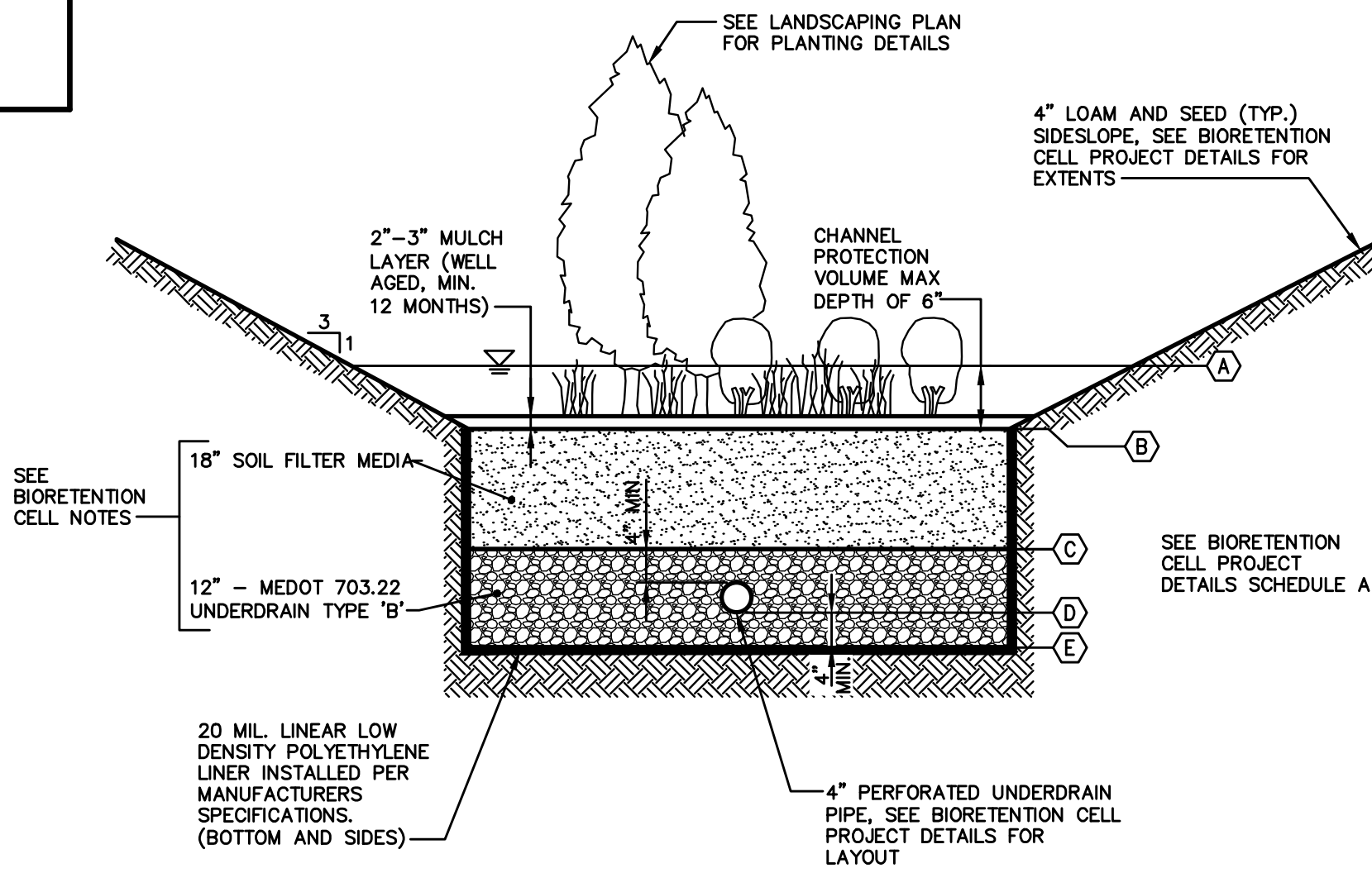
- THE SOIL FILTER MEDIA SHALL BE A LAYERED SYSTEM CONSISTING OF THE FOLLOWING FROM THE BOTTOM:
 - 12" OF LOAMY COARSE SAND, SEE TABLE 1.
 - 2" LAYER OF TOPSOIL (SEE "C" BELOW) ROTOTILLED INTO THE LOAMY COARSE SAND LAYER.
 - 6" OF NON-CLAYEY, LOAMY TOPSOIL SUCH AS USDA SANDY LOAM TOPSOIL WITH 5-8% HUMIFIED 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.

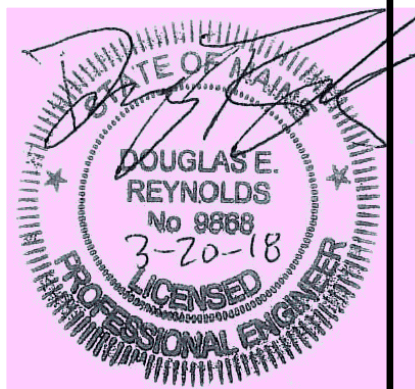
CONSTRUCTION:

- SOIL FILTER MEDIA AND UNDERDRAIN BEDDING MATERIAL SHALL BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR.
- PERFORATED UNDERDRAIN PIPE SHALL BE 4" SLOTTED 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 PSI) 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.



BIORETENTION CELL DETAIL
NOT TO SCALE

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



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Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: JWA	Draft: CG	Date: AUG 2016
Checked: AMP	Scale: NTS	Job No.: 801.06
File Name: 801-06-DETAIL.dwg		
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Drawing Name:	Bio Retention Pond #1 Plan and Details
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

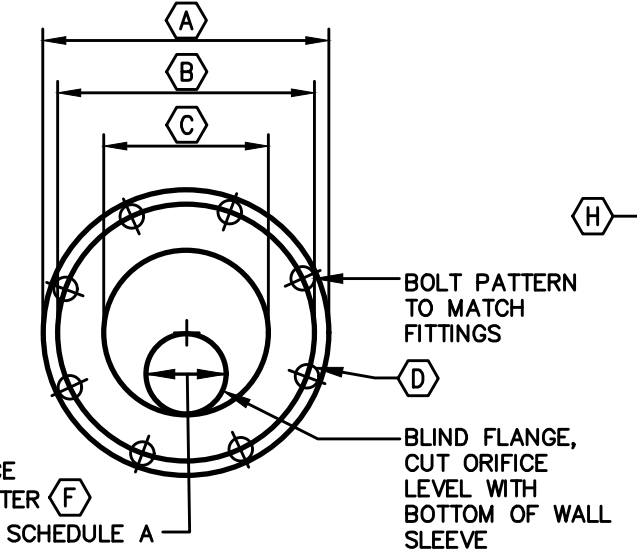
Drawing No.

C404

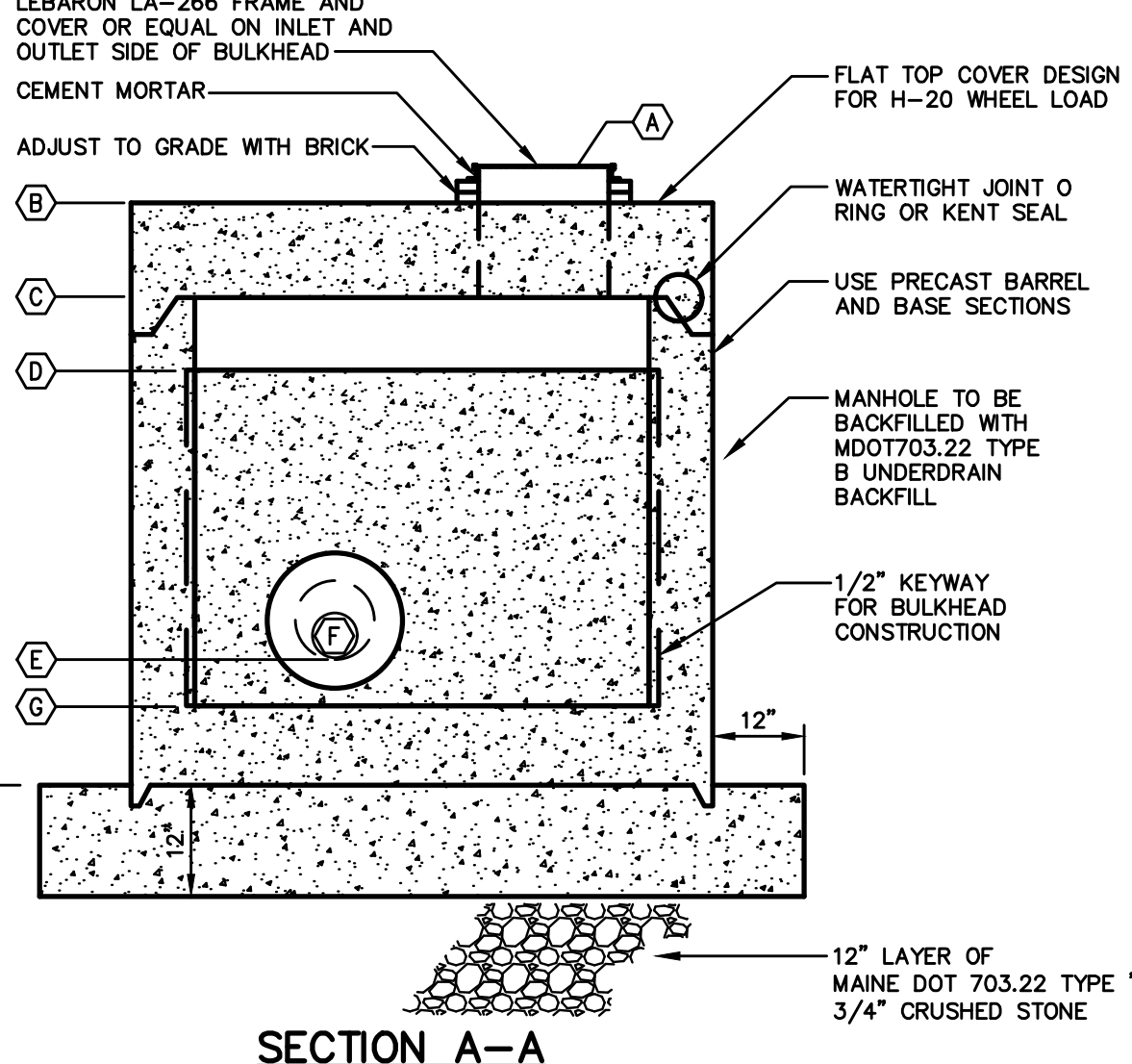
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SCHEDULE A		
ITEM DESCRIPTION	DIMENSION / ELEVATION	
A TOP OF MH COVER	84.77	
B TOP OF STRUCTURE	84.27	
C UNDERSIDE TOP SLAB	83.60	
D TOP CONCRETE BULKHEAD	83.29	
E ORIFICE INVERT	79.19	
F ORIFICE DIAMETER	2.6"	
G MANHOLE INVERT	78.19	
H BOTTOM OF STRUCTURE	77.19	
I PIPE DIAMETER	15"	
J INVERT OUT	79.19	
K PIPE DIAMETER	15"	
L INVERT IN	79.19	
M PIPE DIAMETER	4"	
N INVERT IN	79.19	

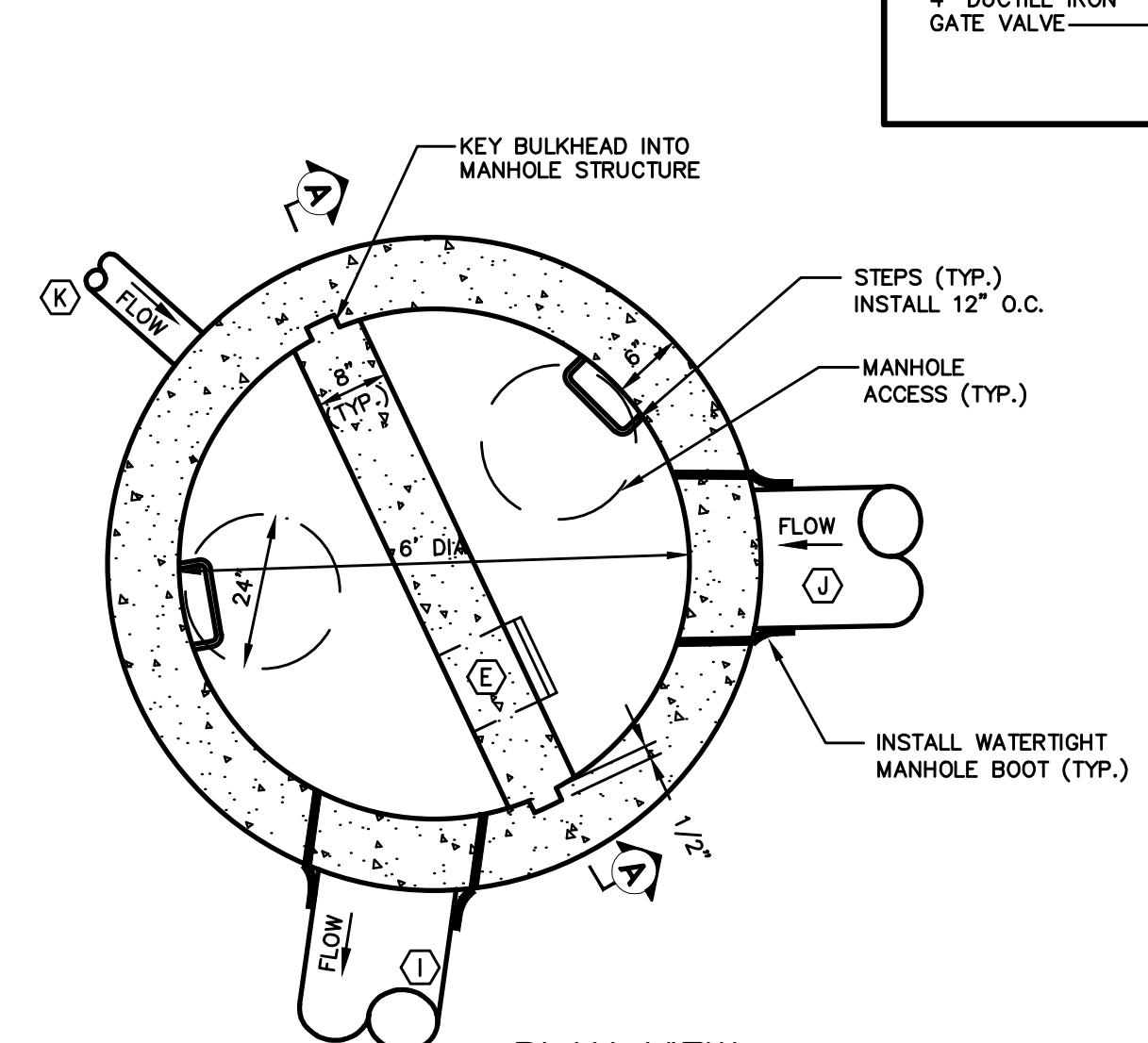
SCHEDULE B ORIFICE		
ITEM DESCRIPTION	DIMENSION / ELEVATION	
A FLANGE O.D.	16"	
B BOLT CIRCLE	14.25"	
C NOMINAL PIPE DIAMETER	10"	
D BOLT HOLE DIAMETER	1.0"	
E ECCENTRIC ORIFICE DIAMETER	2.6"	



ORIFICE DETAIL 1
SEE SCHEDULE B
NOT TO SCALE



SECTION A-A
OUTLET CONTROL
STRUCTURE 1 (OCS1)
SEE SCHEDULE A

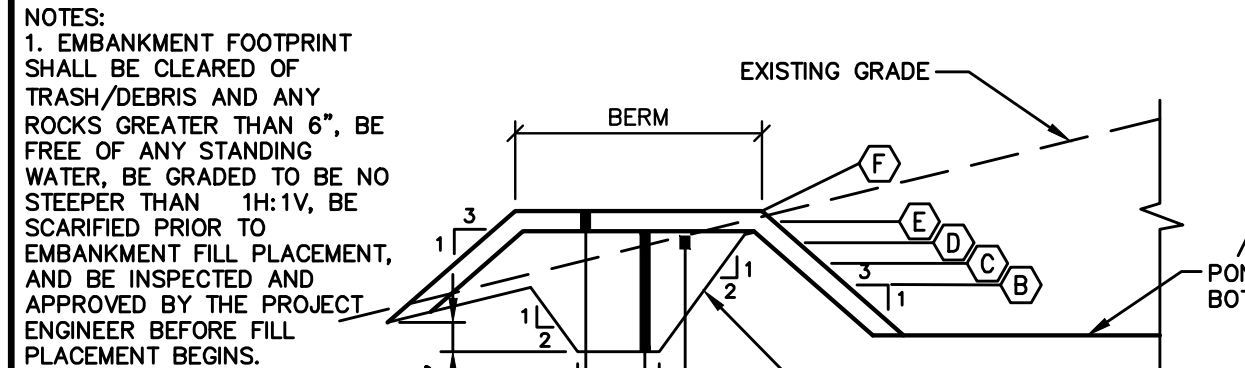


PLAN VIEW
6' OUTLET CONTROL
STRUCTURE 1 (OCS1)
SEE SCHEDULE A
NOT TO SCALE

CONSTRUCTION OVERSIGHT

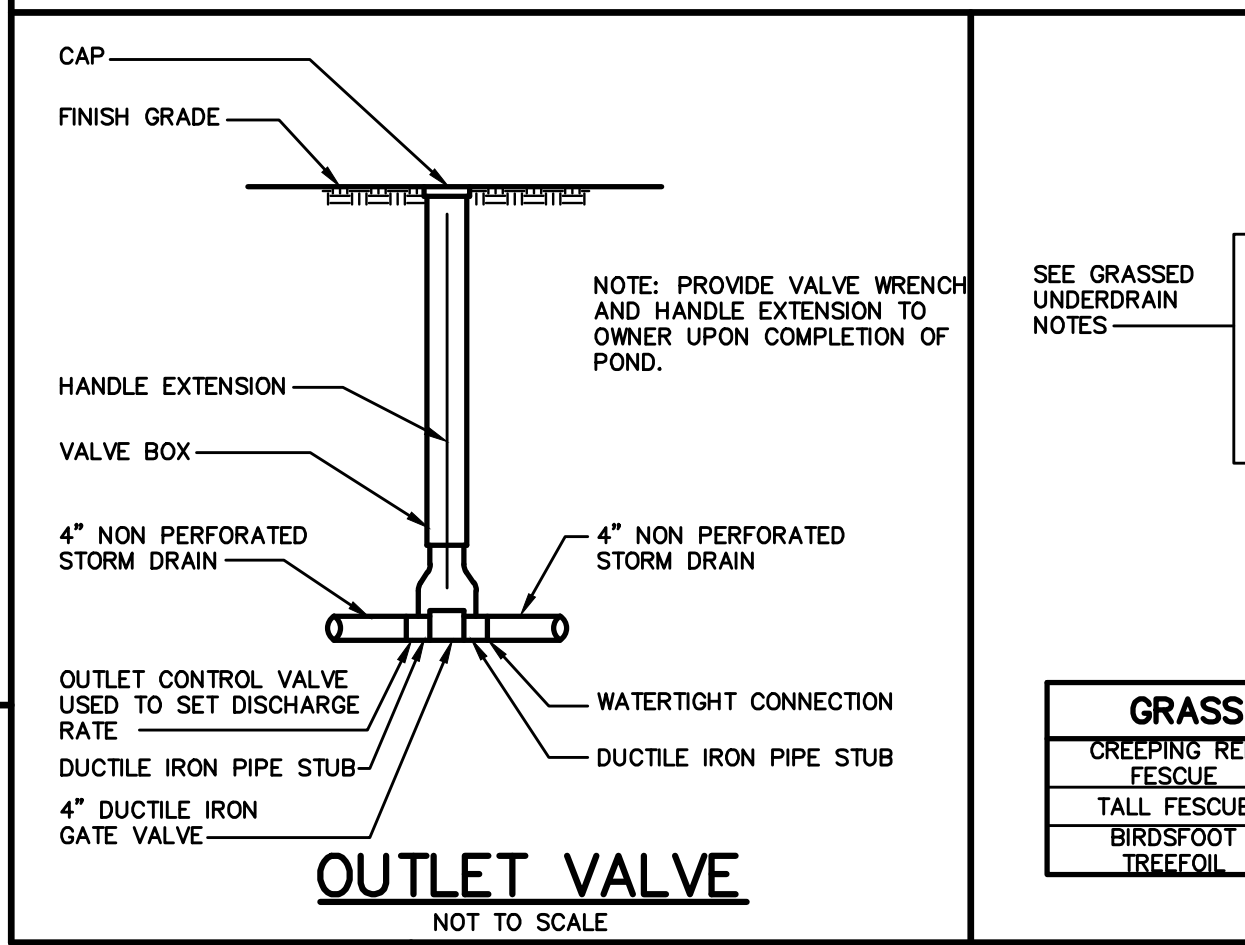
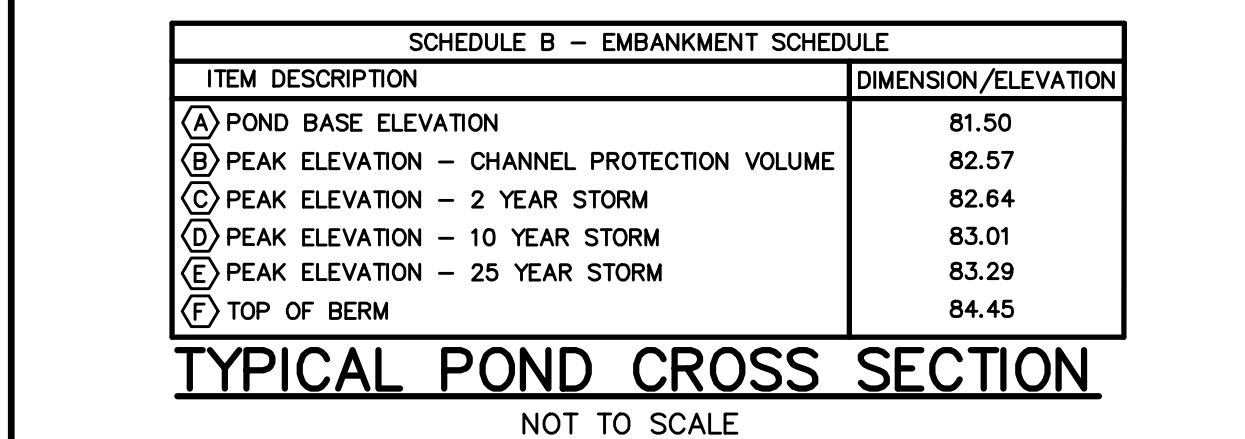
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 - ALL MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN WILL BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.

NOTE: CONTRACTOR SHALL NOTIFY PROJECT ENGINEER 48 HOURS PRIOR TO THE MILESTONES LISTED ABOVE TO ALLOW FOR INSPECTION.

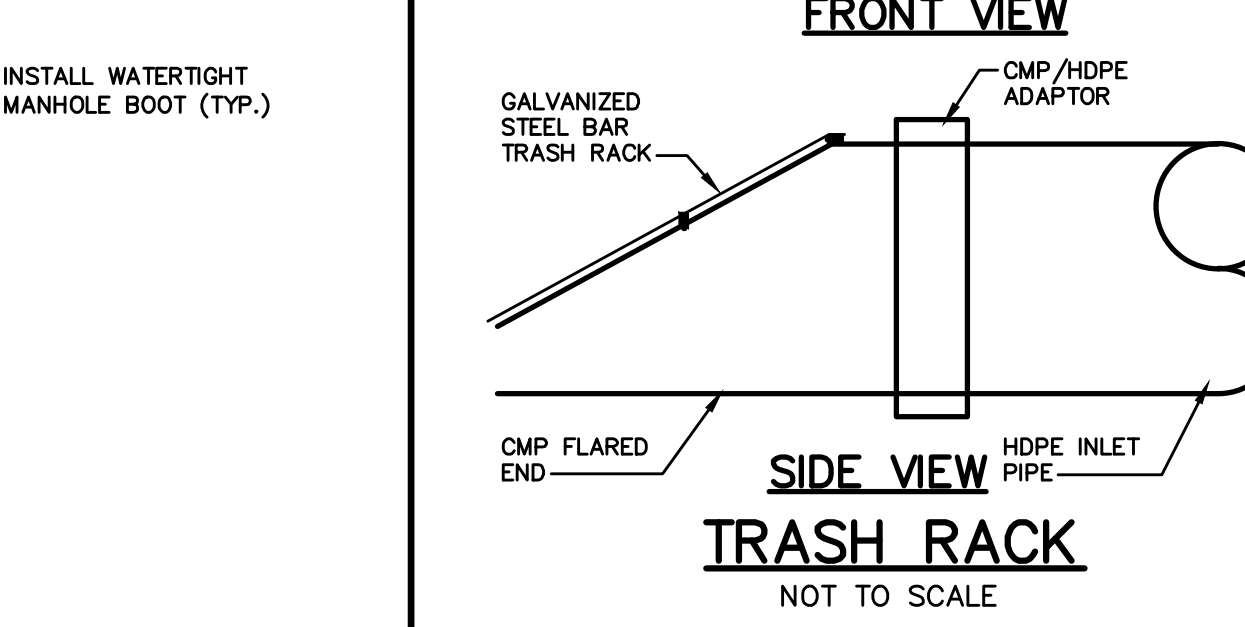
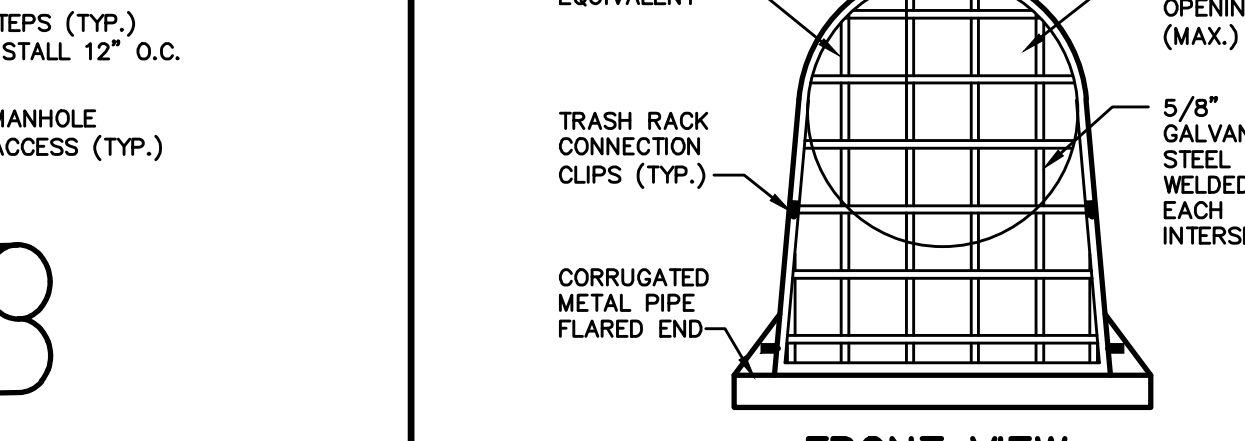


BERM
CONSTRUCTION
NOT TO SCALE

SCHEDULE B - EMBANKMENT SCHEDULE		
ITEM DESCRIPTION	DIMENSION/ELEVATION	
A POND BASE ELEVATION	81.50	
B PEAK ELEVATION - CHANNEL PROTECTION VOLUME	82.57	
C PEAK ELEVATION - 2 YEAR STORM	82.64	
D PEAK ELEVATION - 10 YEAR STORM	83.01	
E PEAK ELEVATION - 25 YEAR STORM	83.29	
F TOP OF BERM	84.45	



OUTLET VALVE
NOT TO SCALE



FRONT VIEW
SIDE VIEW
TRASH RACK
NOT TO SCALE

GRASSED UNDERDRAIN NOTES:

SOIL SPECIFICATIONS:

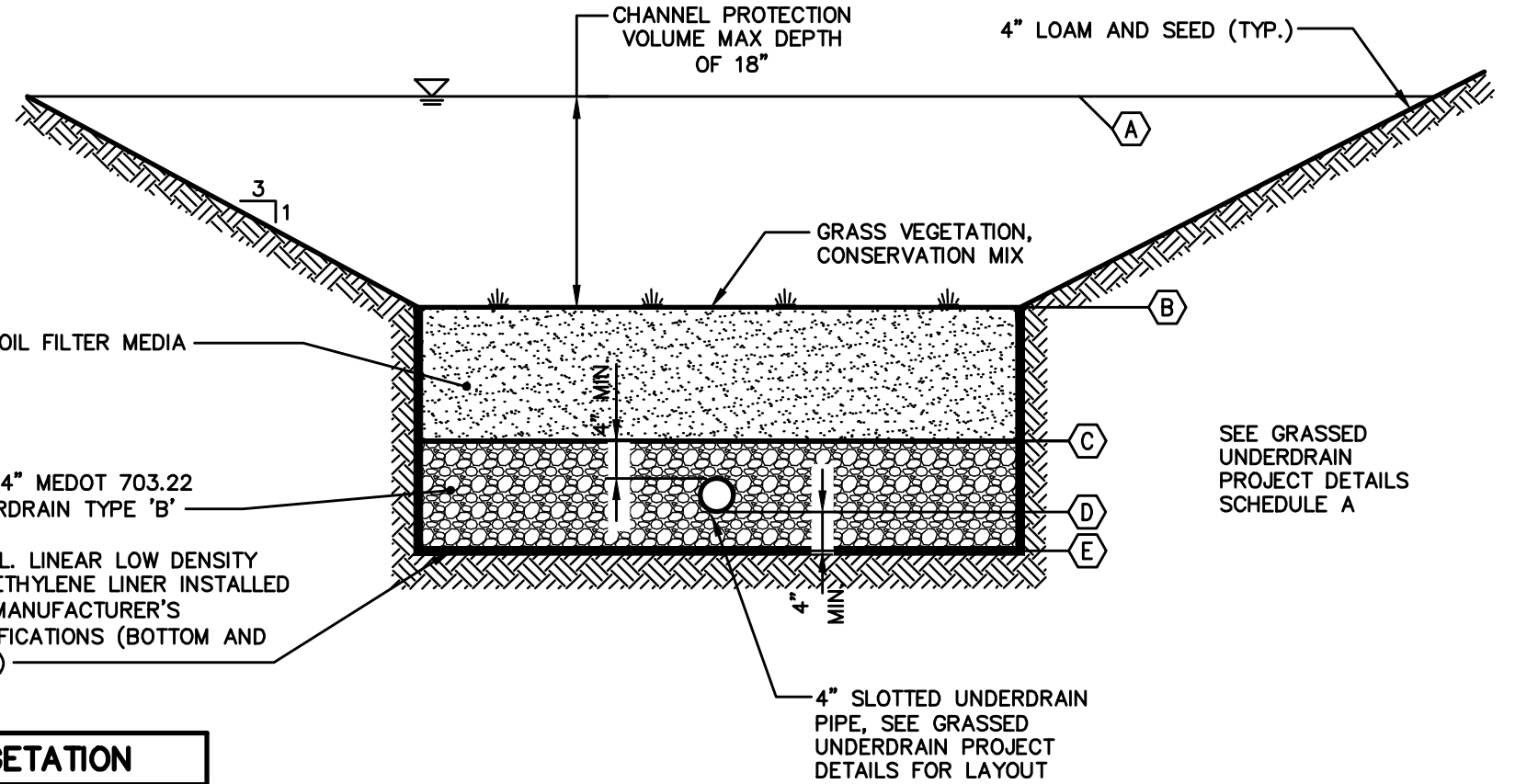
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 - 12" OF LOAMY COARSE SAND, SEE TABLE 1.
 - 2" LAYER OF TOPSOIL (SEE "C" BELOW) ROTOTILLED INTO THE LOAMY COARSE SAND LAYER.
 - 6" OF NON-CLAYEY, LOAMY TOPSOIL SUCH AS USDA SANDY LOAM TOPSOIL WITH 5-8% HUMIFIED ORGANIC MATTER. SUPERHUMUS OR EQUIVALENT 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:

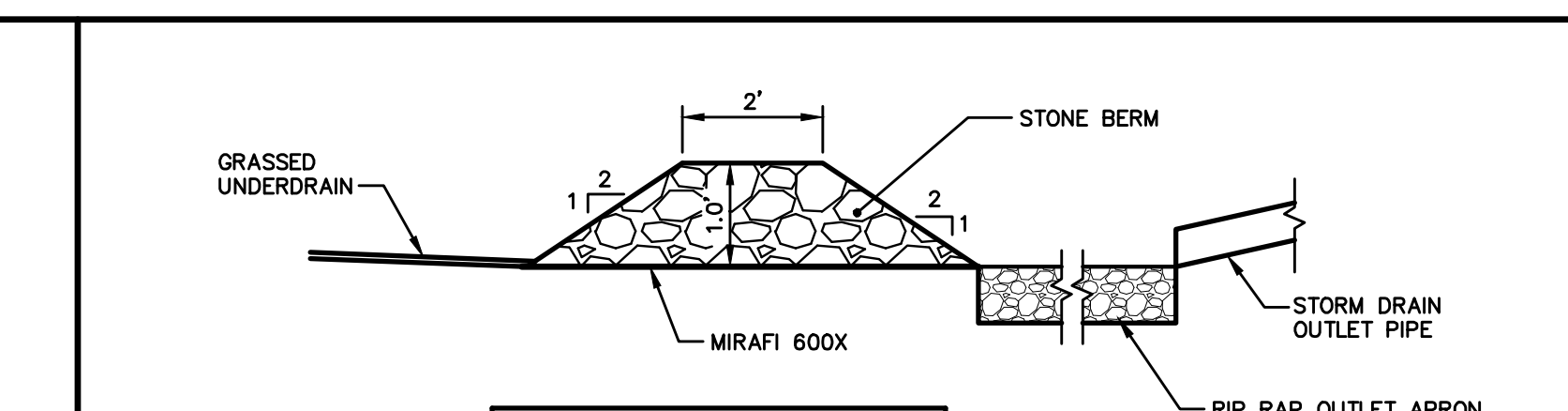
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- SUBMIT 75 LB. SAMPLE OF EACH TYPE OF MATERIAL: SUBMIT IN AIR TIGHT CONTAINERS TO PROJECT ENGINEER.
- THE FOLLOWING MATERIAL SHALL BE SUBMITTED:
 - SAND.
 - UNDERDRAIN BEDDING MATERIAL.
- PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 - STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES; 1996a ON EACH TYPE OF THE SAMPLE MATERIAL AND SUBMIT RESULTS TO PROJECT ENGINEER.
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CONSTRUCTION:

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- PERFORATED UNDERDRAIN PIPE SHALL BE 4" SLOTTED PIPE. SPACED 15 FEET ON CENTER MAXIMUM.
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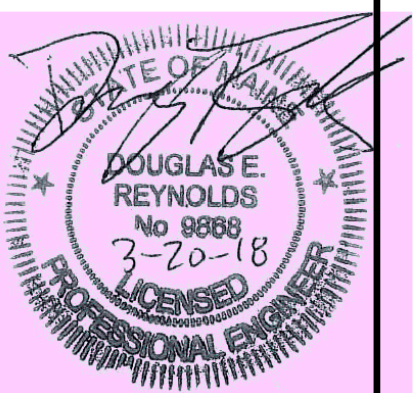
GRASS VEGETATION
NOT TO SCALE



BERM STONE SIZE		
SIEVE DESIGNATION (US CUSTOMARY)	PERCENT BY WEIGHT PASSING	
12 IN	100	
6 IN	84-100	
3 IN	68-83	
1 IN	42-55	
NO. 4	8-12	

GRASSED UNDERDRAIN
NOT TO SCALE

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



Rev.	Date	Revision

Design:	Draft:	Date:
JWA	CG	AUG 2016
Checked:	Scale:	NTS
AMP	Scale:	NTS
File Name:	801-06-DETAIL.dwg	

Design:	Draft:	Date:
JWA	CG	AUG 2016
Checked:	Scale:	NTS
AMP	Scale:	NTS
File Name:	801-06-DETAIL.dwg	



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Drawing Name:		
Grassed Underdrain Soil Filters #1 Plan & Details		
Project:		
Mixed Use Development 300 Allen Ave. Portland, Maine		
Client:		
ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106		

Drawing No.	
C405	

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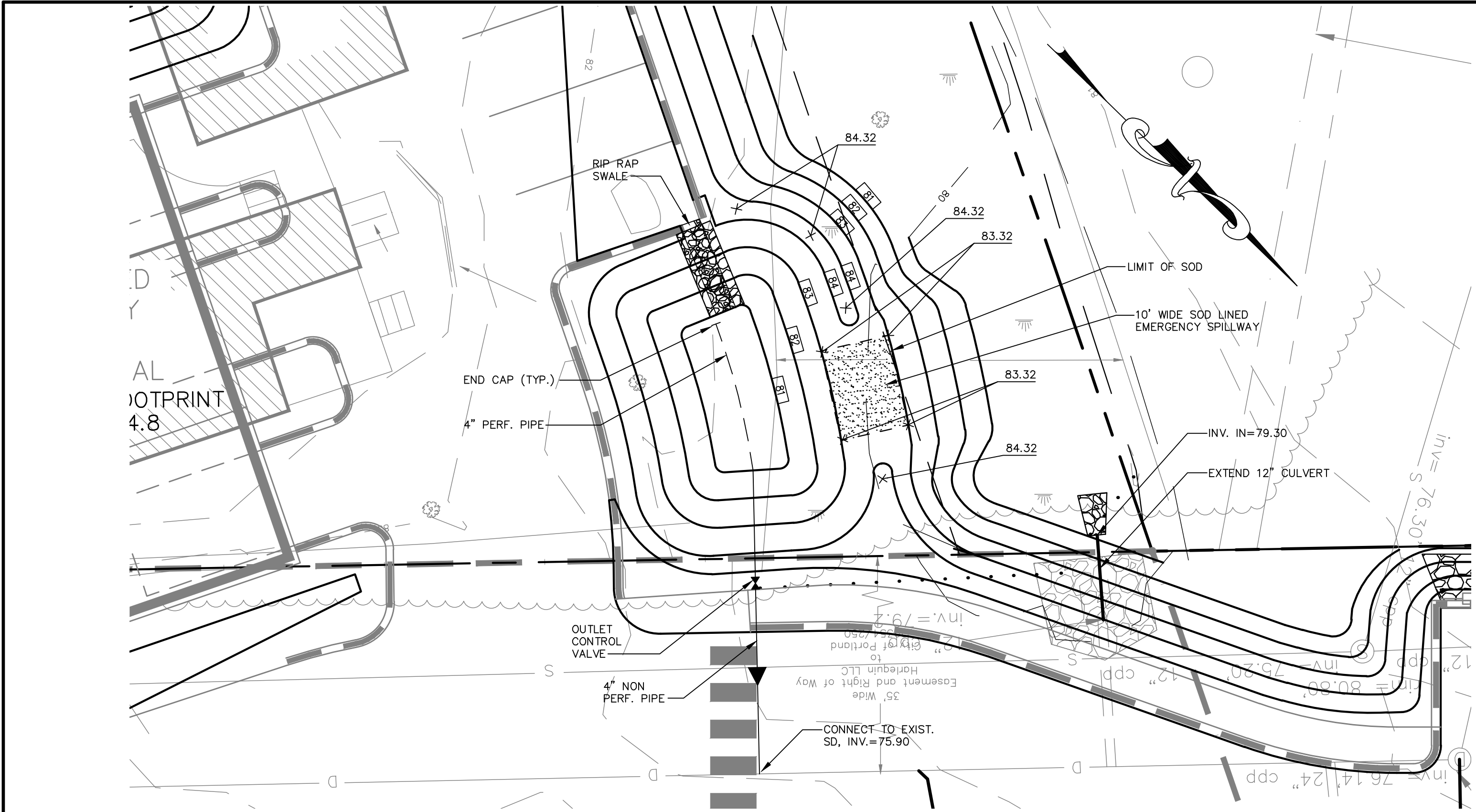


Table 1 Loamy Coarse Sand	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85-100
#20	70-100
#60	15-40
#200	8-15
#200 CLAY SIZE	<2.0

Table 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

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

SCHEDULE A	
ITEM DESCRIPTION	GRASSED UNDERDRAIN DIMENSION/ELEVATION
A CHANNEL PROTECTION VOLUME STAGE	82.02
B TOP SOIL FILTER	81.00
C TOP UNDERDRAIN BEDDING STONE	79.50
D PIPE INVERT: 4" PERF. UD	78.83
E BOTTOM UNDERDRAIN BEDDING	78.50
F BOTTOM OF CRUSHED STONE	77.50

GRASSED UNDERDRAIN SOIL FILTER #2 PROJECT DETAILS

1"=10'

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:

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- AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA.
- AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED.
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NOTES:

1. EMBANKMENT FOOTPRINT SHALL BE CLEARED OF TRASH/DEBRIS AND ANY ROCKS GREATER THAN 6", BE FREE OF ANY STANDING WATER, BE GRADED TO BE NO STEEPER THAN 1H:1V. BE SCARIFIED PRIOR TO EMBANKMENT FILL PLACEMENT, AND BE INSPECTED AND APPROVED BY THE PROJECT ENGINEER BEFORE FILL PLACEMENT BEGINS.

4" LOAM & SEED, MULCH & FERTILIZER

COMPACTED EMBANKMENT MATERIAL, MEETING MDOT SECTION 703.19 GRANULAR BORROW MODIFIED TO HAVE 100% PASSING THE 6" SIEVE. (COMPACTED TO 95% OF MODIFIED PROCTOR). SUBMIT EMBANKMENT MATERIAL GRADATION TO PROJECT ENGINEER PRIOR TO CONSTRUCTING EMBANKMENT.

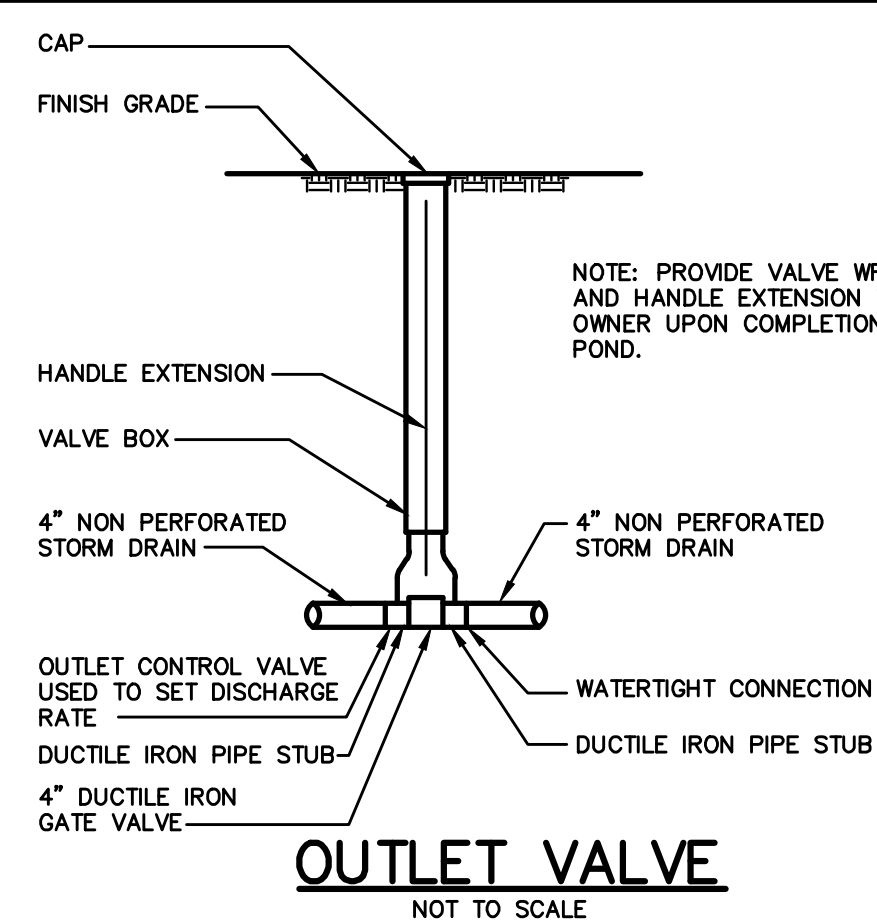
BERM CONSTRUCTION

NOT TO SCALE

SCHEDULE B - EMBANKMENT SCHEDULE	
ITEM DESCRIPTION	DIMENSION/ELEVATION
A) POND BASE ELEVATION	81.00
B) PEAK ELEVATION - CHANNEL PROTECTION VOLUME	82.02
C) PEAK ELEVATION - 2 YEAR STORM	82.24
D) PEAK ELEVATION - 10 YEAR STORM	82.88
E) PEAK ELEVATION - 25 YEAR STORM	83.32
F) TOP OF BERM	84.32

TYPICAL POND CROSS SECTION

NOT TO SCALE



OUTLET VALVE

NOT TO SCALE

SEE GRASSED UNDERDRAIN NOTES

GRASS VEGETATION	
CREeping RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
BIRD'SFOOT TREFOIL	8 LBS/ACRE

GRASSED UNDERDRAIN NOTES:

SOIL SPECIFICATIONS:

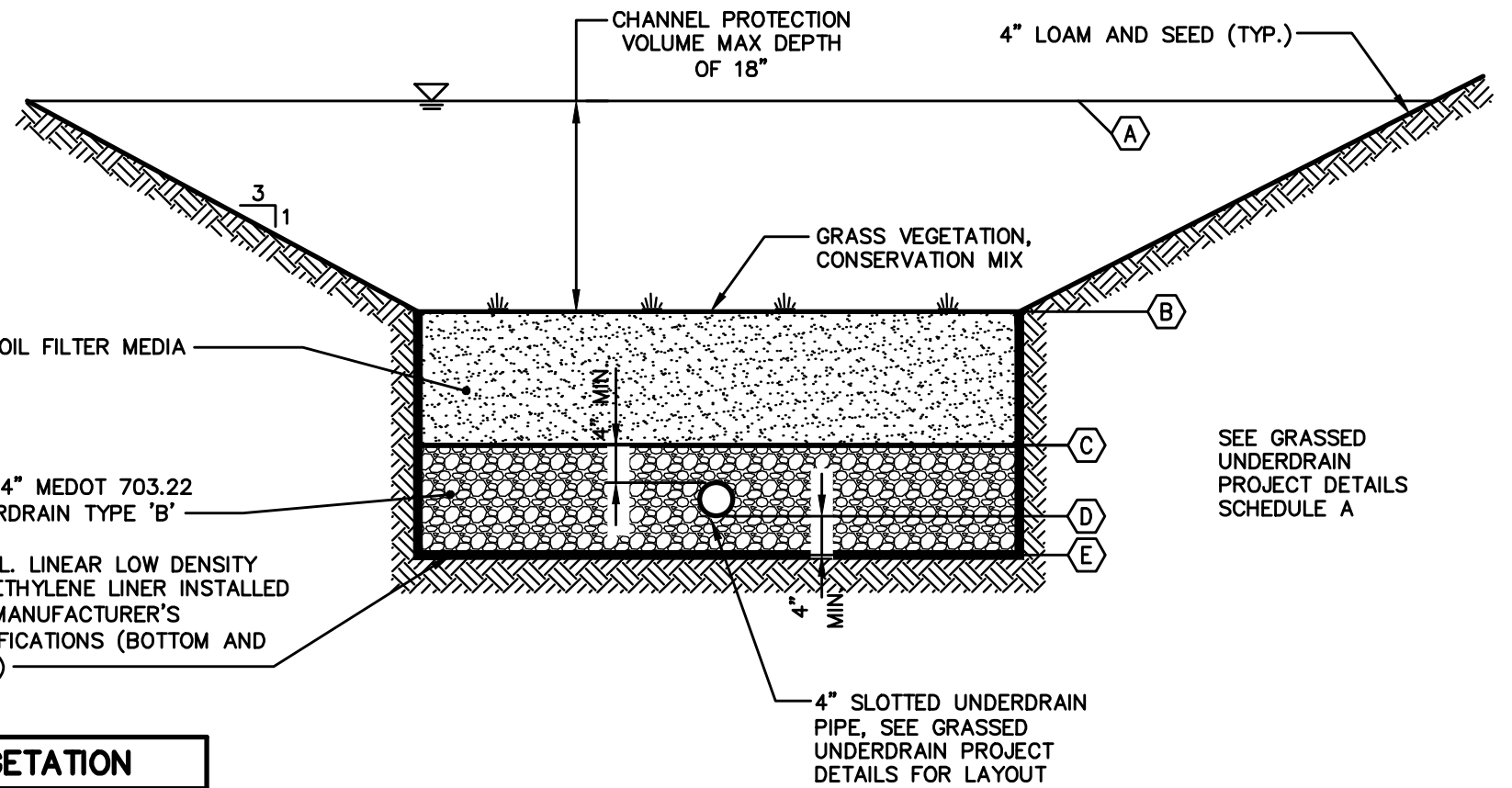
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SUBMITTALS:

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- 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.
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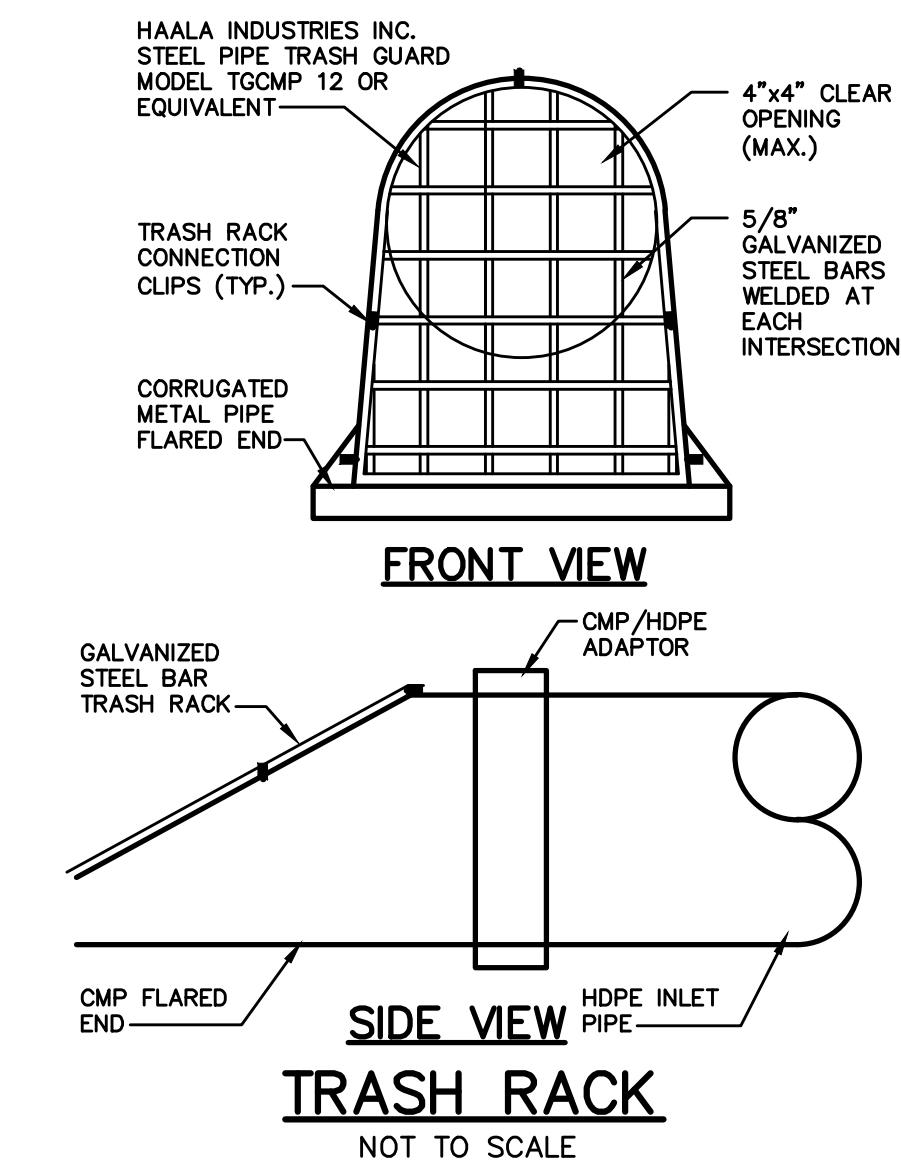
CONSTRUCTION:

- SOIL FILTER MEDIA AND UNDERDRAIN BEDDING MATERIAL SHALL BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR.
- PERFORATED UNDERDRAIN PIPE SHALL BE 4" SLOTTED 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.
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GRASSED UNDERDRAIN DETAIL

NOT TO SCALE

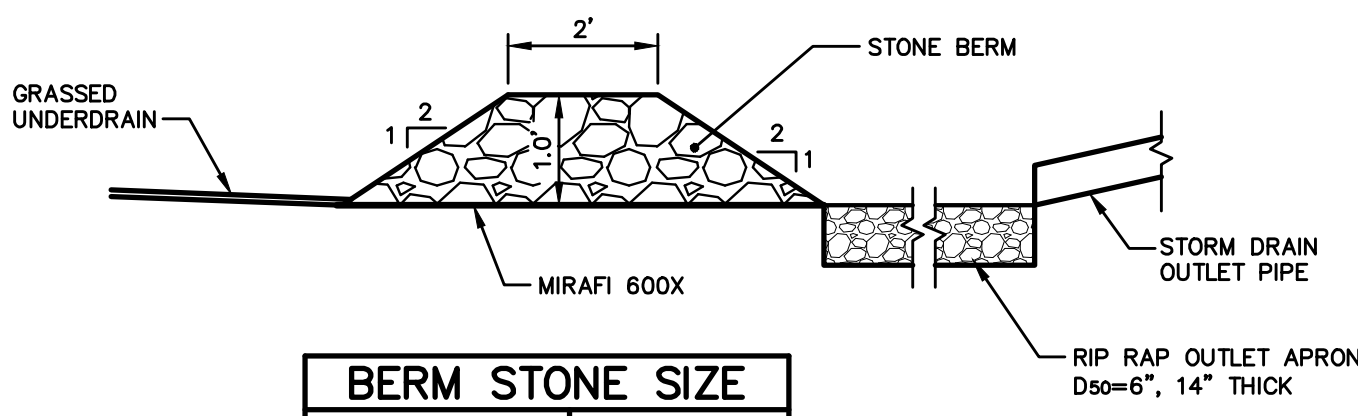


FRONT VIEW

SIDE VIEW

TRASH RACK

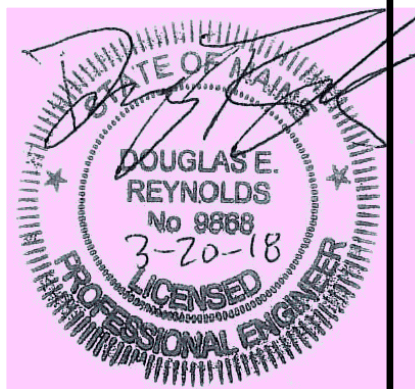
NOT TO SCALE



BERM STONE SIZE

SIEVE DESIGNATION (US CUSTOMARY)	PERCENT BY WEIGHT PASSING
12 IN	100
6 IN	84-100
3 IN	68-83
1 IN	42-55
NO. 4	8-12

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



Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

Design: JWA	Draft: CG	Date: AUG 2016
Checked: AMP	Scale: NTS	Job No.: 801.06
File Name: 801-06-DETAIL.dwg		
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Drawing Name:	Grassed Underdrain Soil Filters #2 Plan & Details
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.

C406

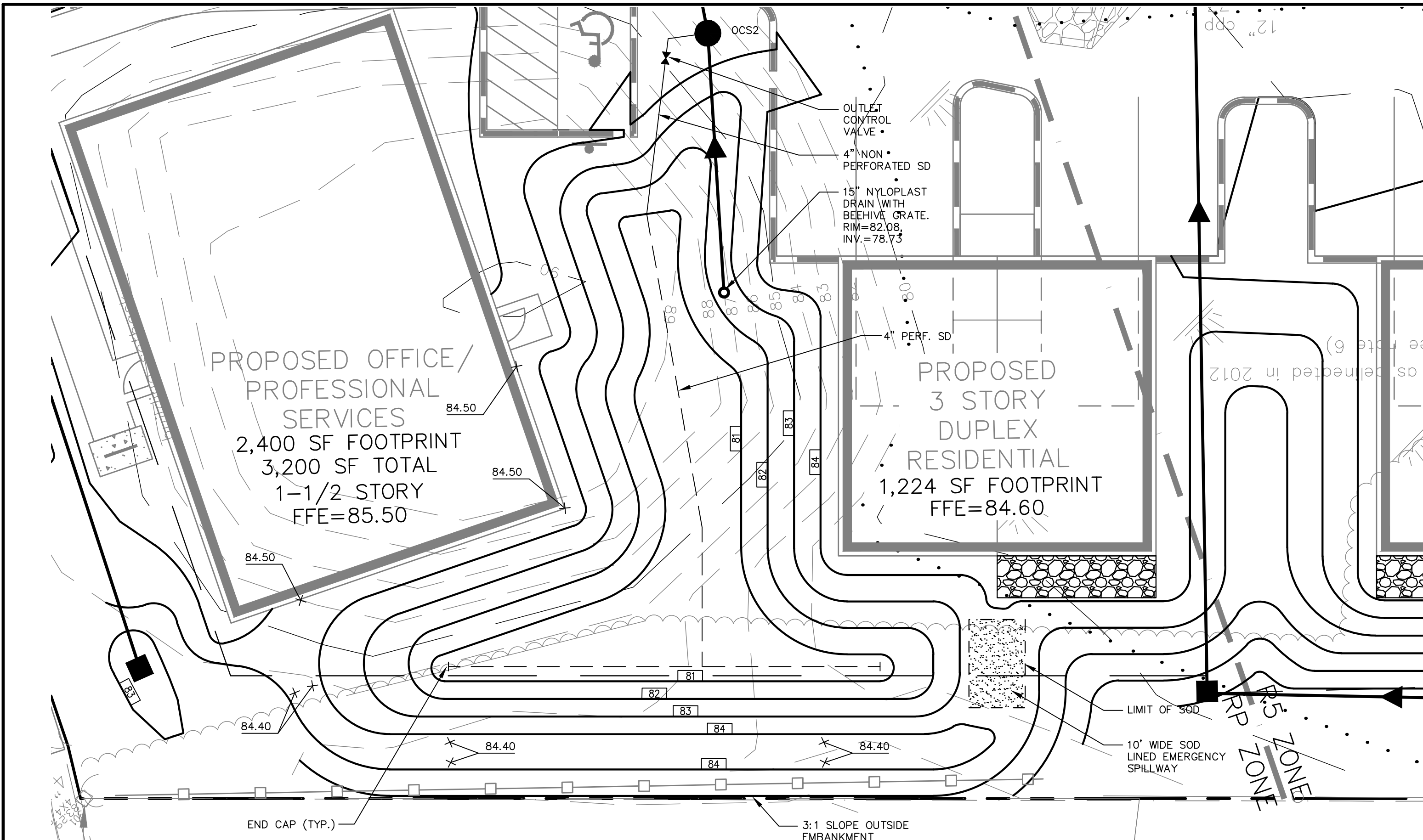


Table 1 Loamy Coarse Sand	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85-100
#20	70-100
#60	15-40
#200	8-15
#200 CLAY SIZE	<2.0

Table 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

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

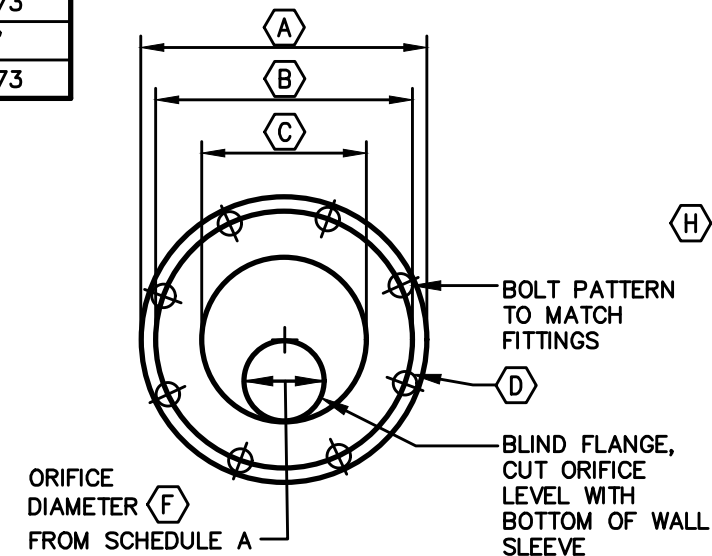
SCHEDULE A	
ITEM DESCRIPTION	GRASSED UNDERDRAIN DIMENSION/ELEVATION
A CHANNEL PROTECTION VOLUME STAGE	82.08
B TOP SOIL FILTER	81.00
C TOP UNDERDRAIN BEDDING STONE	79.50
D PIPE INVERT: 4" PERF. UD	78.83
E BOTTOM UNDERDRAIN BEDDING	78.50
F BOTTOM OF CRUSHED STONE	78.00

GRASSED UNDERDRAIN SOIL FILTER #3 PROJECT DETAILS

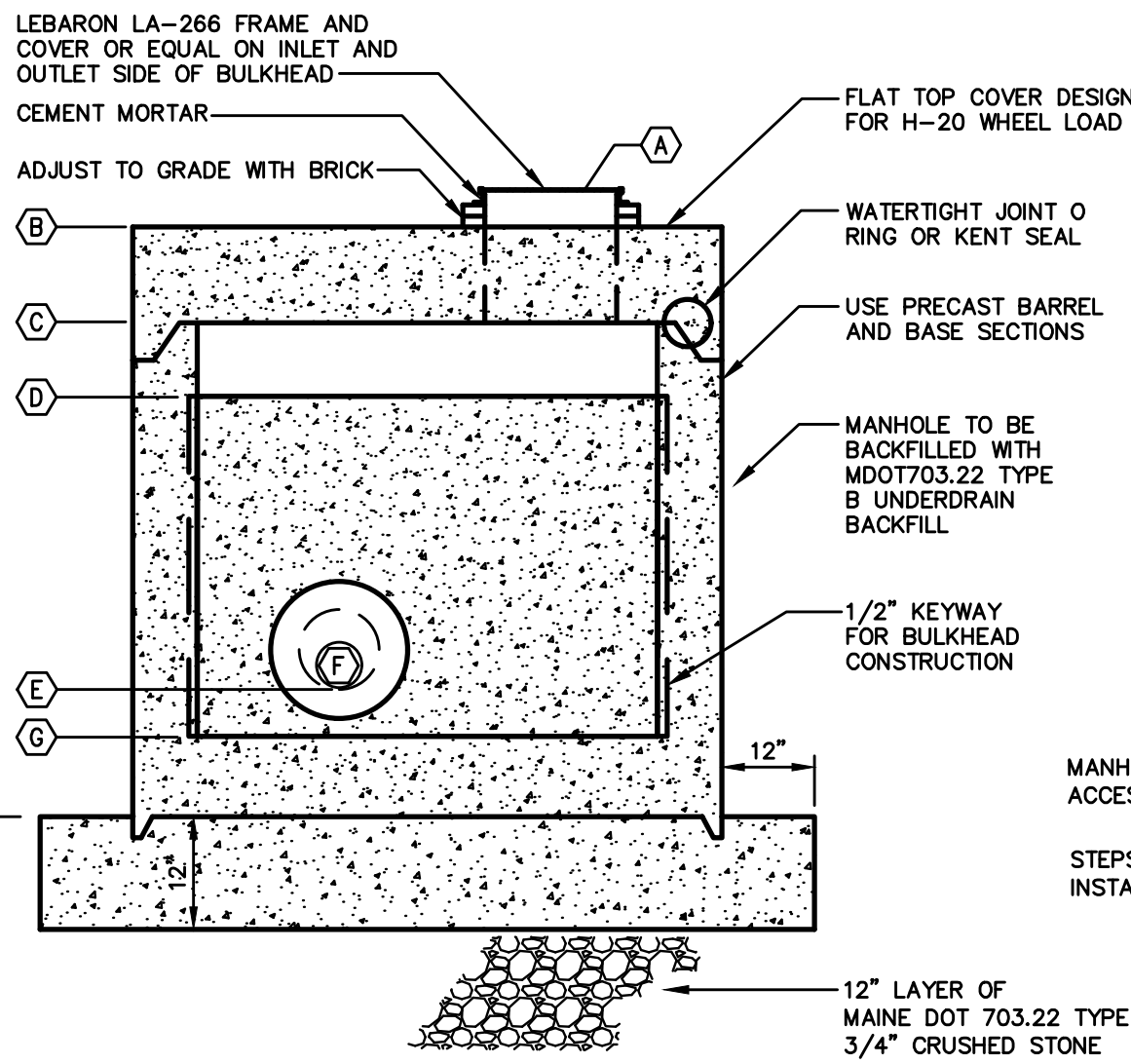
1"=10'

SCHEDULE A	
ITEM DESCRIPTION	DIMENSION/ELEVATION
A TOP OF MH COVER	OCS 2
B TOP OF STRUCTURE	84.47
C UNDERSIDE TOP SLAB	83.80
D TOP CONCRETE BULKHEAD	83.28
E ORIFICE INVERT	78.73
F ORIFICE DIAMETER	2.0"
G MANHOLE INVERT	77.73
H BOTTOM OF STRUCTURE	76.73
I PIPE DIAMETER	15"
J INVERT OUT	78.73
K PIPE DIAMETER	15"
L INVERT IN	78.73
M PIPE DIAMETER	4"
N INVERT IN	78.73

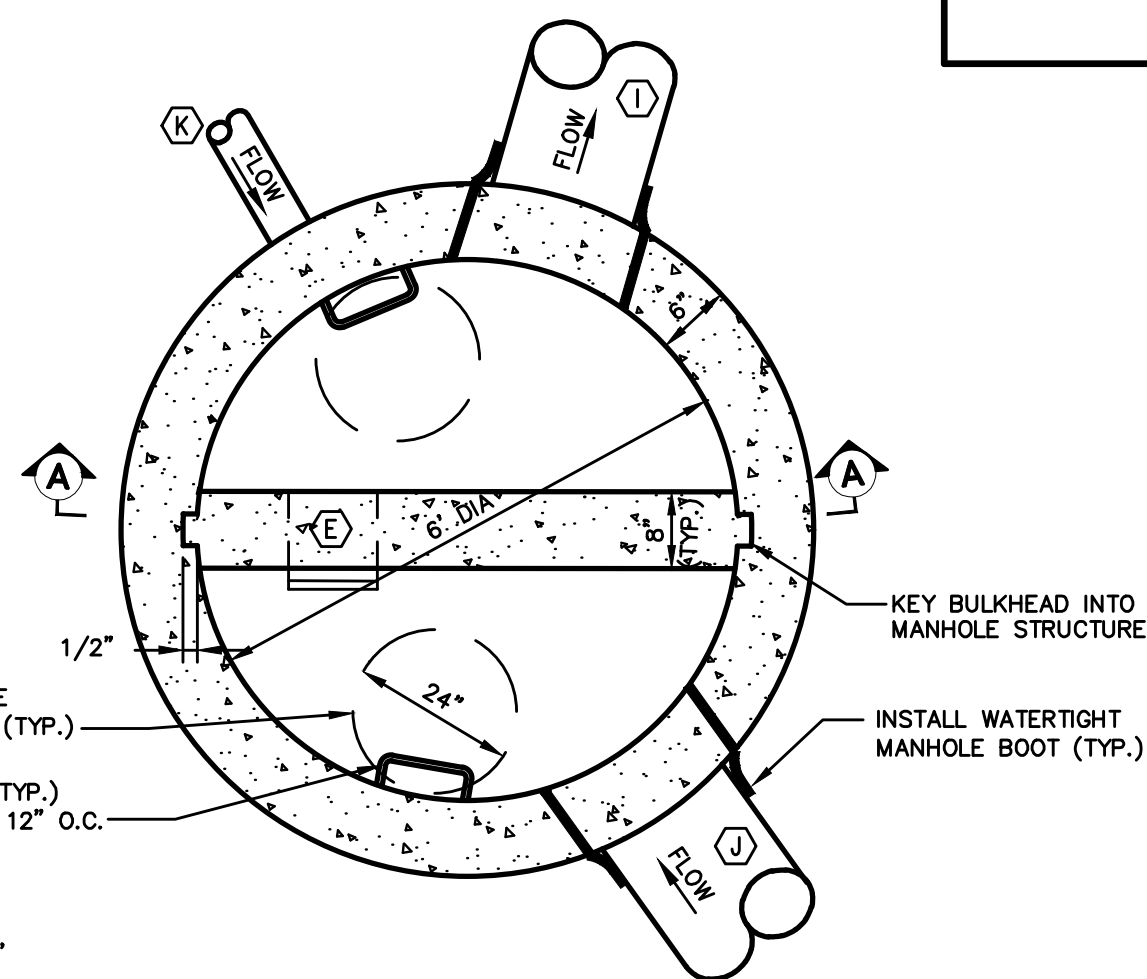
SCHEDULE B ORIFICE	
ITEM DESCRIPTION	DIMENSION/ELEVATION
A FLANGE O.D.	OCS 2
B BOLT CIRCLE	14.25"
C NOMINAL PIPE DIAMETER	10"
D BOLT HOLE DIAMETER	1.0"
E ECCENTRIC ORIFICE DIAMETER	2.0"



ORIFICE DETAIL 1
SEE SCHEDULE B
NOT TO SCALE



SECTION A-A
OUTLET CONTROL
STRUCTURE 1 (OCS2)
SEE SCHEDULE A



PLAN VIEW
6' OUTLET CONTROL
STRUCTURE 1 (OCS2)
SEE SCHEDULE A
NOT TO SCALE

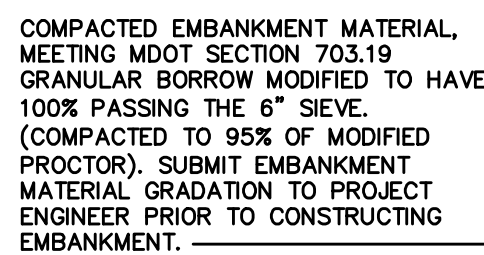
CONSTRUCTION OVERSIGHT

- 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 SEEDING.
 - 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.

NOTES:

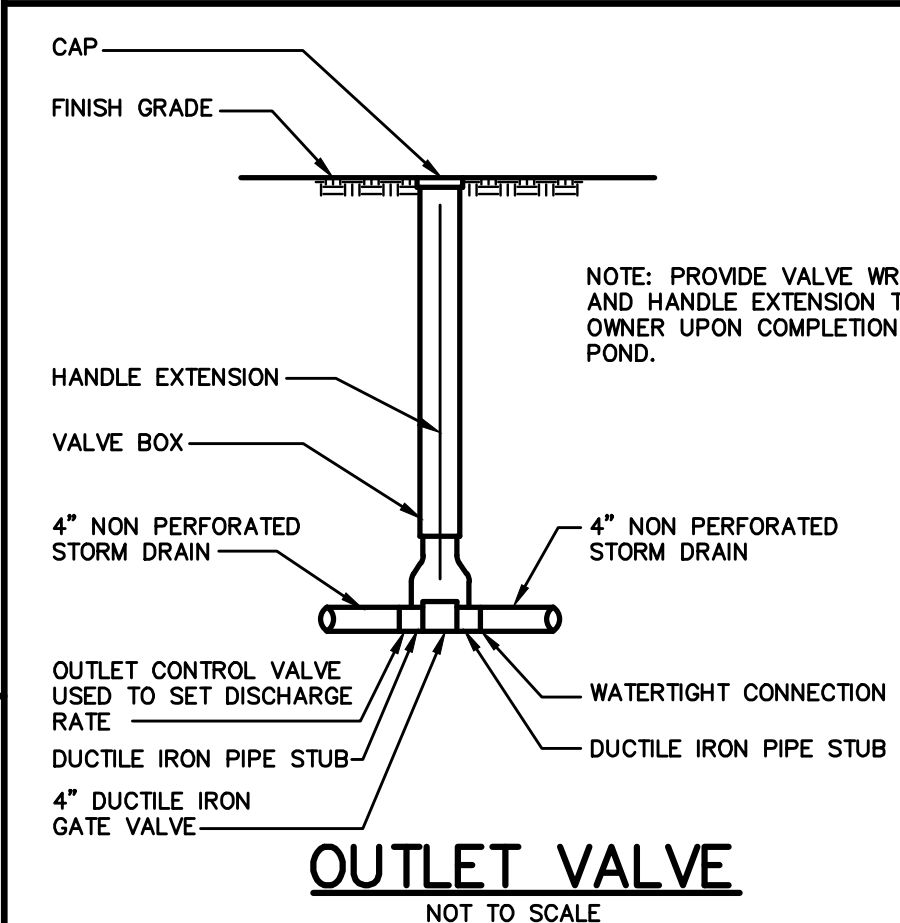
- EMBANKMENT FOOTPRINT SHALL BE CLEARED OF TRASH/DEBRIS AND ANY ROCKS GREATER THAN 6", BE FREE OF ANY STANDING WATER, BE GRADED TO BE NO STEEPER THAN 1H:1V, BE SCARIFIED PRIOR TO EMBANKMENT FILL PLACEMENT, AND BE INSPECTED AND APPROVED BY THE PROJECT ENGINEER BEFORE FILL PLACEMENT BEGINS.



BERM
CONSTRUCTION
NOT TO SCALE

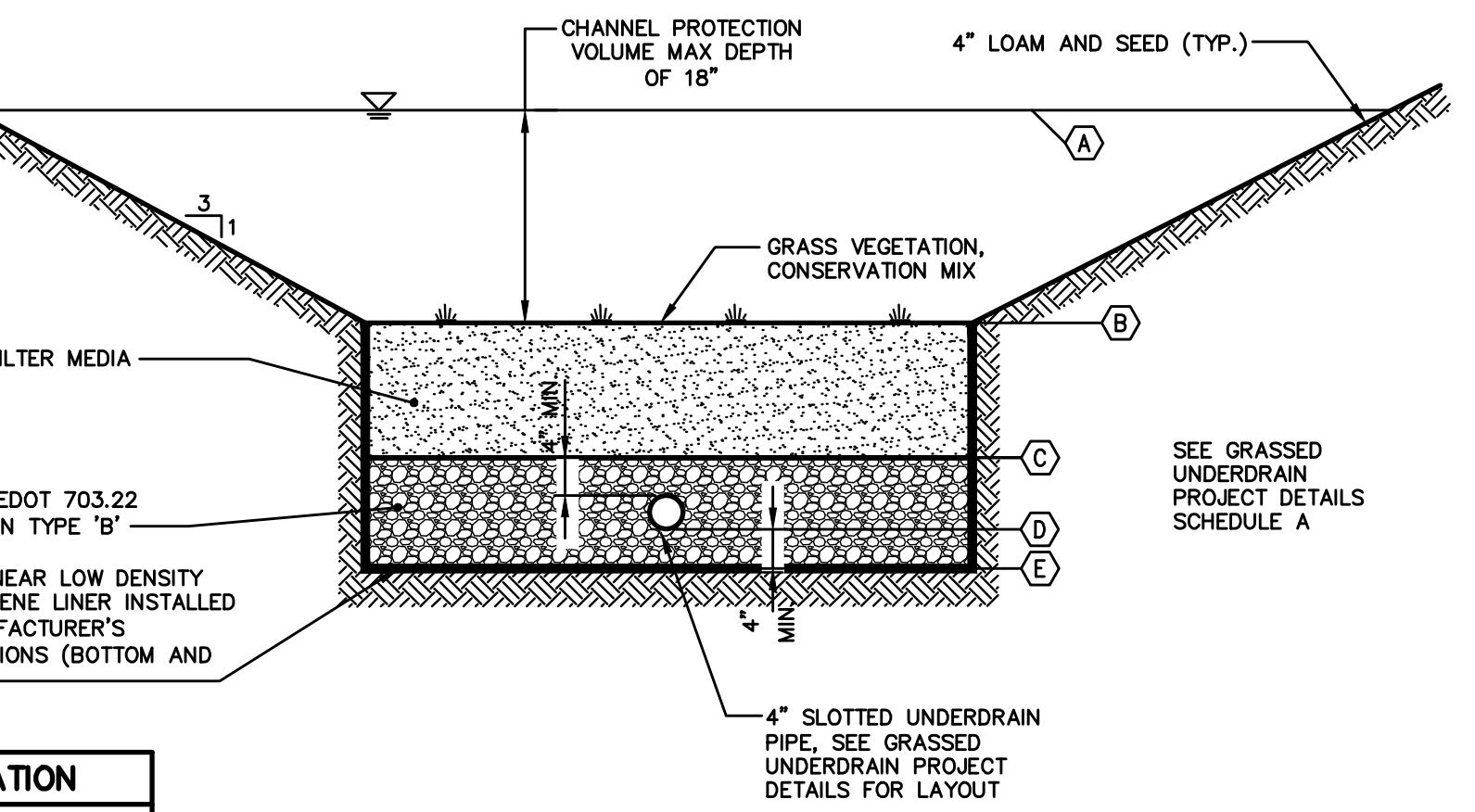
SCHEDULE B - EMBANKMENT SCHEDULE	
ITEM DESCRIPTION	DIMENSION/ELEVATION
A POND BASE ELEVATION	81.00
B PEAK ELEVATION - CHANNEL PROTECTION VOLUME	82.08
C PEAK ELEVATION - 2 YEAR STORM	82.31
D PEAK ELEVATION - 10 YEAR STORM	82.90
E PEAK ELEVATION - 25 YEAR STORM	83.28
F TOP OF BERM	84.40

TYPICAL POND CROSS SECTION
NOT TO SCALE

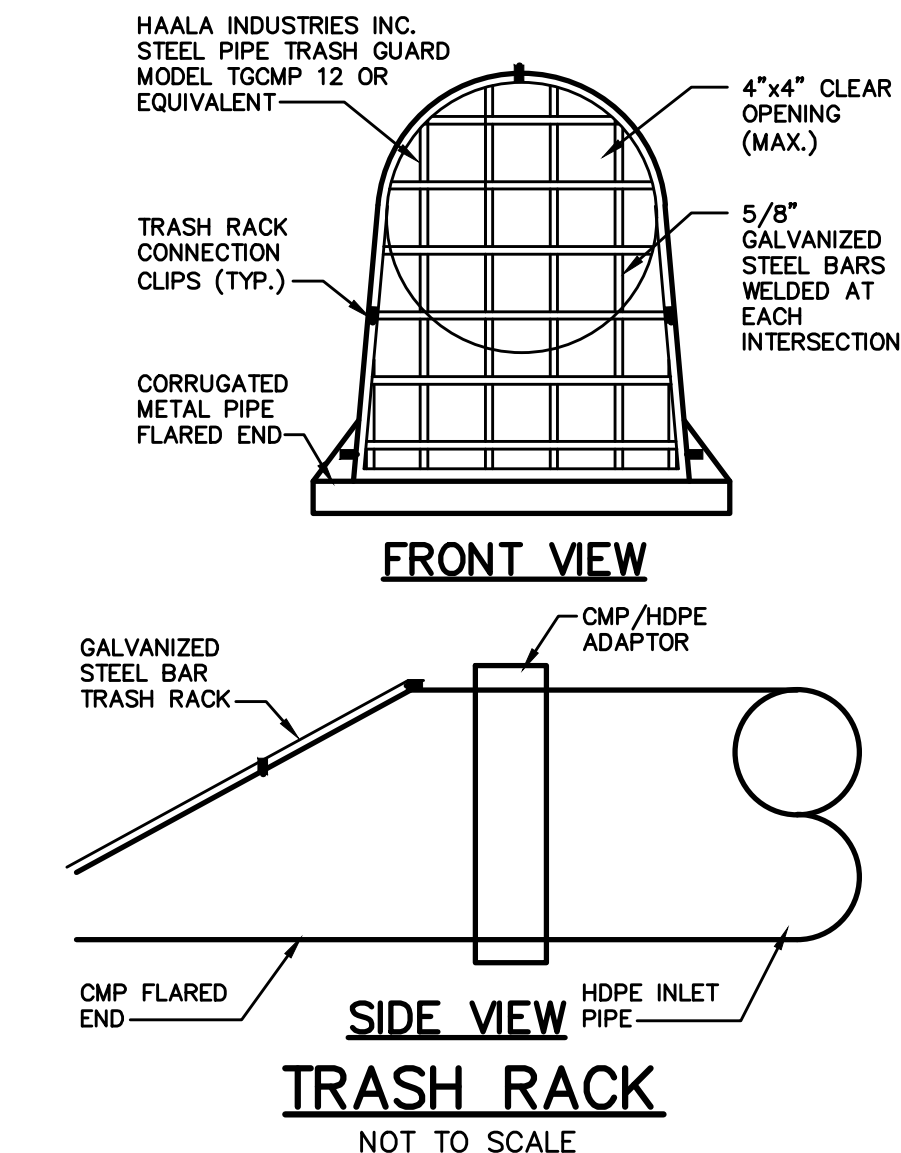


OUTLET VALVE
NOT TO SCALE

GRASS VEGETATION	
CREeping RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
BIRDFOOT TREFOIL	8 LBS/ACRE

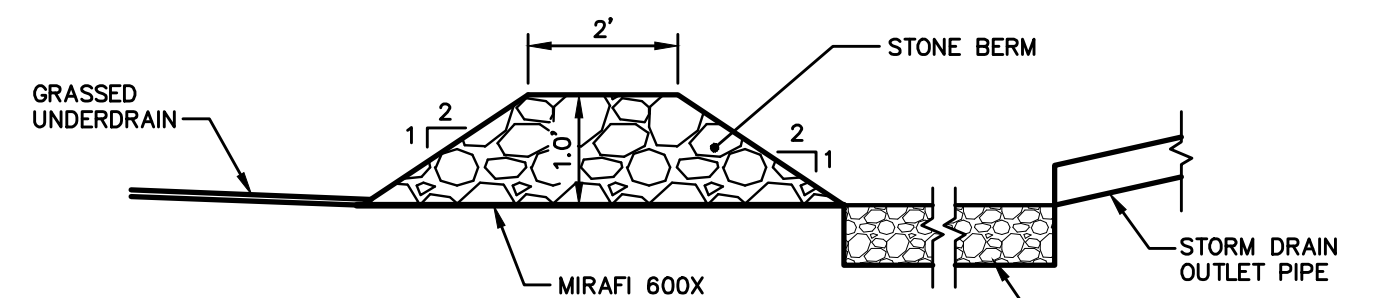


GRASSED UNDERDRAIN DETAIL
NOT TO SCALE



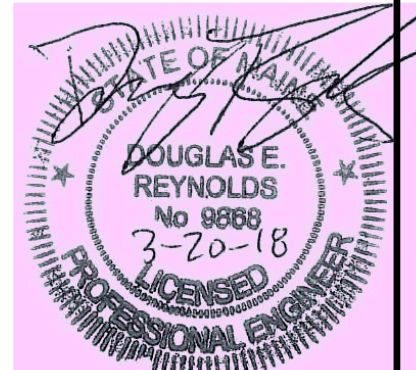
FRONT VIEW

SIDE VIEW
TRASH RACK
NOT TO SCALE



BERM STONE SIZE	
SIEVE DESIGNATION (US CUSTOMARY)	PERCENT BY WEIGHT PASSING
12 IN	100
6 IN	84-100
3 IN	68-83
1 IN	42-55
NO. 4	8-12

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



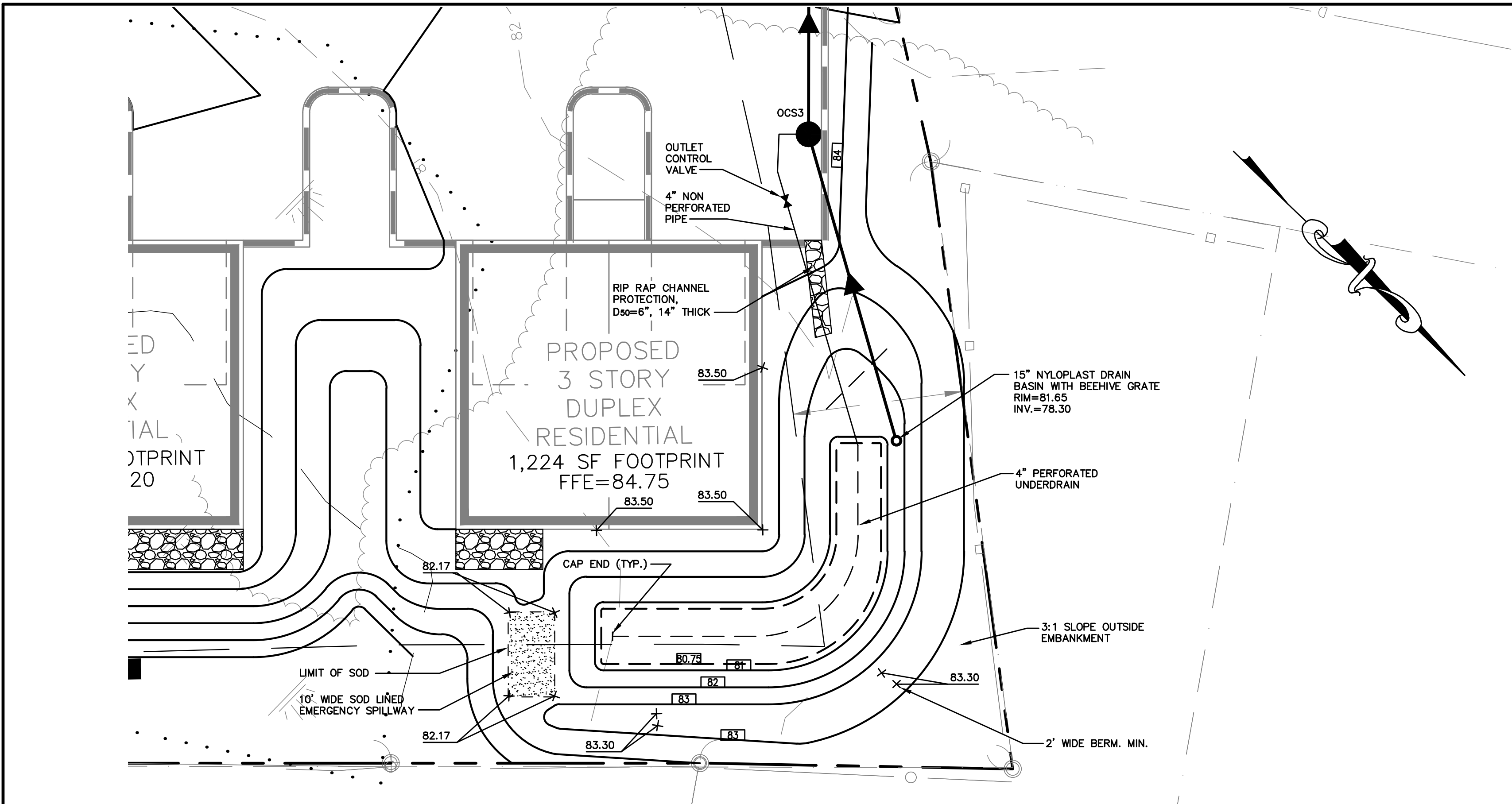
Design: JWA	Draft: CG	Date: AUG 2018
Checked: AMP	Scale: NTS	Job No.: 801.06
File Name: 801-06-DETAIL.dwg		
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Drawing Name:	Grassed Underdrain Soil Filter #3 Plan & Details
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.	C407
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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:
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 - 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.

NOTES:

- EMBANKMENT FOOTPRINT SHALL BE CLEARED OF TRASH/DEBRIS AND ANY ROCKS GREATER THAN 6", BE FREE OF ANY STANDING WATER, BE GRADED TO BE NO STEEPER THAN 1H:1V, BE SCARIFIED PRIOR TO EMBANKMENT FILL PLACEMENT, AND BE INSPECTED AND APPROVED BY THE PROJECT ENGINEER BEFORE FILL PLACEMENT BEGINS.

4" LOAM & SEED, MULCH & FERTILIZER

COMPACTED EMBANKMENT MATERIAL, MEETING MDOT SECTION 703.19 GRANULAR BORROW MODIFIED TO HAVE 100% PASSING THE 6" SIEVE. (COMPACTED TO 95% OF MODIFIED PROCTOR). SUBMIT EMBANKMENT MATERIAL GRADATION TO PROJECT ENGINEER PRIOR TO CONSTRUCTING EMBANKMENT.

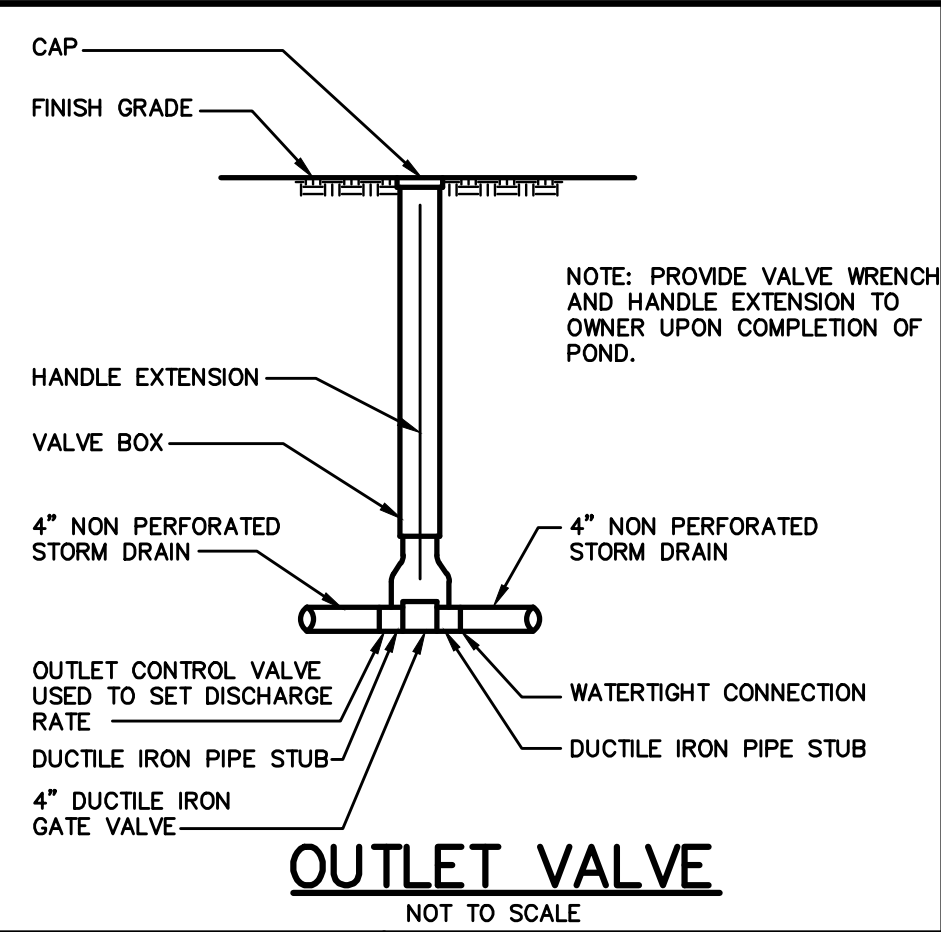
BERM CONSTRUCTION

NOT TO SCALE

SCHEDULE B - EMBANKMENT SCHEDULE	
ITEM DESCRIPTION	DIMENSION/ELEVATION
(A) POND BASE ELEVATION	80.75
(B) PEAK ELEVATION - CHANNEL PROTECTION VOLUME	81.65
(C) PEAK ELEVATION - 2 YEAR STORM	81.69
(D) PEAK ELEVATION - 10 YEAR STORM	81.94
(E) PEAK ELEVATION - 25 YEAR STORM	82.18
(F) TOP OF BERM	83.30

TYPICAL POND CROSS SECTION

NOT TO SCALE

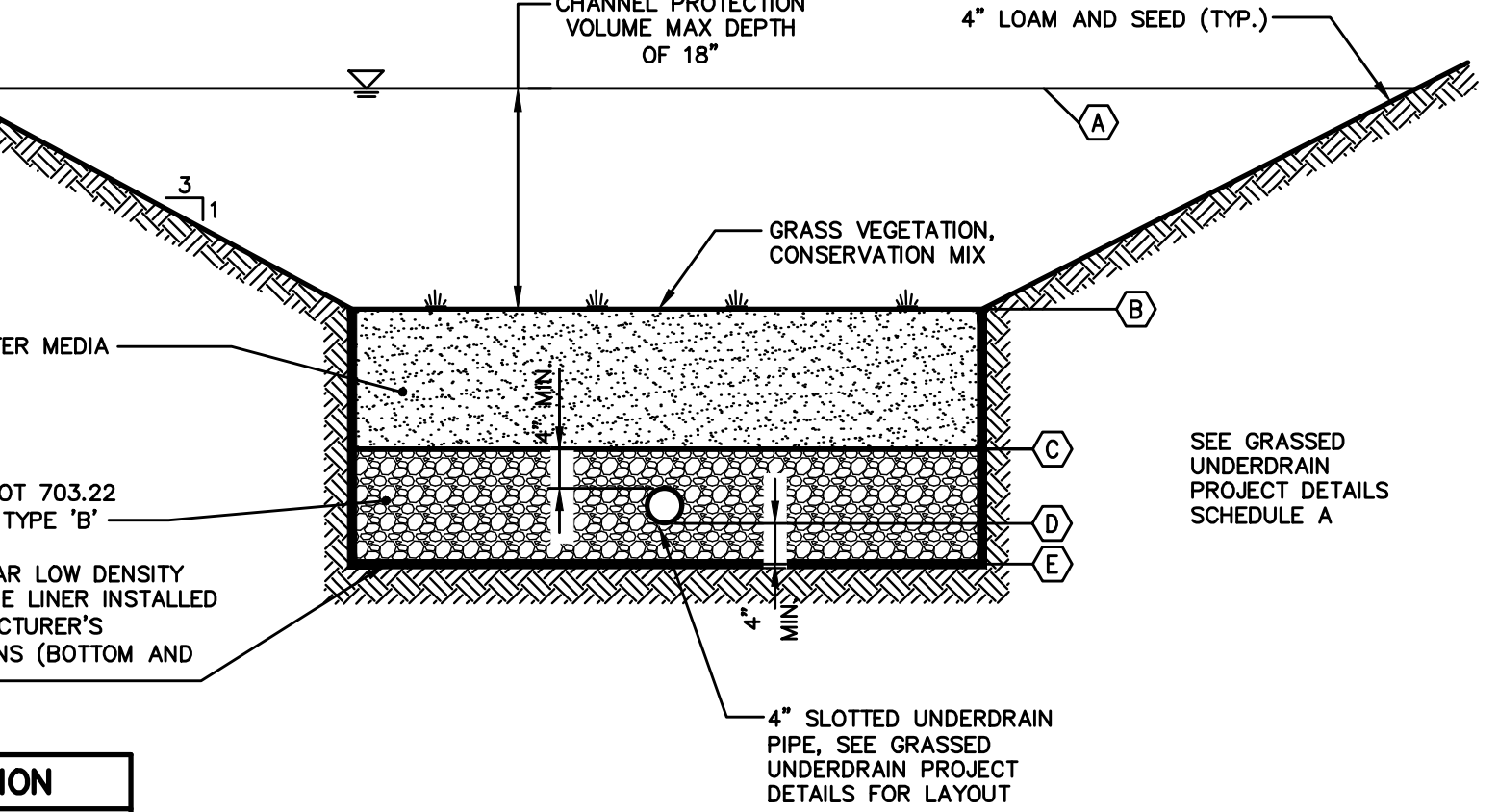


OUTLET VALVE

NOT TO SCALE

SEE GRASSED UNDERDRAIN NOTES

GRASS VEGETATION	
CREeping RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
BIRD'SFOOT TREFOIL	8 LBS/ACRE



GRASSED UNDERDRAIN DETAIL

NOT TO SCALE

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 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

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

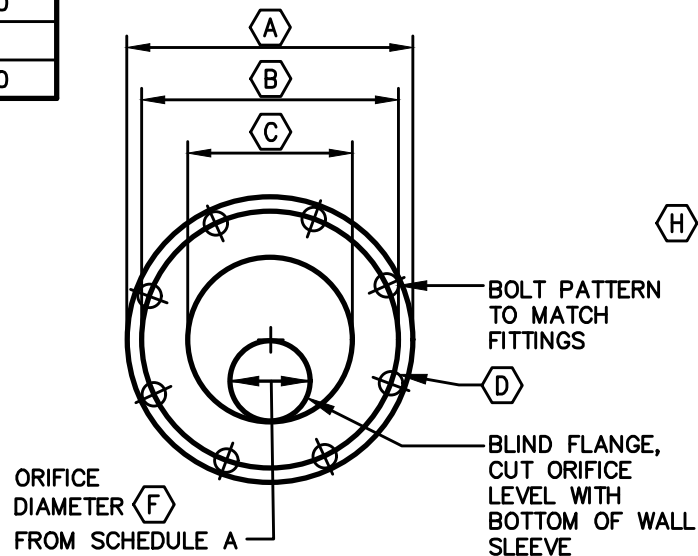
SCHEDULE A	
ITEM DESCRIPTION	GRASSED UNDERDRAIN DIMENSION/ELEVATION
A CHANNEL PROTECTION VOLUME STAGE	81.65
B TOP SOIL FILTER	80.75
C TOP UNDERDRAIN BEDDING STONE	79.25
D PIPE INVERT: 4" PERF. UD	78.58
E BOTTOM UNDERDRAIN BEDDING	78.25
F BOTTOM OF CRUSHED STONE	77.75

GRASSED UNDERDRAIN SOIL FILTER #4 PROJECT DETAILS

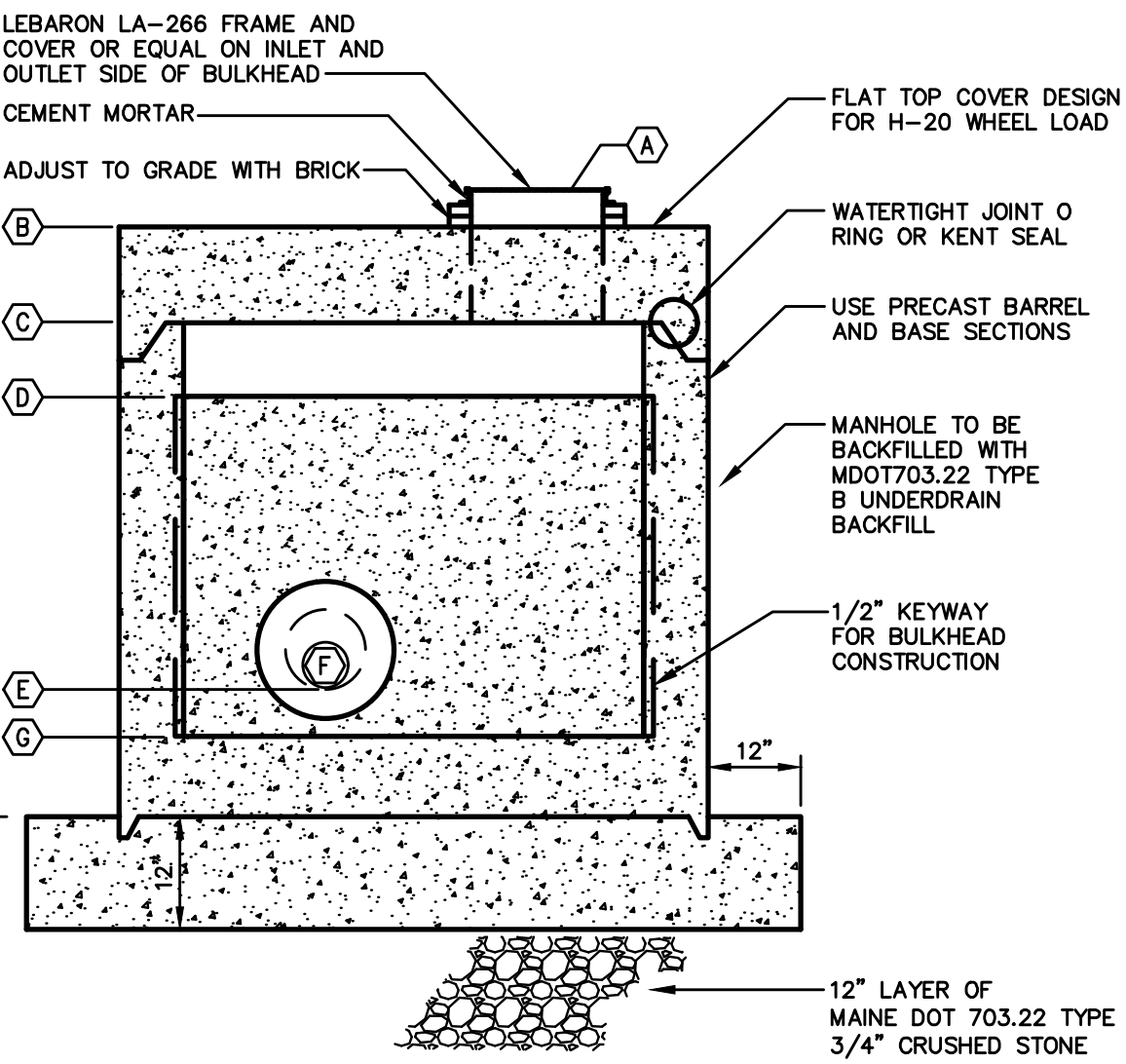
1"=10'

SCHEDULE A	
ITEM DESCRIPTION	DIMENSION/ELEVATION
A TOP OF MH COVER	OCS 3
B TOP OF STRUCTURE	84.33
C UNDERSIDE TOP SLAB	83.16
D TOP CONCRETE BULKHEAD	82.18
E ORIFICE INVERT	78.30
F ORIFICE DIAMETER	2.0"
G MANHOLE INVERT	77.20
H BOTTOM OF STRUCTURE	76.20
I PIPE DIAMETER	15"
J INVERT OUT	78.20
K PIPE DIAMETER	15"
L INVERT IN	78.30
M PIPE DIAMETER	4"
N INVERT IN	78.20

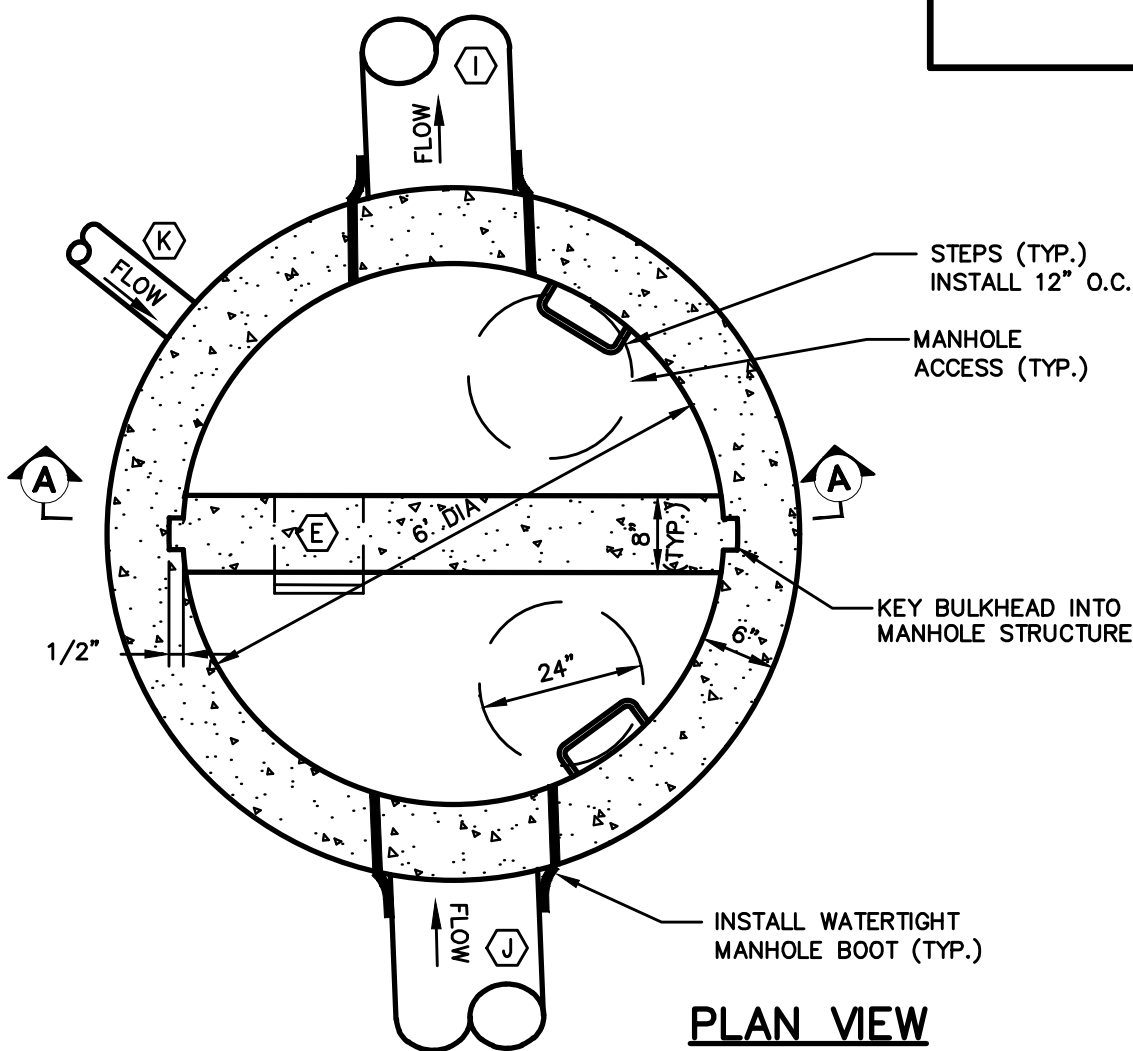
SCHEDULE B ORIFICE	
ITEM DESCRIPTION	DIMENSION/ELEVATION
A FLANGE O.D.	OCS 3
B BOLT CIRCLE	16"
C NOMINAL PIPE DIAMETER	14.25"
D BOLT HOLE DIAMETER	10"
E ECCENTRIC ORIFICE DIAMETER	2.0"



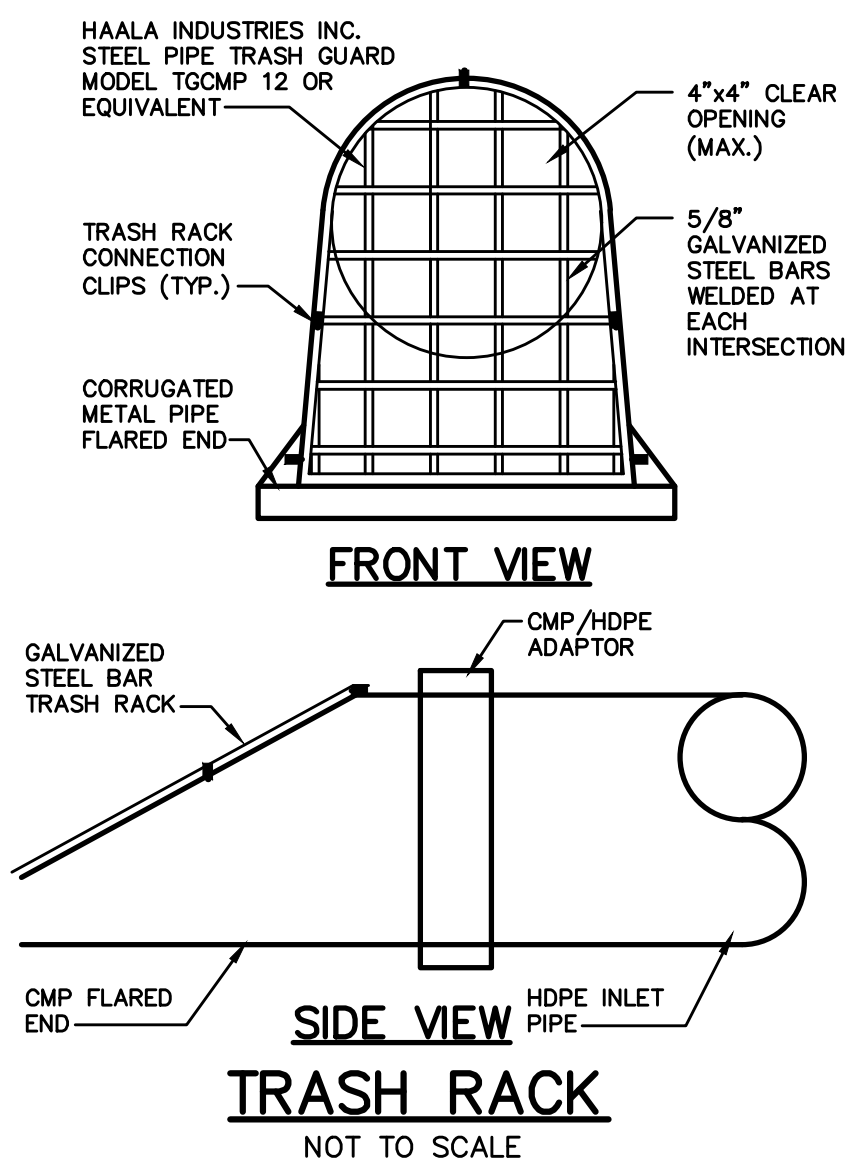
ORIFICE DETAIL 1
SEE SCHEDULE B
NOT TO SCALE



OUTLET CONTROL
STRUCTURE 1 (OCS3)
SEE SCHEDULE A



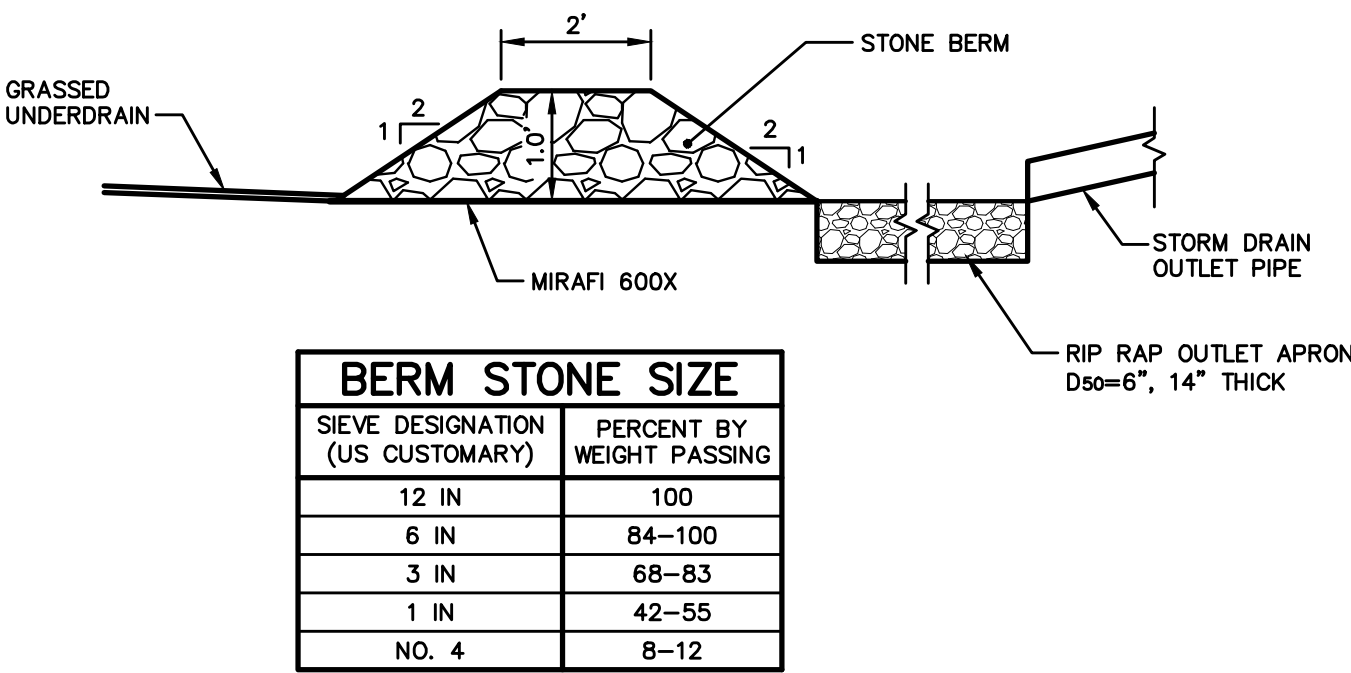
6' OUTLET CONTROL
STRUCTURE 1 (OCS3)
SEE SCHEDULE A
NOT TO SCALE



FRONT VIEW

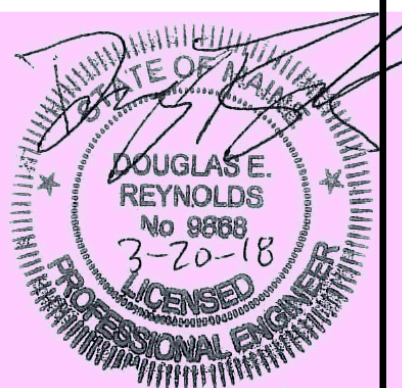
SIDE VIEW
TRASH RACK

NOT TO SCALE



BERM STONE SIZE	
SIEVE DESIGNATION (US CUSTOMARY)	PERCENT BY WEIGHT PASSING
12 IN	100
6 IN	84-100
3 IN	68-83
1 IN	42-55
NO. 4	8-12

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



Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

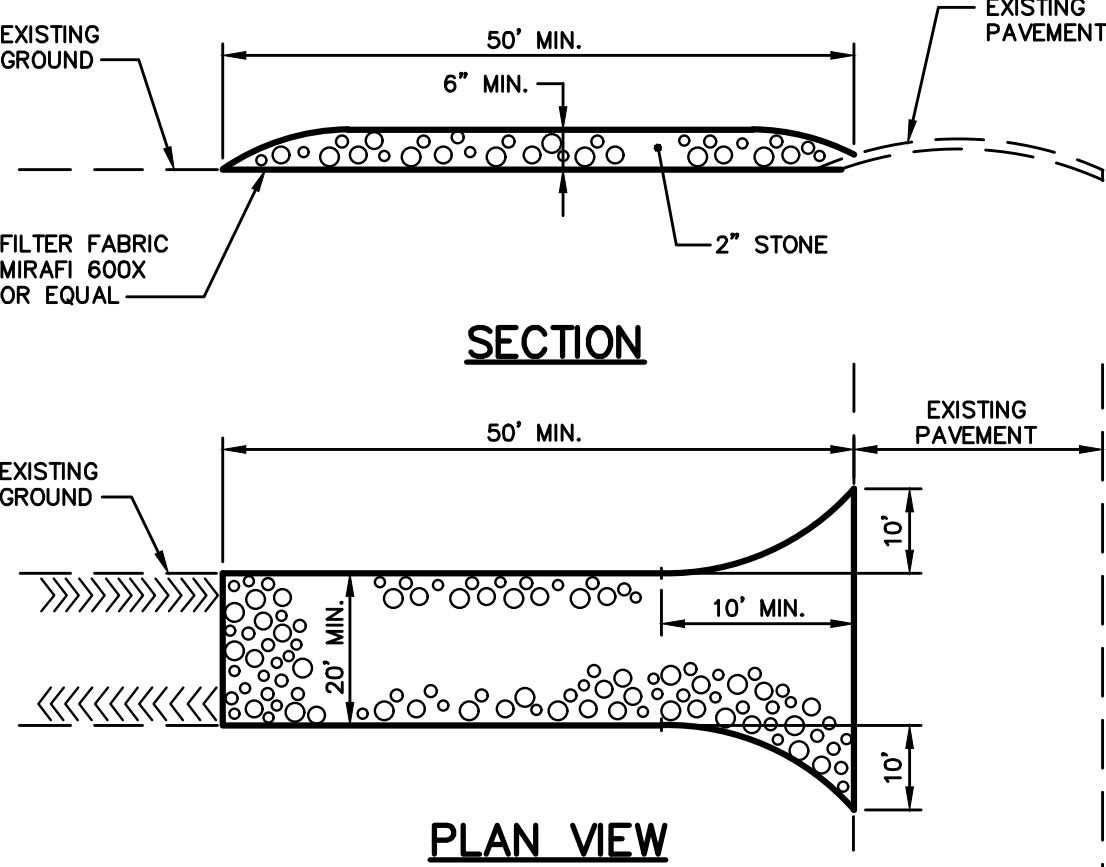
Design: JWA	Draft: CG	Date: AUG 2016
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LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By



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Drawing Name:	Grassed Underdrain Soil Filter #4 Plan & Details
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.	C408
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NOT TO SCALE



SILT FENCE	
SILT FENCE REINFORCEMENT	MAXIMUM SPACING "A"
NONE	6"
WIRE REINFORCEMENT 14 GAUGE, 6" MESH	10'

SECTION B-B

SECTION A-A

NOT TO SCALE



SPACING BETWEEN CHECK DAMS

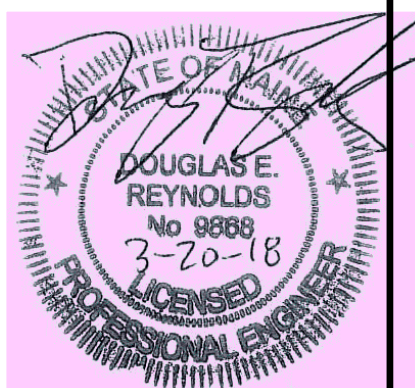
S_o (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

NOT TO SCALE

-
- Diagram illustrating the required structure for wood waste compost/bark. The pile is shown with a height of 2' and a width of 4'. The material is labeled "WOOD WASTE COMPOST/BARK". The pile is situated on a "BERM" which is required to be "KEYED A MIN. OF 4" INTO EXISTING GROUND". The area to the right of the berm is labeled "EXISTING GROUND" and "RUNOFF". The slope of the ground to the right is labeled "FILL SLOPE".

NOT TO SCALE

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



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 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, LOGS, 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 FROM ALLEN 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 INFLOWING 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 THEN 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 8:1 AND EQUAL TO OR FLATTER THAN 2:1, WHICH ARE TO BE REVEGETATED, SHALL RECEIVE CURLEX BLANKETS BY AMERICAN EXCELSON 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, 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 DENUDED AREAS THAT ARE WITHIN 50 FEET OF AN UNDISTURBED WETLAND, WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN A BUILDING PAD, PARKING AREA, OR ACCESS DRIVE, SUBBASE AREA, SHALL RECEIVE MULCH OR EROSION CONTROL MESH FABRIC WITHIN 48 HOURS OF INITIAL DISTURBANCE OF SOIL. ALL AREAS WITHIN 50 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 DENUDED AREAS, SHALL BE COVERED WITH HAY MULCH OR EROSION CONTROL MIX, APPLIED AT 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. ALLEN 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 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. STORM DRAIN CATCH BASIN INLET PROTECTION SHALL BE PROVIDED THROUGH THE USE OF STONE SEDIMENT BARRIERS OR APPROVED SEDIMENT BAGS (SUCH AS SILT SACKS). INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE BARRIERS SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRS MADE AS NECESSARY. SEDIMENT SHALL BE REMOVED AND THE BARRIER RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ½ THE DESIGN DEPTH OF THE BARRIER. THE BARRIER SHALL BE REMOVED WHEN THE TRIBUTARY DRAINAGE AREA HAS BEEN STABILIZED.
12. WATER AND/OR CALCIUM CHLORIDE SHALL BE FURNISHED AND APPLIED IN ACCORDANCE WITH MDOT SPECIFICATIONS – SECTION 637 – DUST CONTROL.
13. 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 50 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.
3. CATCH BASINS SHALL BE PROVIDED WITH SEDIMENT SUMPS AND INLET HOODS (THE SNOOT) FOR ALL OUTLET PIPES THAT ARE 18" IN DIAMETER OR LESS.

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 MIXED USE DEVELOPMENT AND RELATED INFRASTRUCTURE WILL COMMENCE IN SUMMER 2018 AND BE COMPLETED BY WINTER OF 2018.

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 ALLEN AVENUE.
2. INSTALL PERIMETER SILT FENCE AND/OR WOOD WASTE BERMS PRIOR TO GRUBBING RESPECTIVE AREAS.
3. CLEAR AND GRUB SITE. INSTALL STONE CHECK DAMS AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.
4. FOUNDATION PREPARATION AREA SHALL BE EXCAVATED FOR INSTALLATION OF THE BUILDING FOOTINGS. BUILDING WORK WILL BE ON GOING THROUGH THE REMAINDER OF THE PROJECT.
5. COMMENCE INSTALLATION OF DRAINAGE APPURTENANCES.
6. COMMENCE CONSTRUCTION OF THE BIOTRETIONMENT POND AND GRASSED UNDERRAIN SOIL FILTERS. THE FILTER MEDIA SHALL NOT BE INSTALLED UNTIL THE TRIBUTARY AREA HAS BEEN STABILIZED.
7. COMMENCE EARTHWORK AND GRADING TO SUBGRADE.
8. COMMENCE INSTALLATION OF WATER AND SEWER LINES.
9. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
10. COMPLETE INSTALLATION OF UNDERGROUND UTILITIES TO WITHIN 5' OF THE BUILDINGS.
11. INSTALL LIGHT POLE FOUNDATIONS AND LIGHT POLES.
12. COMPLETE REMAINING EARTHWORK OPERATIONS.
13. COMPLETE INSTALLATION OF CATCH BASINS AND APPURTENANCES.
14. INSTALL SUB-BASE AND BASE GRAVEL WITHIN PARKING FIELDS, WALKWAYS, AND ALL DRIVEWAYS.
15. INSTALL CURBING IN PARKING FIELDS, DRIVEWAYS, AND ALONG THE STREETS AS NEEDED.
16. INSTALL BASE COURSE PAVING FOR ACCESS DRIVE AND PARKING AREA AS WELL AS CONCRETE SURFACES.
17. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
18. INSTALL SURFACE COURSE PAVING FOR ACCESS DRIVE AND PARKING AREAS. STRIPE PER PLAN.
19. ONCE THE SITE IS STABILIZED AND A 90% CATCH OF VEGETATION HAS BEEN OBTAINED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
20. 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 50 FEET OF AN UNDISTURBED WETLAND AND 7 DAYS FOR ALL OTHER AREAS. AREAS WITHIN 50 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 LATE 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 LOADED, 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 LOADED, 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 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 LOADED, 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 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.

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 1ST, 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%.
- 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%.

6. SEEDING
BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND BEFORE APRIL 15, THE AREAS SHALL BE FINE GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 5 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 SEEDD 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 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 1,000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1,000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT 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 1,000 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, ESTELLE ESTATES, 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. PROCEDURES 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.

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.

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. SNOOT), CHECK TO ENSURE WATERTIGHT SEAL IS WORKING. AT A MINIMUM, REMOVE FLOATING DEBRIS AND HYDROCARBONS AT THE TIME OF THE INSPECTION.

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 CULVERTS INLET AND OUTLET.

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 – BIO-FILTRATION:

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.

SOIL FILTER – VEGETATED 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 BIOTRETIONMENT CELL 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.

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. 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 STRIP 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 EROSION 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 UNDERRAIN GRAVEL IS SHOWING THROUGH THE STONE OR WHERE STONES HAVE DISLOODED. 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 AND PARKING SURFACES: 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. FLOWING AND SANDING OF PAVED AREAS SHALL BE PERFORMED AS NECESSARY TO MAINTAIN VEHICULAR TRAFFIC SAFETY.

HOUSEKEEPING

THE FOLLOWING PROCEDURES ARE HEREBY ESTABLISHED AS A MINIMUM FOR COMPLIANCE WITH THIS SECTION. FOR FURTHER INFORMATION ON THE PROCEDURES LISTED BELOW, REFER TO MDEP CHAPTER 500 RULES – APPENDIX C.

SPILL PREVENTION:

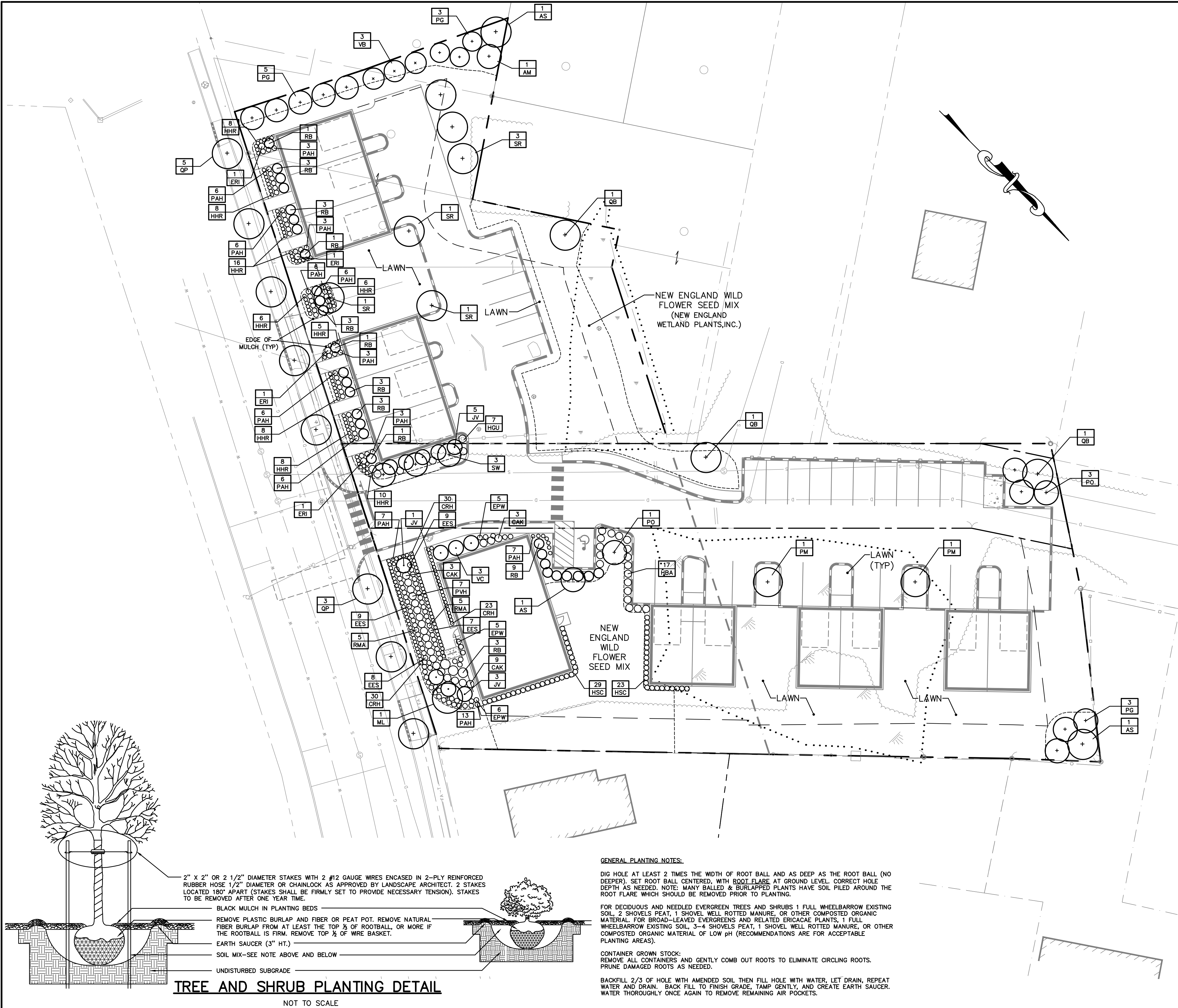
APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING/IMPLEMENTATION SHALL BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE.

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:

C:\CAD WORKING\801-06-LANDSCAPE.dwg - Mar 06, 2018 - 12:16pm



GENERAL PLANTING NOTES

1. CALL DIG-SAFE (1-888-344-7233) PRIOR TO BEGINNING WORK. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO OWNER.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. DO NOT SCALE FROM DRAWINGS. ANY OMISSIONS IN DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT. ANY DISCREPANCIES BETWEEN DRAWINGS, PLANT QUANTITIES, DETAILS, NOTES AND SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT FOR FURTHER DIRECTION AND RESOLUTION BEFORE ANY ADDITIONAL WORK PROCEEDS.
4. PROVIDE SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. CONTRACTOR SHALL FURNISH AND PLACE 12 INCHES OF LOAM IN ALL SHRUB BEDS, 30 INCHES IN ALL TREE PITS, AND 6 INCHES UNDER ALL TURF AREAS. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
6. ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF THE LATEST PUBLICATION OF "AMERICAN STANDARDS FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN".
7. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
8. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM THE OWNER.
9. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
10. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY, OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. DAMAGE TO EXISTING SITE IMPROVEMENTS DURING INSTALLATION OF LANDSCAPE MATERIAL SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
14. CONTRACTOR SHALL COORDINATE INSPECTION OF PLANT MATERIAL AND LOCATIONS WITH PROJECT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ALL PLANT MATERIAL SHALL BE ON-SITE AND PLACED BEFORE INSPECTION CAN BE COMPLETED. A MINIMUM OF 48 HOUR NOTIFICATION SHALL BE REQUIRED.
15. MAINTENANCE REQUIREMENTS: PRUNE DEAD OR DAMAGED BRANCHES, MAINTAIN GUY POSTS AND WATER AS REQUIRED UNTIL PROJECT COMPLETION AND ACCEPTANCE BY OWNER.
16. WATERING: ALL PLANTINGS SHALL BE THOROUGHLY WATERED UPON INSTALLATION, AND THEN WEEKLY WHENEVER ANY DRY SPELLS OCCUR, UNTIL ACCEPTANCE BY OWNER.
17. LANDSCAPE CONTRACTOR OR PLANT SUPPLIER SHALL GUARANTEE PLANTS AND PROVIDE REPLACEMENTS FOR TWO YEARS FROM INSTALLATION.
18. CONTRACTOR SHALL PLACE 4" SHREDDED DARK BARK MULCH AROUND SHRUB BEDS AND TREE PITS.

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE
AS	ACER SACCHARUM 'GREEN MOUNTAIN'	SUGAR MAPLE	1-1/2"- 2" CAL.
AM	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SHADBLOW	6'-7" HGT. CLUMP
AS	ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN SUGAR MAPLE	2-1/2" CAL.
CAK	CALAMAGROSTIS X ACUTIFOLIA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	NO. 1 CONT.
CRH	COREOPSIS 'RED HOT VANILLA'	RED HOT VANILLATICKSEED	NO. 1 CONT.
EES	ECHINACEA PURPUREA 'Evan Saul'	SUNDOWN CONE FLOWER	NO. 1 CONT.
EPM	ECHINACEA PURPUREA 'MAGNUS'	MAGNUS PURPLE CONE FLOWER	NO. 1 CONT.
EPW	ECHINACEA 'POW WOW WILDBERRY'	POW WOW WILDBERRY CONE FLOWER	NO. 1 CONT.
ERI	ECHINOPS RITRO	GLOBE THISTLE	NO. 1 CONT.
HHR	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	NO. 1 CONT.
HSC	HEMEROCALLIS 'STEEPLE JACKIE'	STEEPLE JACKIE DAYLILY	NO. 1 CONT.
HBA	HOSTA 'BLUE ANGEL'	BLUE ANGEL HOSTA	NO. 1 CONT.
HGU	HOSTA 'GUACAMOLE'	GUACAMOLE HOSTA	NO. 1 CONT.
JV	JUNIPERUS VIRGINIANA 'GREY OWL'	GREY OWL JUNIPER	18"-24" HGT.
ML	MAGNOLIA X LOEBERNII 'LEONARD MESSEL'	LEONARD MESSEL MAGNOLIA	8'-10" HGT.
PAH	PENNISETUM ALOPECUROIDES 'HAMELIN'	HAMELIN FOUNTAIN GRASS	NO. 1 CONT.
PM	PLATANUS X ACERIFOLIA 'MORTON CIRCLE'	EXCLAMATION LONDON PLANTREE	2-1/2" CAL.
PVH	PANICUM VERGATUM 'HEAVY METAL'	HEAVY METAL SWITCH GRASS	NO. 1 CONT.
PO	PICEA GLAUCA	WHITE SPRUCE	6'-7" HGT.
PO	PICEA OMORICA	SERBIAN SPRUCE	6'-7" HGT.
QB	QUERCUS BICOLOR	SWAMP WHITE OAK	2-1/2" CAL.
QP	QUERCUS PALUSTRIS	PIN OAK	2-1/2" CAL.
RB	ROSA 'BONICA'	BONICA SHRUBROSE	18"-24" HGT.
RMA	RUDEBECKIA MAXIMA	MAXIMA CONEFLOWER	NO. 1 CONT.
SR	SYRINGA RETICULTA	JAPANESE TREE LILAC	6'-8" HGT.
SW	SYRINGA RETICULTA 'WILLAMETTE'	IVORY PILLAR JAPANESE TREE LILAC	6'-8" HGT.
VB	VIBURNUM X BURKWOODII	BURKWOOD VIBURNUM	24"-30" HGT.
VC	VIBURNUM X CARLCEPHALUM 'CAYUGA'	CAYUGA VIBURNUM	24"-30" HGT.

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

1 inch = 20 ft.



Rev.	Date	Revision

LEVEL III SITE PLAN APPLICATION	3/5/18	DER
PRE-APPLICATION MEETING	11/7/17	DER
Issued For	Date	By

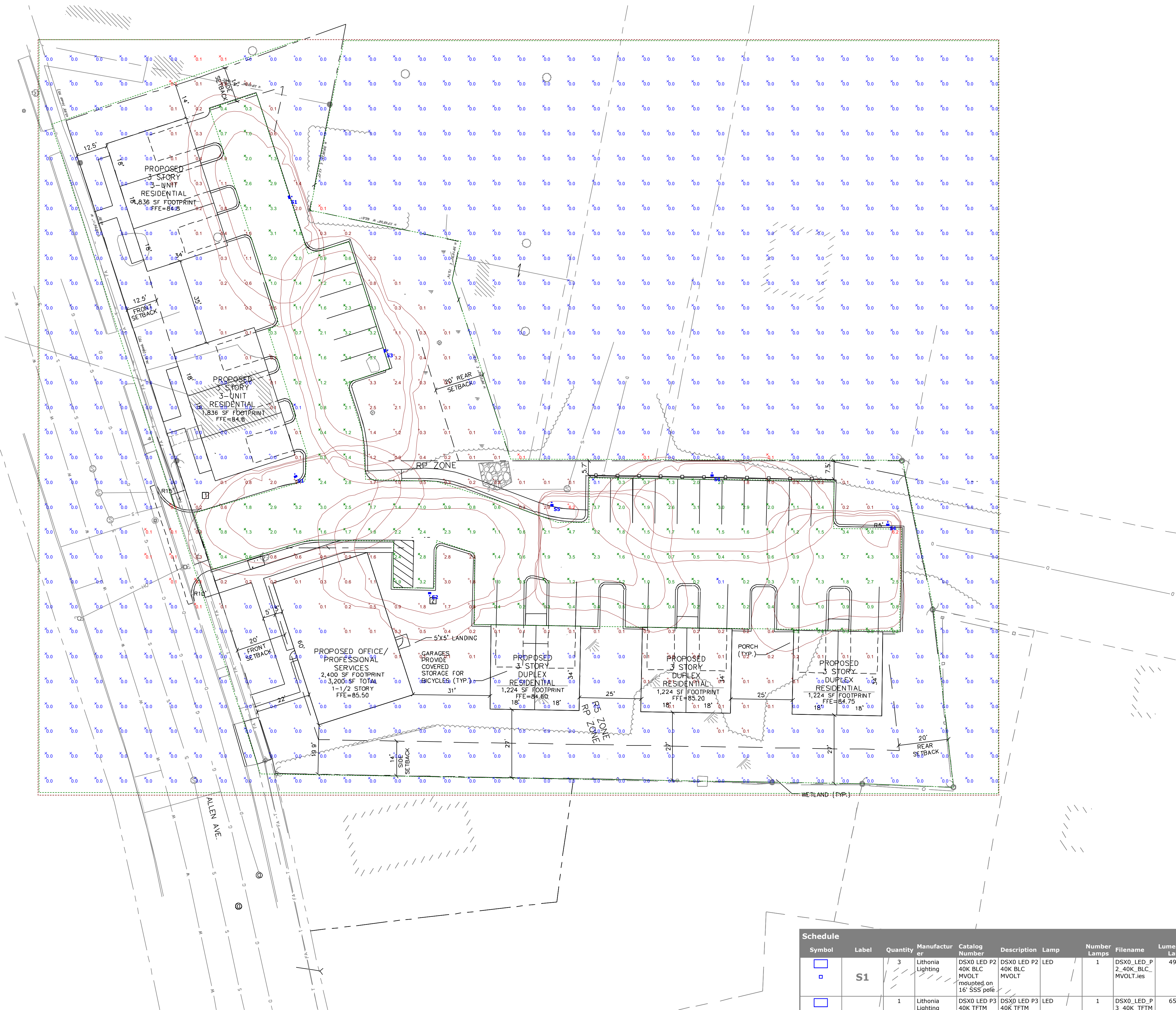
Design: DJG	Draft: CG	Date: NOV 2017
Checked: DER	Scale: 1"=20'	Job No.: 801.06
File Name: 801-06-LANDSCAPE.dwg		
This plan shall not be modified without written permission from Gorrill-Palmer Consulting Engineers, Inc.(GPCEI). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GPCEI.		



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207.772.2515

Drawing Name:	Landscape Plan
Project:	Mixed Use Development 300 Allen Ave. Portland, Maine
Client:	ESTELLE ESTATES, LLC 39 DARLING AVENUE, SOUTH PORTLAND, ME 04106

Drawing No.
L101



Plan View
Scale - 1" = 20ft

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Overall site calcs	+	0.3 fc	6.2 fc	0.0 fc	N/A	N/A
Parking area	X	1.5 fc	6.2 fc	0.1 fc	62.0:1	15.0:1
Site Perimeter	X	0.0 fc	0.1 fc	0.0 fc	N/A	N/A

Schedule											
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
 	S1	3	Lithonia Lighting	DSX0 LED P2 40K BLC MVOLT mounted on 16' SSS pole	DSX0 LED P2 40K BLC MVOLT	LED	1	DSX0_LED_P2_40K_BLC_MVOLT.ies	4925	0.9	49
 	S2	1	Lithonia Lighting	DSX0 LED P3 40K TFTM MVOLT HS mounted on 16' SSS pole	DSX0 LED P3 40K TFTM MVOLT with houseside shield	LED	1	DSX0_LED_P3_40K_TFTM_MVOLT_HS.ies	6595	0.9	71
 	S3	1	Lithonia Lighting	DSX0 LED P3 40K T35 MVOLT HS mounted on 16' SSS pole	DSX0 LED P3 40K T35 MVOLT with houseside shield	LED	1	DSX0_LED_P3_40K_T35_MVOLT_HS.ies	7014	0.9	71
 	S4	1	Lithonia Lighting	DSX0 LED P3 40K LCCO MVOLT mounted on 16' SSS pole	DSX0 LED P3 40K LCCO MVOLT	LED	1	DSX0_LED_P3_40K_LCCO_MVOLT.ies	5153	0.9	71
 	S5	1	Lithonia Lighting	DSX0 LED P3 40K RCCO MVOLT mounted on 16' SSS pole	DSX0 LED P3 40K RCCO MVOLT	LED	1	DSX0_LED_P3_40K_RCCO_MVOLT.ies	5153	0.9	71

FRONT ELEVATION
SCALE: 1/8" = 1'0"

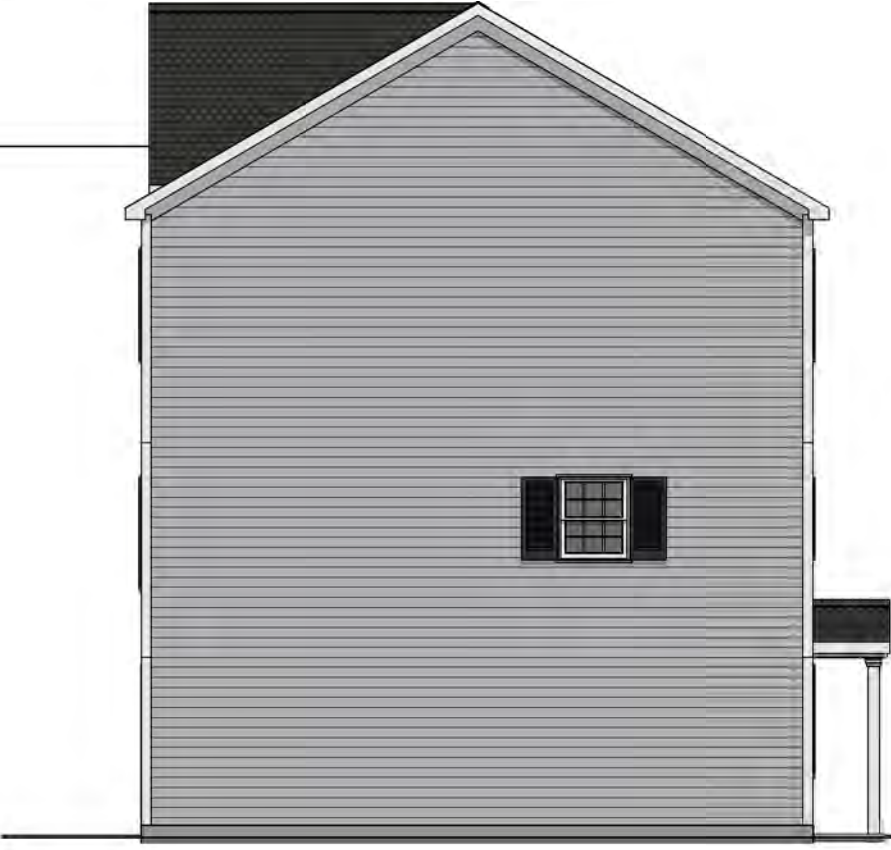
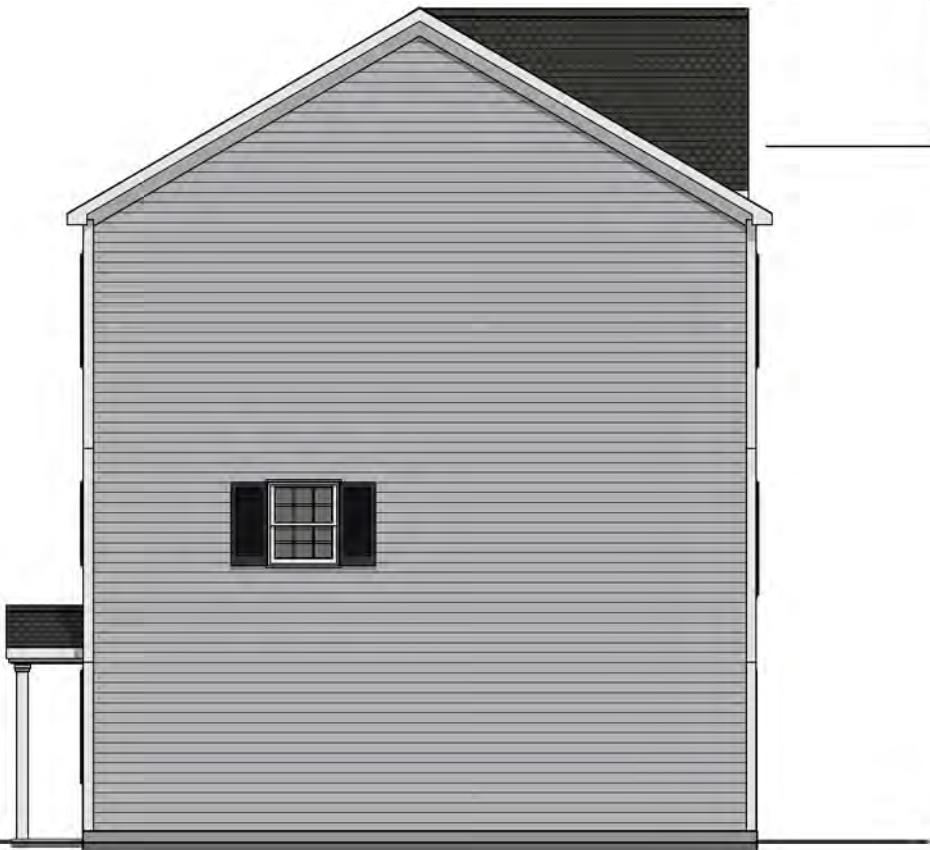


REAR ELEVATION
SCALE: 1/8" = 1'0"



LEFT ELEVATION
SCALE: 1/8" = 1'0"

RIGHT ELEVATION
SCALE: 1/8" = 1'0"

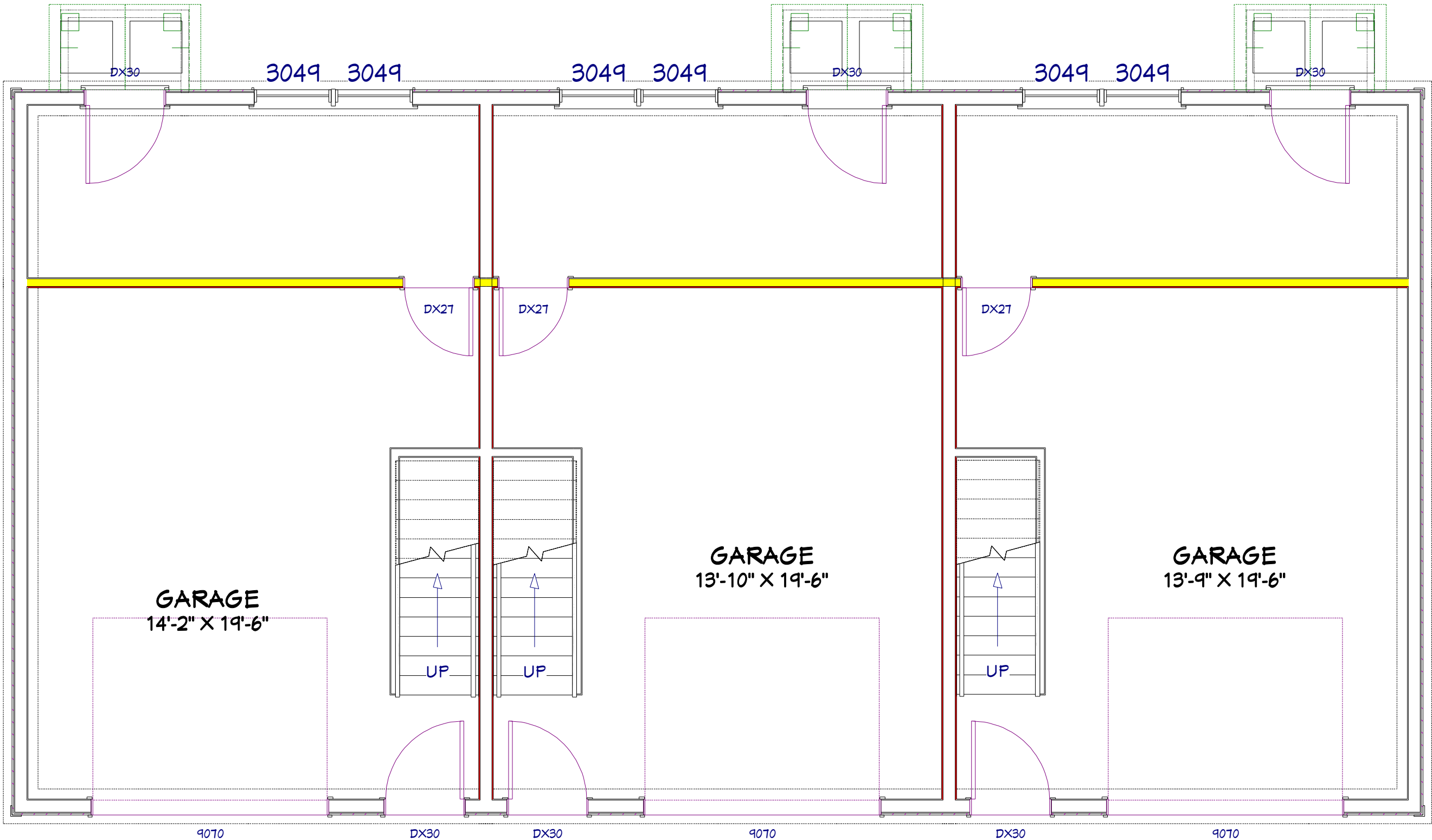


THIRD PARTY INSPECTION AGENCY		PE/RA		SERIAL No		HOME OWNER		BUILDERS		USE GROUP	
						ALLEN AVENUE PORTLAND, ME		SILVER BEACH HOMES LLC		R3	
				PRODUCTION No		SITE				CONST TYPE	
				REVISION						WOOD	
				DATE						FRAME (VB)	
										DESIGNER	
										DWG	
										DATE	
										3/15/2018	
										SCALE	
										AS NOTED	
										PAGE:	
										2	

TRIPLEX
ELEVATIONS

WESTCHESTER MODULAR HOMES INC.
30 REAGANS MILL RD. WINGDALE, NY 12594
Tel (845)832-9400 Fax (845)832-6698

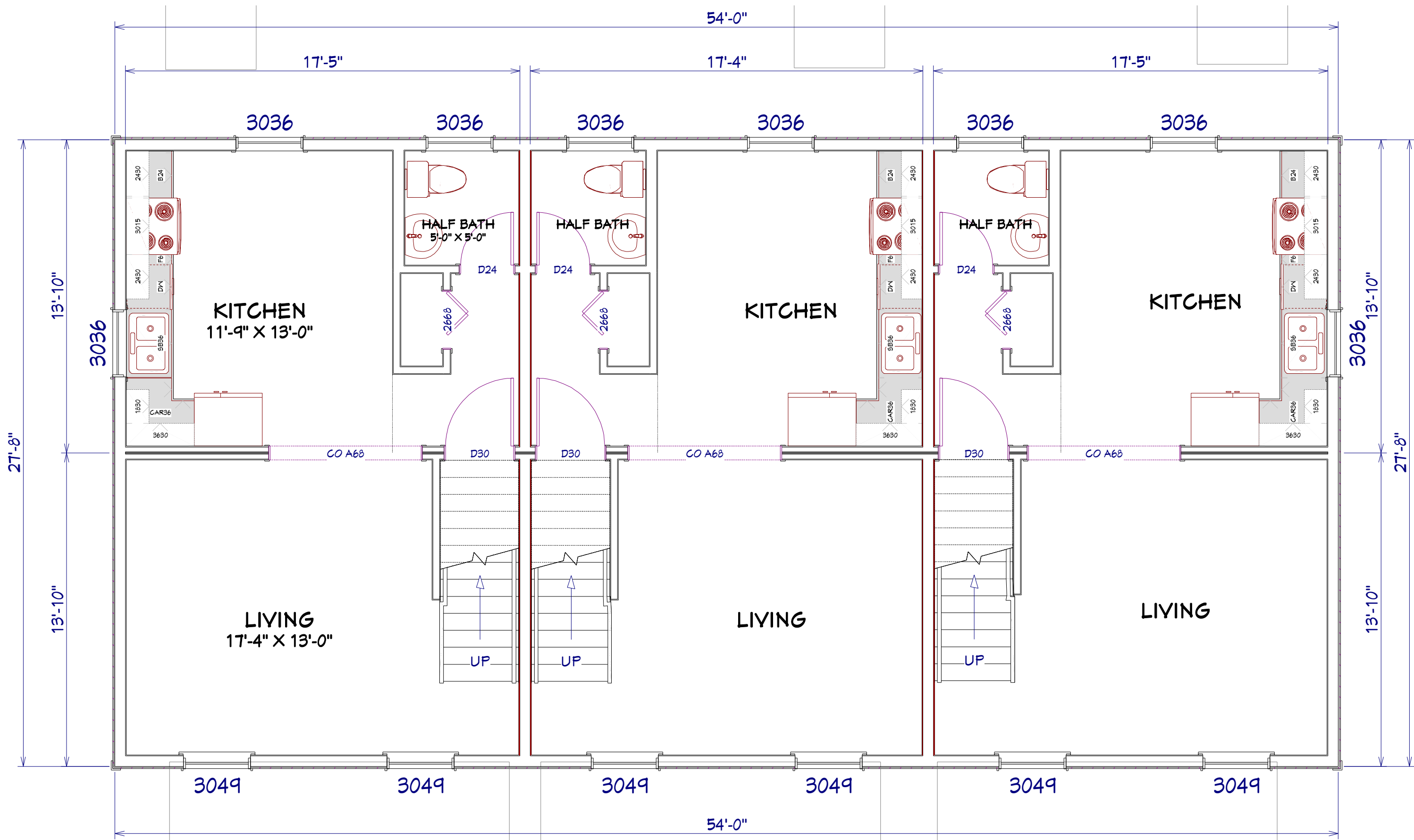
PRELIMINARY ONLY- NOT FOR CONSTRUCTION



- FOUNDATION NOTES:
- 1) THE FOUNDATION PLAN IS PROVIDED FOR FOUNDATION DESIGN PARAMETERS ONLY. COMPLETE FOUNDATION ENGINEERING BASED ON SPECIFIC SITE CONDITIONS, APPLICABLE LOCAL AND STATE CODES, TO BE REVIEWED AND APPROVED BY A REGISTERED ARCHITECT OR ENGINEER IN THE STATE OF HOUSE DESIGNATION.
 - 2) THE BUILDER/PURCHASER SHALL BE RESPONSIBLE FOR DESIGN, CONSTRUCTION AND CODE COMPLIANCE OF ALL FOUNDATION ELEMENTS INCLUDING (BUT NOT LIMITED TO) STRUCTURAL, PLUMBING, ELECTRICAL, HEATING, ENERGY CONSERVATION AND FIRE SEPARATION.
 - 3) MINIMUM COLUMN FOOTING SIZE SHALL BE 2'-6" x 2'-6" x 10" DEEP.
 - 4) CONCRETE STRENGTH TO BE A MINIMUM 3000 PSI.
 - 5) LALLY COLUMN SHALL BE MINIMUM 3 1/2" 91 STEEL PIPE.
 - 6) FOUNDATION SILL SHALL BE PRESERVATIVE TREATED LUMBER (SUPPLIED AND INSTALLED BY B/P PRIOR TO HOUSE DELIVERY AND SET). THERE SHALL BE NO PROTRUSION ABOVE TOP OF SILL PLATE.

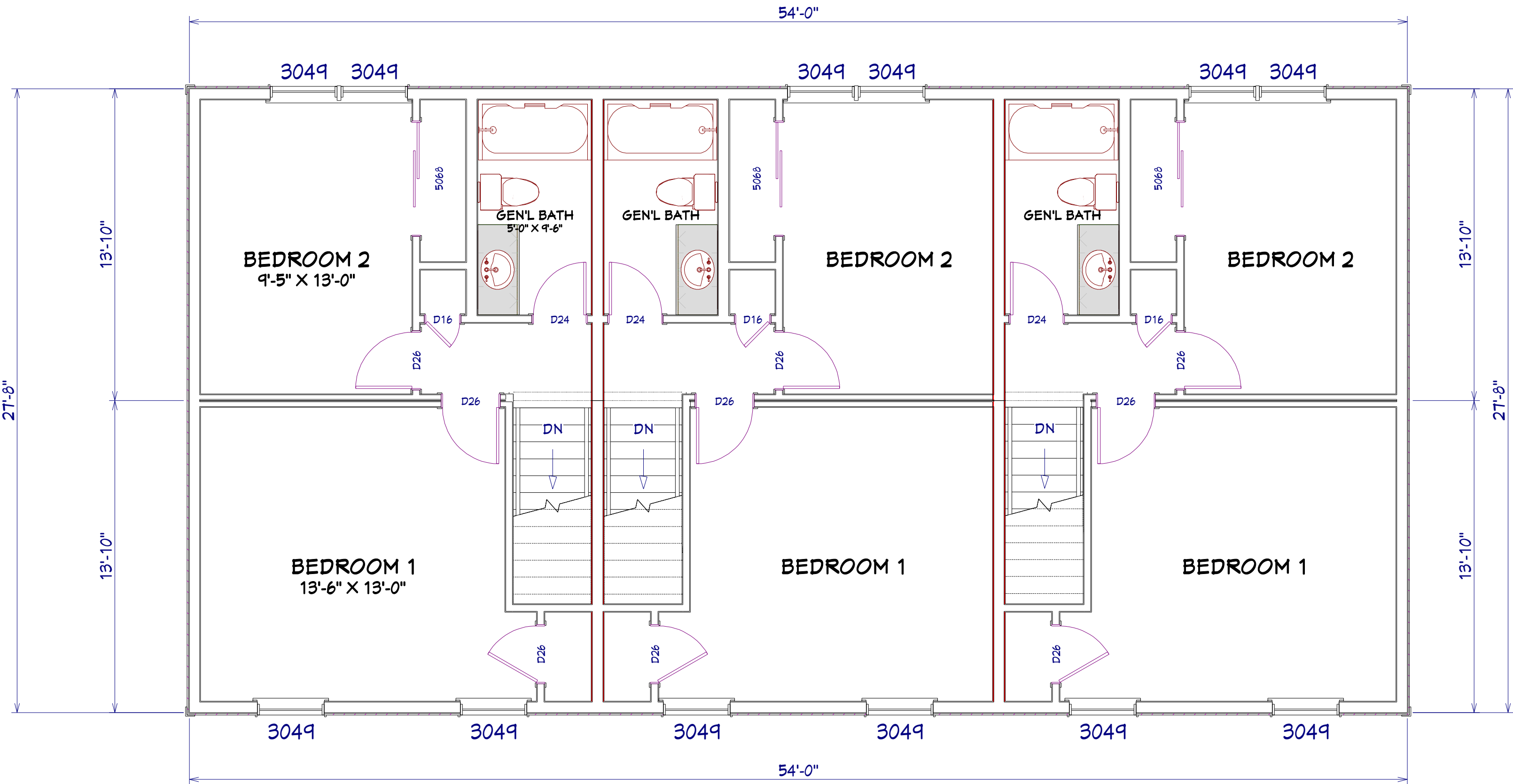
SCALE: 1/4" = 1'0"

USE GROUP R3		BUILDER SILVER BEACH HOMES LLC	HOME OWNER ALLEN AVENUE PORTLAND, ME	SERIAL No	PE/RA	THIRD PARTY INSPECTION AGENCY
CONST TYPE WOOD FRAME (VB)		SITE		PRODUCTION No		
DESIGNER		TRIPLEX FOUNDATION		REVISION	DATE	
DWV						
DATE						
3/15/2018						
SCALE						
AS NOTED						
PAGE:		 WESTCHESTER MODULAR HOMES INC. 30 REAGANS MILL RD. WINGDALE, NY 12594 Tel (845)832-9400 Fax (845)832-6698				
3						



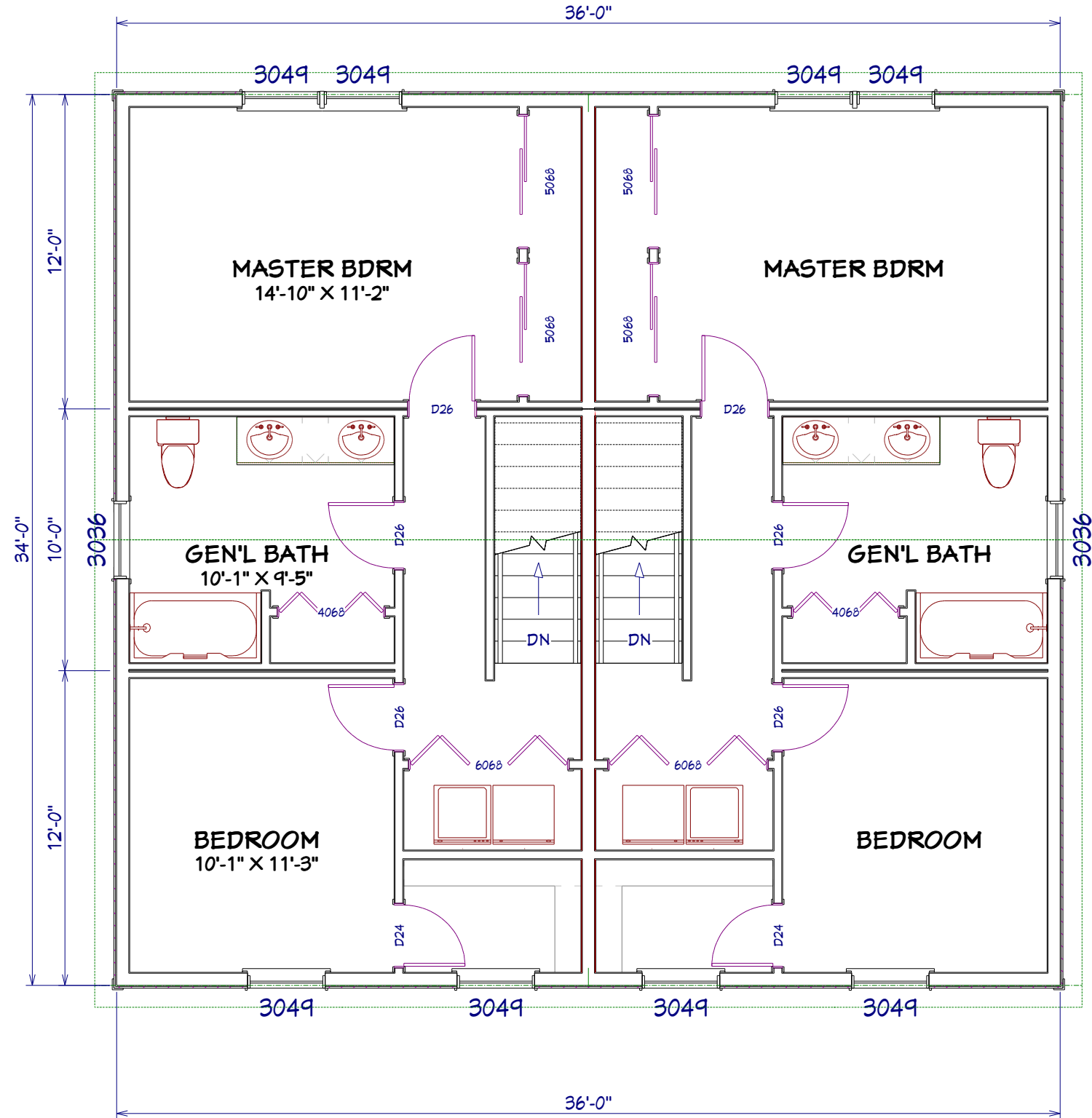
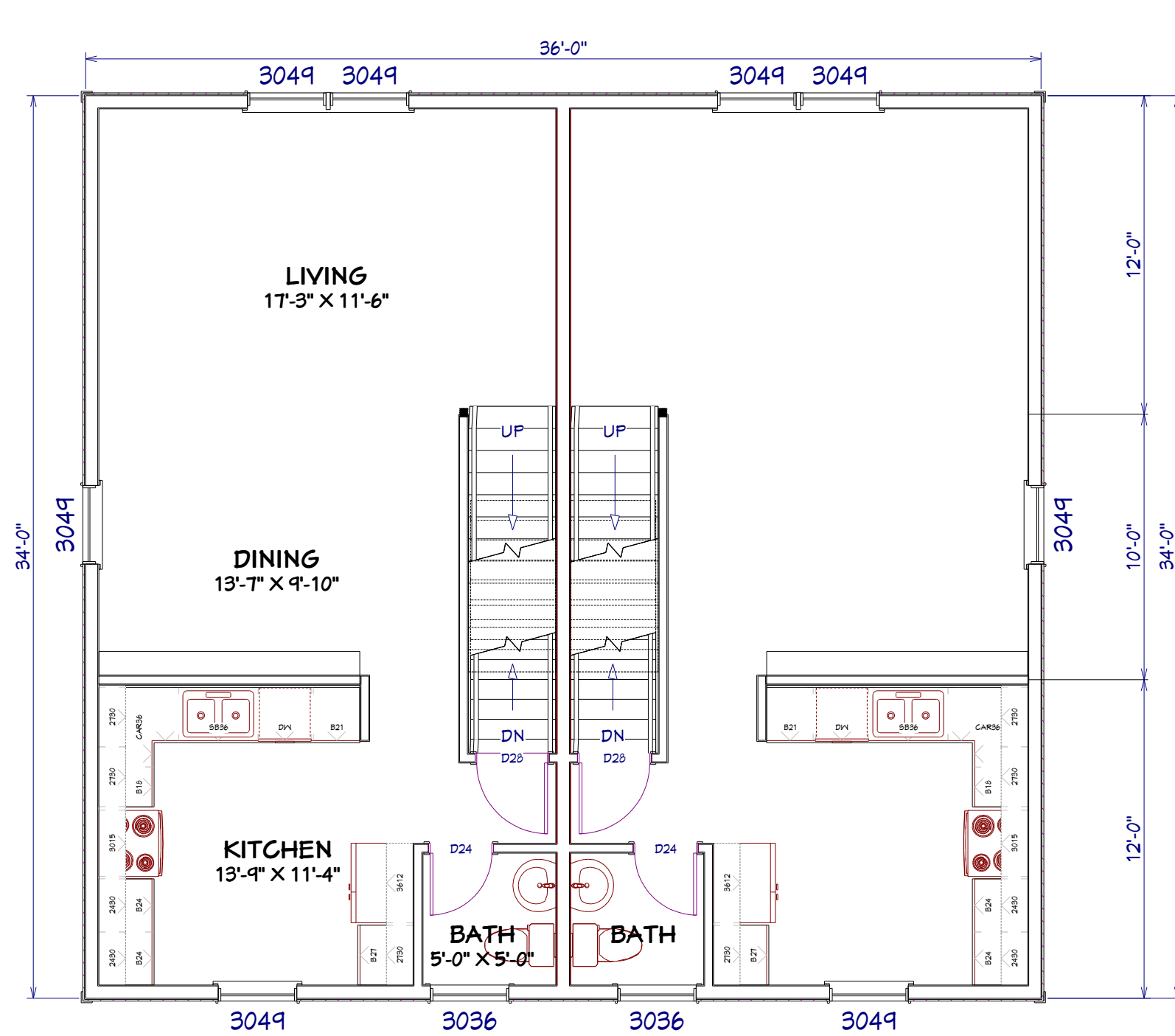
SCALE: 1/4" = 1'0"

USE GROUP R3	BUILDER SILVER BEACH HOMES LLC	HOME OWNER ALLEN AVENUE PORTLAND, ME	SERIAL No	PE/RA	THIRD PARTY INSPECTION AGENCY
CONST TYPE WOOD FRAME (VB)		SITE	PRODUCTION No		
DESIGNER DWW	TRIPLEX FIRST FLOOR		REVISION		
DATE 3/15/2018					
SCALE AS NOTED					
PAGE: 4	 WESTCHESTER MODULAR HOMES INC. 30 REAGANS MILL RD. WINGDALE, NY 12594 Tel (845)832-9400 Fax (845)832-6698				



SCALE: 1/4" = 1'0"

USE GROUP R3		BUILDER SILVER BEACH HOMES LLC	HOME OWNER ALLEN AVENUE PORTLAND, ME	SERIAL No		PE/RA	THIRD PARTY INSPECTION AGENCY
CONST TYPE WOOD FRAME (VB)				PRODUCTION No			
DESIGNER DWW				REVISION	DATE		
DATE 3/15/2018							
SCALE AS NOTED							
PAGE: 5		 WESTCHESTER MODULAR HOMES INC. 30 REAGANS MILL RD. WINGDALE, NY 12594 Tel (845)832-9400 Fax (845)832-6698					



<u>USE GROUP</u>	BUILDER	HOME OWNER	SERIAL No.	PE/RA	THIRD PARTY INSPECTION AGENCY
R3	BUILDER	CUSTOMER SITE ADDRESS	PRODUCTION No.		
CONST. TYPE WOOD FRAME (VB)					
DESIGNER DWW			REVISION	DATE	
DATE 10/20/2017			6	12/2/15	
SCALE AS NOTED					
PAGE: 4	 WESTCHESTER MODULAR HOMES INC. 30 REAGANS MILL RD. WINGDALE, NY 12594 Tel (845)832-9400 Fax (845)832-6698				

Fwd: Comments and requests on 300 Allen Avenue, Estelle Estates Development

Matthew Grooms <mgrooms@portlandmaine.gov>
To: Jennifer Munson <jmy@portlandmaine.gov>

Tue, Jun 12, 2018 at 8:12 AM

Hi Jen,

I am forwarding a public comment for 300 Allen Avenue.

Thanks,

Matt

----- Forwarded message -----

From: **Jane Orbeton** <mckorb1@gmail.com>

Date: Mon, Jun 11, 2018 at 11:25 PM

Subject: Comments and requests on 300 Allen Avenue, Estelle Estates Development

To: mgrooms@portlandmaine.gov

Cc: Jane Orbeton <mckorb1@gmail.com>, Susan McKenna <susie.mckenna@gmail.com>, Jim McKenna <jimmckenna3@gmail.com>

Hello, Portland Planning Board and Planning Staff,

We are Susan McKenna, James McKenna and Jane Orbeton, owners of a single family home at 7 Short Street that immediately abuts the back side of the Estelle Estates Property at 300 Allen Avenue. We are unable to attend the workshop on June 12 and hope that you will seriously consider our comments and requests. The Estelle Estates development merits careful consideration because (1) it abuts and by its density, paving and scale it will have an impact on, neighboring residences and (2) the properties in the neighborhood and the property at 300 Allen Avenue are often wet enough that ducks swim in our yards on ponds newly formed by rain or snow melt, right over our grass. We cannot accept any more water from Estelle Estates and the development should be designed to avoid such a result. This is a very serious problem that the whole neighborhood needs the Planning Board to address.

To make the Estelle Estates development compatible with our property and the other residences nearby, we ask for the City to require the following:

1. **A metal perimeter fence** at least 4 feet high supported by metal posts set in concrete along the property line everywhere that the development abuts residential property and shrubbery plantings along all property lines;
2. **A lighting plan** that is considerate of and compatible with neighboring residences, that is "dark sky" lighting and that does not direct lighting at abutting properties;
3. **A drainage plan** that ensures that the development absorbs and disposes of its own water runoff, specifically requiring no runoff onto adjacent properties and no increase in the amount of surface water that those properties experience;
4. **Limitation of the amount of on site parking and paving** to the amount required by the zoning ordinance; and
5. **Required use of a permeable paving system** for all or part of the parking and paved areas that will address the neighborhood water issue, that is permeable paving, such as pervious concrete, porous asphalt, paving stones or grass pavers.

Please confirm receipt of this email in time for consideration at the workshop on June 12.

Thank you for your assistance. We would be happy to speak with your staff at any time.

Susan McKenna, 629-7943

James McKenna, 318-3035

Jane Orbeton, 420-6265

--

Matthew Grooms

Planner

Planning Division

City Hall, 389 Congress Street, 4th Floor

Portland, Maine 04101

(207) 874-8725 (T)

(207) 756-8258 (F)

mgrooms@portlandmaine.gov



Memorandum

Planning and Urban Development Department

Planning Division

To: Chair Dundon and Members of the Portland Planning Board

From: Jean Fraser, Planner

Date: June 8th, 2018

Re: Level III Subdivision and Site Plan:
New 8-unit: 7 residential and 1 commercial condominium (3-stories)
28 Vannah Avenue

Project # PL000030-2018
Vannah White, LLC, Applicant

Meeting Date: June 12th, 2018

I. INTRODUCTION

Vannah White LLC (Thomas Greer) is requesting the Planning Board to consider a Level III Subdivision and Site Plan application for a new eight-unit building at 28 Vannah Avenue, near the Woodford's Corner intersection of Forest Avenue and Ocean Avenue.

The proposed ground floor comprises one commercial unit in the front part and an ADA accessible residential unit in the rear. Six residential units (one and two bedroom) are proposed for the two upper stories. The new building is 3 stories (approximately 35ft in height) with a footprint of 3150 sq ft and total floor area of 9100 sq ft.

The site is currently occupied by a residential style commercial building with a large parking area, and most of the site is within the B1 zone that provides a buffer between the B2 zone to the west and the surrounding R3 (see plan on page 4).



A total of 237 notices were sent to property owners within 500 feet of the site and interested parties, and a legal ad was published in the *Portland Press Herald* on June 4th and 5th, 2018. The required Neighborhood Meeting was held on May 23, 2018 and attended by 10 neighbors. The Meeting Certificate and notes are included in Attachment U.

Applicant: Vannah White, LLC (Thomas Greer)

Consultants: Engineer: Thomas S Greer, PE
Architects: Whipple Callender Architects

Required Reviews and Waivers:

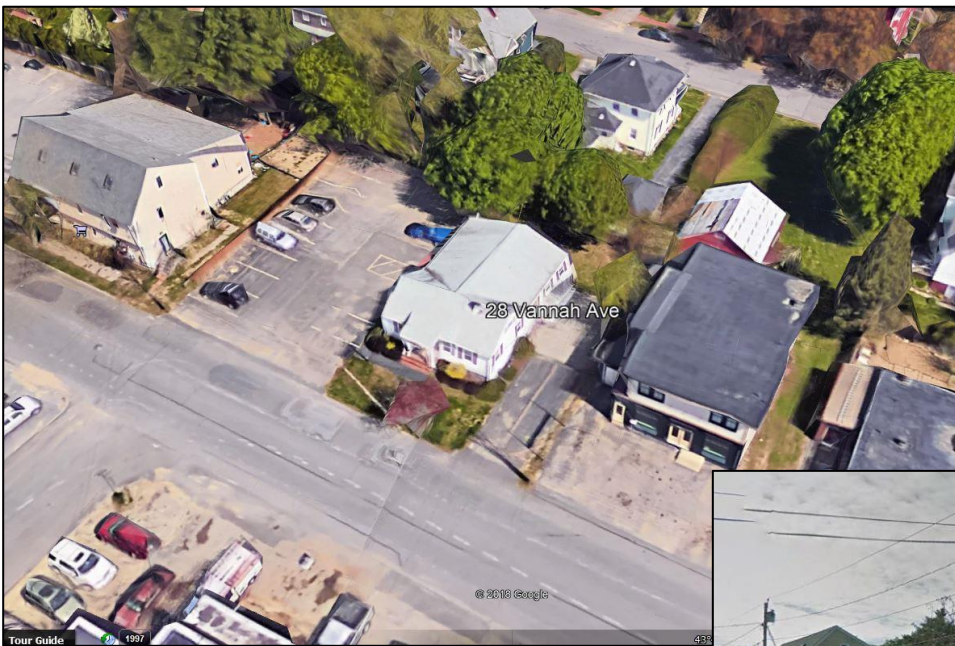
Review	Applicable Standards
Subdivision: Construction of new building with 7 residential dwelling units and 1 commercial unit	<i>Section 14-497</i> for the creation of 8 units.
Site Plan: Multifamily development	<i>Section 14-526</i> for the proposed multifamily residential development.
Waiver Requests to Planning Board	Applicable Standards
Compact Parking Spaces: The applicant proposes 4 compact vehicle parking spaces as part of the 17 total spaces (23.5%) (see applicants waiver request in <u>Att 5</u>)	Technical Standard 1.14 <i>Parking Lot and Parking Space Design</i> requires that any parking lot with more than 10 spaces may be comprised of up to 20% compact parking spaces. The City's Traffic Engineer Reviewer supports this waiver but requires that the one nearest the driveway be converted to a full length space (<u>Att 5</u>).

II. PROJECT DATA

SUBJECT	DATA
Existing Zoning	Primarily B1; strip along back boundary is R3
Existing Use	Offices and parking
Proposed Use	Commercial/residential
Total Area of the Site	10,500 sq ft
Proposed Disturbed Area of the Site	10,500 sq ft
Impervious Surface Area - Existing	7,867 sq ft
Impervious Surface Area - Proposed	8,380 sq ft
Building Footprint - Existing	1,552 sq ft
Building Footprint - Proposed	3,150 sq ft
Building Floor Area - Existing	1,552 sq ft
Building Floor Area - Proposed	9,100 sq ft
Number of lots proposed	8 (1 commercial; 7 residential)
Residential Units- Existing	0
Residential Units- Proposed	7
Residential Bedroom Mix:	two 1-BR; five 2-BR
Parking Spaces - Existing	17
Parking Spaces - Proposed	17 (incl 1 handicapped parking space)
Bicycle Parking Spaces - Existing	0
Bicycle Parking Spaces - Proposed	4 (2 bike racks shown on site plan, with 2 bikes each)
Estimated Cost of Project	\$1,200,000

II. EXISTING CONDITIONS

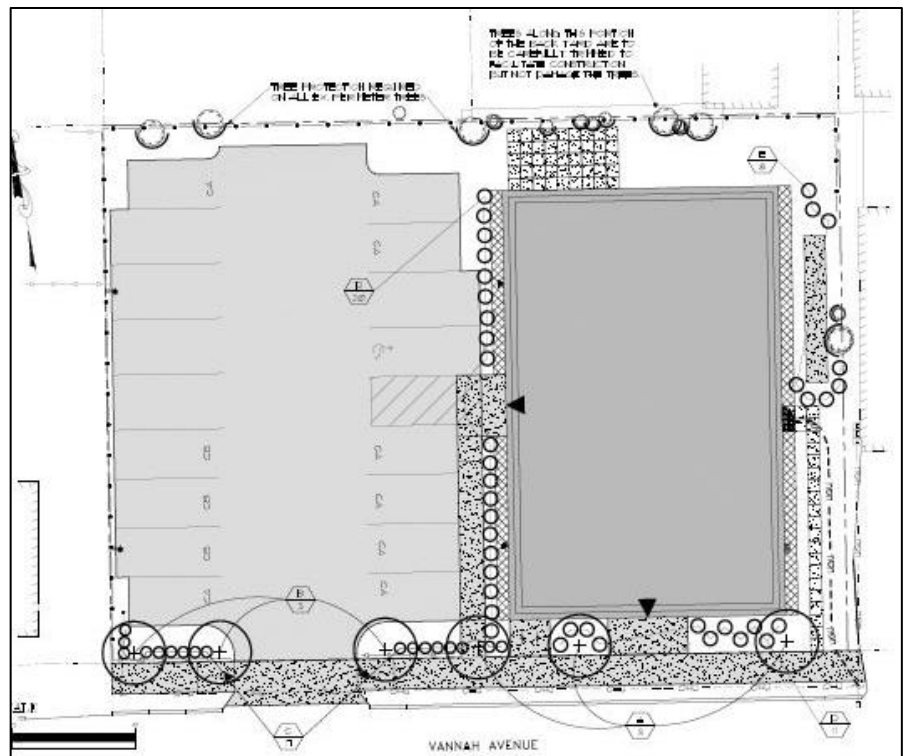
The applicant has submitted photographs of the existing site in Attachment T and a boundary survey in Plan P1. The relatively flat site is bounded to the north by the R3 zone and residential properties. To the west is an existing building used for offices, day care and personal services. To the east is a mixed use building with retail on the ground floor and two residential units above (also in B1 zone).



IV. PROPOSED DEVELOPMENT

The proposal is for a new 3 story gabled building (with basement) on the site of the existing building, with the parking lot approximately as existing with existing trees preserved around the perimeter and a new sidewalk, street trees and landscaping along the frontage.

The proposal includes fencing around three sides of the project: the west and north sides (and small part of the east side at rear) are white PVC stockade style fencing; at the front along the back of the sidewalk (in front of the trees) is a black vertical metal decorative fence at 4 feet in height. Other site features include a communal patio at the rear and HVAC compressors along the east side.



V. ZONING ASSESSMENT

The site is primarily within the B1 zone, with an 8 foot wide strip along the back boundary within the R-3 zone as illustrated below and shown on the Site Plan in Plan P4:

Uses: The proposed uses are permitted within the B1 zone, which allows multifamily dwellings above the first floor where a commercial use is on the first floor. Multifamily dwellings are also allowed on the first floor where a minimum depth of 25 feet along the principal street frontage is maintained for commercial uses; the proposed commercial space meets this requirement.

Under the Fair Housing Act the first floor unit must be accessible and the site plan ([Plan P.4](#)) and ground floor plan ([Plan P11](#)) address the accessibility requirements although this should be confirmed in a narrative.



The B1 zone requires that if the commercial space is used as retail or restaurant there are restrictions on the times of opening and deliveries.

Dimensional Requirements: The submissions document that the proposal meets all of the dimensional requirements except regarding height. The applicant should submit an analysis of the final grades and average grade, and show the height dimensions of the building in relation to the average grade. The civil plans reference finished grades that are not consistent with the architectural plans. However, the site is fairly flat and the proposed building appears to be approximately 35 feet (the maximum allowed); this will be verified as part of the final review.

Parking Requirements: The applicant has proposed 17 parking spaces. There are 7 residential units and a commercial space of about 1500 sq ft in the proposed building (the area of the commercial space needs to be confirmed by the applicant) .

The ordinance specifies the following (summarized):

- **Residential:** 2 spaces per unit (14 required)
- **Retail:** 1 parking space /200 sq ft of first floor area in excess of 2000 sq ft (0 required)
- **Restaurant:** 1 space for each 150 sq ft not used for bulk storage or food preparation (up to 8 or 9 required)
- **Offices; professional:** 1 space for each 400 sq ft exclusive of cellar, not used for bulk storage (up to 3 or 4 required pending verification of the floorspace)

The applicant may intend the ground floor commercial unit to be retail or offices, and in that case the parking provision appears to meet the zoning requirement subject to the confirmation of the floorspace. If at some stage the ground floor space was used or converted to a restaurant use, then the on-site parking provision appears to be inadequate. This issue will require further discussion and potentially a condition to ensure that the parking meets the ordinance requirements.

VI. STAFF REVIEWS

A. SUBDIVISION REVIEW (14-497(a). Review Criteria)

The applicant has submitted a draft Subdivision Plat (Plan P2) which has not been reviewed in detail but appears comprehensive. Condominium Documents will need to be submitted as part of the final submissions.

The proposals have generally addressed the subdivision standards, with the following items still to be addressed:

2 & 3. Adequacy of Water Supply

The applicant has not yet provided evidence of capacity from the Portland Water District and this would need to be part of the final submissions.

6. Sanitary Sewer/Stormwater Disposal

The proposal increases the impervious surface by 513 sq ft and the Peer Engineer Reviewer has requested additional information to clarify the grading and assess the stormwater management proposals (Attachment 2).

B. SITE PLAN REVIEW

The proposed development generally meets the site plan standards except as noted below:

1. Transportation Standards

Circulation

The proposed commercial space on the ground floor is proposed as retail (though business shown on floor plan) and could become a restaurant or other business. These uses would generate deliveries and the Traffic Engineer Tom Errico has commented (Attachment 5):

- *The applicant should provide details for how truck deliveries will be accommodated.*

Parking

- Vehicular: The proposed parking provision of 17 spaces has been achieved by the inclusion of 4 compact spaces. The applicant has requested a waiver for the percentage of compact parking spaces, but the Traffic Engineer Reviewer is less concerned about the number than the location. One of the compact spaces is located near the access driveway and presents a safety concern. This compact space has been designed as compact in order to avoid the guy wire for the nearby utility pole - staff recommend that the guy wire be reconstructed to be fully within the 6 ft landscaped area and thus avoid this parking space, which would allow it to be full sized.

The Traffic Engineer Tom Errico has commented (Attachment 5):

- *Given site conditions, that the project nearly meets City requirements, and some compact parking spaces exceed City dimensional requirements, I support a waiver from the City's Technical Standards for the number of compact spaces on the site.*
- *It is recommended that the compact space near the driveway entrance be lengthened by 2 feet and the CMP pole guy wire be adjusted accordingly.*
- *It appears the parking aisle width does not meet City standards to the rear of the parking lot. The applicant should provide a formal waiver request with supporting documentation.*

- **Bicycle:** The ordinance requirement is 2 spaces per 5 dwelling units and 2 bicycle parking spaces for every 10 required vehicle parking spaces for non-residential. The applicant has shown two bike racks (4 bicycle spaces) on the revised site plan and staff consider that this provision meets the ordinance requirements.

Construction Management Plan

The applicant has submitted a Construction Management Plan narrative and plan (Att L and Plan P8). Staff reviewers have provided comments (Attachment 2) and the final Construction Management plan should address these comments.

2. Environmental Quality Standards

Landscaping and Landscape Preservation, Parking Lot Landscaping and Street Trees

The proposal retains all of the existing trees on the site, adds 6 new trees along the frontage at the back of the ROW, and adds other planting along the front and around the building (see Landscape plan in Plan P5. and above under “proposed Development”

The proposal includes “buffer” fencing around three sides of the project: the west and north sides (and small part of the east side at rear) are white PVC stockade style fencing; at the front along the back of the sidewalk (in front of the trees) is a black vertical metal decorative fence at 4 feet in height. The public comment (PC1) questions the need for fencing (favoring more landscaping instead); the open vertical design of the frontage fence and its low height (4 feet) may allow the landscape to be viewed.

Jeff Tarling, the City’s Arborist, is generally supportive of the proposed tree preservation and landscaping; he has indicated he has several minor suggestions and his written comments will be circulated at the Workshop.

3. Public Infrastructure and Community Safety Standards

Consistency with Related Master Plans

The proposal includes a new concrete sidewalk that accords with the City’s material policy and includes curbing. The applicant has agreed to extend the sidewalk a short distance beyond the applicant’s frontage (to the east) to connect with the existing sidewalk.

To the west there is a missing section of sidewalk and a section in poor condition, and the City will be upgrading these sections within about a year which will provide an improved sidewalk connection between the new development and Forest Avenue.

Public Safety and Fire Prevention

The Fire Department has reviewed the proposals in terms of public safety and fire prevention (Attachment 2). Initially there was a concern regarding life safety access to the residential upper floors of the abutting building that is about 5-6 feet away from the compressor pad. The Fire Department looked into this more closely and confirmed that they are satisfied with the emergency access along the boundary (Attachment 4).

4. Site Design Standards

Noise and Vibration

The applicant originally proposed that the HVAC compressors be located along the rear boundary and staff suggested (Attachment 1) that they be located away from the residential zone. The revised plan shows these as relocated along the side of the building at the rear.

Since then staff have learned that there are residential units above the building at the side. The applicant should submit sound information to confirm that the compressors meet the B1 sound requirements as they are so close to the boundary and there is no fence at this location. Further discussion is required to determine whether there may be less impact if the compressors were to be located at the rear within the boundary fence or whether additional noise attenuation would be recommended if they are at the side.

Zoning-Related Design Standards (B1 zone)

The photograph below provides an indication of the context for the project:



The proposed building is illustrated in the rendering below:



1. B1 Design Standards

The project is located mainly in the B1 zone and the City's Urban Designer has provided a Design Review Memo (see Attachment 3 and extracts below) that questions the gable design as it appears out of proportion and top heavy, and recommends a flat roof.

The applicant has not revised the building design and has explained the basis for retaining the initial gabled design in the "response to comments (Attachment V), as quoted below:

1) *Pitched Roof: It was unanimous at the neighborhood meeting that they preferred the pitched roof. They cited the new building at the corner of Ocean and Hershey as a building style they did not like. This pitched roof design was carefully considered. The staff comments summarized as requesting "a box structure with a plain entrance". Changing to the flat roof and removing the entrance details will create a big square box with little variation and no neighborhood feel.*

The pitched roof, with the gables and eaves, break up the facade and reduce the overall appearance of the height and size of the building. The third floor also steps back to again reduce the appearance of height.

We have provided banding at the first floor with a change in siding color to emphasize the commercial space and provide interest to the building design. The front entrance was designed to provide a higher quality of architectural design to the building.

Extract from the Design Review Comments (Attachment 3) : *(questions and unmet standards in red)*

- Provide information about the material selection and label materials on the elevations*
- Clarify discrepancies between site plan and architectural plans – especially for fences, pads, and mechanical systems*

Standard (1) f. Building Design – Building design conveys its commercial/mixed use nature. Use of office-front is consistent with commercial buildings on this street. *Staff question the use of a gable roof when such large dormers are also being introduced, especially since the building is so wide that the proportion of the gable moves away from the residential character. The building form is top-heavy with the large dormers and the eave at the second floor. Staff recommend a flat roof, which would be appropriate for a three-story, mixed-use building type, as well as appropriate given the width and proportion of the building overall and does not preclude the use of articulation and detail to add visual interest. At the very least, the second story eave should be removed which contributes to the top-heavy feel of the form.* The office use is differentiated on the façade through the use of the office-front windows, the change of material, and the trim delineating the ground from the upper floors. These elements are adequate in conveying the different uses – *a gable roof is not necessary to convey the residential use or to try and fit into the residential context which happens to include a variety of roof forms (including flat roofs).* Staff find the design of the office entry to be *too formal for the overall character of the building and the neighborhood character – this should be revised, possibly to simplify the columns and the pediment roof.*

Standard (1) g. Building Materials – *Staff requests more information about the proposed materials in order to evaluate the proposal.* The project appears to use clapboard of two different reveals with panel as an accent – these would be appropriate material choices. The surrounding context uses clapboard and brick primarily.

Standard (1) h. Building Scale – Building is three stories with a gable/dormer roofline. There is a two-story mixed-use building between this site and the residential buildings on the street.

The existing scale of commercial and mixed-use buildings on Vannah Ave is typically one story or two to three stories for mixed-use with the majority of buildings being too short compared with the street width. Therefore, staff support new development that is appropriately scaled (meaning taller) for the street and for a mixed-use urban corridor and finds three stories meets the standard (as well as the zoning). In addition, this project has some massing variation at the third floor that varies the height of the building at the street.

2. Multi-family and Other Housing Types Design Standards

In addition, there are design standards that apply to all multifamily development including this proposal. These are more general standards that include design standards as well as several other standards as listed below with staff 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;*
- 2. 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: The proposals have been evaluated in the context of the B-1 Design Standards (above) which cover the design elements mentioned in standards 1 and 2 in greater detail. Please refer to the Design Review comments in Attachment 3.

- 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: A 10 foot by 18 foot common patio has been provided at the rear of the building, accessible from the handicap unit on the ground floor.

- 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 area is screened along the ROW frontage with a decorative fence and tree planting, and by PVC stockade fences elsewhere except along the eastern boundary.

VII. NEXT STEPS

The final submissions should address the staff comments and issues outlined in this Memorandum, along with addressing Board comments. These include:

- Resolution of design;
- Submission of additional information eg height calculations based on average grade; materials; area of the commercial space;
- Resolution of compressor location;
- Revisions to parking lot/frontage area to address parking space size/utility guy wire/ landscape /fencing comments;
- Address staff comments regarding parking aisle width; construction management plan; grading and drainage; truck deliveries;
- Clarification of handicap unit access and other ADA compliance;
- Submission of draft condominium documents and capacity letters.

ATTACHMENTS:

Attachments to the Memorandum

1. Prelim Staff comments 5.17.18
2. Peer Engineer, Fire and Planning comments 6.5.18
3. Design Review Memo 5.10.18
4. Fire comment update 6.6.18
5. Prelim Traffic Engineering comments 6.7.18
6. City Arborist comments
7. DPW comments

Public comments

- PC 1 Tamara Jones 6.4.18

Applicant's Submittal

- A. Cover letter
- B. Table of Contents and List of Plans
- C. Application and checklist
- D. Right, Title and Interest and Easements
- E. Financial and Technical Capacity
- F. Description including location plan
- G. Zoning
- H. Easements

- I. Federal and State Requirements
- J. City Master Plans
- K. Fire Safety
- L. Construction Management Plan narrative
- M. Geotechnical Report
- N. Consistency with Master Plans (same as J)
- O. Solid Waste
- P. Utility capacity
- Q. Design Standards
- R. Lighting and HVAC
- S. Request for Waivers
- T. Architectural Street Views
- U. Neighborhood meeting Certificate and Notes
- V. Response to staff prelim review comments 5.29.18

Plans

- P1. Survey
- P2. Subdivision Plan (2 sheets)
- P3. Existing conditions
- P4. Site Plan
- P5. Landscape Plan
- P6. Grading and Utilities Plan
- P7. Erosion control Plan
- P8. Construction Management Plan
- P9. Details (2 sheets)
- P10. Architectural Cover Sheet
- P11. Ground Floor Plan
- P12. Elevations (2 sheets)
- P13. Building Section
- P14. Photometric Plans (2 sheets)

28 Vannah Street

1 message

Jean Fraser <jf@portlandmaine.gov>
To: Tom Greer <tgreer@walsh-eng.com>

Thu, May 17, 2018 at 11:33 AM

Hello Tom

Yesterday at the Dev Rev meeting reviewers finalized the preliminary comments on this project. The application is very thorough but there are several items that need further discussion/revision as noted below:

- *Design of the new building (B1 Design Standards):*
 - Please see the attached Design Review Memo; we have some concerns regarding the roof and entrance design;
 - Please also submit elevations that have the calculations for the average grade, show the average grade and show the heights at the corners (needed to confirm this meets zoning).
- *Landscaping (Site Plan, B1 Zone and B1 Design Standards):* We welcome the retention of the large existing trees along the boundaries, but revisions are needed to:
 - Widen the area beneath the trees along the front to 6 feet to ensure that the trees/shrubs survive and buffer the parking; we would support an increase in % of compact parking spaces (or narrowing of some spaces) and removal of one parking space (near front to west) to achieve this;
 - A densely landscaped buffer/ architectural quality fencing is required along the rear boundary that abuts the residential zone (see site plan ordinance) - the existing proposals show little planting and a chain link fence at this location and do not meet the standards.
 - As part of the treatment along the boundary with residential, please clarify the enclosure for the patio; (as a comment and not a review comment, we note that the patio location is on the north side and immediately behind a large building and will be very dark)
 - Fencing on the architectural plans differs from the site plan. Revised plans for the Planning Board should be consistent, with all fencing shown on the site plan and labeled as to height and materials (please also clarify boundary treatment along both side boundaries).
- *Parking lot layout:* The layout of the parking lot needs to be revised to address the following:
 - Pedestrian access from sidewalk to residents entrance;

- Servicing requirements for the retail/commercial use, including for deliveries & waste collection (?dumpsters);
 - Safe and protected placement of the pole lights, which should be shown on the site plan.
- *Sidewalk:* As part of the previous parking agreement the small section of sidewalk abutting the site was to be upgraded to create a continuous sidewalk. Occupants of your development will be using this sidewalk, so please clarify what arrangements are being made for this improvement to be made at the same time as the site is developed?
 - *Mechanical Units:*
 - The site plan ordinance states:
 - (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.*
 - In light of this ordinance requirement, please relocate the mechanical units/compressors (the architectural plans show them differently than the site plan, but both have them within the residential zone and near the boundary with residences) and specify what enclosures will be provided (also to limit noise as there is a noise limit in the B1 zone of 55dBA).

If you consider that a meeting with reviewers would be helpful please let me know. We will confirm the PB meeting date when we receive revised plans and the associated "response to comments" letter. Please also send me a copy of your Neighborhood Meeting invitation and notes etc when available.

Thank you
Jean

--

Jean Fraser, Planner
City of Portland
874 8728



PLAN CORRECTIONS REPORT PL-000030-2018 FOR CITY OF PORTLAND

PLAN ADDRESS: 28 Vannah Avenue
Portland, 04103

PARCEL: 129 F011001

APPLICATION DATE: 03/28/2018

SQUARE FEET: 0.00

DESCRIPTION: 8 Unit Building; 7 residential, 1 commercial

EXPIRATION DATE:

VALUATION: \$0.00

CONTACTS

Agent/Representative

Name

Tom Greer

Company

Walsh Engineering Associates,
Inc.

Address

1 Karen Drive, Suite 2A
Westbrook, ME 04092

Corrections Required

Civil Engineering - Third Party Reviewer

Lauren Swett

v.1.00 - Not Resolved

Correction: General

The Applicant has noted that water and sewer ability to serve verification is pending.

Corrective Action: Provide utility ability to serve verification when available.

Correction: General

The Applicant should review parking lot grading. Spot grades are shown in the pavement to the north and south of the ADA parking spaces, however it is not clear if these are existing or proposed grades. No drainage infrastructure is provided, so it is unclear how drainage exits the parking lot based on these spot grades.

Corrective Action: Update grading plan.

Correction: General

The construction management plan should be updated to note that contractors may not utilize on street parking during construction.

Corrective Action: Provide updated construction management plan.

Fire

Robert Thompson

v.1.00 - Not Resolved

Correction: General

Fire Department access to the building is sufficient.

Corrective Action: N/A

Correction: General

This project shall not affect the emergency escape capabilities of any existing building. *(See update in 6.6.18 email)*

Corrective Action: N/A

Correction: General

There are adequate fire hydrants in the area.

Corrective Action: N/A

Correction: General

The entire building shall be sprinklered.

Corrective Action: N/A

Planning

Jean Fraser

v.1.00 - Not Resolved

Correction: Exceeds Required Parking

The compact parking space nearest the entrance should be removed as if it occupied by a standard length car it will partially block the driveway. Since the parking count exceeds zoning requirements by 10%, this space could be lost or relocated.

(see update from Tom Errico, Traffic Engineering Reviewer dated 6.7.18)

Corrective Action: N/A

Conditions Required

Planning and Urban Development Department Planning Division



Subject: B-1 Design Review – 28 Vannah Avenue
Written by: Caitlin Cameron, Urban Designer
Date of Review: Thursday, May 31 2018

The project at 28 Vannah Avenue was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer, Jean Fraser, Planner, and Nell Donaldson, Senior Planner, against the *B1 Commercial Business Zones Standards* (Section (d) of the Design Manual).

Design Review Comments: *(questions and unmet standards in red)*

- Provide information about the material selection and label materials on the elevations
- Clarify discrepancies between site plan and architectural plans – especially for fences, pads, and mechanical systems

(d) B-1 Commercial Business Zones

Standard (1) a. Urban Street Wall – Building placement is near the property line and maintains the desired street wall with a landscape buffer.

Standard (1) b. Mixed Uses – Building includes office and residential uses.

Standard (1) c. Building Entrances – The office entrance is directly accessible from the street while the residential entrance is to the side and faces the parking lot. **The Site Plan was revised to provide a direct pedestrian access to the residential entrance from the sidewalk as required by the standard.**

Standard (1) d. Windows – Windows are provided along street frontage as required – high level of fenestration. **VT of .7 or greater is required.**

Standard (1) e. Façade Character – Office entrance and use faces the street and the office storefront is adjacent to the street.

Standard (1) f. Building Design – Building design conveys its commercial/mixed use nature. Use of office-front is consistent with commercial buildings on this street. **Staff question the use of a gable roof when such large dormers are also being introduced, especially since the building is so wide that the proportion of the gable moves away from the residential character. The building form is top-heavy with the large dormers and the eave at the second floor.** Staff recommend a flat roof, which would be appropriate for a three-story, mixed-use building type, as well as appropriate given the width and proportion of the building overall and does not preclude the use of articulation and detail to add visual interest. **At the very least, the second story eave should be removed which contributes to the top-heavy feel of the form.** The office use is differentiated on the façade through the use of the office-front windows, the change of material, and the trim delineating the ground from the upper floors. These elements are

adequate in conveying the different uses – a gable roof is not necessary to convey the residential use or to try and fit into the residential context which happens to include a variety of roof forms (including flat roofs). Staff find the design of the office entry to be too formal for the overall character of the building and the neighborhood character – this should be revised, possibly to simplify the columns and the pediment roof.

Standard (1) g. Building Materials – Staff requests more information about the proposed materials in order to evaluate the proposal. The project appears to use clapboard of two different reveals with panel as an accent – these would be appropriate material choices. The surrounding context uses clapboard and brick primarily.

Standard (1) h. Building Scale – Building is three stories with a gable/dormer roofline. There is a two-story mixed-use building between this site and the residential buildings on the street. The existing scale of commercial and mixed-use buildings on Vannah Ave is typically one story or two to three stories for mixed-use with the majority of buildings being too short compared with the street width. Therefore, staff support new development that is appropriately scaled (meaning taller) for the street and for a mixed-use urban corridor and finds three stories meets the standard (as well as the zoning). In addition, this project has some massing variation at the third floor that varies the height of the building at the street.

Standard (1) i. Landscaping and Buffers – Parking is to the side of the property and is screened from view from the street by a fence and understory planting. The abutting properties are screened using a fence.



Jean Fraser <jf@portlandmaine.gov>

28 Vannah Avenue

1 message

Robert Thompson <rmt@portlandmaine.gov>

Wed, Jun 6, 2018 at 10:53 AM

To: Jean Fraser <jf@portlandmaine.gov>

Hi Jean,

I've reviewed the proposed site plan for this project, as well as the proximity and construction features of the building to the right of this proposed project. Based on my findings, I've determined the construction of this building, and associated utilities, will not impede the means of escape from the neighboring building.

Please feel free to contact me if you have any further questions or concerns.

Thank you,
Mike

--

Robert M. Thompson
Division Fire Chief
Portland Fire Department
(207) 874-8400
rmt@portlandmaine.gov

28 Vannah Street - Preliminary Traffic Comments

1 message

Tom Errico <thomas.errico@tylin.com>

Thu, Jun 7, 2018 at 9:09 AM

To: Jean Fraser <jf@portlandmaine.gov>

Cc: "BHYMAN@portlandmaine.gov" <BHYMAN@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, "Jeff Tarling (JST@portlandmaine.gov)" <JST@portlandmaine.gov>

Hi Jean – I have reviewed the revised preliminary plans and offer the following traffic comments.

- The proposed project is not expected to generate a significant amount of new traffic and thus is not expected to impact safety and mobility in the study area.
- Given site conditions, that the project nearly meets City requirements, and some compact parking spaces exceed City dimensional requirements, I support a waiver from the City's Technical Standards for the number of compact spaces on the site.
- It is recommended that the compact space near the driveway entrance be lengthened by 2 feet and the CMP pole guy wire be adjusted accordingly.
- The applicant should provide details for how truck deliveries will be accommodated.
- It appears the parking aisle width does not meet City standards to the rear of the parking lot. The applicant should provide a formal waiver request with supporting documentation.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director

File: 17166

VANNAH WHITE, LLC
61 Anthoine Rd
Windham, Me 04062

March 26, 2018

Ms. Barbara Barhydt
City of Portland, Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

RE: SUBMITTAL FOR THE 28 – 28 VANNAH AVENUE

Dear Barbara,

Attached is the application for an 8 unit building to be constructed at 28 Vannah Avenue. The building will have 7 residential units and 1 commercial unit.

The project includes the removal of the existing building on site and replacing it with the new structure. The parking will be reconstructed in its current location, providing parking for the entire building. No off- site parking is required.

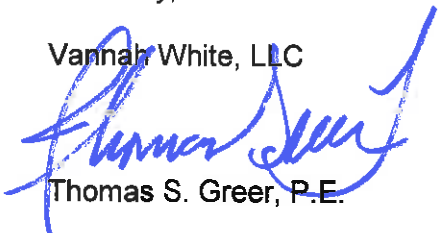
The new project will increase the impervious surface by less than 1,000 square feet. No storm water management is required.

We have requested an "Ability to Serve" letter from the Water District. It will be provided as soon as we have it.

Please review the application and let me know if you have any questions..

Sincerely,

Vannah White, LLC



Thomas S. Greer, P.E.

Enclosures

cc: File TSG/vjg

Table of Contents

1. Table of Contents
2. Cover Letter
3. Application: Level III, Site - Subdivision Plan
- 3a. Checklist: Level III
4. Location Plan
5. Project Description
6. Right, Title or Interest
7. State and - or Federal Permits
8. Zoning Requirements
- 8a. Zoning Assessment Table
9. Existing and Proposed Easements
10. Request for Waivers
- 10a. Waiver Table
11. Financial Capacity
12. Technical Capacity
13. Construction Management Plan Narrative
14. Significant Natural Features
15. City Master Plans
16. Utility Capacity to Serve Letters
17. Solid Waste
18. Fire Safety Plan and Code Summary
19. City Design Manual Standards
20. HVAC Equipment
21. Geotechnical Report
22. Site Lighting
23. Architectural Street Views
24. Drawing List

Drawing List

SHEET#	SHEET TITLE
C-1.1	SUBDIVISION RECORDING PLAT SHEET 1 OF 2
C-1.2	SUBDIVISION RECORDING PLAT SHEET 2 OF 2
C-2.1	SITE PLAN
C-2.2	EXISTING CONDITIONS AND DEMOLITION PLAN
C-2.3	GRADING AND UTILITIES PLAN
C-2.4	EROSION CONTROL PLAN, NOTES & DETAILS
C-2.5	LANDSCAPE PLAN, NOTES & DETAILS
C-3.1	SITE DETAILS
C-3.2	SITE DETAILS
	PHOTOMETRICS PLAN 1 of 2
	PHOTOMETRICS PLAN 2 of 2
CM-1	CONSTRUCTION MANAGEMENT PLAN
I	EXISTING CONDITIONS PLAN OF LAND
A 0	ARCHITECTURAL TITLE SHEET
A1.1	GROUND FLOOR PLAN
A2.1	ELEVATIONS – NORTH & EAST
A2.2	ELEVATIONS – SOUTH & WEST
A 3.1	SECTIONS



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), Design Manual and Technical Manual.

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207) 874-8719
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:	The 28
Proposed Development Address:	28 Vannah Avenue
Project Description:	Seven residential and One commercial unit
Chart/Block/Lot:	Map 129 / Block F / Lots 009 & 011
Preliminary Plan	
Final Plan	

II. Contact Information (Please enter n/a on those fields that are not applicable)

APPLICANT

Name:	Vannah White, LLC / Thomas S. Greer
Business Name:	Vannah White, LLC
Address:	28 Vannah Avenue
City/State:	Portland, Maine
Zip Code:	04103
Work #:	207-553-9898
Home #:	
Cell #:	207-749-9396
Fax #:	
E-mail:	tgreer@walsh-eng.com

OWNER

Name:	Same as above.
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

AGENT/REPRESENTATIVE

Name:	Same as above.
Address:	
City/State:	
Zip Code:	
Work #:	
Home #:	
Cell #:	
Fax #:	
E-mail:	

BILLING (to whom invoices will be forwarded to)

Name:	Vannah White, LLC / Thomas S. Greer
Address:	61 Anthoine Rd
City/State:	Windham, Maine
Zip Code:	04062
Work #:	
Home #:	
Cell #:	207-749-9396
Fax #:	
E-mail:	tgreer@walsh-eng.com

ENGINEER

Name:	Thomas S. Greer, PE.
Address:	28 Vannah Avenue
City/State:	Portland, Maine
Zip Code:	04103
Work #:	207-553-9898
Home #:	
Cell #:	207-749-9396
Fax #:	
E-mail:	tgreer@walsh-eng.com

SURVEYOR

Name:	Maine Survey Consultants, Inc.
Address:	P.O. Box 485
City/State:	Harrison, Maine
Zip Code:	04040
Work #:	207-583-6159
Home #:	
Cell #:	
Fax #:	207-583-2334
E-mail:	

ARCHITECT

Name:	Whipple Callender Architects
Address:	P.O. Box 1276
City/State:	Portland, Maine
Zip Code:	04104-1276
Work #:	207-775-2696
Home #:	
Cell #:	
Fax #:	
E-mail:	

ATTORNEY

Name:	Barns Greenfield & Thornton / Jim Barns
Address:	8 Fundy Rd
City/State:	Falmouth, Maine
Zip Code:	04105
Work #:	207-781-7677
Home #:	
Cell #:	
Fax #:	
E-mail:	jbarns@BGT-law.com

DESIGNATED PERSON(S) FOR UPLOADING INTO e-PLAN

Name:	Jody Cady
E-mail:	jody@walsh-eng.com
Name:	Thomas Greer
E-mail:	tgreer@walsh-eng.com
Name:	Rita Sawyer
E-mail:	rita@walsh-eng.com

III. APPLICATION FEES

LEVEL III DEVELOPMENT (check applicable review)

☒	Less than 50,000 sq. ft.	\$750.00
☐	50,000 – 100,000 sq. ft.	\$1,000.00
☐	100,000 – 200,000 sq. ft.	\$2,000.00
☐	200,000 – 300,000 sq. ft.	\$3,000.00
☐	Over 300,000 sq. ft.	\$5,000.00
☐	Parking lots over 100 spaces	\$1,000.00
☐	After-the-fact Review	\$1,000.00 + applicable application fee above

PLAN AMENDMENTS (check applicable review)

☐	Planning Staff Review	\$250.00
☒	Planning Board Review	\$500.00

OTHER REVIEWS (check applicable review)

☐	Traffic Movement	\$1,500.00
☐	Stormwater Quality	\$250.00
☒	Subdivision	\$500.00 + applicable fee for lots/units below
	# of Subdivision Lots/Units [] x \$25.00 each	\$ 200.00
☐	Site Location	\$3,500.00 + applicable fee for lots/units below
	# of Site Location Lots/Units [] x \$200.00 each	\$
☐	Change of Use	
☐	Flood Plain	
☐	Shoreland	
☐	Design Review	
☐	Housing Replacement	
☐	Historic Preservation	
TOTAL APPLICATION FEE DUE:		\$ 1950.00

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)

V. PROJECT DATA (Please enter n/a on those fields that are not applicable)

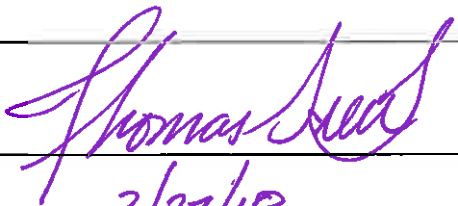
TOTAL AREA OF SITE	0.24 acres	sq. ft.
PROPOSED DISTURBED AREA OF THE SITE	0.24 acres	sq. ft.
<i>If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland.</i>		
IMPERVIOUS SURFACE AREA		
Impervious Area (Total Existing)	7867	sq. ft.
Impervious Area (Total Proposed)	8380	sq. ft.
Building Ground Floor Area and Total Floor		
Building Footprint (Total Existing)	1552	sq. ft.
Building Footprint (Total Proposed)	3150	sq. ft.
Building Floor Area (Total Existing)	1552	sq. ft.
Building Floor Area (Total Proposed)	9100	sq. ft.
ZONING		
Existing	B-1	
Proposed, if applicable		
LAND USE		
Existing	Office	
Proposed	Commercial/Residential	
RESIDENTIAL, IF APPLICABLE		
# of Residential Units (Total Existing)	0	
# of Residential Units (Total Proposed)	7	
# of Lots (Total Proposed)	1	
# of Affordable Housing Units (Total Proposed)	0	
PROPOSED BEDROOM MIX		
# of Efficiency Units (Total Proposed)		
# of One-Bedroom Units (Total Proposed)	2	
# of Two-Bedroom Units (Total Proposed)	5	
# of Three-Bedroom Units (Total Proposed)		
PARKING SPACES		
# of Parking Spaces (Total Existing)	17	
# of Parking Spaces (Total Proposed)	17	
# of Handicapped Spaces (Total Proposed)	1	
BICYCLE PARKING SPACES		
# of Bicycle Spaces (Total Existing)	0	
# of Bicycle Spaces (Total Proposed)	2	
ESTIMATED COST OF THE PROJECT		
	\$1,200,000	

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 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:	
Date:	3/27/18

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

FINAL PLAN - Level III Site Plan			
Applicant Checklist	Planner Checklist	# of Copies	GENERAL WRITTEN SUBMISSIONS CHECKLIST (* If applicant chooses to submit a Preliminary Plan, then the * items were submitted for that phase and only updates are required)
X		1	* Completed Application form
X		1	* Application fees
X		1	* Written description of project
X		1	* Evidence of right, title and interest
N/A		1	* Evidence of state and/or federal 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))
N/A		1	Stormwater management plan and stormwater calculations
X		1	Written summary of project's consistency with related city master plans
X		1	Evidence of utility capacity to serve
X		1	Written summary of solid waste generation and proposed management of solid waste
X		1	A code summary referencing NFPA 1 and all Fire Department technical standards
X		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
X		1	Manufacturer's verification that all proposed HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

Applicant Checklist	Planner Checklist	# of Copies	SITE PLAN SUBMISSIONS CHECKLIST (* 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
		1	Final Site Plans including the following:
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;
N/A			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;
X			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;
X			Location of all snow storage areas and/or a snow removal plan;
X			A traffic control plan as detailed in Section 1 of the Technical Manual;
X			Proposed buffers and preservation measures for significant natural features, where applicable, as defined in Section 14-526(b)(1);
N/A			Location and proposed alteration to any watercourse;
N/A			A delineation of wetlands boundaries prepared by a qualified professional as detailed in Section 8 of the Technical Manual;
N/A			Proposed buffers and preservation measures for wetlands;
X			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;
N/A			A stormwater management and drainage plan, in accordance with Section 5 of the Technical Manual;
X			Grading plan;
X			Ground water protection measures;
X			Existing and proposed sewer mains and connections;

- Continued on next page -

X		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;
X		Location and size of all on site solid waste receptacles, including on site storage containers for recyclable materials for any commercial or industrial property;
X		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;
X		Location and dimensions of all existing and proposed HVAC and mechanical equipment and all proposed screening, where applicable;
X		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;
N/A		Location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.



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



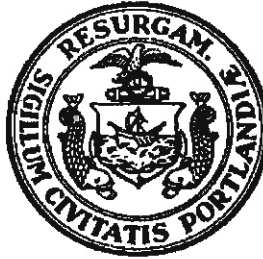
A separate drawing[s] shall be provided as part of the site plan application for the Portland Fire Department's review.

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: 3/26/18

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

Site Address: 28 Vannah Avenue

Chart Block Lot Number: Map 129/Block F/Lots 009&011

Proposed Use: 7 Residential Units

Previous Use: 1 Commercial Unit

Existing Sanitary Flows: 100 GPD

Existing Process Flows: 0 GPD

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

Site Category	Commercial (<i>see part 4 below</i>)	☐
	Industrial (<i>complete part 5 below</i>)	☐
	Governmental	☐
	Residential	☒
	Other (<i>specify</i>)	☐

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

2. Please, Submit Contact Information.

City Planner's Name: _____ Phone: _____

Owner/Developer Name: Vannah White LLC c/o Thomas Greer

Owner/Developer Address: _____

Phone: _____ Fax: _____ E-mail: _____

Engineering Consultant Name: Thomas Greer PE

Engineering Consultant Address: 61 Anthoine Rd Windham Me 04062

Phone: 207-749-9396 Fax: _____ E-mail: tgreer@walsh-eng.com

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

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 1,180 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*) 90 gpd/bedroom = 1,080 plus 100 for Commercial Unit

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values:

N/A

Size of External Grease Interceptor:

Retention Time:

Peaking Factor/ Peak Times:

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

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated:

N/A

GPD

Do you currently hold Federal or State discharge permits?

Yes

No

Is the process wastewater termed categorical under CFR 40?

Yes

No

OSHA Standard Industrial Code (SIC):

(<http://www.osha.gov/oshstats/sicser.html>)

Peaking Factor/Peak Process Times:

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

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



A Guide to Holding Neighborhood Meetings Portland, Maine

Planning and Urban Development Department
Planning Division and Planning Board

In order to improve communication between applicants and neighbors, the City of Portland requires applicants who are proposing certain types of development review projects, to hold a neighborhood meeting.

Developments requiring a neighborhood meeting

- Proposed map amendments, contract zones and zoning text amendments that would result in major development;
- Subdivisions of five or more units or lots;
- Master Development Plans; and
- Level III site plan proposals as defined in Section 14-523.

(The Land Use Code, including Article II (Planning Board) and Article V (Site Plan – which contains the neighborhood meeting requirements), are available on the City's web site at www.portlandmaine.gov/citycode/chapter014.pdf)

Timing of meeting

- **Subdivisions of 5 or more units or lots, zone changes, contract zones, zoning text amendments and Level III site plans:**
 - Preliminary Site Plan - The meeting should be held within 30 calendar days of filing the application.
 - Final Site Plan – If only a final plan is submitted, the meeting should be held within 21 calendar days of filing the application and no less than 7 calendar days before the public hearing.
- **Master Plan Development:**
 - The meeting should be held within 30 calendar days of filing the application.
 - The meeting should be held on a date no less than 7 calendar days before a public workshop or public hearing.
 - The meeting shall not be combined with any required neighborhood meeting for the Level III applications.

Location of meeting

- The meeting should be held in the evening, during the week, at a convenient location within the Portland neighborhood surrounding the proposed site. Community meeting spaces at libraries, schools or other places of assembly are recommended. Neighborhood schools are usually available for evening meetings.
- Meetings should not be held on the same day as scheduled Planning Board or City Council meetings. The City Council generally meets on the 1st and 3rd Monday of each month and the Planning Board generally meets on the 2nd and 4th Tuesday of each month; however additional meetings may be scheduled. An updated schedule may be found on the City's website: www.portlandmaine.gov

Invitation List

- Property owners within 500 feet of the proposed development (1000 feet for proposed industrial subdivisions and industrial zone changes)
- Interested citizens and neighborhood groups.

The Planning Division provides the mailing labels. We require at least 48 hours notice to generate the mailing labels and a charge of \$1.00 per sheet will be payable upon receipt of the labels. An electronic version (excel or word format) of the labels can also be e-mailed upon request.

A digital copy of the notice must be provided to the Planning Office (jmy@portlandmaine.gov and ldobson@portlandmaine.gov) and the assigned planner, which will then be forwarded to those on the interested citizen list who receive e-mail notices.

When to Send Invitations

- Invitations must be sent **no less than 10 days (to include weekends)** prior to the neighborhood meeting.
- Notices may be sent by regular mail and do not need to be sent by certified mail.

Notice Description

A recommended invitation format is included in this packet of material.

Attendance Sheet and Meeting Minutes

- Sign-in sheet must be circulated for those in attendance.
- Applicant shall take accurate minutes of the meeting.
- The sign-in sheet and minutes shall be submitted to the Planning Division.
A public hearing will not be scheduled until the meeting minutes and sign-up sheet are submitted to the Planning Division.

A Certification form is included with this packet to be completed and signed by the applicant.

Please call the Planning Division at 874-8721 or 874-8719 if you have any questions.

Attachments

1. Neighborhood Meeting Invitation Format
2. Neighborhood Meeting Certification

EXAMPLE: Neighborhood Meeting Invitation Format

**Applicant/Consultant
Letterhead**

(Date)

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a (development proposal) located at (location/number and street address).

Meeting Location: _____

Meeting Date: _____

Meeting Time: _____

(The City code requires that property owners within 500 feet (1000 feet for proposed industrial subdivisions and industrial zone changes) 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 (telephone number of applicant or consultant).

Sincerely,

(Applicant)

Note:

Under Section 14-32(C) and 14-524(a)d of the City Code of Ordinances, an applicant for a Level III development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting within 30 days of submitting a preliminary application or 21 days of submitting a final site plan application, if a preliminary plans was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street Portland, ME 04101 or by email: to bab@portlandmaine.gov

EXAMPLE: Neighborhood Meeting Certification

I, (applicant/consultant) hereby certify that a neighborhood meeting was held on (date) at (location) at (time).

I also certify that on (date at least ten (10) days prior to the neighborhood meeting), invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.
2. Residents on the "interested parties" list.
3. A digital copy of the notice was also provided to the Planning Division (jmy@portlandmaine.gov and ldobson@portlandmaine.gov) and the assigned planner to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,

_____ (date)

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes



LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

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

Please confirm by electronically checking the boxes to the left

Tab 1 – General Application Documents

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

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

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

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

Tab 2 - TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ☐ ☒ ☐	Transportation Analysis- Traffic Impact (14-526 (a) 1) - Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts - Traffic Impact Study (Technical Manual, Section 1) if applicable
Yes NA Plan ☐ ☒ ☐	Access and Circulation (14-526 (a) 2 a) - Access and internal circulation, addressing ADA access - Access and egress impacts on traffic flows - Description and use of drive-up features, if applicable
Yes NA Plan ☐ ☒ ☐	Loading and Servicing (14-526 (a) 2 b) - Loading and servicing needs, route and travel way geometrics for deliveries - Turning templates for delivery vehicles, if applicable
Yes NA Plan ☐ ☒ ☒	Sidewalks (14-526 (a) 2 c) - Sidewalks and condition along street frontages and internal walkways - Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
Yes NA Plan ☐ ☒ ☐	Public Transit (14-526 (a) 3), if applicable - Existing available transit services - Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ☒ ☐ ☒	Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c) - Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements - Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
Yes NA Plan ☐ ☐ ☒	Bicycle Parking (14-526 (a) 4 b) - Address bicycle parking requirements and identify locations on-site - Construction details for bike racks (Technical Manual, Section 1)
Yes NA Plan ☐ ☐ ☒	Snow Storage (14-526 (a) 4 d) Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ☐ ☒ ☐	Traffic Demand Management (TDM) (14-526 (a) 5), if applicable Develop TDM with Trip Reduction Targets and Strategies

Tab 3 - ENVIRONMENTAL AND LANDSCAPE FEATURES			
Check list			Assess/Provide/Document:
Yes	NA	Plan	Preservation of Significant Natural Features (14-526 (b) 1), if applicable - Trees, plants, habitats listed on State or Federal list of endangered or threatened - High and moderate value waterfowl and wading habitat - Aquifers on Casco Bay Islands - Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) - Proposed preservation areas and protection measures - Documentation from environmental consultants, determinations from applicable state agencies
☐	☒	☐	
Yes	NA	Plan	Landscaping and Landscape Preservation (14-526 (b) 2 a) - Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) - Protection measures of existing vegetation during construction - Protection measures within Shoreland Zone, if applicable
☐	☒	☐	
Yes	NA	Plan	Site Landscaping (14-526 (b) 2 b) - Screening and buffering of service areas and between non-residential and residential uses - Planting plans with plant schedule and sizes (Technical Manual, Section 4)
☐	☐	☒	
Yes	NA	Plan	Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable Landscaped islands within parking areas (Technical Manual, Section 4)
☐	☒	☐	
Yes	NA	Plan	Street Trees (14-526 (b) 2 b iii) - Existing Heritage or Feature Trees on site and measures to preserve - Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable
☐	☐	☒	
Tab 4 - ENVIRONMENTAL AND STORMWATER			
Check list			Assess/Provide/Document:
Yes	NA	Plan	Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a) - Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable - Erosion control plan and measures - Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable - Subsurface sanitary sewage disposal and groundwater protection
☐	☒	☐	

Tab 5 - PUBLIC INFRASTRUCTURE AND SAFETY			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	Consistency with City Master Plans (14-526 (c) 1) - Identify consistency with master plans - Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
☒	☐	☐	
Yes	NA	Plan	Public Safety and Fire Prevention (14-526 (c)) - Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) - Emergency vehicle access - Address consistency with public safety standards (Technical Manual, Section 3) - Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
☒	☐	☐	
Yes	NA	Plan	Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9) - Electrical services, including providing underground services - Identify existing and proposed connections for public utilities and required public utility upgrades - Sewer line connections are required, if there is a main within 200 feet - Proposed solid waste management facilities on-site and management for the site - Written evidence of the ability to serve from utility companies, as applicable
☒	☐	☒	
Tab 6 - SITE DESIGN			
Check list		Assess/Provide/Document:	
Yes	NA	Plan	Massing, Ventilations and Wind Impact (14-526 (d) 1) - Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable - Bulk, location or height impacts on adjoining structures - Identify and locate HVAC equipment and venting away from public spaces and residential properties - Identify screening and manufacturing specifications for noise, if applicable
☐	☐	☒	
Yes	NA	Plan	Shadows (14-526 (d) 2), if applicable Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
☐	☒	☐	
Yes	NA	Plan	Snow and Ice Loading (14-526 (d) 3) Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
☐	☐	☒	
Yes	NA	Plan	View Corridors (14-526 (d) 4), if applicable Protection of designated view corridors (Portland Design Manual, Appendix 1)
☐	☒	☐	

Yes NA Plan ☐ ☒ ☐	Historic Resources (14-526 (d) 5), if applicable - Identify developments within Historic Districts or affecting Designated Landmarks - Certificate of Appropriateness or other evidence - Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required - Address preservation and documentation of Archaeological Resources
Yes NA Plan ☒ ☐ ☒	Exterior Lighting (14-526 (d) 6) - Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) - Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes NA Plan ☐ ☒ ☐	Noise and Vibration (14-526 (d) 7) Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes NA Plan ☐ ☒ ☐	Signage and Wayfinding (14-526 (d) 8), if applicable - Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff - Proposed commercial and directional signage on site
Yes NA Plan ☐ ☒ ☐	Zone Related Design Standards (14-526 (d) 5) - Address Historic Preservation Design Review, if applicable - Address any applicable design review standards by zone - Address submission requirements from Design Manual, page 1, addressing neighborhood context - Description of exterior materials, color, finish, and samples
Tab 7 - Construction Management Plan	
Yes NA Plan ☒ ☐ ☐	Construction Management Plan Construction Management Document and Plan

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

☒ GRADING and DRAINAGE PLAN including:
• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☒ EROSION CONTROL
• Must be in compliance with Technical Manual, Section 5
☒ LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping and buffers • Planting schedule
☒ RECORDING PLAT , if applicable
• IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☒ ARCHITECTURAL PLANS & RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans

MAINE REAL ESTATE TAX PAID

WARRANTY DEED
(Maine Statutory Short Form)

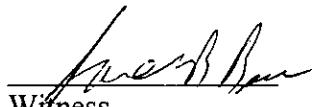
KNOW ALL PERSONS BY THESE PRESENTS, that WATSON INVESTMENT PROPERTIES, LLC, of Portland, Maine, for consideration paid, grants to VANNAH WHITE, LLC, whose mailing address is 13 Spoondrift Road, Falmouth, County of Cumberland and State of Maine, with warranty covenants, a certain lot or parcel of land, with any buildings thereon, situated at 28 Vannah Avenue, City of Portland, County of Cumberland and State of Maine, as more fully described in Exhibit A attached hereto.

See Exhibit A

Meaning and intending to convey the same premises conveyed to Grantor by deed dated April 13, 2007, from Francis J. Watson recorded in the Cumberland County Registry of Deeds Book 25010, Page 173.

Witness my hand and seal this 22nd day of December, 2011.

WATSON INVESTMENT PROPERTIES, LLC



Witness



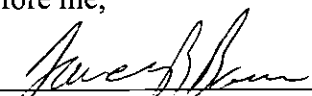
By: Francis J. Watson
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

December 22, 2011

Then personally appeared the above-named FRANCIS J. WATSON, sole member of said WATSON INVESTMENT PROPERTIES, LLC, and acknowledged the foregoing to be the free act and deed of said WATSON INVESTMENT PROPERTIES, LLC and his free act and deed in his said capacity.

Before me,



Notary Public/Attorney at Law

SEAL

James B. Barns
Notary Public, Maine
My Commission Expires October 25, 2015

EXHIBIT A

Certain lots or parcels of land, with any improvements thereon, situated in the City of Portland, County of Cumberland and State of Maine, on the northeasterly of Vannah Avenue, and being Lots. No. 72 and 74 as shown on Plan of Saunders Field, recorded in the Cumberland County Registry of Deeds, in Plan Book 13, Page 93, to which plan reference is made for a more particular description.

Received
Recorded Register of Deeds
Dec 22, 2011 03:42:29P
Cumberland County
Pamela E. Lovley

11. Financial Capacity

Att. E



February 6, 2018

City of Portland
389 Congress Street
Portland, ME 04101

RE: Thomas S. Greer

To whom it may concern:

People's United Bank understands Thomas S. Greer is developing a commercial project in Portland, Maine. We have had a satisfactory working relationship with Thomas S. Greer since 1998.

While the Bank is not yet at a point where a commitment letter can be issued, I am supportive of the request and feel the capacity exists to successfully complete the proposed project.

If you should have any comments or questions, please feel free to contact me at
(207) 828-3039.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Vanidestine", written over a horizontal line.

Mark Vanidestine
Vice President

12. Technical Capacity

The applicant has assembled a highly qualified team of professionals for the preparation of this project. All members of this team have significant experience with this type of project and many have worked together on other similar projects. The project is being designed by a multi-disciplinary team of design professionals. All members of the design team have proven experience working on projects located in the City of Portland.

Engineer:

Thomas S. Greer, PE
28 Vannah Avenue
Portland, Maine 04103

Surveyor:

Maine Survey Consultants
P.O. Box 485
Harrison, Maine 04040

Architect:

Whipple Callender Architects
P.O. Box 1276
Portland, Maine 04104

Attorney:

Barns, Greenfield & Thorton
James Barns
8 Fundy Road
Falmouth, Maine 04105

Thomas S. Greer, PE

Professional Experience

Walsh Engineering Associates Inc., Westbrook, Maine: Tom joins Walsh Engineering Associates, Inc. with multiple ongoing civil engineering projects. This project brings a wide array of engineering design considerations. His design expertise and knowledge of permitting procedures make the projects successful. These projects include:

- 40 Unit Senior Housing, Portland
- 10 Lot Clustered Subdivision, North Yarmouth
- Gravel Pit, Cornish
- 78 Unit Residential Project, Portland
- Mixed Commercial and Residential Project, Portland
- Church Expansion, Scarborough
- Commercial Transportation Facility, Buxton
- 24 Unit Multi Family, Kennebunk
- Hotel Renovation, Old Orchard Beach
- 10 Lot residential Subdivision, Bridgton,
- School Parking Lot Expansions, Naples
- 400 Unit Master Plan, Gray

Pinkham & Greer, Civil Engineers: Tom has over 40 years of experience in consulting engineering. This includes construction inspection, civil engineering design, and project management, as well as company management as a Principal of Pinkham & Greer; each experience building on the previous to form a well-rounded background in civil engineering and business management.

Mr. Greer's principal responsibilities within the company include management of civil engineering projects such as site designs and permit applications, and the financial management of the firm. Civil engineering projects include subdivision and land planning, stormwater management plans, site designs for commercial and institutional clients, and utility design for sewer and water projects.

The responsibility of corporate management adds to Mr. Greer's direct, hands-on experience when addressing each client's individual business concerns; developing solutions sensitive to the issues important to the client, such as financing, in addition to the technical engineering issues.

Mr. Greer has chaired the American Society of Civil Engineering subcommittee reviewing the stormwater management manual prepared by the Maine Department of Environmental Protection and was a member of the Technical Advisory Committee in developing the DEP Stormwater Management Program. He has also assisted the DEP with training programs for Non Point Source Stormwater through the Non Point Source Technical Advisory Committee.

Education

University of Maine – Orono, Maine B.S. Civil Engineering, 1976

Registration

Professional Engineer, Maine #4206
Professional Engineer, New Hampshire #5879
Professional Engineer, Connecticut # 16331

Professional Associations and Board Affiliations

American Society of Civil Engineers

Maine Survey Consultants, Inc.

P.O. Box 485, Harrison, Maine 04040

PH: 207-583-6159, Fax: 207-583-2334

www.mainesurveyconsultants.com

info@mainesurveyconsultants.com

Maine Survey Consultants, Inc. was established in 1988 by Delmore A. Maxfield, PLS. The company was formally called D.A. Maxfield, Jr. Land Surveying and has been providing professional land surveying services from offices in Harrison, Maine since 1980. Prior to that Mr. Maxfield was employed by Whitman & Howard, Inc., a civil engineering firm with offices located in Westbrook, Maine and Boston, Massachusetts.

The company currently consists of 4 employees performing all aspects of surveying; research, fieldwork, CAD. Our experience includes large and small boundary surveys, topographic surveys, GPS control surveys, development site surveys, street detail surveys, surveys for road and bridge design, and subdivision surveys.

The company currently incorporates the use of Leica Total Stations, Topcon Ranger data collectors, JAVAD & Topcon GPS equipment, and computers using AutoCad, Land Desktop, and Carlson survey software. We have full high speed internet capability and can transfer files electronically as needed. Our drafting department includes large format copying and scanning equipment as well.

Maine Survey Consultants, Inc.

Delmore A. Maxfield, Jr.
Professional Land Surveyor

Present Occupation:

1988-2018 Maine Survey Consultants, Inc. Harrison, Maine 04040
Owner: Providing professional land surveying services to the general public, developers, municipalities, and other professionals. Performing land boundary surveys, topographic, construction, GPS, and aerial photo control surveys.

Professional License:

1977 Professional Land Surveyor, State of Maine, Number 1177

Formal Education:

1972-1976 EMAPLS correspondence courses in land surveying

1971-1972 Northeastern University, Boston MA
Civil Engineering program

1970 Oxford Hills High School graduate South Paris, Maine

Past Employment:

1980-1988 D.A. Maxfield, Jr. – Land Surveying Owner, Harrison, Maine

1972-1980 Whitman & Howard, Inc. survey department Westbrook, Maine

Professional Membership:

1972-2018 Maine Society of Land Surveyors

1988-2012 American Congress on Surveying and Mapping

1990-2018 National Society of Professional Surveyors

Awards:

1987 MSLS annual meeting Map Contest Second Place

2001 MSLS annual meeting Map Contest Best of Show

2003 MSLS annual meeting Map Contest First Place Topographic

Other Memberships:

1983-2018 Harrison Volunteer Fire Department

EDUCATION: B.A., Architecture, Rhode Island School of Design, 1985
B.F.A., Architecture, Rhode Island School of Design, 1982

REGISTRATION:
Maine #1722, issued 1989
New Hampshire #3059, issued 2002
LEED AP BD+C 2009

COMMUNITY: Friends of Evergreen Cemetery Board Member, 1990 - 2004, 2007 - 2008
Evergreen Cemetery Master Plan Committee Board Member, 1992
Friends of Saint Lawrence Church, Board Member, 2003 - 2011
City of Portland, Housing Task Force, 2004

RECENT WORK:

2014 - 32 Turner Street

A comprehensive rehabilitation of an existing two-family residence located on Munjoy Hill. This balloon-framed structure was completely reworked and expanded where possible. Work entailed:

- Zoning analysis to maximize expansion possibilities for the families
- Code Analysis
- Architectural design services
- Product specifications
- Structural coordination
- New hi-efficiency heat system
- Permitting

2014 - 116 Walton Street

This project involved the rehabilitation of a large Italianate residence and carriage house. The separate structures are joined with a new kitchen addition, creating a basement and ground floor capable of accommodating sixteen female residents as well as staff. Work entailed:

- Site development plan, including stormwater features and treatment
- Architectural design services
- Product specifications
- New hi-efficiency heat system
- Permitting

2013 - 13 Lewis Street

This ongoing project rehabilitates an existing four unit structure in the West End of Portland. This historically contributing structure shows its age due to fire and subsequent removals. The complete rehabilitation of this structure meets the standards of the Historic District and updates the interiors to serve as a pair of one- and a pair of two-bedroom apartments. Previously the apartments were all one bedroom. Work entailed:

- Historic approvals
- Zoning analysis to add volume to the structure

(Resume cont.)

- Code analysis
- Architectural design services
- Structural services
- Product specifications
- Enhanced insulation package and hi-efficiency heating system
- Permitting

2013 - 145 Glenwood Avenue

This project involved the rehabilitation of a large building, formerly used as a VFW hall. The large residential-scaled building was capable of accommodating sixteen male residents as well as staff. We maintained beautiful large rooms with existing woodwork and renovated areas for the kitchen and bath functions. The basement was renovated as bedrooms, the ground floor a sunny gathering space with a new kitchen and decks, and the upper floor as bedrooms incorporating salvaged original doors and trim. Work entailed:

- Site development plan
- Zoning analysis
- Permitting
- Architectural design services
- Product specifications
- New hi-efficiency heat system

2009 - 20012- Oceanview Manor

We undertook a study to evaluate the creation of three new multi-unit buildings to replace the existing single story units at Oceanview Manor. We considered many site factors in our work:

- Sequencing of work
- Zoning compliance
- Apartment plans
- Building form
- Universal design

2008 - The Lodges Condominiums

The Lodges in Rangeley is conceived as groups of townhouse residences arranged in rows of four and six units. We worked closely with the owner team to create a unique image for their “ski country” development and design plans that reflect unit location at the end or middle of the building. Siting was critical for views, and the sloping site was accommodated in the design, creating a useful daylight basement. Units include an open-plan living/dining/kitchen layout, exterior decks, garages, undeveloped basement space, bathrooms and a loft. Work entailed:

- Zoning compliance
- Code research
- Architectural design
- Building form & detail
- Construction administration

5. Project Description

Site

This project is located at 28 Vannah Avenue, adjacent the Woodford's Corner area. The .24 acre site is currently developed with a 1500 square foot office and parking lot. The office building will be replaced with a new 3 story colonial building with one commercial unit and seven residential units. The parking lot will be resurfaced to provide seventeen parking spaces.

There are very limited to no sidewalks currently on Vannah Avenue. This project will provide a concrete sidewalk across the front of the project. This will reduce the entrance to the parking lot from the current 60 feet to 20 feet. It will have a decorative fence and a hedge for screening. It will be lit with building mounted lights.

Stormwater

The site currently surface drains to Vannah Avenue and towards the east. The future plan is to continue that drainage pattern. The soils are Windsor Loam sands. These are well draining soils. The impervious area goes from 7867 square feet to 8380 square feet; an increase of 513 square feet. This is considered an insignificant increase by the City. No additional storm water management is required.

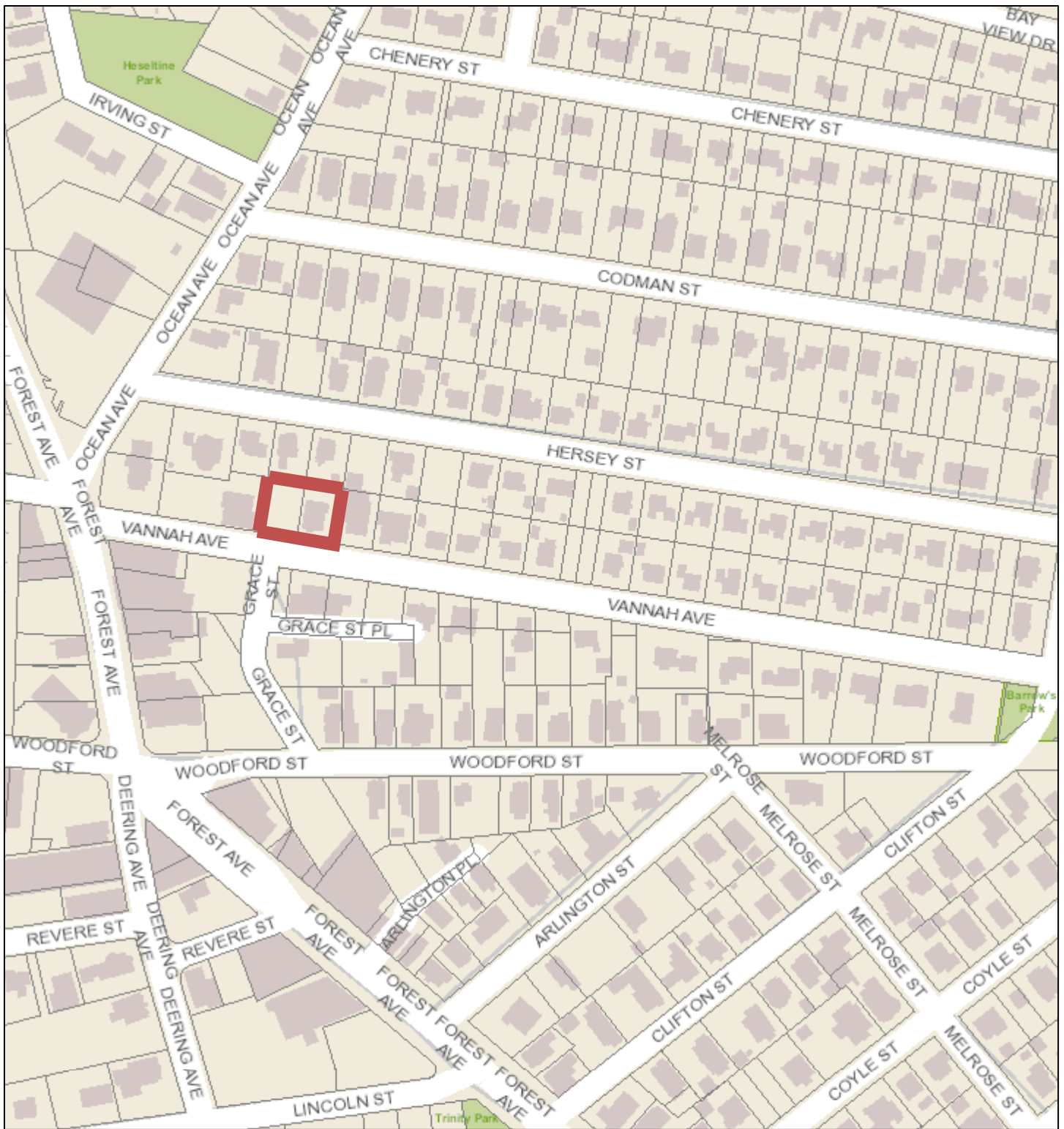
Architecture

The building design is a colonial structure in its basic form. It relates its form to the adjacent buildings. The buildings in the neighborhood are predominantly clap board structures with pitched roofs. The exceptions are the flat roofed, clapboard sided building to the east and the brick building across the street.

The design is enhanced with store front windows and a covered entrance in the front and a covered entrance on the parking lot side.

The residential use mixed with the commercial use blends the B-1 district with the adjacent R-3 district.

28 Vannah Avenue

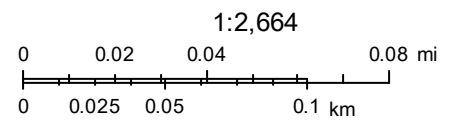


Lines

 Subject Parcel

 Parcels

LOCATION PLAN



City of Portland, DPS

8. Zoning Requirements:

DIVISION 9. B-1 AND B-1b NEIGHBORHOOD BUSINESS ZONES

(b) B-1b Neighborhood Business Zone

The purpose of the B-1b neighborhood business zone is to provide appropriate opportunities for the establishment of small-scale ground floor commercial uses to serve 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).

Suitable locations for this zone may include street intersections, arterial streets, and sites with existing or traditional neighborhood retail and service 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.

NOT APPLICABLE

b. In any structure with commercial use on the first floor, multifamily dwellings are permitted above the first floor.

APPLICABLE

c. Combined living/working spaces including, but not limited to, artist residences with studio space.

NOT APPLICABLE

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.

NOT APPLICABLE

b. Business services, as defined in section 14-47, but excluding beverage container redemption centers.

NOT APPLICABLE

c. Personal services, as defined in section 14-47.

NOT APPLICABLE

d. Offices of building tradesmen provided there is no exterior storage of building materials.

NOT APPLICABLE

e. Retail establishments, provided such do not City of Portland Land Use Code of Ordinances Chapter 14 Sec. 14-162 Rev.11-17-2014 14-238 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.

APPLICABLE

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);

APPLICABLE (7 Residential units)

Sec. 14-165. Dimensional requirements.

In addition to the provisions of division 25 (space and bulk regulations and exceptions) of this article, residential uses in off-peninsula locations, permitted under section 14- 162(a) shall meet the requirements of such abutting or nearest residential zone except minimum lot area per dwelling unit. Residential uses in on-peninsula locations, as defined in Section 14-47, and nonresidential uses in the B-1 and B1-b zones shall meet the following minimum requirements:

<u>Criteria</u>	<u>Required</u>	<u>Proposed</u>
1. Minimum Lot Size: residential	none	0.24
Other (non-residential)	none	0.24
2. Minimum Lot Area per Dwelling Unit:	1000 sf	7 units (1493/Unit)
3. Minimum Street Frontage:	20 ft	120 ft
4. Minimum Lot Width:	None	120 ft
5. Minimum Front Yard:	none	1 inch
6. Maximum Front yard:	10 ft	1 inch
7. Minimum Rear Yard:	10 ft (principal)	10 ft
8. Minimum Side Yard:	5 ft (principal)	10 ft
9. Structure Stepbacks: (Portions of structure above 35')		
Side:	10 ft	N/A
Rear:	15 ft	N/A
10. Maximum Structure Height:	35 ft	32'-6"
11. Maximum Floor Area (Retail):	5,000 sf	1463 sf
12. Maximum Impervious Surface:	90%	±80%

Sec. 14-166. Other requirements.

All nonresidential uses in B-1 and B-1b zones shall meet the requirements of division 25 (space and bulk regulations and exceptions) of this article in addition to the following requirements:

- a. *Landscaping and screening: The site shall be suitably landscaped for parking, surrounding uses and accessory site elements, including storage and solid waste receptacles where required by article IV (subdivisions) and article V (site plan).*

RESPONSE: The parking area is screened with both existing fence and new fence. Supplemental plantings will reinforce the screening where feasible. No external storage or waste receptacles are proposed as part of this project. All waste and storage will occur internally in a trash room.

- b. *Curbs and sidewalks: Curbs and sidewalks as specified in article VI of chapter 25.*

RESPONSE: All curbing and sidewalks within the right-of-way will meet the City Standard of granite curb and concrete sidewalk in this district.

- c. *Off-street parking and loading: Off-street parking and loading are required as provided in division 20 and division 21 of this article.*

RESPONSE: Parking for 14 vehicles is required.

7 residential units x 2 parking spaces/unit = 14 parking spaces

Commercial less than 2000 sf (first floor) = 0 parking spaces

Parking for 17 vehicles is provided on site (4 compact, 12 regular, and 1 ADA space).

- d. *Front yard parking: There shall be no off street parking in the front yard between the street line and the required maximum setback line. Where an existing building setback exceeds the maximum front yard setback, a maximum of ten (10) percent of the total parking provided on the site may be located between the principal structure and the street.*

RESPONSE: The parking is existing, it will be moved back 3 feet from the boundary line.

- e. *Signs: Signs shall be subject to the provisions of division 22 of this article.*

RESPONSE: Business signs will be on the front of the building as shown on the Architectural plan.

- f. *Exterior storage: There shall be no exterior storage with the exception of fully enclosed containers or receptacles for solid waste disposal. Such containers or receptacles shall be shown on the approved site plan. In no event shall vehicles, or truck trailers with or without wheels, be used for on-site storage. Truck load sales shall not be considered outside storage provided that such activity does not extend beyond three (3) consecutive days nor occur more frequently than three (3) times a calendar year.*

RESPONSE: No exterior storage is proposed as part of this project. All waste and other storage will occur internally.

- g. *Storage of vehicles: Storage of vehicles is subject to the provisions of section 14-335. (h) Shoreland and flood plain management regulations: If the lot is located in a shoreland zone or in a flood hazard zone, then the requirements of division 26 and/or division 26.5 apply.*

RESPONSE: No vehicle storage is proposed or anticipated as part of this project.

Sec. 14-167. External effects.

Every use in a B-1 or B-1b zone shall be subject to the City of Portland Land Use Code of Ordinances Chapter 14 Sec. 14-166 Rev.1-15-2014 14-246 following requirements:

- a. *Enclosed structure: The use shall be operated within a completely enclosed structure, except for those specific open air activities licensed by the City, including but not limited to outdoor seating, sidewalk sales, etc.*

RESPONSE: All residential and commercial use components will occur within the building.

- b. *Noise: The volume of sound, measured by a sound level meter with frequency weighting network (manufactured according to standards prescribed by the American Standards Association), generated shall not exceed fifty-five (55) decibels on the A scale, on impulse (less than one (1) second), at lot boundaries, excepting air raid sirens and similar warning devices.*

RESPONSE: The proposed uses are anticipated to create a level of sound lower than 55 decibels. All HVAC equipment will be selected to ensure a sound level less than 55 decibels. Manufacturer's verification of the sound levels will be submitted to Staff on product cut sheets once specific units have been selected.

- c. *Vibration and heat: Vibration inherently and recurrently generated and heat shall be imperceptible without instruments at lot boundaries.*

RESPONSE: The proposed uses are not anticipated to create unreasonable vibration or heat.

- d. *Glare, radiation or fumes: Glare, radiation or fumes shall not be emitted to an obnoxious or dangerous degree beyond lot boundaries.*

RESPONSE: The proposed uses are not anticipated to create unreasonable glare, radiation, or fumes.

- e. *Smoke: Smoke shall not be emitted at a density in excess of twenty (20) percent opacity level as classified in Method 9 (Visible Emissions) of the Opacity Evaluation System of the U.S. Environmental Protection Agency.*

RESPONSE: The proposed uses are not anticipated to create unreasonable smoke.

- f. *Materials or wastes: No materials or wastes shall be deposited on any lot in such form or manner that they are clearly visible from neighbors' properties or may be transferred beyond the lot boundaries by natural causes or forces. All solid waste disposals, including materials which might cause fumes or dust, or constitute a fire hazard if stored out-of-doors, shall be only in fully*

enclosed containers or receptacles. Areas attracting large numbers of birds, rodents or insects are prohibited.

RESPONSE: All materials/wastes generated by the demolition and construction of the proposed project will be contained and disposed of properly. No lingering storage of materials or wastes is anticipated. Trash and recycling will be stored internally and collected weekly by a private waste hauler.

DIVISION 20 OFF STREET PARKING

Section 14-332 Uses requiring off-street parking.

In all zones where off street parking is required the following minimum off-street parking requirements shall be provided. Except as provided in Section 14-332.1, 14-332.2 (exceptions) and 14-345 (fee in-lieu of parking) of this division, for the uses listed below the following minimum off-street parking requirements shall be provided and maintained in the case of new construction, alterations which increase the number of units, and changes of use:

(a) Residential structures:

1. For new construction, two, (2) parking spaces for each dwelling unit.

RESPONSE: 7 dwelling units x 2 parking spaces/unit = 14 parking spaces.

(h) Retail stores:

One (1) parking space for each two hundred (200) square feet of first floor area in excess of two thousand (2,000) square feet not used for bulk storage and one (1) parking space for each seven hundred (700) square feet, or major fraction thereof, for each floor above the first floor not used for bulk storage.

RESPONSE: First floor commercial is approximately 1,463 sf, thus no parking is required. No additional commercial is proposed on upper floors.

<u>Criteria</u>	<u>Required</u>	<u>Proposed</u>
Off Street Parking:		
Residential	(2PS/ DU)	14 PS (2 PS/DU)
Retail	1PS/200 sf (above 2000 sf)	0 PS
<u>Total Parking Required</u>		14 PS
Proposed Parking		17 PS Total

Section 14-332.3 Uses requiring off-street bicycle parking.

In all zones where of-street motor vehicle parking is required, minimum off-street bicycle parking shall be provided and maintained.....as specified in Section 14 - 526(a) (2) (Site Plan Standards).

The site plan shall provide secure bicycle parking in conformance with Section 1 of the Technical Manual and shall meet the following requirements:

(a) Residential structures. Two (2) bicycle parking spaces for every five (5) dwelling units shall be required.

RESPONSE: The project proposed seven dwelling units and so the project is proposing two bicycle racks to accommodate four bikes. It will be located in the sidewalk along Vannah Avenue in front of the building. Internal storage of bikes is also provided to each unit owner.

(b) Non-residential structures. Two (2) bicycle parking spaces for every ten (10) vehicle parking spaces for the first one hundred (100) required vehicle parking spaces, plus one (1) bicycle parking space for every twenty (20) required motor vehicle parking space over one hundred (100) required vehicle parking spaces.

RESPONSE: The proposed commercial use does not require any parking spaces = 0 required bike parking spaces.

(c) Development with zero (0) to ten (10) required vehicle parking spaces shall provide at least two (2) bicycle parking spaces.

RESPONSE: The proposed requires 14 vehicle parking spaces (17 will be provided). Two bike racks which contain four bike parking spaces are proposed as part of this project.



ZONING ANALYSIS Relevant Zone(s) B-1 & B-1b

All Projects:

	Required	Proposed
Lot Size	None	0.24 acres
Area Per Dwelling Unit	1,000 s.f.	1,493 s.f.
Minimum Street Frontage	20 feet	120 feet
Front Yard Minimum	None	6 feet
Front Yard Maximum	None	6 feet
Rear Yard	10 feet	11.7 feet
Yard Right	5 feet	10 feet
Yard Left	5 feet	65 feet
Side Street Setback	-	-
Step Back	10/15 feet	NA
Maximum Lot Coverage	-	-
Minimum Lot Coverage	-	-
Maximum Height	35 feet	32.5 feet
Open Space	-	-
Maximum Impervious Area	90%	76%
Pavement Setback	-	-
Floor Area Ratio	-	-
Off Street Parking Spaces	14	17
Loading Bays	-	-
Other 1	-	-
Other 2	-	-
Other 3	-	-

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size	NA	
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density	NA		
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

9. Existing & Proposed Easements

- There are no easements currently associated with this property. No easements are proposed.

7. State and/or Federal Permits

No State or Federal permits are required for this project.

15. City Master Plans

The proposed project, to the best of our knowledge, has been designed to be consistent / compliant with the following City related Master Plans:

Comprehensive Plan: Portland's Plan 2030

Housing Goals

- *To encourage and promote affordable decent, housing opportunities for all Maine citizens*
The proposed building will replace an old single family residence and will supply new, efficient, market rate apartments to the housing stock which is in such high demand.

- *Increase, preserve, and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland Households;*
The seven new market rate apartments and commercial space increase both the available housing stock and commercial space market both of which are in great demand within the City and within such a desirable neighborhood.

- *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;*
The proposed mix use building (seven apartments on three floors) with a ground floor commercial space is a historical urban land use and is compatible with the current adjacent neighborhood and City wide trends. The increased density is located within an appropriate neighborhood center and is compatible to the neighborhood mix of uses and density. Many services are located within walking distance and a bus stop is located on Forest Avenue, easily within walking distance.

- *Pursue policies to enable people who work in Portland to have the option to live in Portland.*
The proposed mixed use building is located a short car/bus/bike ride from downtown and is on a major bus route making for convenient commuting to the City. The projects close proximity to many other major travel corridors makes this new project ideally located for travel within the City and the surrounding area.

By providing a mix of new rental housing stock (7 apartments replacing a single family house) with neighborhood appropriate densities, in an established neighborhood center, over a ground floor commercial space, along a bus route and adjacent to significant travel corridors the proposed mixed use project is consistent with the current Comprehensive Plan.

18. Fire Safety Plan and Code Summary

Att. K



WHIPPLE-CALLENDER ARCHITECTS

3.26.18 – 28 VANNAH STREET CODE REVIEW SUMMARY- INCLUDES REFERENCE TO PORTLAND ZONING REGS., FIRE DEPARTMENT INFORMATION, IBC 2009, NFPA 2009

Portland Zoning- 2009- Relevant sections:

14-250 Dimensional Req.:

B-1 Neighborhood Business zone- permitted uses, new Apartment/ multifamily (7 units) and Commercial space for business use.

No minimum lot size

Setback requirements

Street frontage 20' min. We are in excess of 20'

Front setback- Average neighboring depth

Side setback- 10' max.

Rear yard- 10' abutting residential zone

Max. permitted imperv. surface – 90%

Max. permitted bldg. height is 35'

Parking- 17 total spaces

IBC- 2009- Relevant sections:

The building use is defined as Business for the Commercial space and R-2 Apartments.

Per table 503 the Type V - R/A structure (with associated B space at grade) can have 12,000 s.f. per floor and be 3 stories while remaining un-sprinkled. WE ARE SPRINKLED, WILL PROTECT AND DRAFTSTOP THE WOOD FRAME, AND DO NOT EXCEED THE S.F. LIMITS

Table 508.4 indicates 1 hr. separation between Business and Residential uses in sprinkled facilities. WE COMPLY

Table 601 - The new structure is sprinkled, Type V-A protected. Protected elements including framing, all bearing walls, floor construction and roof construction.

Section 709 - The walls are fire partitions and the floors horizontal assemblies.

709.3 Fire resistance rating- Fire partitions shall be rated one hour. WE COMPLY

709.4 Continuity- Fire assemblies shall be rated one hour. WE COMPLY

709.4 Fire-blocking- All walls separating dwelling units and stairs shall be fire-blocked at the top of the demising partition typical. WE COMPLY

712.4 Continuity (horizontal)- Assemblies between apartments, storage and ground floor commercial shall be rated one hour. WE COMPLY

713 Penetrations at Walls and Assemblies- Seal to maintain rating of Fire Partition and Assemblies. WE WILL COMPLY



WHIPPLE-CALLENDER ARCHITECTS

Fire Department checklist- please refer to plan for travel distance, smoke detectors, CO2 detectors, alarm panel

KNOX BOX SHALL BE PROVIDED

1. Owner- **The 28 LLC**
2. Architect- **Whipple Callender Architects, PO Box 1276 Portland, Maine 04101 (775-2696)**
3. Proposed use- **R-2 Apartments and ground floor Commercial**
4. Square footage of structure- **3,240 s.f. gross s.f. per floor**
5. Elevation of all structures **10' floor to floor**
6. Proposed fire protection of all structures- **fully sprinkled- 13 R**
7. Hydrant Locations- **Toward back cove, opposite side at 55 Vannah St.**
8. Water main sizes and locations- **Size unknown- main on opposite side of street.**
9. Access to any Fire Department Connections-**Connection will be provided at parking side**
10. Access to all structures (2 sides Min.)- **Clear access to 3 sides**
11. A code summary shall be included referencing NFPA and all fire department technical standards- **Attached**

NFPA 101-2009 – Chapter 30: New Apartment Buildings (In this case, three stories, seven total apartments and ground floor Commercial space).

Table 6.1.14.4.1 (b) Required Separation of Occupancies

The Table indicates a separation between Business and Apartment uses of 1 hr. when the building is protected throughout by an approved sprinkler system. **A 1 HR. SEPARATION BETWEEN APARTMENT AND BUSINESS/ COMMERCIAL WILL BE PROVIDED.**

30.1 General Requirements

30.1.1.1 The requirements of this chapter shall apply to new apartment occupancies.

30.1.2 Multiple Occupancies

30.1.2.2.1 In buildings protected by an automatic sprinkler system in accordance with 9.0, dwelling units of an apartment building shall be permitted to have their sole means of egress pass through a non residential occupancy in the same building provided the following criteria are met:

1. The dwelling unit of the apartment building shall comply with Chapter 30
2. The sole means of egress shall not pass through a high hazard contents area.

WE MEET THE CRITERIA.

30.1.2.3 Multiple dwelling units shall be permitted to be located above a nonresidential occupancy only where one of the following conditions are met.

1. Where the dwelling units of the residential occupancy and exits therefrom are separated from the non-residential occupancy by construction having a 1 hour fire rating.
2. Where the nonresidential occupancy is protected throughout by an approved supervised automatic fire alarm system per 9.7

WE MEET BOTH CONDITIONS.

30.2 Means of Egress Requirements

30.2.1.1 Means of escape from a dwelling unit to the outside of the building shall be in accordance with Chapter 7 and this chapter. **WE COMPLY WITH CHAPTER 7- REFER TO STAIR DETAILS**



WHIPPLE-CALLENDER ARCHITECTS

30.2.1.2 Means of escape within a dwelling unit shall comply with the provisions of Section 24.2 for one and two family dwellings. WE MEET EGRESS REQUIREMENT WITH TRAVEL DISTANCE, PRIMARY EGRESS STAIR AND SECONDARY WINDOW AS MEANS OF EGRESS.

30.2.2.3.1 Stairs complying with 7.2.2 shall be permitted. MIN. 3'8" WIDE WITH 11" FIN. TREAD, 7" RISER AND COMPLIANT HANDRAIL BOTH SIDES.

30.2.4 Number of Exits

30.2.4.3 A single exit shall be permitted in buildings where the total number of stories does not exceed four, provided all the following conditions are met:

1. The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 31.3.5
2. The exit stairway does not serve more than ½ of a story below the level of exit discharge.
3. The travel distance from the entrance door to any dwelling unit to an exit does not exceed 35 feet.
4. The exit stairway is completely enclosed or separated from the rest of the building by barriers having a minimum 1 hour fire resistance rating.
5. All openings between the exit stairway enclosure and the rest of the building are protected by self closing doors having a minimum 1 hr. fire resistance rating.
6. All corridors serving as access to the exits have a min. ½ hr. fire resistance rating.
7. Horizontal and vertical separation having a min. ½ hr. fire resistance rating is provided between dwelling units. WE MEET THE ABOVE CONDITIONS 1 THRU 7.

7.3 Capacity of Means of Egress

7.3.4.1 In existing buildings, the width of exit access shall be permitted to be not less than 36" EXIT ACCESS WILL TYPICALLY BE IN EXCESS OF 28".

30.2.9 Emergency lights shall be provided in buildings 4 or more stories in height or with more than 12 dwelling units, unless each unit has a direct exit to the outside of the building at grade level- WE ARE NOT REQUIRED TO HAVE EMERGENCY LIGHTS AS WE ARE 3 STORIES, LESS THAN 12 DWELLING UNITS.

30.2 Means of Egress Components

30.2.2.1.2 In buildings protected throughout with an approved, supervised automatic sprinkler system in accordance with 30.3.5 , exit enclosures shall have a minimum 1 hr. fir resistance rating and doors shall have a minimum 1 hr. fir resistance rating . WE WILL PROVIDE SEPARATIONS & DOORS AS REQUIRED

30.2.2.2 Doors

30.2.2.2.1 No door in any means of egress shall be locked against egress when the building is occupied. EGRESS DOORS WILL ALWAYS BE OPERABLE FROM INSIDE THE APARTMENT & GROUND FLOOR VESTIBULE.

30.2.2.3 Stairs

30.2.2.3.1 Stairs complying with 7.2.2 shall be permitted. WE WILL COMPLY WITH THE REQUIREMENTS OF 7.2.2 – 7" MAX. RISER, 11" FIN. TREAD AND 3'8" MIN. FIN. EGRESS WIDTH.

30.2.5 Arrangement of Means of Egress

30.2.5.1 Access to all required means of egress shall be in accordance with Section 7.5



WHIPPLE-CALLENDER ARCHITECTS

30.2.5.3.2 No common path of travel shall exceed 50' in buildings protected throughout by an approved, supervised automatic sprinkler system installed in accordance with 30.3.5. Travel within a dwelling unit shall not be included when calculating common path of travel. OK- NO COMMON PATH

31.2.6.2 Travel distance, from areas other than those within a living units, to the exit, shall not exceed to a corridor door shall not exceed 125 feet in buildings protected throughout by an approved, supervised automatic sprinkler system installed in accordance with 30.3.5. NO TRAVEL DISTANCE- SINGLE EGRESS STAIR

30.2.6.4 Travel distance within a dwelling unit to a corridor door shall not exceed 250 feet in buildings protected throughout by an approved, supervised automatic sprinkler system installed in accordance with 30.3.5. OUR MAXIMUM TRAVEL DISTANCE WITHIN AN APARTMENT IS APPROXIMATELY 40'.

30.2.9 Emergency lights shall be provided in buildings 4 or more stories in height or with more than 12 dwelling units, unless each unit has a direct exit to the outside of the building at grade level- WE ARE NOT REQUIRED TO HAVE EMERGENCY LIGHTS AS WE ARE 3 STORIES, LESS THAN 12 DWELLING UNITS.

30.3.2.1.1 Boiler rooms, Laundry and storage areas require 1 hr. rated separation.- WE WILL PROVIDE 1 HR. SEPARATION AT BOILER ROOM, LAUNDRY AND STORAGE AREAS.

30.3.3.2 Interior wall and ceiling finish- WE WILL APPLY CLASS A INTERIOR PAINTS AND FINISHES TYPICALLY.

30.3.4.1 Detection, Alarm and Communication Systems

30.3.4.1.1 Emergency lights shall be provided in buildings 4 or more stories in height or with more than 11 dwelling units shall be provided with a fire alarm system in accordance with Section 9.6 WE ARE NOT REQUIRED TO HAVE EMERGENCY LIGHTS AS WE ARE 3 STORIES, LESS THAN 11 DWELLING UNITS.

30.3.4.2 Initiation

30.3.4.2.2 Initiation of the required fire alarm system by manual means shall not be required in buildings 4 or fewer stories in height, containing not more than 16 dwelling units and protected throughout by an approved, supervised sprinkler system installed in accordance with 30.4.2.2. THE ALARM SYSTEM SHALL NOT HAVE MANUAL PULL STATIONS

30.3.4.3 Notification

30.3.4.2.1 Occupant Notification shall be provided automatically in accordance with Section 9.6.2 and the following shall also apply:

1. Visible signals shall be installed in units for the visually impaired. HORNS AND STROBES WILL BE INSTALLED AT BEDROOMS AND LIVING AREAS TYPICALLY
2. Positive alarm system in accordance with 9.6.3.4 shall be permitted.

30.3.4.3.4 Annunciation and annunciation zoning shall not be required in buildings 4 or fewer stories in height containing not more than 16 units and protected throughout by an approved, supervised automatic alarm system in accordance with 30.3.5. NO ANNUNCIATOR PANEL WILL BE INSTALLED

30.3.4.3.5 Fire Department notification shall be accomplished in accordance with 9.6.4. WE WILL PROVIDE NOTIFICATION PER OPTIONS LISTED IN 9.6.4



WHIPPLE-CALLENDER ARCHITECTS

31.3.4.4.2 Automatic smoke detection shall be installed as follows:

1. Smoke detectors shall be installed in all common areas and work spaces outside the living unit such as exit stairs, egress corridors, lobbies, storage rooms, equipment rooms, and other tenantless spaces in environments that are suitable for proper smoke detector operation.
2. Heat detectors shall be located within each room of the living unit.

WE PLAN ON INSTALLING HARD WIRED SMOKE DETECTORS AND CO2 DETECTORS AS REQUIRED.

30.3.4.5 Smoke Alarms

30.3.4.5.2 Smoke alarms shall be required outside every bedroom per 9.6.2.10 and 31.3.5.4 . SMOKE DETECTORS WILL BE LOCATED OUTSIDE BEDROOMS AND ALL LEVELS INCLUDING THE BASEMENT

30.3.2.1.1 Hazardous Area Protection

Boiler and fuel fired heating rooms serving more than a single dwelling unit. 1 hour or sprinklers. THE BOILER ROOM & MECHANICAL SPACES WILL BE PROTECTED WITH 1 HR. RATED WALLS AND CEILING AND SPRINKLER COVERAGE.

NFPA 101-2009 – Chapter 38: New Business Occupancies- LIMITED GROUND FLOOR SPACE WITH 2 MEANS OF EGRESS

38.1 General Requirements

38.1.1.1- The requirements of this chapter shall apply to existing buildings or portions thereof currently occupied as business occupancies.

38.2- Means of Egress Requirements

38.1.2.1.1- All means of egress shall comply with Chapter 7 and this chapter. . WE COMPLY

38.2.2 Means of Egress Requirements- . WE COMPLY- PROVIDE 2 MEANS AT GRADE

38.2.4 Number of Exits- WE COMPLY- PROVIDE 2 MEANS AT GRADE

38.2.4.1 Exits shall comply with the following, except as otherwise permitted by 38.2.4.2 through 37.2.4.5. WE WILL PROVIDE 2 MEANS OF EGRESS FROM THE BUSINESS SPACE, BOTH TO EXTERIOR GRADE

38.2.5 Arrangement of Means of Egress- refer to 38.2.4.1 above

38.3.4 Detection, Alarm and Communication Systems

38.3.4.1 General. A fire alarm system in accordance with Section 9.6. shall be provided in all business occupancies where any one of the following conditions exist.

1. The building is 3 or more stories in height
2. The occupancy is subject to occupancy by 50 or more occupants above or below the level of exit discharge.
3. The occupancy is subject to 300 or more total occupants.

NONE OF THE CONDITIONS EXIST, THE FIRE ALARM WILL BE ACITIVATED BY THE SPRINKLER SYSTEM.

38.3.4.2 Initiation. Initiation of the fire alarm system shall be by one of the following means: (2) Approved automatic sprinkler system that complies with 9.6.2.1(3) and provides protection throughout the building , plus a minimum of one manual fire alarm box in accordance with 9.6.2.6. THE FIRE ALARM WILL BE ACITIVATED BY THE SPRINKLER SYSTEM.



WHIPPLE-CALLENDER ARCHITECTS

38.3.4.3- Occupant Notification- During all times that the business occupancy is occupied, the required fire alarm system, once initiated, shall activate an alarm in accordance with 9.6.3 throughout the building , and positive alarm sequence in accordance with 9.6.3.4 shall be permitted. FINAL NOTIFICATION PER FIRE ALARM PERMIT TO BE FILED WITH THE CITY OF PORTLAND

13. Construction Management Plan

Narrative

**Vannah White LLC
28 Vannah Ave Mixed Use Development
March 2018**

A construction management site plan has been prepared and is attached to this document.

The Construction Management narrative and plan depict the overall planning, coordination, and control of a construction site, including phases as applicable, from beginning to completion. The goal for the 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.

A. Construction Management Principles

The following narrative provides an overview of the construction management principles that Vannah White, LLC and its contractor has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

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

B. Development Review of Construction Management Plan

Vannah White, LLC and its contractor shall submit a construction management plan that provides a comprehensive logistics and safety program for the construction project, which will be reviewed and approved as part of the site plan review process. The plan minimizing impacts to areas surrounding the building/construction site will be primary considerations in the process. The following details define the intended approach to the successful management of the project construction and the construction management plan will address the general conditions contained below.

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

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, Vannah White, LLC and its contractor shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include:

1. **Street Opening Permits:** A street opening permit will be required for all subsurface utility connections within Vannah Avenue (including water, gas, and

electric/communications, and curbing). Schedule and duration of work are unknown at this time.

2. **Blasting:** No blasting is anticipated for this project.

D. Construction Administration and Communication

Vannah White, LLC and its contractor will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust.

1. Contact Person and contact information for the Vannah White, LLC and its contractor and who is available 24 hours.

Contractor and contact person: Unknown At this Time

Developer/owner contact person: Vannah White, LLC
Tom Greer ,
207-749-9396

2. Contractor will have a project sign with the contact information.
3. Phone numbers will be on the sign and available for issues at all times of day during the construction period
4. All construction site signage is temporary and shall be removed at project completion.

E. Construction Schedule

1. The contractor shall submit a schedule or time line for the construction project, including any Phasing.

Construction schedule:

- **Commencement of construction: September 1st, 2018**
 - **Duration of construction: 10 months**
 - **Schedule of major construction events: See construction timeline at end of document**
2. Hours of Construction: **7:00 AM – 7:00 PM Monday – Friday. Construction activities shall start no earlier than 8:00 AM on Saturdays, Sundays or Holidays.** Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit and Section 25-129. Noise, dust and debris.
 3. There is no anticipation of night work on this project.
 4. All deliveries for materials will comply with the noise requirements listed above or will be restricted to the hours allowed for construction.

5. Material Deliveries: Schedule and designated location for delivery of materials and boxed goods.

Deliveries may only occur during normal hours of construction and must be taken on-site. No deliveries are allowed to occur from Vannah Avenue.

F. Security & Public Safety

1. The site construction fence will be placed either on the property line, at back of curb, or at limit of work; as depicted on the plan to allow for construction equipment and construction employees to access the exterior walls of the building and for the site work.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16.
3. Demolition of the existing house/building and other associated site items will occur. A demolition fire safety program is needed and will be prepared and supplied when a contractor is selected.
4. Vannah White, LLC and its contractor shall develop a fire safety and emergency protocol plan and contact the nearest Fire Station to advise them of the ongoing construction project.
5. 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. (not anticipated)
6. Any proposed temporary security lighting shall be shown on the CMP and all fixtures shall be full cutoffs. (not anticipated)

G. Construction Permitting and Traffic Control Plans

1. **Construction Activity in Public Streets:** Will only occur when making connection to utilities within the adjacent street and when new curbing is set. All required permits will be obtained at the responsibility of the general contractor. Traffic and bicycle flow will be maintained and controlled as necessary for this work to occur.
2. **Sewer and Stormwater:** All sewer and stormwater water system connections will be per the City's requirements/standards and 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.

Other utilities: All other utilities (gas, water, underground electric/communications) will be per the utility provider requirements/standards. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works.

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 site plan, subdivision, or street opening permit approval. MOT plans may be required for projects that have impacts on local streets.

Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public through or along the construction work zone. On a case-by-case basis, applicants may be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. MOT plans shall employ the appropriate techniques and devices as called for 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.
- Flaggers will be used during utility connection within the adjacent streets.
- No police detail or lighted intersections are anticipated for this project.

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.

- Vannah Avenue: Both bicycles and pedestrians will be alerted that the sidewalks along the project frontage will be closed for close to the duration of the construction. Signage will indicate where crossings should occur to the opposite side of the streets to alternate sidewalks/bike routes.
- Typical construction fencing will be used to secure the site. Alternate sidewalks are available on the other side of the adjacent streets.
- ADA compliance shall be maintained.
- Note: There are no sidewalks east of this site on Vannah Avenue.

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. Vannah White, LLC and its contractor shall apply for the necessary permits.

H. Site Management and Controls

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

1. Regular trash and debris removal
2. Street cleaning and damage controls
3. Dust controls: The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).
4. Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris (Attachment 2).
5. Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.
6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.
 - 1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
 - 2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or 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

I. Erosion Control and Preservation of Trees

1. Vannah White, LLC's selected contractor shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.
2. Vannah White, LLC's selected 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. The existing parking lot will be used for this purpose.

J. Construction Staging Area

1. The Construction Management Plan depicts locations of the material staging areas, the location on onsite temporary construction job trailers, the location on onsite truck delivery/holding areas, the location onsite parking, the general location of the construction security fence, temporary toilets, and the general location of temporary construction dumpsters.

2. **Delivery Truck Holding Areas On-Site:** The delivery holding area is 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 will be brought within the fence line and will make every attempt to avoid queuing on public streets.
3. **Delivery Truck Holding Areas Off-Site:** In the event that adequate on-site area for holding of trucks is not available, an off-site marshaling area will be utilized for trucking. The designated off-site location will be identified in the construction management plan (along Vannah Avenue).

K. Parking During Construction

1. **Construction Parking:** Parking for construction workers is provided on site. If it is found that more parking is required, on street parking along Vannah Avenue will be used.
2. **Parking:** The existing paved parking area is being utilized for parking.
3. **Truck Routes and Volumes:** The Construction Management Plan shall address the designated truck routes and expected truck volumes. All deliveries to the site shall be via Forest Avenue to Vannah Avenue. All deliveries will be made on site within the secure construction fence. Delivery volumes will vary depending on construction sequencing but will only occur during allowable hours of operation.

L. Special Measures as Necessary

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

No special measures of construction are anticipated for this project.

21. Geotechnical Report

The existing foundation is at a similar depth to that of the new building. The soils in the area are sandy soils; suitable for development.

14. Significant Natural Features

The project site is a previously developed urban site. There are no significant plant species, communities, or specimens within the site.

There are no significant natural features on the site.

15. City Master Plans

The proposed project, to the best of our knowledge, has been designed to be consistent / compliant with the following City related Master Plans:

Comprehensive Plan: Portland's Plan 2030

Housing Goals

- *To encourage and promote affordable decent, housing opportunities for all Maine citizens*
The proposed building will replace an old single family residence and will supply new, efficient, market rate apartments to the housing stock which is in such high demand.
- *Increase, preserve, and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland Households;*
The seven new market rate apartments and commercial space increase both the available housing stock and commercial space market both of which are in great demand within the City and within such a desirable neighborhood.
- *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;*
The proposed mix use building (seven apartments on three floors) with a ground floor commercial space is a historical urban land use and is compatible with the current adjacent neighborhood and City wide trends. The increased density is located within an appropriate neighborhood center and is compatible to the neighborhood mix of uses and density. Many services are located within walking distance and a bus stop is located on Forest Avenue, easily within walking distance.
- *Pursue policies to enable people who work in Portland to have the option to live in Portland.*
The proposed mixed use building is located a short car/bus/bike ride from downtown and is on a major bus route making for convenient commuting to the City. The projects close proximity to many other major travel corridors makes this new project ideally located for travel within the City and the surrounding area.

By providing a mix of new rental housing stock (7 apartments replacing a single family house) with neighborhood appropriate densities, in an established neighborhood center, over a ground floor commercial space, along a bus route and adjacent to significant travel corridors the proposed mixed use project is consistent with the current Comprehensive Plan.

17. Solid Waste

The proposed building will have private service for trash and recycling collection. Tenants (residential and commercial) will be informed of collection day and appropriate interim on-site storage of waste and recycling will be inside the building in the trash room.

All waste generated from the site preparation, general site work, and building construction will be collected and sorted/separated on-site in containers and disposed of properly, off-site, by the general contractor.

16. Utility Capacity to Serve Letters

We have requested letters from the appropriate utility companies expressing their ability to serve the project, and will submit these to the City once received.

The following utilities will service the project:

<u>Utility</u>	<u>Provider</u>	<u>Location</u>
Water Service *	Portland Water District	<u>Main In Vannah Avenue</u>
Sanitary Sewer *	City of Portland	<u>Existing Service Connection to Vannah</u>
Stormdrain	City of Portland	<u>Not available</u>
Power	Central Maine Power	<u>Underground from existing pole</u>
Tele/Comms	Verizon	<u>Underground from existing pole</u>
Cable	Time Warner Cable	<u>Underground from existing pole</u>
Gas	Unitil	<u>From line in Vannah Avenue</u>

* Letters of capacity to serve have been requested from these utility companies.



Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

March 20, 2018

Tom Greer
Walsh Engineering Associates
1 Karen Drive Suite 2A
Westbrook, ME 04092

Re: 28 Vannah Avenue, PO
Ability to Serve with PWD Water

Dear Mr. Greer:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on March 13, 2018. Based on the information provided per plans dated March 5, 2018, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch fire and 1.5-inch domestic service may be installed from the water main in Vannah Avenue. The service should enter through the properties frontage on Vannah Avenue at least 10-feet from any side property lines.
- It is the District's understanding that the existing commercial office will be converted into 7 residential apartment units and 1 commercial space. The existing building is currently served with a 1-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.
- Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.

Prior to construction, the owner or contractor will need to make an appointment to complete a service application form and pay all necessary fees. The appointment shall be requested through MEANS@pwd.org or by calling 207-774-5961 ext. 3199. Please allow (3) business days to process the service application paperwork. PWD will guide the applicant through the new development process during the appointment.



Existing Site Service

According to District records, the project site does currently have existing water service. A 1-inch diameter copper domestic service line provides water service to the site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 8-inch diameter ductile iron water main in Vannah Avenue and a public fire hydrant located approximately 360 feet from the site. The most recent static pressure reading was 96 psi on July 17, 2017.

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. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

A handwritten signature in black ink, appearing to read "Robert A. Bartels".

Robert A. Bartels, P.E.
Senior Project Engineer

19. City Design Manual Standards

Design Standards contained within the City of Portland Design Manual apply to this project.

- **B-1 AND B-1B NEIGHBORHOOD BUSINESS DESIGN STANDARDS**

RESPONSE: To the best of our knowledge the proposed site plan adheres to the standards outlined in the Section, see below.

- **TWO-FAMILY, SPECIAL NEEDS INDEPENDENT LIVING UNITS, MULTIPLE-FAMILY, LODGING HOUSES, BED AND BREAKFASTS, AND EMERGENCY SHELTERS**

RESPONSE: To the best of our knowledge the proposed site plan adheres to the standards outlined in the Section, see below.

B-1 AND B-1B NEIGHBORHOOD BUSINESS AND B-2 AND B-2B COMMERCIAL BUSINESS ZONES:

(1) **STANDARDS.** Development located in the B-1, B-1b, B-2, and B-2b zones shall meet the City of Portland Design Manual Adopted May 11, 2010 7 following additional standards.

a. *Urban Street Wall: In the B-1, B-1b, and B-2b zone it shall be required that buildings shall be located to create and preserve an urban street wall.*

RESPONSE: The proposed building is within inches of the right-of-way line and very close to being in line with the adjacent building to the West.

b. *Mixed Uses: In B-1b zone buildings shall be multi-storied with mixed uses.*

RESPONSE: The proposed is a three story mixed use building (commercial and ADA residential on ground floor with residential on upper floors).

c. *Building Entrances: In the B-1 and B-2b zone building entrances shall be oriented toward, located adjacent to, and directly accessible from, a sidewalk in a public right-of-way.*

RESPONSE: The commercial component entrance doors of the project are located directly on Vannah Ave.

d. *Windows: In the B-1, B-1b, B-2, and B-2b zones windows shall be required along the street frontage of a building. Windows shall be transparent (with a visible transmittance (VT) of .7 or greater) and installed at a height to allow views into the building by passersby.*

RESPONSE: Multiple windows are located along the street frontage.

e. *Facade Character: In the B-1, B-1b, B-2, B-2b zones, active and public portions of buildings (e.g. doors, windows, entries, retail displays) shall be oriented to and, where possible, be located adjacent to the public sidewalk to create an active presence along the sidewalk.*

1. *Where building facades situated along a public way have no interactive use or function, such facades shall be designed to provide sufficient architectural and graphic amenities to provide visual interest along the street and relate the building, and its use, to passersby.*

RESPONSE: The commercial component entrance doors of the project are located directly on Vannah Ave. There are multiple windows along the front façade to provide visual interest.

f. *Building Design: B-1, B-1b, B-2, and B-2b commercial buildings shall be designed to be compatible with their residential and commercial neighbors. In the B-1 and B-1b zones building scale, roof pitch, and fenestration shall be designed to complement surrounding residential structures.*

RESPONSE: The proposed has been designed to be compatible with the adjacent neighborhood.

g. Building Materials: Facade materials of buildings located in the B-1, B-1b, B-2, and B-2b zones shall be compatible with those materials of surrounding residential and commercial uses.

RESPONSE: The proposed building uses clapboard siding. It is compatible with the surrounding uses which also have clapboard siding.

h. Building Scale: In the B-1 and B-1b zones building scale must relate and be compatible with surrounding residential structures.

RESPONSE: The proposed is compatible in height and scale with the surrounding neighborhood.

i. Landscaping and buffers: In the B-1, B-1b, B-2 and B-2b zones buildings and associated parking areas must be screened to buffer abutting properties. A densely planted landscape buffer and/or fencing will be required to protect neighboring properties from the impacts associated with the development, including lighting, parking, traffic, noise, odor, smoke, or other incompatible uses. Where buildings are setback from the street, a landscaped area must be planted along the front yard street line.

RESPONSE: The parking area is located at the side of the property and is fenced on three sides with an existing fence, a new fence and a decorative fence street side. Supplemental plantings will reinforce the screening where appropriate.

GUIDELINES

Please refer to Appendix 2 of this manual, The B-1, B-1b, B-2, B-2b Design Guidelines, for applicable design guidelines for the B-1 and B-2 zones. In addition, the following design guidelines shall also apply:

- 1) Buildings located in the B-2 zone are specifically encouraged to adhere to the design guidelines contained in the B-1, B-1b, B-2, B-2b Design Guidelines Appendix 2 of this section concerning the creation and preservation of an urban street wall.*

RESPONSE: The proposed has been designed with the design guidelines in mind. The urban street wall is maintained and is compatible with the surrounding properties.

- 2) In the B-1b and B-2 zones, buildings are specifically encouraged to adhere to the guidelines contained in the B-1, B-1b, B-2, B-2b Design Guidelines Appendix 2 of this section concerning building entrances.*

RESPONSE: The proposed has been designed with the design guidelines in mind. The commercial component entrance doors of the project are located directly on Vannah Ave.

APPENDIX 2

1. Building Location and Form

Buildings shall be located near the street so as to create an urban street wall. An urban street wall is created by a pattern of buildings which line the street in a consistent manner, thereby establishing a desirable spatial relationship between the building in the commercial district and the major object. Location is one of several related factors defining the street environment.

RESPONSE: The proposed building is within inches of the right-of-way line and very close to being in line with the adjacent building. This location provides/creates an urban street wall.

Building Form, including height, bulk, and massing, contribute to the development of a street wall. The desired condition is to have the building frame and enclose the street, which is achieved by providing building height that is proportionate to the width of the adjoining major street. A ratio of building height to street width of one-to-two creates a strong "room-like" street, while a one- to-three ratio provides good street definition and proportion. Shorter buildings of one story facing broad streets will not achieve the desired relationship.

RESPONSE: Due to the proposed building's adjacent location to the street/right-of-way line and its comparable height, bulk, and massing, it successfully contributes/provides a street wall.

In the B-2b zone, buildings adjacent to streets should approach 1:2 height to street width, with a minimum of 1:3. For a fifty-foot street right-of-way, therefore, a minimum height of 15' is required, with 25' height preferred. An eighty-foot right-of-way requires about 27' to achieve the 1:3 proportions with 40'-height preferred. Obviously, buildings located as close as possible to the street right-of- way will provide better definition and proportion than buildings set further back.

RESPONSE: Not applicable, the project is in the B-1 Zone.

2. Building Function

An urban street and business district requires a substantial intensity and variety of uses. It is beneficial to have mixed uses within portions of buildings situated near the street. For example, a retail first floor might have office or residential on the second or third floors. This provides both the scale of building height desired, as well as the economic vitality of the business district.

RESPONSE: The proposed is three story mixed use building (commercial on ground floor with residential on upper floors). This will help to provide the variety of uses and intensity desired.

3. Orientation of Buildings and their Entrances to the Street

Major building entries shall be designed and located to provide the primary building access oriented to the public street and sidewalk. Doorways should be prominent and obvious in appearance, so as to attract the users toward the entry. Major entry features should primarily address the street, with entry courts, display windows, signage, lights, walkways, and vestibules, as appropriate. Major entries should be adjacent to, or very close to, the street and public sidewalk.

RESPONSE: The commercial component entrance doors of the project are located directly on Vannah Avenue sidewalk. There are multiple windows along the front façade to provide visual interest.

4. Windows

Windows shall be located in all building facades visible from the public way, especially on building facades along the major public street. Retail uses with store fronts are the most desirable feature for locations adjacent to the public sidewalk; and active, transparent (minimum visible transmittance (VT) of .7 or greater), and interesting windows contribute the maximum value. Limitations on transparency, such as dark or reflective glass, or interior coverings, should be avoided. Where uses (such as office) are not conducive to transparent viewing from the public way, windows can still convey a sense of activity and presence along the street. Even these more private windows can convey occupancy and habitation when lighted from within, as during evening hours, even if the interior is screened from view.

RESPONSE: The proposed contains multiple windows along the front façade ground floor to provide visual interest along the street.

5. Building Character, Detail, Scale, and Graphic Qualities

Building design will include various architectural and graphic amenities to provide a strong presence along a street and relate a building to its community. Awnings, canopies, and flags may be utilized to highlight entryways and to further identify the activity and identity of a use. Facade lighting may be used to highlight entryways or to provide visual interest along an otherwise blank facade Building scale, roof pitch, architectural detail, and fenestration shall be designed to complement and be compatible with surrounding residential and commercial buildings.

RESPONSE: The proposed uses clapboard siding. It is compatible with the surrounding uses. It uses a covered entrance to highlight its location.

6. **Signage and Building Entrances**

Building entrances and building signage in the B-1, B-1b, and B-2b zones will be designed and constructed at the pedestrian scale.

RESPONSE: The proposed commercial space entry has been designed with the pedestrian in mind. It is located directly along the Vannah Avenue side, has down lights to highlight its location, and the ground floor is clad in clapboards to give a warm welcoming feeling to the pedestrian.

7. **Development Relationship to Street**

Building facades and site amenities shall form a cohesive wall of enclosure along a street. Where buildings are not located at the street line, site amenities, including masonry walls, fences, and landscaping, shall be placed along the street to provide a sense of enclosure or definition.

RESPONSE: The proposed uses materials, scale, articulation, and location to right-of-way to create enclose / urban wall along Vannah Avenue.

8. **Parking Lots**

Parking Lots shall be screened from view of the public way. Landscaping or fencing shall be used to screen parking lots from public ways and residential neighbors. Where parking is located within the front yard (or side yard of a corner lot), a landscaped buffer or fence shall be placed along the street line to distinguish the private space from the public space and to help define the street wall.

RESPONSE: The proposed parking lot is located to the side of The 28 building. It will be screened from the surrounding properties through the use of the existing fence, a new fence and vegetation, and will be supplemented with new screening material along the street.

Parking lots shall be screened from neighboring properties. A densely planted landscape buffer or fencing shall be installed to protect neighboring properties from the impacts associated with the parking lot and the use it serves.

RESPONSE: The parking lot is screened with both existing fence and new fence. Supplemental plantings will reinforce the screening along the street.

(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;

RESPONSE: The proposed building incorporates clapboards. The materials provide a historical context which relates to the surrounding neighborhood and City. The door and window openings at the ground floor level help to break up the facade while still providing the needed street wall. The proposed building compliments the adjacent buildings (commercial and residential) by incorporating materials found in the adjacent neighborhood.

2. 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 City of Portland Design Manual Adopted May 11, 2010 10 streetscape elements;

RESPONSE: The proposed development fits into the existing neighborhood and street context well. It closely matches the building setback of the adjacent building; it does propose to have landscaping areas in the front; it will have strong entry points identified with signage, storefront windows and covered entries. The back and side yards will be defined with both fencing and landscaping to screen parking area and provide privacy as similarly done in the neighborhood and as required in the Design Manual.

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;

RESPONSE: The proposed includes buffer plantings and an existing and new fence to screen the parking area and common patio for the residents.

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;

RESPONSE: The proposed provides sufficient windows to provide ample sunlight/air circulation while still maintaining privacy. Each unit will have storage in the building.

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;

RESPONSE: The access way for the proposed project is by a driveway and sidewalks located beside the building. A parking area is located to the side of the building for screening purposes and it is buffered where possible from the neighboring properties by plantings and fencing.

6. Two-family or multiple-family dwellings shall not be converted to lodging houses unless all units in the building have been vacant for at least one (1) year prior to the date conversion is sought or unless the individual multiple-family units are less than one thousand (1,000) square feet in size. In no event shall any single-family dwelling in the R-5 or R-6 zone be converted in whole or in part to a lodging house.

RESPONSE: Not applicable.

22. Site Lighting

Street Lighting

There is existing lighting along Vannah Avenue. The existing lighting concentrates at the intersection of Vannah and Forest Avenues and a street light is at the easterly boundary of the property.

Site Lighting

The parking lot will be illuminated with LED building mounted lights. The fixtures will be Viper S Series by Beacon Lighting. Building mounted lights will be Hubbell lights catalog # LNC-5LU-4K-3-X, Type S-2. See attached cut sheet of the lights and enclosed Photometric Plan.

Building Lighting

The building and entrances will be illuminated by LED recessed down lights built into the canopies or soffit. The lights will be ID+ 3.5" by Focal Point. See attached cut sheet of the lights and enclosed Photometric Plan.



TYPE S1 & S1W



VIPER S SERIES

Small Viper Luminaire

SPECIFICATIONS

Intended Use:

The Beacon Viper luminaire is available with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 400W MH or HPS.

Construction:

- One piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

LED/Optics:

- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input.
- Power factor is .92 at full load.
- All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2.
- Dimming drivers are standard with connections for external dimming equipment available upon request.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher.
- Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.

Electrical:

- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- The housing is designed for an optional twist lock photo control receptacle.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20KA; shuts off at end of life.
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55°C (131°F). Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the Wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full Wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on hours of operation or time of night (see www.beaconproducts.com/products/energeni).
- Also available with Beaconnect Wireless Control System (see Beaconnect product page for more details www.beaconproducts.com/products/beaconnect).

Installation:

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included.

Finish:

- Beacote V polyester powder-coat electrostatically applied and thermocured.
- Beacote V finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Listings:

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: <http://www.designlights.org/QPL>
- Listed to UL1598 and CSA22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 3G rated for ANSI C136.31 high vibration applications
- IDA approved

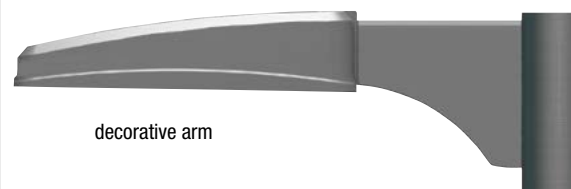
Warranty:

Five year limited warranty (for more information visit: www.hubbellighting.com/resources/warranty).

PRODUCT IMAGE(S)

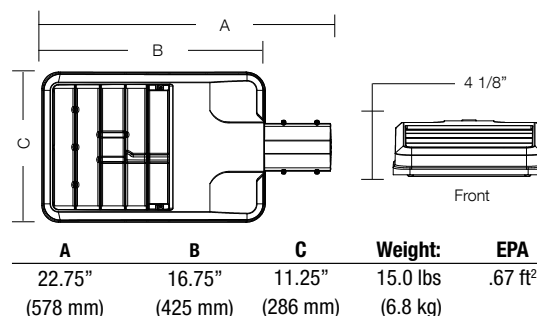


rectangular arm

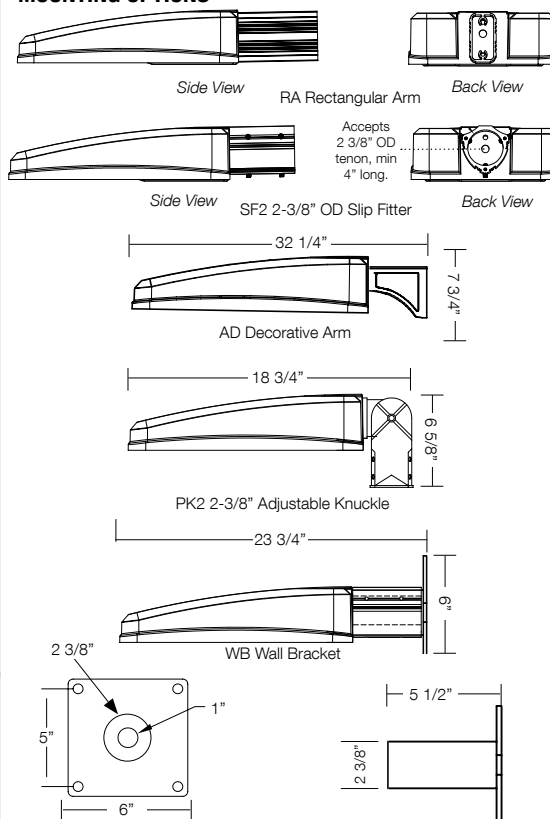


decorative arm

DIMENSIONS



MOUNTING OPTIONS



CERTIFICATIONS/LISTINGS



*3000K and warmer CCTs only

Web: www.securitylighting.com

2100 Golf Road, Suite 460, Rolling Meadows, IL 60008-4704

Phone: 1-800-LIGHT IT, 1-800-544-4848, Fax: 847-279-0642

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LNC SERIES

Cat.# LNC-5LU-4K-3-X

Job

Type

S2



HUBBELL
Outdoor Lighting

Approvals

SPECIFICATIONS

Intended Use:

The compact LED LNC is designed for entry/perimeter illumination for safety, security and identity. Typical mounting height is up to 12 feet with 40ft fixture spacing (without acrylic diffuser) and 30ft spacing with acrylic diffuser installed. Photocontrol option is available to provide dusk-to-dawn control for additional energy savings.

Construction:

Decorative die-cast aluminum housing and door. Rugged design protects internal components and provides excellent thermal management for long life – 60,000 hours minimum LED life at L96 rating per IESNA TM-21-11. Powder paint finishes provide lasting appearance in outdoor environments.

Optics/Electrical

LED:

Drivers are 120-277V, 50/60Hz Type II, III and Type IV lenses provide wide lateral spread.

0-10V dimming 120-277V only.

- LNC5L – 5 LEDs, Types II, III or IV available, see page 2 for electrical details
- LNC7L – 7 LEDs, Type II, III or IV available, see page 2 for electrical details
- LNC9L – 9 LEDs, Types II, III or IV available, see page 2 for electrical details
- 3000K - 80 CRI, 4000K - 70 CRI, and 5000K - 70 CRI, CCT nominal
- Minimum operating temperature is -40°C/-40°F
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion

Lenses:

Full cut-off distribution; Ambient diffuser included, use for applications near entrances or locations where reduced brightness is desired.

Installation:

Quick mount adapter provides quick installation, designed for recessed box 4" square junction box.

Listings:

Listed and labeled to UL 1598 for wet locations, 25° C ambient environments. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at:

<http://www.designlights.org/>

- IES Progress Award Winner - 2012

Warranty:

Five year limited warranty. For more information visit:

<http://www.hubbelloutdoor.com/resources/warranty/>

PRODUCT IMAGE(S)



LNC-5L



LNC-7L



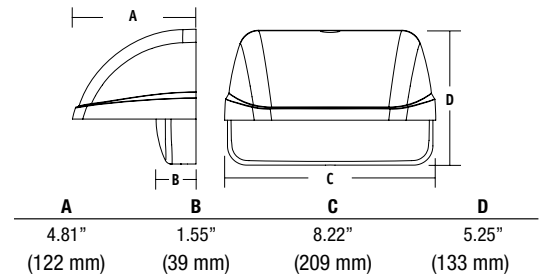
LNC-9L



With diffuser



DIMENSIONS



SHIPPING INFORMATION

Catalog Number	G.W(kg)/CTN	Carton Dimensions			Carton Qty. per Master Pack
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)	
LNC-5LU	9.6 (4.36)	14.5 (37)	9.6 (24.5)	6.8 (17.5)	2
LNC-7LU	9.6 (4.36)	14.5 (37)	9.6 (24.5)	6.8 (17.5)	2
LNC-9LU	9.6 (4.36)	14.5 (37)	9.6 (24.5)	6.8 (17.5)	2

CERTIFICATIONS/LISTINGS



*3000K and warmer CCTs only

ORDERING INFORMATION

ORDERING EXAMPLE: LNC-9LU-5K-3-1-PCU

SERIES	NUMBER OF LEDs	VOLTAGE	CCT	IES DISTRIBUTION	FINISH	OPTIONS
LNC	5L 5 LEDs 7L 7 LEDs 9L 9 LEDs	U 120V-277V 1 120V 2 208V 3 240V 4 277V	3K 3000K nominal, 70 CRI 4K 4000K nominal, 70 CRI 5K 5000K nominal	2 Type II 3 Type III 4 Type IV	1 Bronze 2 Black 3 Gray 4 White 5 Platinum	PCU Universal Button Photocell
AM ¹ Amber (590 μm available for "Turtle Friendly"/observatory applications, 350 mA (consult factory))						

¹ Amber LEDs only available on 7LU and 9LU configurations, 350 mA only



HUBBELL
Outdoor Lighting

Hubbell Outdoor Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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LAREDO LNC-SPEC

AUGUST 30, 2017 4:47 PM

20. Manufacturer's Verification of HVAC Equipment Meeting Emission Requirements

No emissions are anticipated as all HVAC equipment is electrical. Final sizes of equipment are unknown at this time but will not be anything out of the ordinary.

All HVAC equipment is shown on the Site Plan.

10. Requests for Waivers

Waiver Request 1:

Technical Manual Standard, Section 1.14 Parking Lot and Parking Space Design

1.14 Any parking lot with 10 or fewer spaces shall contain standard sized parking spaces. Parking lots with greater than 10 spaces may be comprised of up to 20% compact parking space).

The applicant is proposing four (4) compact vehicle parking spaces as part of the 17 proposed on-site.

Due to the changing dynamic of vehicle size, general greater acceptance and use of smaller parking stalls, and familiarity of residents with the parking configuration this reduction appears to be warranted. The project's parking area will be accessed from a low volume and low speed shared driveway so it is not anticipated that a high number of vehicle turnover in parking will occur to make compact stalls less successful from an operational standpoint.

Waiver Request 2:

Technical Manual Standard, Section 4.6 Street Trees

4.6.1. Residential Development: Multi-family residential: Multi-family residential developments shall provide a minimum of one tree per unit, planted in the City right of way unless otherwise approved and spaced thirty (30) to forty five (45) on center.

There are seven proposed apartment units in the building which require seven street trees. There is not enough road frontage or other adjacent landscape zones large enough to plant the required number of trees within the right-of-way. The project has proposed to plant five trees in the front of the building. The applicant will pay into the City's Tree Fund as necessary.



Vannah Avenue looking Towards Forest Avenue



16 & 18 Vannah Avenue



28 Vannah Avenue



34 Vannah Avenue



Neighborhood Meeting Certification

I, Thomas S. Greer hereby certify that a neighborhood meeting was held on May 23, 2018 at 28 Vannah Avenue, in Portland at 6:00 pm concerning a 7 unit residential and 1 unit commercial space building at 28 Vannah Avenue.

I also certify that on May 1, 2018, invitations were mailed to all addresses on the mailing list provided by the Planning Division, including property owners within 500 feet of the proposed development and the residents on the "interested parties" list.

A digital copy of the notice was also provided to the Planning Division (jmy@portlandmaine.gov) and the assigned planner to be forwarded to those on the interested citizen list who receive email notices.

Signed,

A handwritten signature in blue ink, which appears to read "Thomas S. Greer", is written over a horizontal line.

5/24/18 (date)

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

The 28

28 Vannah Avenue, Portland, Maine

Neighborhood Meeting

May 1, 2018

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for The 28, an 8-unit building consisting of a single commercial unit and 7 residential units at 28 Vannah Avenue.

Meeting Location: 28 Vannah Avenue, Portland

Meeting Date: May 23, 2018 (Wednesday)

Meeting Time: 6:00-7:00pm

The purpose of this meeting is to introduce the project to our neighbors as part of the City approval process.

- The existing office building will be replaced with a new 3 story colonial building with one commercial unit and seven residential units. The parking lot will be resurfaced to provide 17 parking spaces.
- The application is filed with the City.
- The developer, Vannah White, LLC, can be contacted at:

Address: Vannah White, LLC
Thomas S. Greer
28 Vannah Avenue
Portland, ME 04103

Phone #: (207) 553-9898

Email: tgreer@walsh-eng.com

- The City Planning Authority can be contacted at :
Website: <https://www.portlandmaine.gov/314/Planning-Urban-Development>
Phone #: (207) 756-8246



**PINKHAM & GREER
CIVIL ENGINEERS**

28 VANNAH AVE. PORTLAND, ME. 04103
Tel: 207.781.5242 Fax: 207.781.4245

Neighborhood Meeting

The 28

May 23, 2018

The meeting started at 6:00pm at 28 Vannah Avenue. There were 10 neighbors in attendance. The project was presented by Tom Greer as Owner, Developer and Civil Engineer for the project.

The proposed building was noted as to its size and number of units. Stakes were in the ground at the corners of the proposed building.

The neighbors asked about the trees along the back boundary line. Most of the trees will stay. One was pointed out for removal due to its condition. It was also mentioned that some of the trees at the back of the building will be trimmed.

The sidewalk across the front of the building was well received.

The landscape plan was well received, noting the trees across the front of the building.

Lighting was raised as a concern. They did not want it to be too bright. The proposed lighting was discussed, not too tall and downward facing. We also talked about using timers for the exterior lights.

One neighbor wanted to see if the site could be a "No Smoking" site.

The neighbors did not want a restaurant/bar as the commercial space. It was noted here that the space is only 1400 square and does not have a grease trap.

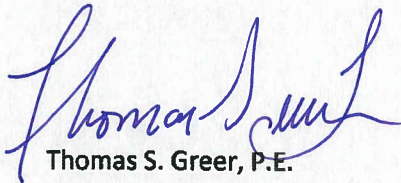
We noted that the City Staff's comments included wanting the building to have a flat roof and that the entrance should be plain. They unanimously stated that they liked the pitched roof and did not like the flat roof, mentioning a dislike for the look of the new building at the corner of Ocean and Hershey as reasoning for their comments.

Blasting for construction was raised as a concern. We do not anticipate blasting, but if it becomes necessary, we would do a pre-blast survey and notify them of the blasting. They mentioned that this was not done when blasting occurred at the new building on the corner.

The fence in the back yard was discussed. We have agreed to use a 6 foot solid fence.

Overall, this project was well received by the neighbors.

Respectfully Submitted,



Thomas S. Greer, P.E.

Pinkham & Greer Civil Engineers

NEIGHBORHOOD MEETING ATTENDEE LIST

The 28

28 Vannah Avenue

May 23, 2018

Name & Address	Name & Address
Thomas S. Greer 28 Vannah Avenue Portland, ME 04103	
Johanna Cady Walsh Engineering Associates, Inc. One Karen Drive, Suite 2A Westbrook, ME 04092	
Bryony Urquhart 34 HERSEY ST PORTLAND ME 04103	
Clara Williams 38 Vannah Ave PTLD ME 04103	
Dick HARRISON 33 HERSEY ST. Portland 04103	
Ken & Jane Thompson 55 Vannah Ave 04103	
Brien and Anne Hoyer 19 Hersey Street Portland 04103	
Michael Kaplan 49 Ocean Ave, 04103 Portland, ME	

File: 17166

VANNAH WHITE, LLC
28 Vannah Avenue
Portland, Maine 04103

May 29, 2018

Ms. Jean Fraser
City of Portland, Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

RE: Response to May 10th Memo

Dear Jean,

We have uploaded revised drawings in response to the memo of May 10th. The changes to the plan include the following:

- 1) We have added a sidewalk from Vannah Avenue to the residential access door along the parking spaces.
- 2) We have increased the number of compact spaces to provide a 6 foot wide planting strip at the front of the site.
- 3) We have revised the fencing around the site. We will be using a 4 foot high solid fence at the sides and a 6 foot high solid fence along the back of the site. This was agreed to by the neighbor at the back of the site.
- 4) We have relocated the mechanical units to the side of the building. The adjacent building is commercial and has no windows on that side of their building.
- 5) We have revised the building elevations to show the building height and the building materials.
- 6) Light poles have been added to the site plan.

Below is a list of items that were raised in the memo but not changed.

- 1) Pitched Roof: It was unanimous at the neighborhood meeting that they preferred the pitched roof. They cited the new building at the corner of Ocean and Hershey as a building style they did not like. This pitched roof design was carefully considered. The staff comments summarized as requesting "a box structure with a plain entrance". Changing to the flat roof and removing the entrance details will create a big square box with little variation and no neighborhood feel.
The pitched roof, with the gables and eaves, break up the façade and reduce the overall appearance of the height and size of the building. The third floor also steps back to again reduce the appearance of height.
We have provided banding at the first floor with a change in siding color to emphasize the commercial space and provide interest to the building design. The front entrance was designed to provide a higher quality of architectural design to the building.

Ms. Jean Fraser
May 29, 2018
Page 2 of 2
File: 17166

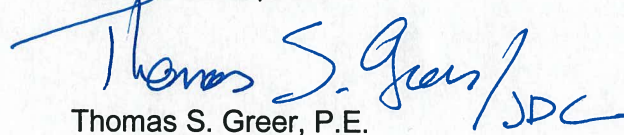
We remain committed to the building design and hope the Board will approve as well. We think the staff memo had it correct with the planning statement; "Therefore, staff support new development that is appropriately scaled for the street and for a mixed-use urban corridor and finds three stories meets the standard (as well as the zoning). In addition, this project has some massing variation at the third floor that varies the height of the building at the street."

- 2) Patio: The patio is located in the rear, away from the traffic and noise. It is not enclosed; it is open to all users of the building. It is located adjacent to the ADA unit to allow access from that unit. The rear fence will help to make it a more private space.
- 3) Dumpsters: The site does not have an exterior dumpster. We have provided a first floor trash room for the building occupants; including the commercial space.
- 4) HVAC Units: The HVAC units have been relocated. Once they are selected, the pertinent data will be provided to the City.

Hopefully this addresses the City's concerns.

Sincerely,

Vannah White, LLC

A handwritten signature in blue ink that reads "Thomas S. Greer" followed by a stylized "JDC" or similar mark.

Thomas S. Greer, P.E.

Enclosures

cc: File TSG/vjg

Comment on 28 Vannah Ave Project

Tamara Jones <tamtamstudios@gmail.com>

Jun 4, 2018 12:17 PM

Posted in group: **Planning Board**

Dear City of Portland Planning Board,

As a resident of Vannah Ave, I frequently walk past 28 Vannah to patron nearby businesses, as well as visit friends and neighbors in the surrounding area. This section of businesses along Vannah Ave, Grace St, and Forest Ave has a very industrial and depressing feeling for those of us who walk it everyday. There are numerous dirt and paved parking lots, guard rails and dumpsters, and forgotten or abandoned sidewalks. Some of the true highlights of 28 Vannah's current state is the amount of green space visible to the passer by, the openness of the property, and the set back of the existing building. I'm am very excited for the established sidewalk that is planned for the property! This will help tremendously as currently there isn't one and many pedestrians use Vannah Ave as a thoroughfare to the Back Cove Trail.

While I understand the desire to build up and out to the lot's maximum potential, I would love for there to be an attractive amount of greenery to help beautify the area as well as transition into our residential neighborhood. Is there the potential to add additional landscaping to the property? Instead of a decorative fence, could there be a more natural barrier, a mix of shrubs, trees or plantings that could have the same effect as a fence but be more open, inviting and green for the public?

Thank you for keeping the neighborhood and public in mind!

Tamara Jones

48 Vannah Ave

PLAN REFERENCES:

- 1) STANDARD BOUNDARY SURVEY 29 VANNAH AVENUE FOR DAVID W. AASKOV DATED AUGUST 1992 PREPARED BY ROSS BOUNDARY SURVEY RECORDED IN CCRD PB 192, PG 210.
- 2) CITY OF PORTLAND SEWER ASSESSMENT PLAN DATED 02-12, 1941 CITY OF PORTLAND FILE #436/13.
- 3) CITY OF PORTLAND BLUE SHEETS VANNAH AVE., FOREST AVE., HERSEY STREET, AND CLIFTON STREET.
- 4) PLAN OF HERSEY SAUNDERS FIELD DATED 05-18-1926 RECORDED IN CCRD PB 17, PG 4.
- 5) PLAN OF HERSEY SAUNDERS FIELD DATED 08-21-1917 RECORDED IN CCRD PB 13, PG 93.
- 6) PLAN SHOWING STANDARD BOUNDARY SURVEY FOR SYLVIA AND HAROLD KROOT BY DANIEL DALFONSO DATED 10/04/99.
- 7) FINAL SITE/SUBDIVISION PLAN OF 23 OCEAN AVE BY FOUR POINTS ASSOCIATES, INC.

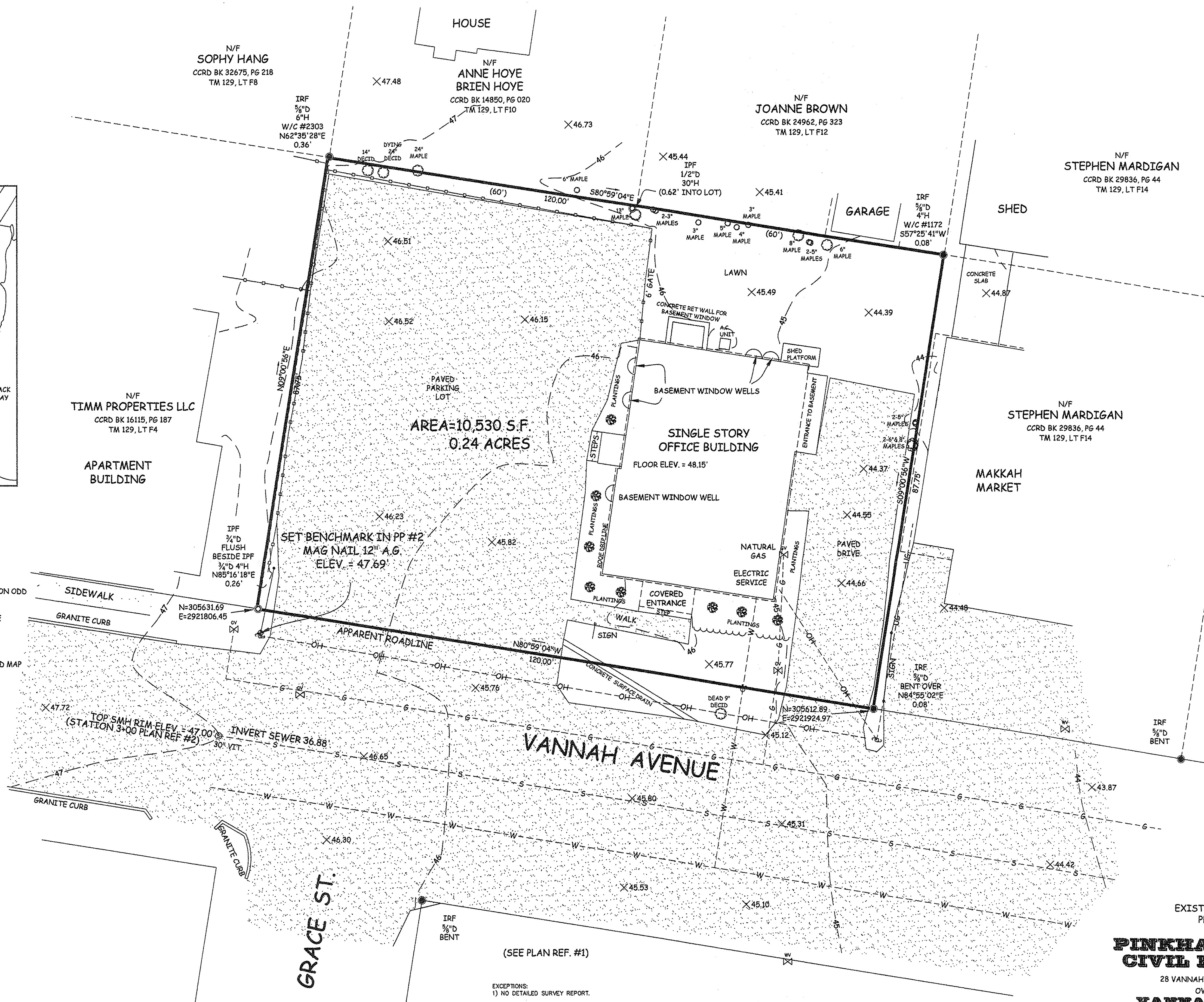
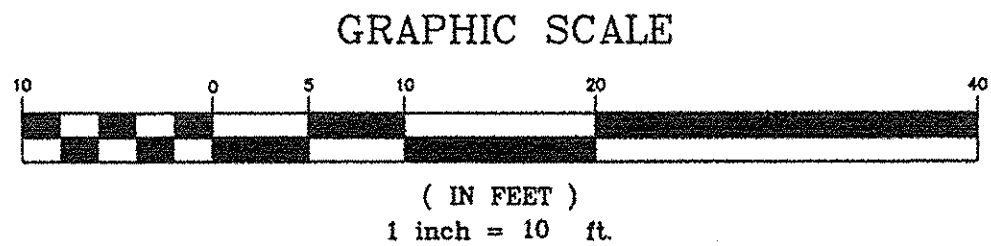


NOTES:

- 1) ELEVATIONS ARE ADJUSTED TO NGVD 1929 DATUM FROM USC & GS DISK STAMPED C 163 1966 FOUND ON ODD FELLOWS BLOCK BUILDING AT 651 FOREST AVENUE VERTICAL ORDER FIRST CLASS I.
- 2) UNDERGROUND UTILITY LOCATIONS HAVE NOT BEEN CONFIRMED. ALL UTILITIES SHOWN HERE ARE APPROXIMATE AND ARE BASED ON VISIBLE ABOVE GROUND STRUCTURES COMBINED WITH UTILITIES SHOWN ON PLAN REF #1 & 2. DIGSAFE SHOULD BE CONTACTED BEFORE ANY EXCAVATION COMMENCES.
- 3) THIS PROPERTY IS NOT LOCATED WITHIN A FLOOD HAZARD AREA PER THE FEMA FIRM FLOOD HAZARD MAP 2300510007B EFFECTIVE DATE JULY 17, 1986.

LEGEND:

- IRON PIPE FOUND
- IRON ROD FOUND
- BENCHMARK
- UTILITY POLE
- GUY WIRE
- DECIDUOUS TREE
- SHRUB
- SEWER MANHOLE
- WATER VALVE
- GAS VALVE
- SIGN (DOUBLE POST)
- SPOT ELEVATION
- NOW OR FORMERLY
- TAX MAP #, LOT #
- REGISTRY BOOK/PAGE
- CUMBERLAND COUNTY REGISTRY OF DEEDS
- PARCEL BOUNDARY
- EDGE PAVED TRAVELWAY
- BUILDING
- CONTOUR
- OVERHEAD UTILITY LINE
- UNDERGROUND UTILITY LINE
- PICKET FENCE
- GAS LINE
- SEWER LINE
- RECORD DIMENSION



(SEE PLAN REF. #1)

EXCEPTIONS:

- 1) NO DETAILED SURVEY REPORT.
- 2) NO DEED DESCRIPTION.

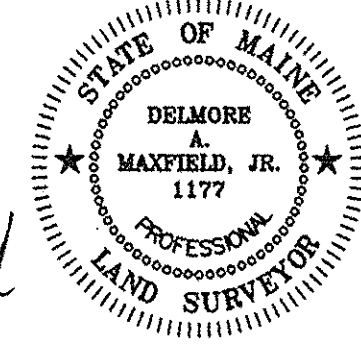
NOTES:

1) THE PARCEL BOUNDARIES AS DEPICTED ON THIS MAP WERE DERIVED FROM A THOROUGH REVIEW OF RECOVERED EXISTING RECORD EVIDENCE AND ACTUAL FIELD SURVEY LOCATION OF FOUND PHYSICAL EVIDENCE AND REPRESENT IN MY PROFESSIONAL OPINION THE POSITION OF THE RECORD PARCEL BOUNDARIES.

2) THIS SURVEY CONFORMS TO THE CURRENT STANDARDS ADOPTED BY THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS. EXCEPTIONS AS NOTED ABOVE.

3) NOT VALID OR TRUE COPY OF ORIGINAL UNLESS SIGNED AND EMBOSSED BY SURVEYOR.

Delmore A. Maxfield, Jr.
DATE: 10-6-17



EXISTING CONDITIONS
PLAN OF LAND
FOR
**PINKHAM & GREER
CIVIL ENGINEERS**

28 VANNAH AVE. PORTLAND, ME. 04103

OWNER OF RECORD:
VANNAH WHITE LLC

CCRD BOOK 29226, PAGE 180

ASSESSOR'S MAP 129 LOTS F009 & F011

LOCATED AT:

28 VANNAH AVENUE
PORTLAND, MAINE

PREPARED BY:

MAINE SURVEY CONSULTANTS, INC.

P.O. BOX 485 HARRISON, MAINE 04040

SCALE: 1"=10' DATE: OCTOBER 2017

JN/PJN 117035/DWG BASE117035 FB 160.145

CITY OF PORTLAND
CONDITIONS OF APPROVAL

IMPERVIOUS INFORMATION

	EXISTING	PROPOSED
BUILDINGS	1552 SQ. FT.	3,150 SQ. FT.
PAVEMENT & GRAVEL	6,315 SQ. FT.	5,140 SQ. FT.
	7,867 SQ. FT.	8,290 SQ. FT.
NET IMPERVIOUS	+ 423 SQ. FT.	

PARKING & BICYCLES

PARKING SPACES PROVIDED:	11
STANDARD SPACES:	
8'x18'	5
COMPACT SPACES "A":	
8'x15'	8
COMPACT SPACES "B":	
8'x11'	3
ACCESSIBLE SPACES:	
8'x18'	1
BICYCLE SPACES PROVIDED: 4 (2 RACKS)	
BIKE SPACES REQUIRED:	
2 BIKE SPACES PER	
5 DWELLING UNITS (8/2.5):	3.2

UNIT ANALYSIS

UNIT COMPOSITION:	
COMMERCIAL UNIT:	1
MARKET RATE RESIDENTIAL:	7
5-2 BEDROOM UNITS	
1- HANDICAP ACCESSIBLE	
2- 1 BEDROOM UNITS	
TOTAL:	8 UNITS

SNOW CLEARANCE NOTES

- SNOW MAY BE STORED WITHIN THE SNOW STORAGE AREAS.
- ANY SNOW THAT CAN NOT BE STORED ON SITE SHALL BE PHYSICALLY REMOVED AND TRANSPORTED OFFSITE IF NECESSARY.
- SNOW TRANSPORTED OFFSITE SHALL BE BROUGHT TO A MAINE DEP APPROVED "SNOW DUMP" OR MEET THE EXEMPTION REQUIREMENTS SPECIFIED WITHIN CHAPTER 513 WHEN THE ABOVE REQUIREMENTS CANNOT BE MET DUE TO AN ABUNDANCE OF SNOW.
- THE SNOW CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO VEGETATION, LANDSCAPING, CURBING, LIGHTING, FENCING ETC. RESULTING FROM THEIR ACTIVITIES.
- THE SNOW CONTRACTOR SHALL USE SALT OR CHLORIDE SUBSTITUTE TO DEICE THE PARKING LOT.
- THE OWNER IS RESPONSIBLE FOR SNOW REMOVAL BEING UNDERTAKEN IN A TIMELY FASHION.

WAIVERS REQUESTED

- THE PLANNING BOARD WAIVES / DOES NOT WAIVE SECTION 11.4 OF THE CITY OF PORTLAND'S TECHNICAL MANUAL STANDARD THAT PARKING LOTS WITH GREATER THAN 10 SPACES MAY BE COMPRISED OF UP TO 20% COMPACT PARKING SPACES TO ALLOW 11 COMPACT SPACES WHICH IS 65% OF THE TOTAL NUMBER.

SURVEY GENERAL NOTES

- ELEVATIONS ARE ADJUSTED TO NGVD 1929 DATUM FROM USC & GS DISK STAMPED C 163 1966 FOUND ON ODD FELLOWS BLOCK BUILDING AT 651 FOREST AVENUE VERTICAL ORDER FIRST CLASS 1.
- UNDERGROUND UTILITY LOCATIONS HAVE NOT BEEN CONFIRMED. ALL UTILITIES SHOWN HERE ARE APPROXIMATE AND ARE BASED ON VISIBLE ABOVE GROUND STRUCTURES COMBINED WITH UTILITIES SHOWN ON PLAN REF #1 & 2. DIGSAFE SHOULD BE CONTACTED BEFORE ANY EXCAVATION COMMENCES.
- THIS PROPERTY IS NOT LOCATED WITHIN A FLOOD HAZARD AREA PER THE FEMA FIRM FLOOD HAZARD MAP 2300510001B EFFECTIVE DATE JULY 11, 1986.

SURVEY PLAN REFERENCES

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- CITY OF PORTLAND BLUE SHEETS VANNAH AVE., FOREST AVE., HERSEY STREET, AND CLIFTON STREET.
- PLAN OF HERSEY SAUNDERS FIELD DATED 05-18-1926 RECORDED IN CCRD PB 17, PG 4.
- PLAN OF HERSEY SAUNDERS FIELD DATED 08-21-1917 RECORDED IN CCRD PB 13, PG 93.
- PLAN SHOWING STANDARD BOUNDARY SURVEY FOR SYLVIA AND HAROLD KROOT BY DANIEL DALFONSO DATED 10/04/93.
- FINAL SITE/SUBDIVISION PLAN OF 23 OCEAN AVE BY FOUR POINTS ASSOCIATES, INC.

ZONE INFORMATION

ZONE: NEIGHBORHOOD BUSINESS ZONE (B-1) & RESIDENTIAL 3 (R-3)
PERMITTED USE & PROPOSED USES: BUSINESS OFFICE & MULTI-FAMILY RESIDENTIAL

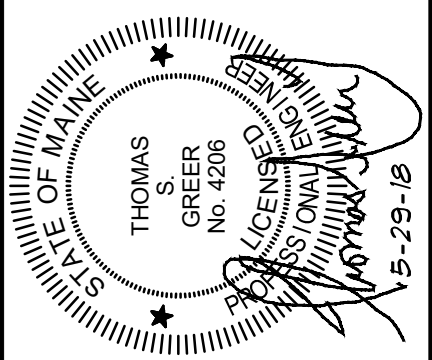
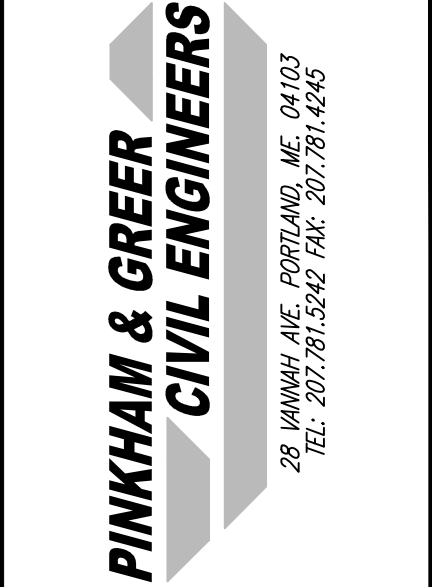
SPACE STANDARDS	B-1	R-3
MINIMUM LOT SIZE	NONE	6,500 SQ. FT.
MINIMUM LOT AREA PER DWELLING UNIT	1,000 *	6,500 SQ. FT.
MINIMUM STREET FRONTAGE	20 FEET	50 FEET
MINIMUM LOT WIDTH	NONE	65 FEET
MINIMUM FRONT YARD	NONE	25 FEET
MAXIMUM FRONT YARD	10 FEET OR **	
MINIMUM REAR YARD	10 FEET	25 FEET
MINIMUM SIDE YARD	5 FEET	
2 1/2 STORY STRUCTURE	**	16 FEET
STRUCTURE STEPBACKS	***	
MAXIMUM STRUCTURE HEIGHT	35 FEET	
MAXIMUM FLOOR AREA	10,000 SQ. FT.	
MAXIMUM IMPERVIOUS AREA	90%	
* EQUAL TO NEAREST RESIDENTIAL ZONE, EXCEPT FOR 1,000 FOR MULTI-FAMILY		
** MAX. FRONT YARD SHALL NOT EXCEED THE AVERAGE DEPTH OF NEAREST DEVELOPED LOTS		
*** ABOVE 35' SHALL BE NO CLOSER THAN 10 FEET FROM THE SIDE LINE AND NO CLOSER THAN 15 FEET FROM THE REAR WHEN PROPERTY ABUTS A RESIDENTIAL ZONE		
FIRST 25 FEET OF USE FROM FRONT BOUNDARY TO BE COMMERCIAL		

CITY OF PORTLAND SUBDIVISION NOTES

- LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
- THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.
- ALL POWERLINE UTILITIES SHALL BE OVERHEAD.
- SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIPDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPs PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003.
- ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
- ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
- PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORKS REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
- EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.
- SUBDIVISION AT THE TIME OF APPROVAL IS DEFINED AS "SUBDIVISION SHALL MEAN THE DIVISION OF A LOT, TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE LOTS, INCLUDING LOTS OF FORTY (40) ACRES OR MORE, WITHIN ANY FIVE-YEAR PERIOD WHETHER ACCOMPLISHED BY SALE, LEASE, DEVELOPMENT, BUILDINGS OR OTHERWISE AND AS FURTHER DEFINED IN 30-A M.R.S.A. SECTION 4401. THE TERM SUBDIVISION SHALL ALSO INCLUDE THE DIVISION OF A NEW STRUCTURE OR STRUCTURES ON A TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE DWELLING UNITS WITHIN A FIVE-YEAR PERIOD AND THE DIVISION OF AN EXISTING STRUCTURE OR STRUCTURES PREVIOUSLY USED FOR COMMERCIAL OR INDUSTRIAL USE INTO THREE (3) OR MORE DWELLING UNITS WITHIN A FIVE-YEAR PERIOD. THE AREA INCLUDED IN THE EXPANSION OF AN EXISTING STRUCTURE IS DEEMED TO BE A NEW STRUCTURE FOR THE PURPOSE OF THIS PARAGRAPH. A DWELLING UNIT SHALL INCLUDE ANY PART OF A STRUCTURE WHICH, THROUGH SALE OR LEASE, IS INTENDED FOR HUMAN HABITATION, INCLUDING SINGLE-FAMILY AND MULTIFAMILY HOUSING CONDOMINIUMS, TIME-SHARE UNITS AND APARTMENTS."

SUBDIVISION PLAT, APPROVED BY THE
CITY OF PORTLAND PLANNING BOARD

DATE



REV.	DATE	DESCRIPTION
1	5/29/18	REV'D PER CITY REVIEW COMMENTS

VANNAH WHITE, INC.
28 VANNAH AVENUE, PORTLAND, ME

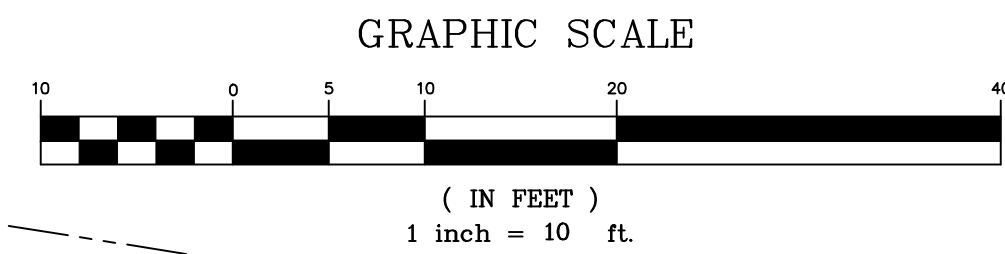
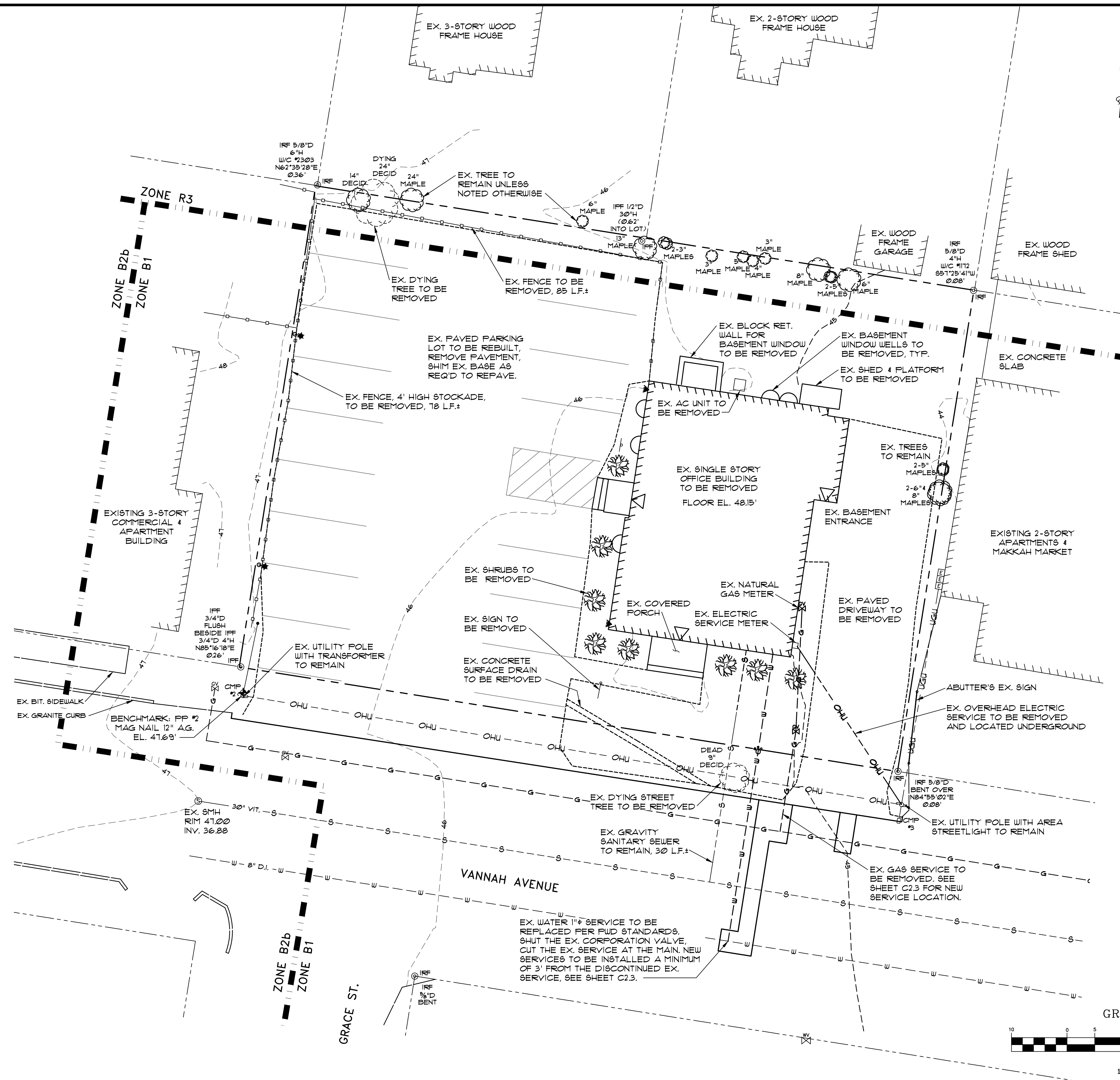
SCALE: AS SHOWN	DRN BY: JDC
DATE: MARCH 5, 2018	DESG BY: TSG
PROJECT: 17166	CHK BY: TSG

THE 28, a condominium
28 VANNAH AVENUE, PORTLAND, MAINE

SUBDIVISION RECORDING PLAT
SHEET 2 of 2

C1.2

LEGEND	
EXISTING	
	PROPERTY LINE
	ABUTTERS PROPERTY
	ZONING DISTRICT
	EDGE OF PAVEMENT
	CURB
	BUILDING
	UTILITY POLE
	UTILITY POLE W/ GUY WIRE
	SIGN
	TREE
	STOCKADE STYLE FENCE
	BENCHMARK
	BOUND FOUND
	IRON PIPE FOUND
	IRON ROD FOUND
	SEWER MANHOLE
	GATE VALVE
	CONTOURS
	SPOT GRADE
	OVERHEAD UTILITY
	WATER LINE
	GAS LINE
	TELEPHONE MANHOLE
	WATER DISTRICT MANHOLE
	SEWER MANHOLE
	UTILITY POLE
	UTILITY POLE W/ GUY WIRE
	SIGN



PINKHAM & GREER
CIVIL ENGINEERS

28 VANUAH AVE. PORTLAND, ME 04103
TEL: 207.781.5242 FAX: 207.781.4245

REV.	DATE	DESCRIPTION
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VANUAH WHITE, INC.

28 VANUAH AVENUE, PORTLAND, ME

SCALE: AS SHOWN

DATE: MARCH 5, 2018

PROJECT: 17186

DRN BY: JDC

DES BY: TSG

CHK BY: TSG

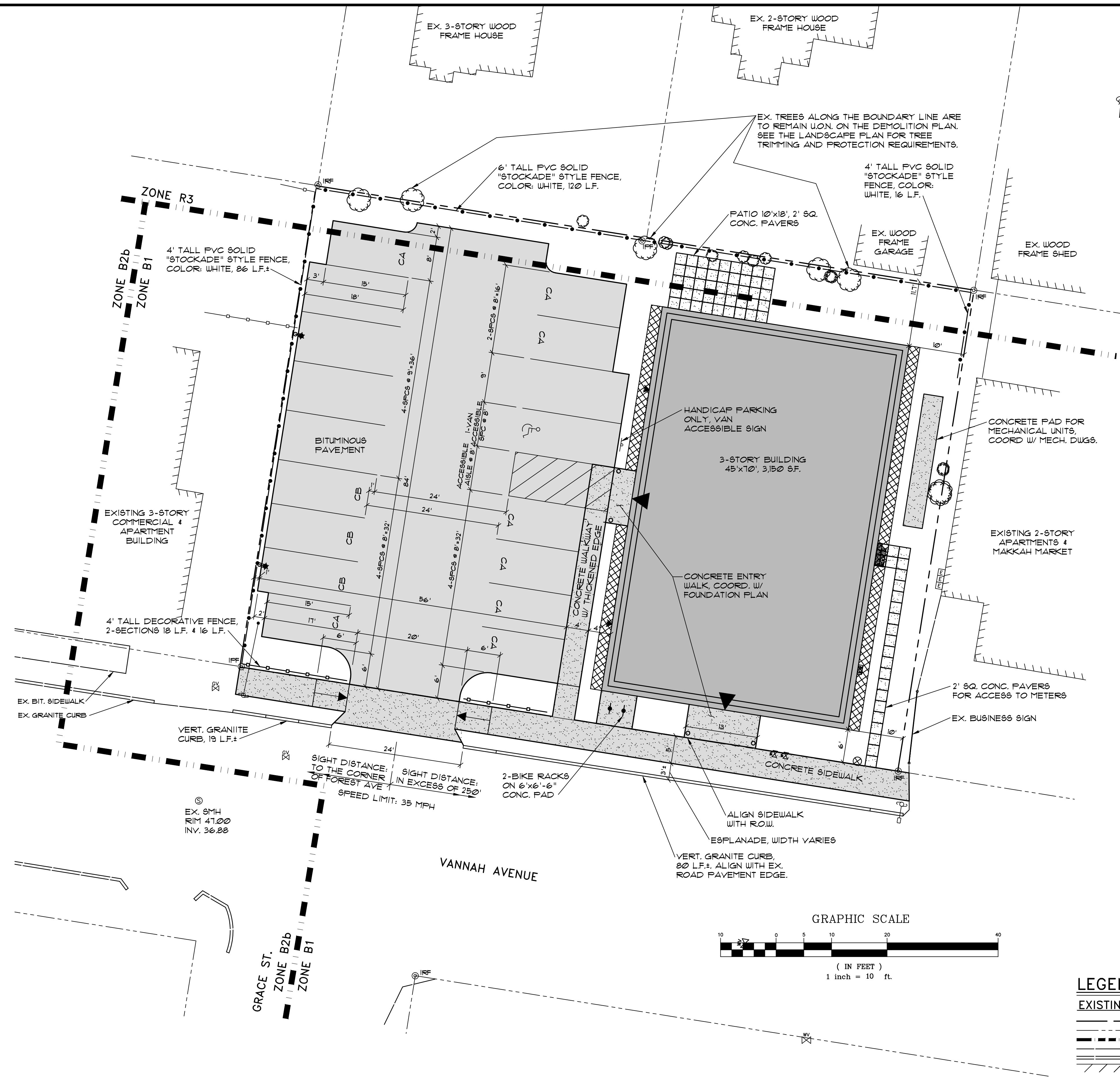
THE 28, a condominium

28 VANUAH AVENUE, PORTLAND, MAINE

EXISTING CONDITIONS AND DEMOLITION PLAN

C2.2

MAP/LOT 129 / F / 9 & 11

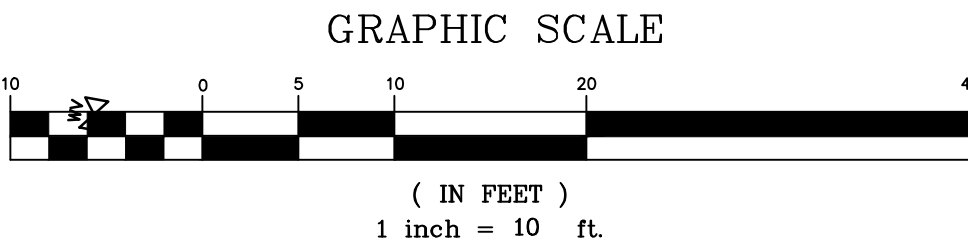


CITY OF PORTLAND SITE PLAN NOTES

- 1. LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
- 2. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS AND LOCATION AND SIZE OF BUILDINGS.
- 3. ALL POWERLINE UTILITIES SHALL UNDERGROUND.
- 4. SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIFDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
- 5. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPs PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION MARCH 2016.
- 6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
- 7. ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
- 8. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, DEVELOPMENT REVIEW COORDINATOR, PUBLIC WORKS REPRESENTATIVE AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
- 9. EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.

PROJECT DRAWINGS

C11	SUBDIVISION RECORDING PLAT, SHEET 1 of 2
C12	SUBDIVISION RECORDING PLAT, SHEET 2 of 2
C2.1	SITE PLAN
C2.2	EXISTING CONDITIONS AND DEMOLITION PLAN
C2.3	GRADING AND UTILITIES PLAN
C2.4	EROSION CONTROL PLAN, NOTES AND DETAILS
C2.5	LANDSCAPE PLAN, NOTES AND DETAILS
C3.1	SITE DETAILS
C3.2	SITE DETAILS
1	EXISTING CONDITIONS PLAN OF LAND
	PHOTOMETRICS PLAN 1 of 2
	PHOTOMETRICS PLAN 2 of 2
C1-1	CONSTRUCTION MANAGEMENT PLAN



PARKING SPACES

SPACE TYPE	SIZE	QUANTITY
STANDARD SPACES:		
ACCESSIBLE SPACE WITH ACCESS AISLE:	9'x18'	5
COMPACT SPACE TYPE "A"	8'x18'	1
COMPACT SPACE TYPE "B"	8'x15'	8
COMPACT SPACE TYPE "C"	8'x11'	3
TOTAL SPACES PROVIDED:		17

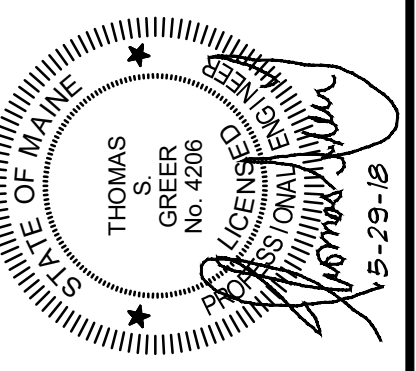
LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- ZONING DISTRICT
- EDGE OF PAVEMENT
- CURB
- BUILDING
- UTILITY POLE
- UTILITY POLE W/ GUY WIRE
- SIGN
- TREE
- STOCKADE STYLE FENCE
- BOUND FOUND
- IRON PIPE FOUND
- IRON ROD FOUND
- SEWER MANHOLE
- GATE VALVE
- GAS VALVE

PROPOSED

- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- GRADE BREAKS AT SIDEWALK
- BUILDING
- BUILDING ENTRY/EGRESS
- BICYCLE RACK
- HANDICAP PARKING
- "NO PARKING" AREA
- COMPACT PARKING SPACE
- DECORATIVE FENCE
- CHAINLINK FENCE
- SIGN
- LIGHT POLE
- WALL MOUNTED LIGHT
- ELECTRIC METER
- GAS METER
- GAS VALVE
- WATER SHUT OFF
- BITUMINOUS PAVEMENT
- BUILDING HATCH
- CONCRETE PAVEMENT
- CONCRETE PAVERS



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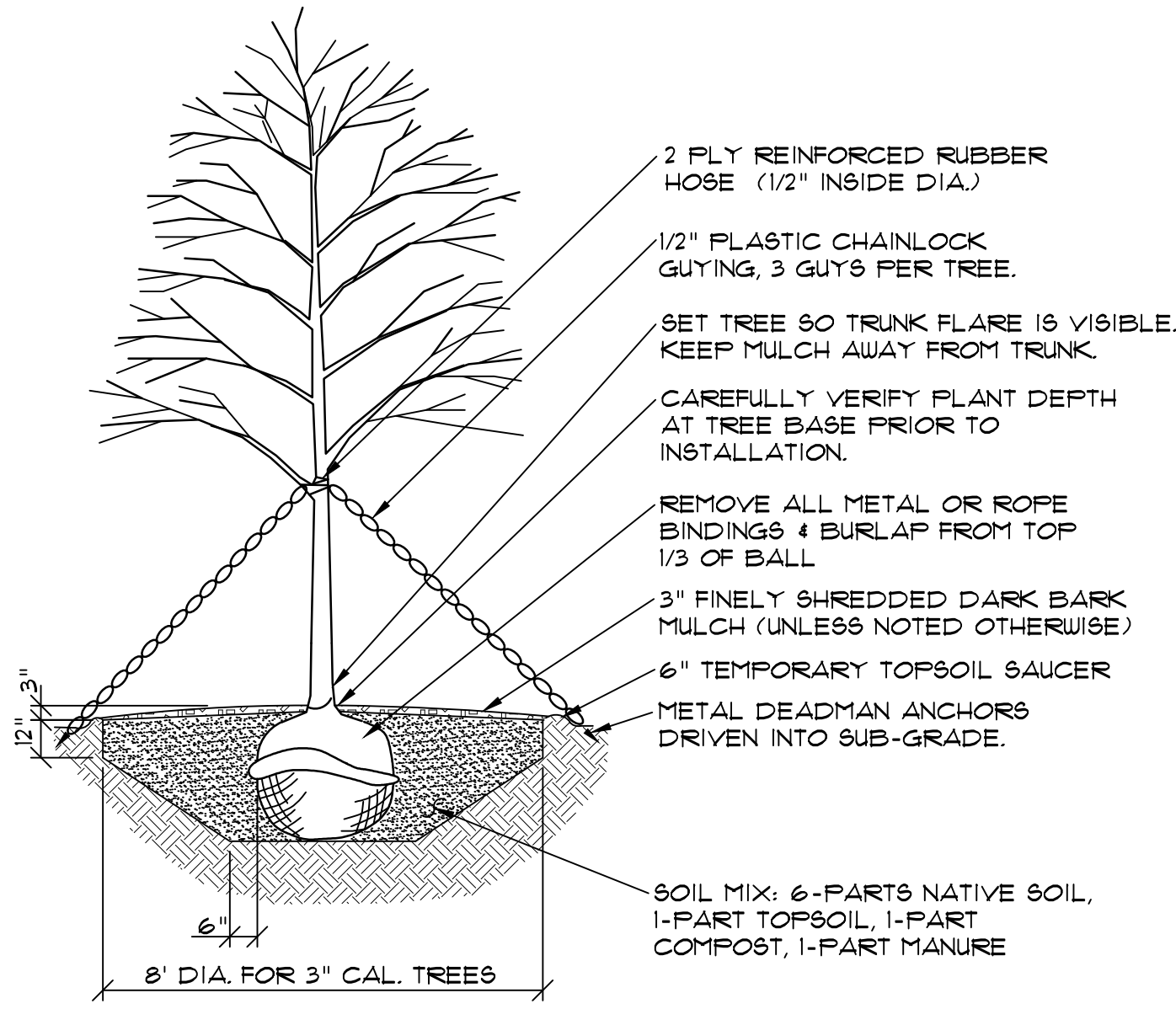
LANDSCAPE NOTES

GENERAL:

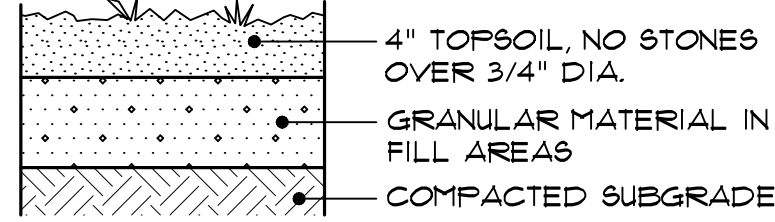
- 1. SAVE EXISTING TREES AS SHOWN. DO NOT CUT OR CLEAR ANY VEGETATION BEYOND THE IMPACT LIMIT LINE.
- 2. ALL PLANT MATERIALS INSTALLED ARE TO MEET THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSEYMEN.
- 3. ALL PROPOSED PLANT LOCATIONS SHALL BE AS SHOWN ON PLANS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING AND WILL NOTIFY OWNER'S REPRESENTATIVE IN THE EVENT OF CONFLICTS.
- 4. PLANT LOCATIONS ARE TO BE SCALED FROM THELANDSCAPE PLAN UNLESS NOTED OTHERWISE.
- 5. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- 6. FINAL QUANTITY FOR EACH PLANT TYPE IS NOTED IN THE PLANT LIST. THIS NUMBER SHALL TAKE PRECEDENCE IN THE CASE OF ANY DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE LIST AND ON THE PLAN.
- 7. ANY PROPOSED SUBSTITUTIONS MUST BE APPROVED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
- 8. ALL DISTURBED AREAS TO BE LOAMED AND SEEDED.

MAINTENANCE:

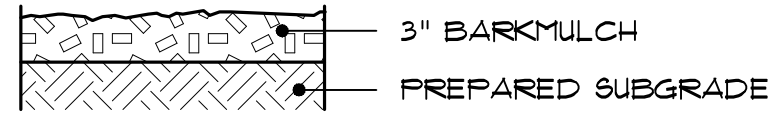
- 1. LAWNS: SHALL BE WATERED, FERTILIZED AND MOWN ON A REGULAR BASIS ACCORDING TO SEASON AND RAINFALL, TO PRODUCE A STRONG TURF OF 80% MIN. COVERAGE WITHIN THE FIRST YEAR, FREE FROM SIZABLE THIN OR BARE SPOTS. REGRADING AND RESEEDING WILL BE PERFORMED ON BARE SPOTS UNTIL COVERAGE IS COMPLETE.
- 2. TREES & SHRUBS: THE ESTABLISHMENT PERIOD SHALL BE TWO CALENDAR YEARS FROM THE DATE OF FINAL ACCEPTANCE. DURING THE ESTABLISHMENT PERIOD THE OWNER OR OWNER'S CONTRACTOR SHALL WATER, CULTIVATE AND PRUNE AS REQUIRED TO MAINTAIN A HEALTHY GROWING CONDITION.
- 3. AT THE END OF THE ESTABLISHMENT PERIOD AND UPON SUBSEQUENT ANNUAL INSPECTIONS, PLANTS WHICH HAVE DIED OR FAILED TO THRIVE SHALL BE REPLACED WITH EQUIVALENT SIZE AND SPECIES. AFTER THE CONTRACTOR'S GUARANTEE PERIOD HAS ENDED, IT IS THE OWNER'S RESPONSIBILITY TO MAINTAIN AND REPLACE PLANTINGS.
- 4. TREES, SHRUBS AND LAWNS WHICH ARE NOT IRRIGATED WITH AN AUTOMATIC SPRINKLER OR DRIP SYSTEM SHALL BE THOROUGHLY WATERED ON A REGULAR BASIS DURING PERIODS OF BELOW AVERAGE RAINFALL. SOIL SHOULD BE SAMPLED AT A DEPTH OF 12" AND IF DRY, WATER TO DEPTH OF 24".
- 5. MULCH IS TO BE MAINTAINED AT A DEPTH TO COMPLETELY COVER THE SOIL AND TO PRESERVE MOISTURE AND MINIMIZE WEEDS.
- 6. TREES, SHRUBS AND LAWNS SHALL BE FERTILIZED ANNUALLY AND TREATED WITH INSECTICIDES AND/OR FUNGICIDES AS REQUIRED FOR CONTINUED HEALTHY GROWTH.
- 7. SUCKERS, WEEDS, AND DEAD WOOD SHALL BE REMOVED ON A SEASONAL BASIS, AND SHRUBS SHALL BE PRUNED TWICE A YEAR ACCORDING TO THE REQUIREMENTS OF EACH SPECIES (I.E. SOME SPECIES SHOULD NOT BE PRUNED AT ALL). SHRUBS SHALL NOT BE PRUNED INTO INDIVIDUALS BUT ALLOWED TO GROW INTO A MASS.
- 8. WHERE TREES ARE LOCATED NEAR SIDEWALKS OR PARKING LOTS, THE CANOPY SHALL BE LIMBED UP TO PROMOTE SAFE CLEARANCE TO 8' ABOVE GRADE.
- 9. LAWN AREAS SHALL BE MOWN AS OFTEN AS NECESSARY TO KEEP LAWNS TO A 2 1/2 - 3" HEIGHT, AND AERATED ON A SEASONAL BASIS.
- 10. BEDS AND LAWN EDGES SHALL BE REGULARLY TRIMMED AND EDGED.
- 11. PERENNIAL AND ANNUAL BEDS SHALL BE DESIGNED, PLANTED AND MAINTAINED FOR SEASONAL COLOR AND INTEREST. ANNUALS MAY BE INCORPORATED TO A MAXIMUM LIMIT OF 25% OF THE BED AREA OF MAINTAINED BEDS FROM MAY 15 THROUGH NOVEMBER 15. PERENNIAL BEDS SHALL BE WATERED AS REQUIRED FOR HEALTHY PLANT GROWTH, AND WEEDED AND DEADHEADED ON A MONTHLY BASIS.



3 DECIDUOUS TREE PLANTING DETAIL NOT TO SCALE

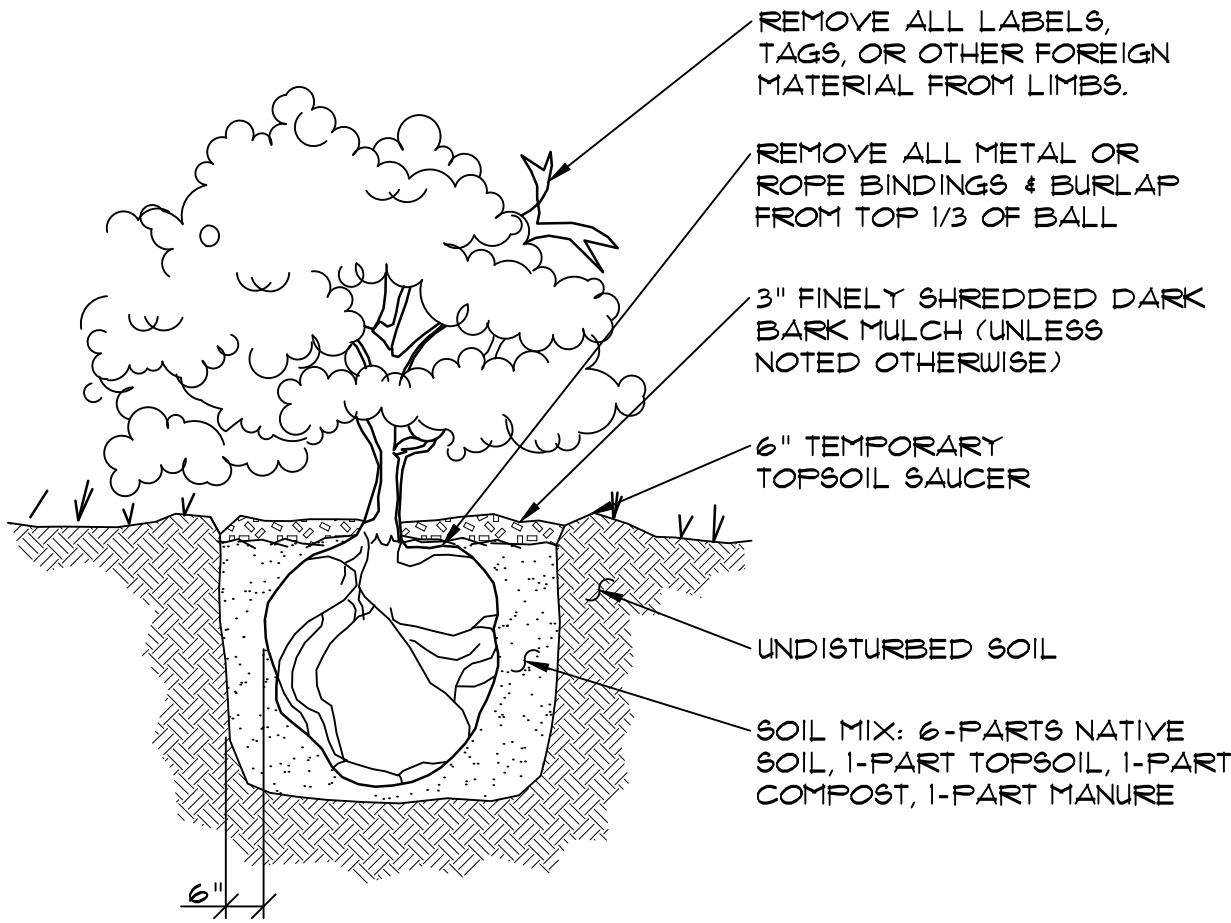


GRASS

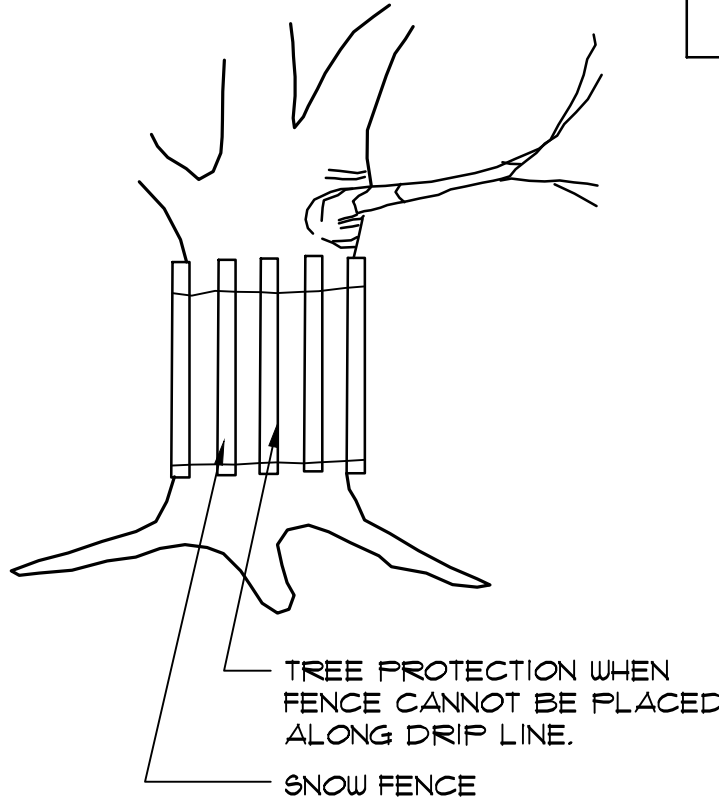


PLANT BED BARKMULCH

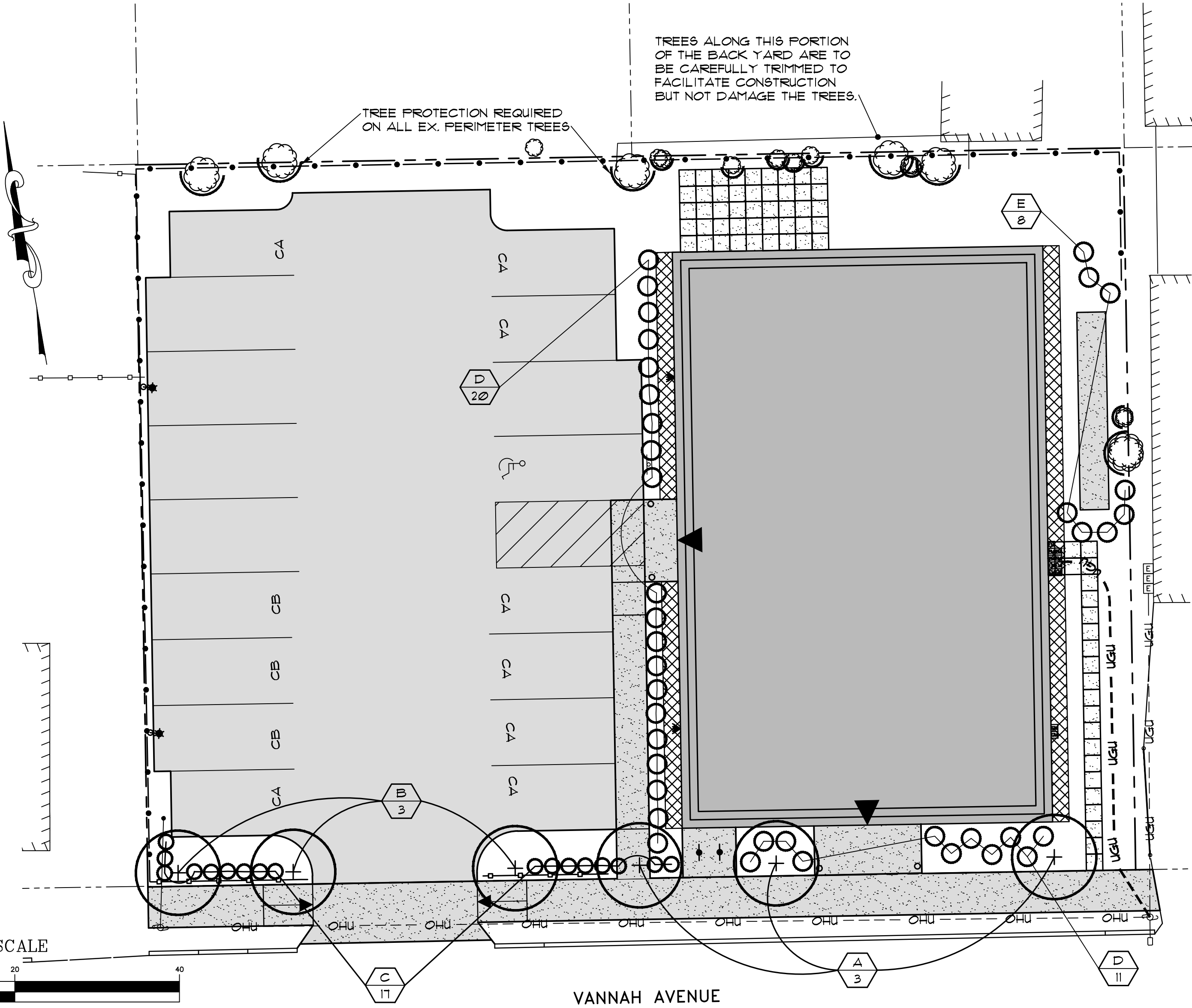
4 LANDSCAPE SURFACE FINISHES NOT TO SCALE



2 SHRUB PLANTING DETAIL NOT TO SCALE

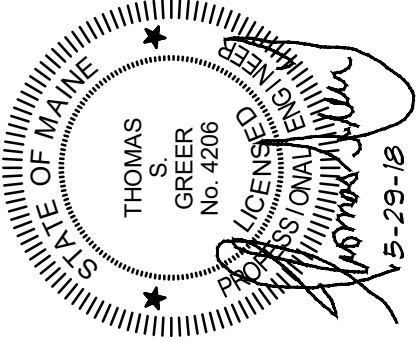
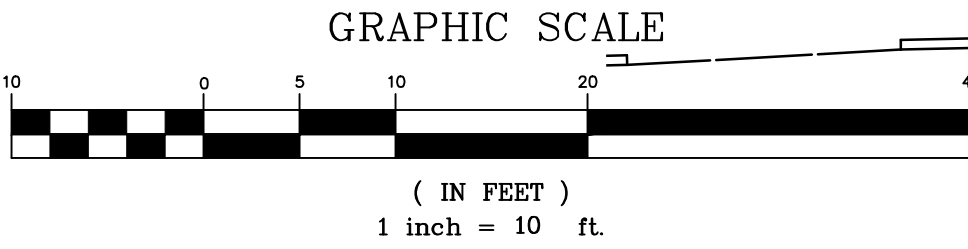


1 TREE PROTECTION FENCE NOT TO SCALE



PLANT LIST

SYMBOL	COMMON NAME/BOTANICAL NAME	SIZE	QUANTITY	ROOT
A	ARMSTRONG MAPLE / a. freemanii 'Armstrong'	2 1/2" cal.	3	B+B
B	LITTLE LEAF LINDEN / tilia cordata 'Greenspire'	2" cal.	3	B+B
C	BOXWOOD / buxus sempervirens	#3	17	Cont.
D	SWITCH GRASS / panicum virgatum 'Shenandoah'	1 gal.	31	Cont.
E	HIGH BUSH BLUEBERRY / mixed variety	2 gal.	8	Cont.



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VANNAH WHITE, INC. 28 VANNAH AVENUE, PORTLAND, ME	SCALE: AS SHOWN DATE: MARCH 5, 2018 PROJECT: 17186	DRN BY: JDC DESIG BY: TSG CHK BY: TSG
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THE 28, a condominium
28 VANNAH AVENUE
PORTLAND, MAINE

LANDSCAPE PLAN,
NOTES & DETAILS

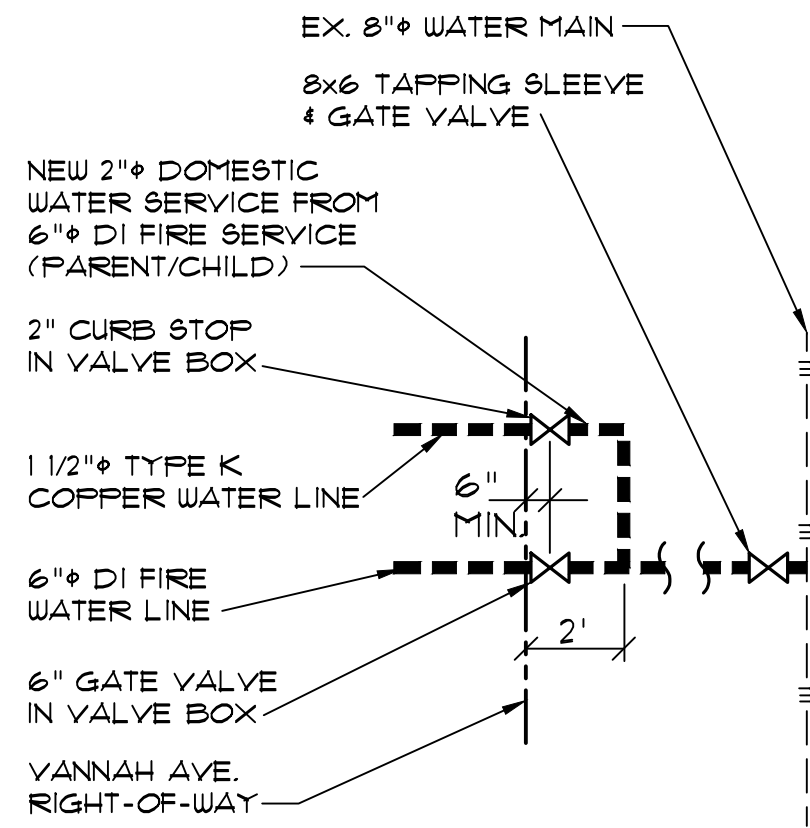
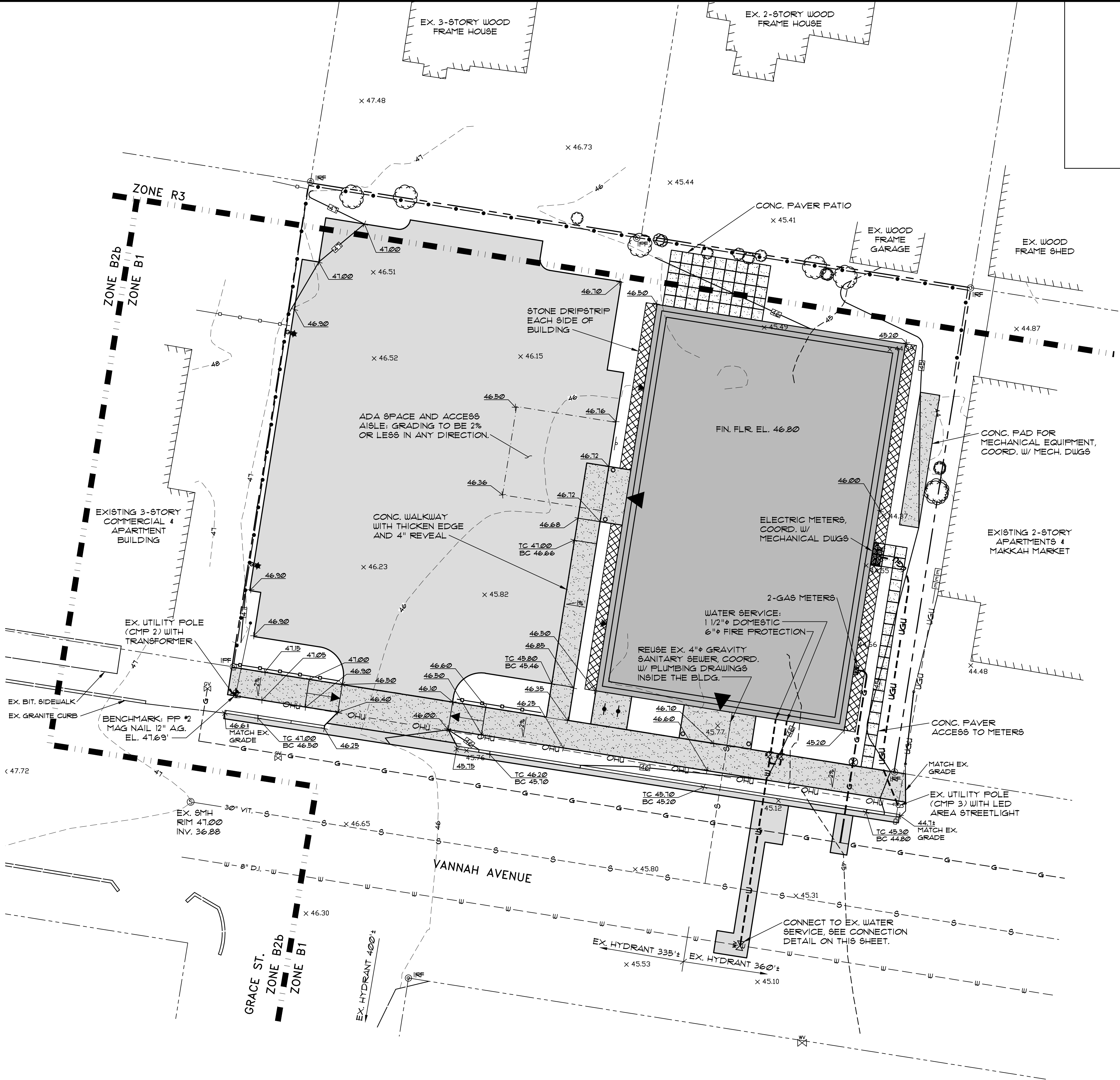
LEGEND

EXISTING

- PROPERTY LINE
- ABUTTERS PROPERTY
- ZONING DISTRICT
- EDGE OF PAVEMENT
- CURB
- BUILDING
- UTILITY POLE W/ GUY WIRE
- SIGN
- TREE
- STOCKADE STYLE FENCE
- BENCHMARK
- BOUND FOUND
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- IRON ROD FOUND
- SEWER MANHOLE
- GATE VALVE
- CONTOURS
- SPOT GRADE
- OVERHEAD UTILITY
- WATER LINE
- GAS LINE
- TELEPHONE MANHOLE
- WATER DISTRICT MANHOLE
- SEWER MANHOLE
- UTILITY POLE
- UTILITY POLE W/ GUY WIRE
- SIGN

PROPOSED

- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- GRADE BREAKS AT SIDEWALK
- BUILDING
- BUILDING ENTRY/EGRESS
- BICYCLE RACK
- WATER LINE
- UNDERGROUND UTILITY
- GAS LINE
- CONTOURS
- SPOT GRADE
- TOP OF CURB/BOTTOM OF CURB
- OF CURB SPOT GRADE
- DECORATIVE FENCE
- CHAINLINK FENCE
- SIGN & SIGN IDENTIFICATION
- ELECTRIC METER
- GAS METER
- GAS VALVE
- WATER SHUT OFF
- BITUMINOUS PAVEMENT
- BUILDING HATCH
- CONCRETE PAVEMENT
- CONCRETE PAVERS



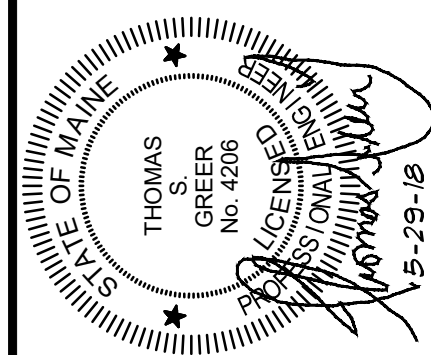
NOTE:
FIRE SPRINKLER DESIGNER TO VERIFY
SIZE OF PARENT/CHILD SERVICES.

WATER CONNECTION DETAIL

N.T.S.

PINKHAM & GREER
CIVIL ENGINEERS

28 VANNAH AVE. PORTLAND, ME 04103
TEL: 207.781.5242 FAX: 207.781.4245



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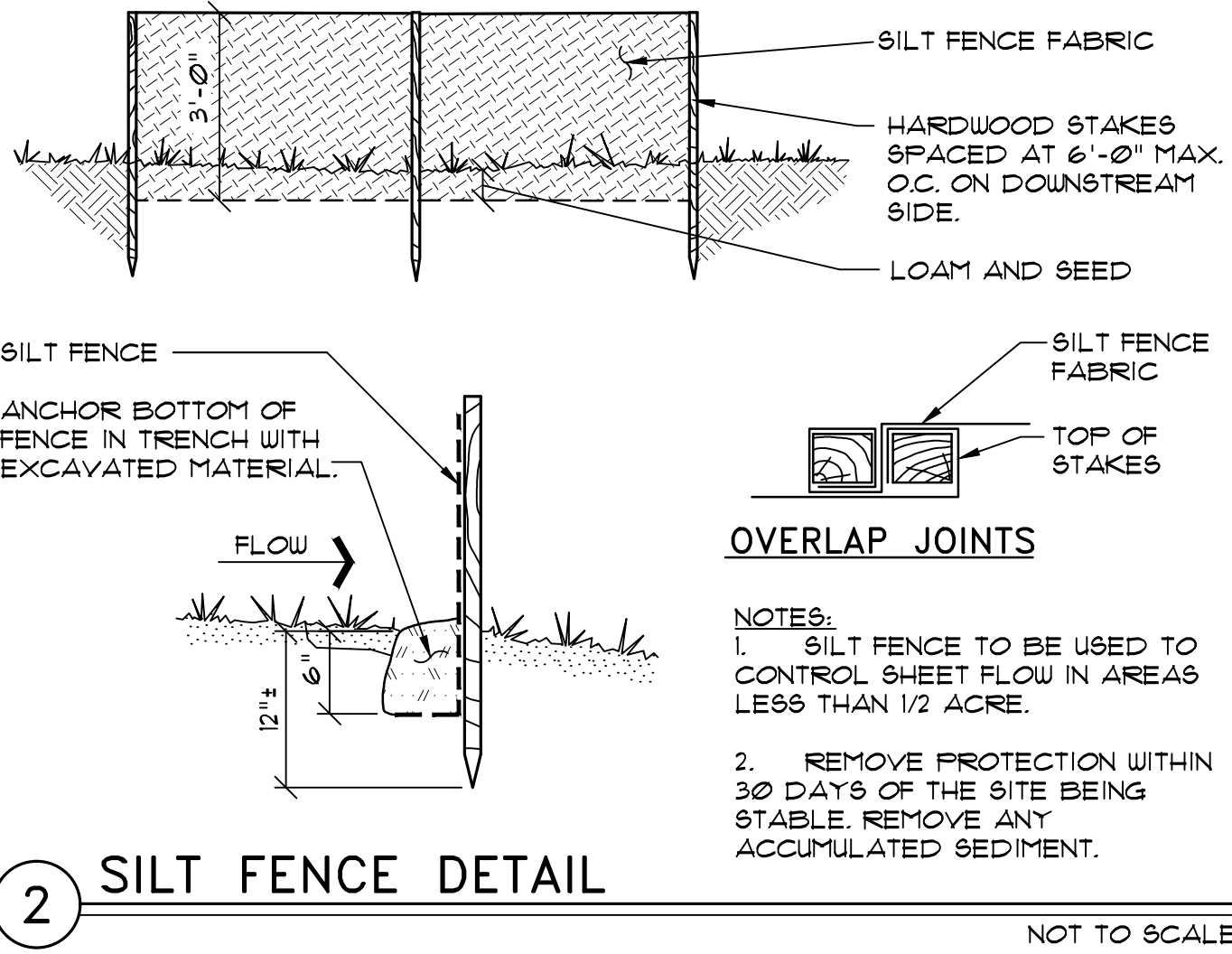
GRADING & UTILITIES PLAN

C2.3

EROSION CONTROL NOTES

GENERAL:

- DURING CONSTRUCTION THE CONTRACTOR IS REQUIRED TO HAVE A MAINTENANCE AND INSPECTION PLAN FOR STORMWATER CONTROL AND EROSION CONTROL DEVICES. INSPECT THE DISTURBED AREAS ONCE PER WEEK AND BEFORE AND AFTER RAIN STORMS. REPAIR OR CORRECT ANY AREAS THAT ARE DEFICIENT WITHIN 1 CALENDAR DAYS. KEEP A LOG OF THE INSPECTIONS AND NOTE ANY CORRECTIVE ACTION TAKEN. THE LOG MUST BE AVAILABLE FOR REVIEW BY THE TOWN AND DEP. KEEP RECORDS FOR 3 YEARS.
- THE DRAWINGS DEPICT THE REQUIRED SOIL EROSION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION SITE IN SUCH A MANNER THAT:
 - SOIL EROSION IS KEPT TO A MINIMUM.
 - NO SEDIMENT LEAVES THE CONSTRUCTION SITE PROPER.
 - ALL POSSIBLE MEASURES ARE EMPLOYED TO PREVENT SEDIMENT FROM ENTERING DRAINAGE COURSES AND WETLANDS EVEN BEYOND THE DETAILS SHOWN ON THIS PLAN IF NECESSARY.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPs PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2016.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATERBODIES, OR WETLAND AS A RESULT OF THIS PROJECT.
- LOAM AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER DISTURBANCE, BUT NO LONGER THAN 7 DAYS. LOAM AND SEED ANY DISTURBED AREA WITHIN 15' OF WETLANDS OR WATERBODIES WITHIN 48 HOURS OR PRIOR TO AND STORM EVENT. USE WINTER SEED RATES AND SPECIFICATIONS IF APPROPRIATE.
- INSPECT SOIL EROSION MEASURES WEEKLY AND AFTER SIGNIFICANT STORM EVENTS. MAKE ALL NECESSARY REPAIRS TO FACILITIES AS SOON AS POSSIBLE, BUT NO LONGER THAN 2 DAYS. CLEAN AND RESET SILT FENCES AND STONE CHECK DAMS WHICH ACCUMULATE SEDIMENT AND DEBRIS.
- PROTECT AND STABILIZE ALL AREAS NOT SCHEDULED FOR EROSION PREVENTION OR STABILIZATION BUT THAT SHOW SIGNS OF EROSION. NOTIFY OWNER OF ANY SIGNIFICANT EROSION PROBLEM.
- APPLY MULCH TO BARE SOILS WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOILS, WITHIN 48 HOURS IF WITHIN 15' OF WETLAND OR WATERBODY, PRIOR TO ANY RAIN EVENT, OR PRIOR TO ANY WORK SHUTDOWN LASTING MORE THAN ONE DAY.
- TEMPORARILY SEED WITHIN 7 DAYS ANY AREA WHICH WILL BE LEFT DISTURBED AND UNWORKED FOR MORE THAN 14 DAYS WITH THE TEMPORARY SEED MIX LISTED BELOW. IF AREA IS WITHIN 15' OF A WETLAND OR WATERBODY, SEED WITHIN 48 HOURS. PERMANENTLY SEED ANY AREA WHICH CAN BE LOAMED AS SOON AS POSSIBLE WITH THE PERMANENT SEED MIX LISTED BELOW. DO NOT USE PERMANENT SEED MIX AFTER SEPTEMBER 15.
- MULCH ALL AREAS SEEDED SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. DURING THE GROWING SEASON (APRIL 15 - SEPT. 30) USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON:
 - THE BASE OF GRASSSED WATERWAYS
 - SLOPES STEEPER THAN 15%
 - WITHIN 100 FT. OF STREAMS AND WETLANDSBETWEEN OCT. 1 AND APRIL 14 USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON:
 - SIDE SLOPES OF GRASSSED WATERWAYS
 - SLOPES STEEPER THAN 2%
- INSTALL EROSION CONTROL MESH IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. MESH TO BE EQUAL TO NORTH AMERICAN GREEN PRODUCT C12BEN.
- FOLLOW SILT FENCE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS FOR INSTALLATION OF SILT FENCE. SECURE ENTIRE BOTTOM OF FENCE EITHER BY BURYING BOTTOM OF FENCE IN A TRENCH OR BERING WITH SOIL OR CHIPPED GRUBBINGS. REFER TO SILT FENCE DETAILS.
- PLACE AND GRADE LOAM IN A REASONABLY UNIFORM MANNER. WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEED BED IS PREPARED. REMOVE FROM SURFACE ALL STONES LARGER THAN 2" AND ALL OTHER UNSUITABLE MATERIAL. LIME AND FERTILIZER SHOULD BE MIXED INTO SOIL PRIOR TO ROLLING EXCEPT IF INCLUDED IN HYDROSEED MIXTURE. PERMANENT STABILIZATION OF REVEGETATED AREAS IS CONSIDERED AS 95% CATCH.
- ALL CATCH BASINS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED BY INSTALLING AND MAINTAINING SILT SACKS DURING CONSTRUCTION.
- WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE OR EROSION CONTROL MIX 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 100 FEET OF A PROTECTED NATURAL RESOURCE.



2 SILT FENCE DETAIL

NOT TO SCALE

TOPSOIL:

- SUITABLE TOPSOIL SALVAGED FROM SITE OR SCREENED, LOOSE AND FRIABLE SANDY LOAM OR LOAM AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE CLASSIFICATION SYSTEM, FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS, ROOTS, WEEDS, RHIZOMES OR OTHER UNDESIRABLE FOREIGN MATTER AS DETERMINED BY THE INSPECTING AUTHORITY. CONTRACTOR SHALL SUBMIT REPORTS OF LOAM TEST RESULTS PERFORMED BY AN INDEPENDENT TESTING LABORATORY FOR TOPSOIL FROM DIFFERENT SOURCES PRIOR TO PLACING. THE COST OF TESTING SHALL BE INCIDENTAL TO THE COST OF TOPSOIL. TOPSOIL SHALL MEET THE FOLLOWING SPECIFICATIONS:
 - MATERIAL
 - SAND - 0.08 IN. TO 0.002 IN. DIAMETER (% BY VOLUME) 45 - 75
 - SILT - 0.002 IN. TO 0.00008 IN. DIAMETER (% BY VOLUME) ... 20 - 40
 - CLAY - LESS THAN 0.00008 IN. DIAMETER (% BY VOLUME) 5 - 15
 - ORGANICS (SHALL MEET THE REQUIREMENTS OF MDOT STANDARD SPECIFICATION 111.03 PEAT HUMUS (% BY VOLUME) .10 - 20
 - NUTRIENTS:
 - CALCIUM (CA) (% SATURATION) 60 - 80
 - MAGNESIUM (MG) (% SATURATION) 10 - 25
 - POTASSIUM (K) (% SATURATION) 21 - 30
 - PHOSPHORUS (P) (POUNDS/ACRE) 10 - 40
 - PH 6.0 - 6.5
 - PERMEABILITY (INCHES PER HOUR) 3 - 10
 - MAXIMUM STONE SIZE (INCHES) 3/4

SEEDING:

USE PERMANENT SEED MIXES AND RATES BETWEEN 5/15 AND 9/30.
USE TEMPORARY SEED MIXES FOR PERIODS LESS THAN 12 MONTHS. IF USING TEMPORARY SEED MIXES AND RATES BETWEEN 10/1 AND 5/14, RE-SEED WITH PERMANENT SEED MIX AFTER 5/15.

PERMANENT SEED:

MDOT 111.03(a) METHOD NUMBER 3

TEMPORARY SEED:

OATS	80.00 LBS/ACRE	4/01 - 5/14
ANNUAL RYEGRASS	40.00 LBS/ACRE	
SUDANGRASS	40.00 LBS/ACRE	5/15 - 8/14
ANNUAL RYEGRASS	80.00 LBS/ACRE	5/15 - 9/14
WINTER RYE	112.00 LBS/ACRE	9/15 - 9/30
WINTER RYE (W/ MULCH COVER)	112.00 LBS/ACRE	10/01 - 3/31

LIME AND FERTILIZER:

APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 POUNDS PER 1000 SQUARE FEET). APPLY FERTILIZER (10-20-20) AT A RATE OF 800 POUNDS PER ACRE (18.4 POUNDS PER 1000 SQUARE FEET).

MULCH:

STRAW OR HAY (ANCHORED)	10 - 30 LBS	PROTECTED AREAS
STRAW OR HAY (ANCHORED)	185 - 215 LBS	WINDY AREAS
SHREDDED OR CHOPPED	185 - 215 LBS	
JUTE MESH	AS REQUIRED	MODERATE TO HIGH VELOCITY AREAS & STEEP SLOPES
EXCELSIOR MAT	AS REQUIRED	

MULCH ANCHORING

PEG AND TWINE	LIQUID ASPHALT
MULCH NETTING	WOOD CELLULOSE FIBER
ASPHALT EMULSION	CHEMICAL TACK

HOUSEKEEPING NOTES

THE DEVELOPER IS RESPONSIBLE FOR NOTIFYING THE CONTRACTOR AND OWNER OF THE HOUSEKEEPING STANDARDS.

- SPILL PREVENTION: THE CONTRACTOR AND OWNERS NEED TO TAKE CARE WITH CONSTRUCTION AND WASTE MATERIALS SUCH THAT CONTAMINATES DO NOT ENTER THE STORMWATER. THE STORAGE OF MATERIALS SUCH AS PAINT, PETROLEUM PRODUCTS, CLEANING AGENTS AND THE LIKE ARE TO BE STORED IN WATERTIGHT CONTAINERS. THE USE OF THE PRODUCTS SHOULD BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. WHEN FUELING EQUIPMENT, INCLUDING SNOWBLOWERS AND LAWNMOWERS, HAVE OIL ABSORBENT PADS AVAILABLE BELOW THE FUELING.

STAGING AREAS ARE NOTED ON THE CONSTRUCTION MANAGEMENT PLAN FOR THE CONTRACTOR'S USE. REFUELING OF SMALL ENGINES BY THE OWNER SHOULD OCCUR ON A PAVED SURFACE.

ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE DEPARTMENT. FOR OIL SPILLS, CALL 1-800-482-0111 WHICH IS AVAILABLE 24 HOURS A DAY. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL 1-800-452-4664 WHICH IS AVAILABLE 24 HOURS A DAY. FOR MORE INFORMATION, VISIT THE DEPARTMENT'S WEBSITE AT: [HTTP://WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/](http://www.maine.gov/dep/spills/emergspillresp/)

- GROUNDWATER PROTECTION: PROTECTION OF THE GROUNDWATER IS REQUIRED BY THE CONTRACTOR AND OWNER. PETROLEUM PRODUCTS SHOULD BE STORED IN MANUFACTURED CANS DESIGNED FOR THE PURPOSE. SPILL PREVENTIONS PROCEDURES SHOULD BE FOLLOWED.

- FUGITIVE SEDIMENT AND DUST: THE CONTRACTOR IS REQUIRED TO MINIMIZE DUST FROM THE CONSTRUCTION OPERATION. THE ROAD SHOULD BE SWEEP REGULARLY (WEEKLY) AND PRIOR TO ANY RAIN EVENT. THE GRAVEL AREAS ARE TO BE WATERED REGULARLY TO MINIMIZE DUST. ANY MUD THAT IS TRACKED OFF SITE SHOULD BE CLEANED UP PRIOR TO IT DRYING AND BECOMING A DUST ISSUE. DO NOT USE OIL TO CONTROL DUST.

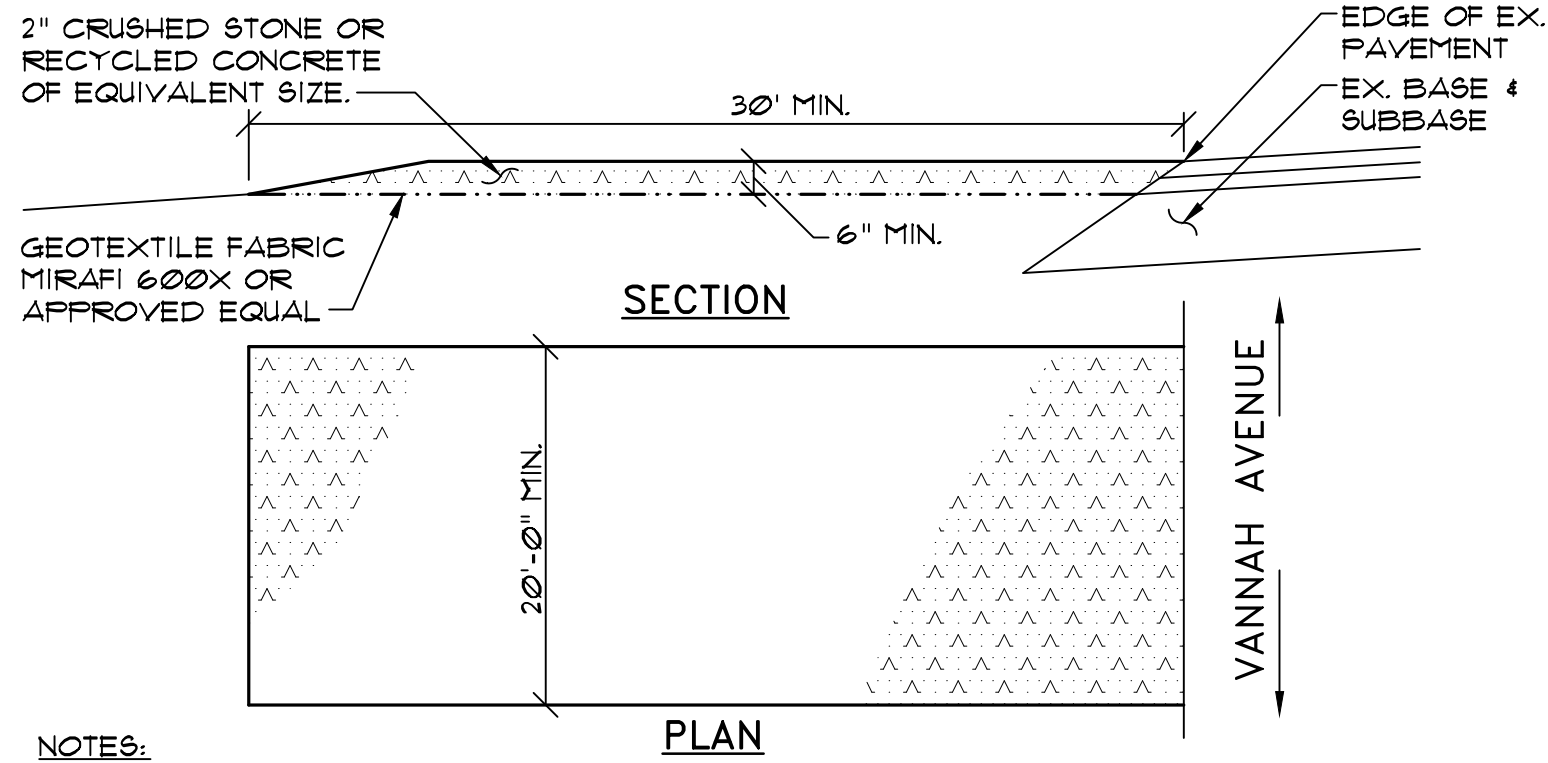
- DEBRIS AND OTHER MATERIALS: CONSTRUCTION MATERIALS AND CONSTRUCTION DEBRIS SHOULD BE COVERED TO PREVENT RAINWATER FROM WASHING CONTAMINANTS OFF THE SITE. ANY FERTILIZERS, CLEANING PRODUCTS, HERBICIDES SHOULD BE PROTECTED FROM THE WEATHER AND USED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

NOTE ANY CONTAMINANTS THAT ARE WASHED OFF THE SITE BY RAINWATER IS A VIOLATION OF THE CLEAN WATERS ACT.

STORAGE HANDLING AND DISPOSAL OF SOLID WASTE ITEMS MUST COMPLY WITH MAINE'S SOLID WASTE MANAGEMENT RULES. LACK OF APPROPRIATE POLLUTANT CONTROL MAY RESULT IN VIOLATIONS OF THE GROUNDWATER QUALITY STANDARDS.

THIS PROJECT HAS A WRITTEN EROSION CONTROL PLAN AND STORMWATER MAINTENANCE PLAN. MODIFICATIONS TO THE PLAN MUST BE APPROVED BY THE CITY.

MAINTENANCE OF THE SITE MUST OCCUR REGULARLY. THE STORMWATER MAINTENANCE REPORT PROVIDES INSPECTION DETAILS AND TIME LINES FOR DOING THE INSPECTIONS AND REPORTING TO THE CITY.



- NOTES:
- ENTRANCE TO BE PLACED WHEN PAVEMENT IS REMOVED. WHILE EXISTING PAVEMENT REMAINS THE ENTRANCE IS NOT REQUIRED.
 - MAINTAIN ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. IF WASHING IS REQUIRED PREVENT SEDIMENT FROM ENTERING WATERWAYS, DITCHES OR STORM DRAINS.
 - REMOVE STABILIZED CONSTRUCTION ENTRANCE AFTER EXCAVATION IS COMPLETE.

1 STABILIZED CONSTRUCTION ENTRANCE DETAIL

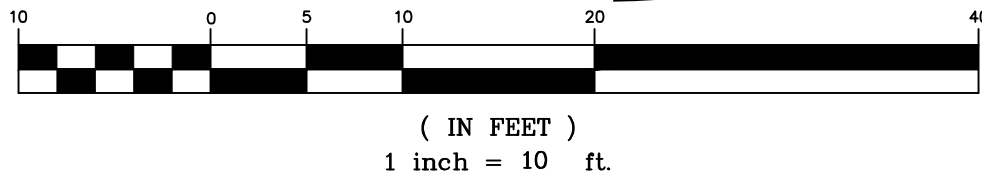
NOT TO SCALE

EROSION CONTROL LEGEND

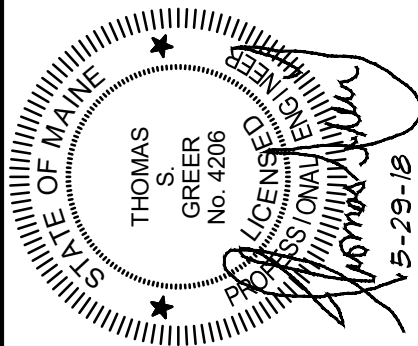


FOR PLAN LEGEND SEE SHEET C2.3

GRAPHIC SCALE



PINKHAM & GREER
CIVIL ENGINEERS
28 VANNAH AVE. PORTLAND, ME 04103
TEL: 207.781.5242 FAX: 207.781.4245



REV.	DATE	REVD PER CITY REVIEW COMMENTS	DESCRIPTION
1	5/29/18		

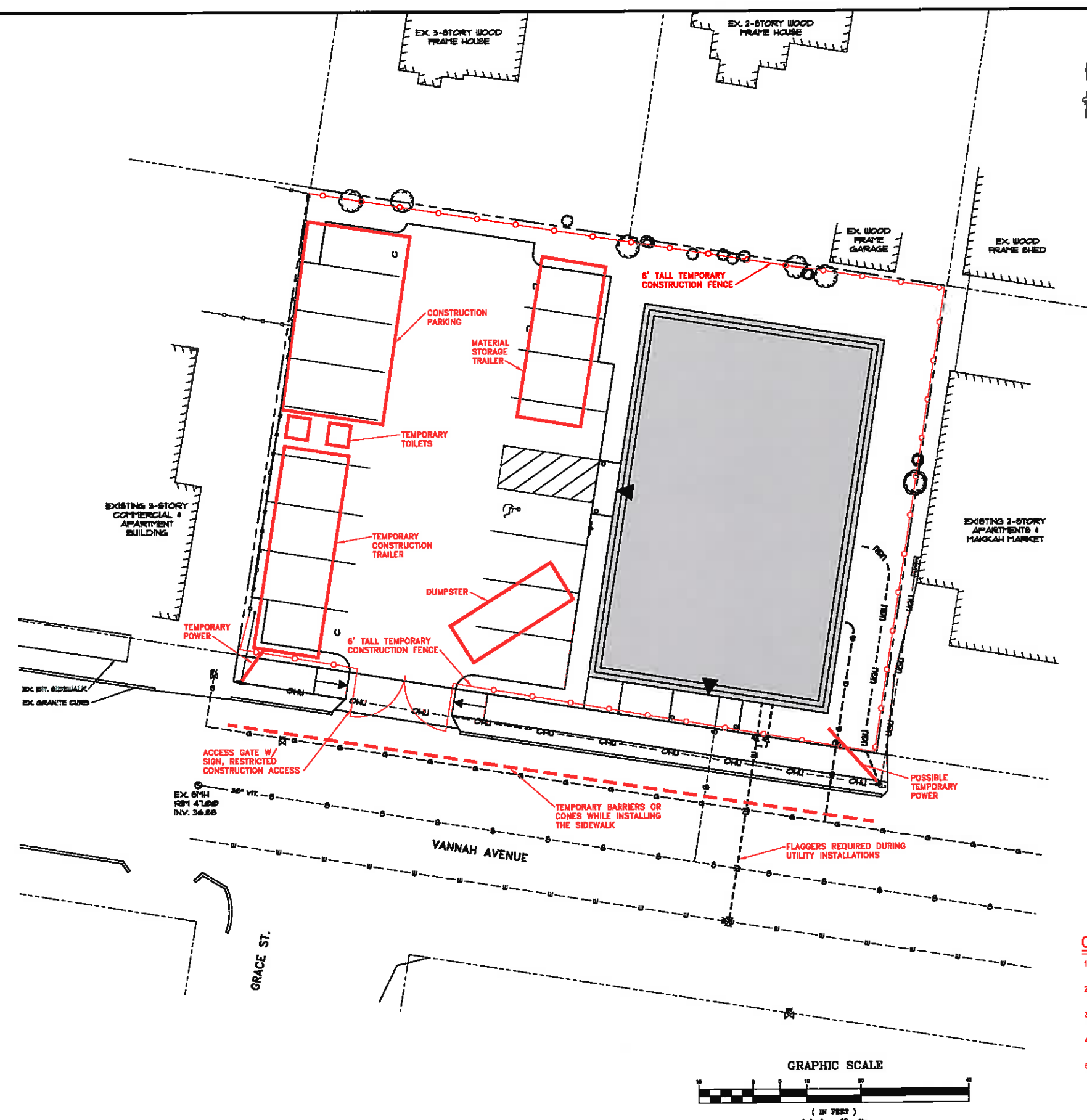
VANNAH WHITE, INC.
28 VANNAH AVENUE, PORTLAND, ME

SCALE: AS SHOWN	DRN BY: JDC
DATE: MARCH 5, 2018	DESG BY: TSG
PROJECT: 17166	CHK BY: TSG

THE 28, a condominium
28 VANNAH AVENUE
PORTLAND, MAINE

EROSION CONTROL
PLAN, NOTES & DETAILS

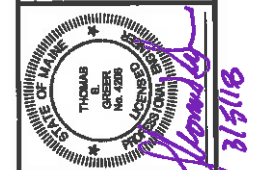
C2.4



CONSTRUCTION MANAGEMENT NOTES

1. PROVIDE SAFETY CONES, BARRELS, FENCING, WARNING TAPE AS REQUIRED TO RESTRICT ACCESS TO THE SITE AND PROVIDE FOR PEDESTRIAN SAFETY.
2. REMOVE EXISTING BUILDING USING THE EXISTING PARKING AREA AS STAGING AREA.
3. PROVIDE DUMPSTERS ON SITE THROUGHOUT THE CONSTRUCTION PROCESS.
4. TEMPORARY TRAILERS AND EMPLOYEES CONVENIENCE FACILITIES TO BE MAINTAINED ON SITE THROUGHOUT THE PROJECT.
5. CONSTRUCTION EMPLOYEE PARKING TO BE MAINTAINED ON SITE. ANY PARKING ALONG VANUAH AVENUE MUST LEAVE ROOM FOR TWO WAY TRAFFIC.

PINKHAM & GREER
CIVIL ENGINEERS
28 VANUAH AVE. PORTLAND, ME 04103
TEL: 207.761.4243



REV.	DATE	DESCRIPTION

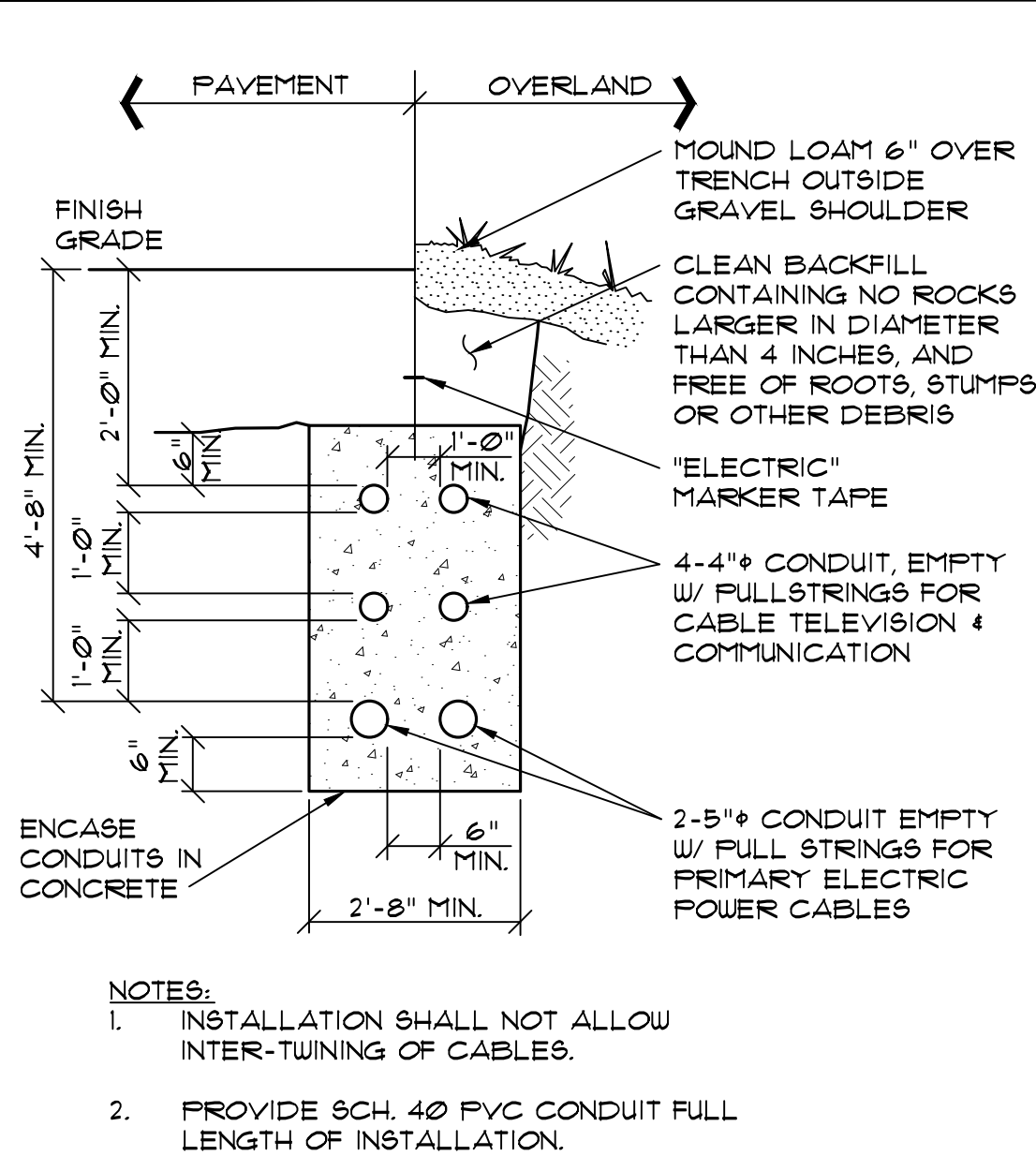
VANUAH WHITE, INC. 28 VANUAH AVENUE, PORTLAND, ME	
SCALE: AS SHOWN	DRN BY: JDC
DATE: MARCH 5, 2018	DESIGN BY: TSG
PROJECT: 17108	CHK BY: TSG

THE 28, a condominium
28 VANUAH AVENUE, PORTLAND, MAINE

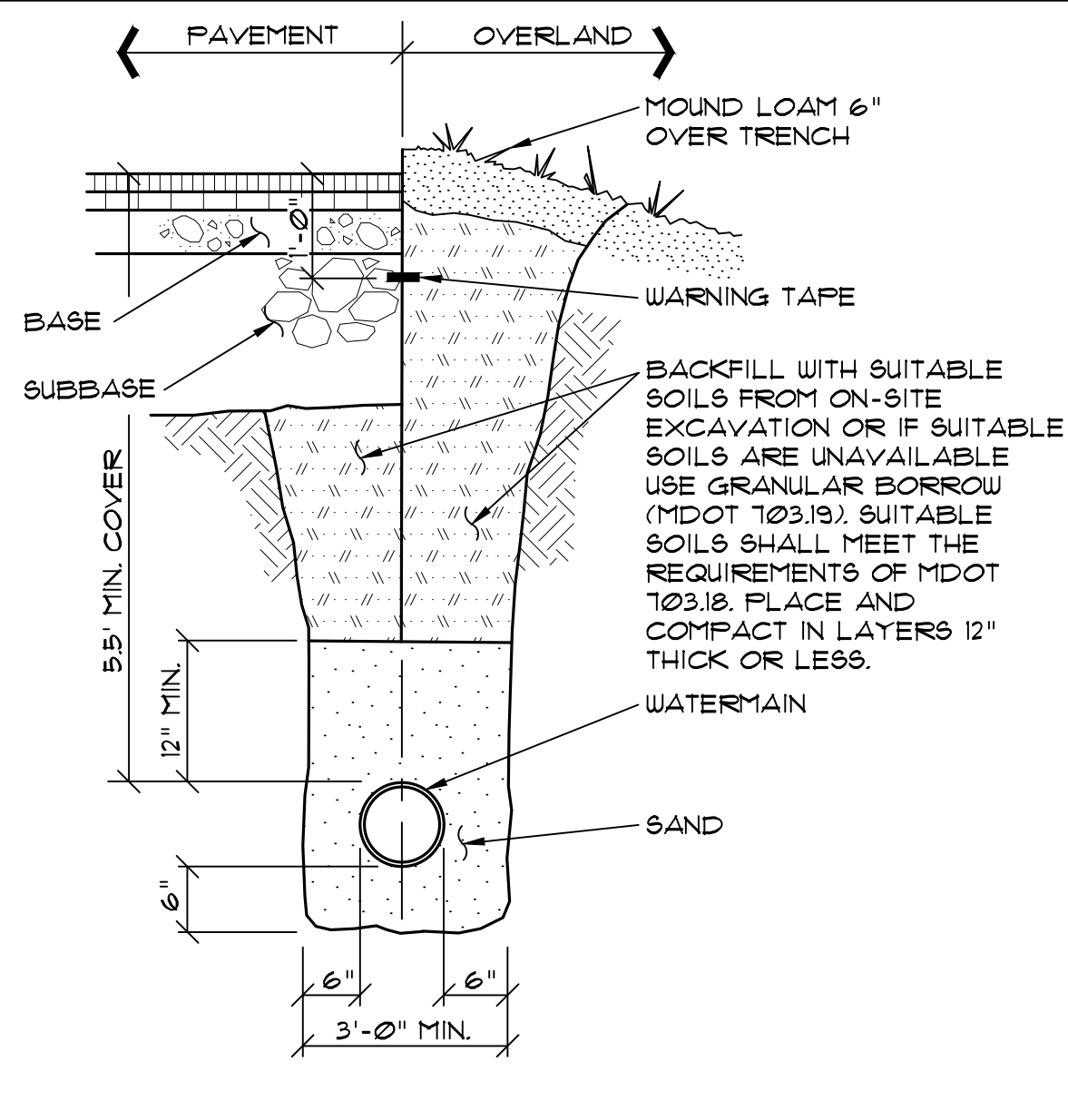
**CONSTRUCTION
MANAGEMENT PLAN**

CM-1

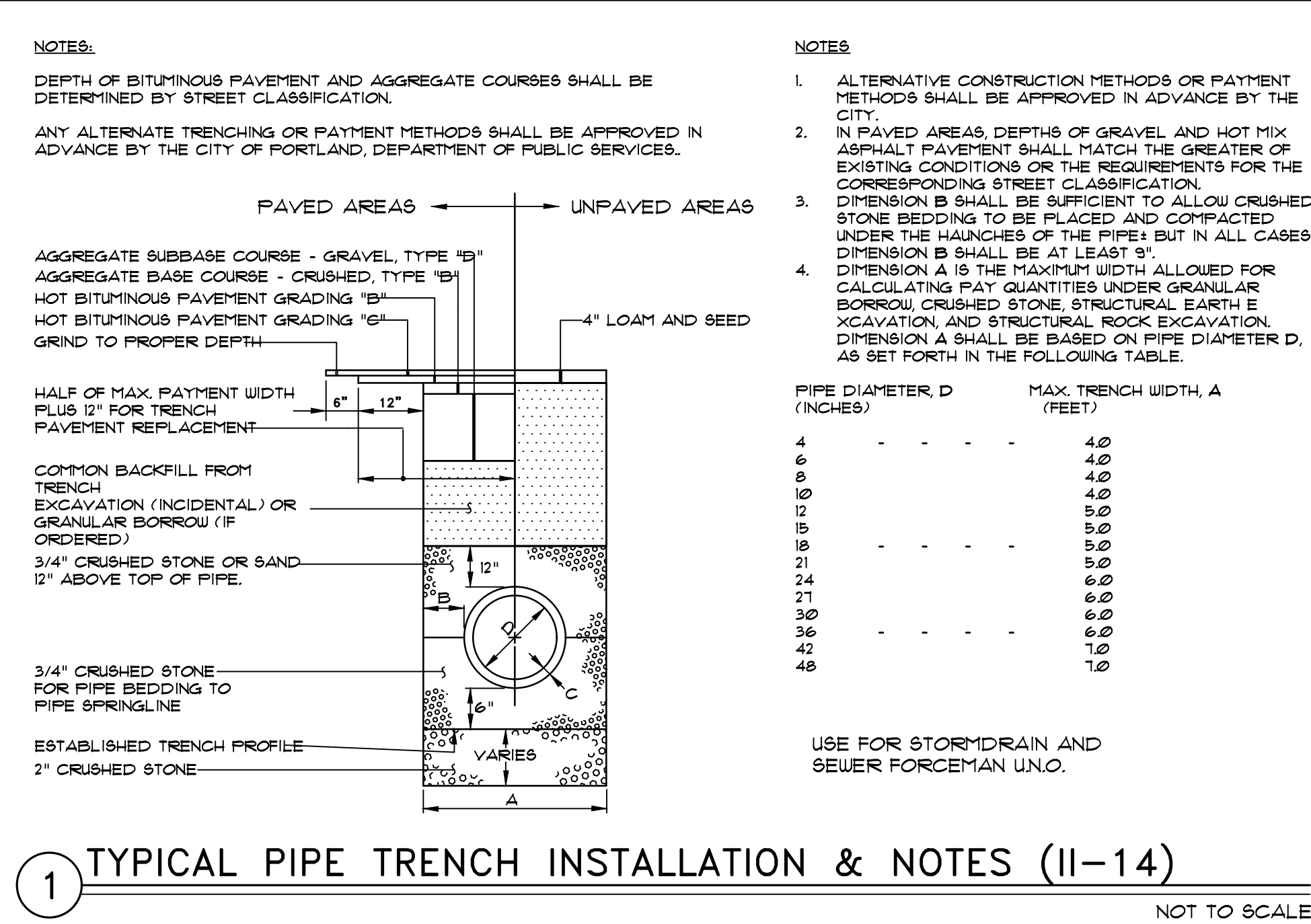
MAPLOT 129/F/9.8.11



3 CABLE TRENCH SECTION
NOT TO SCALE



2 TYPICAL WATER MAIN SECTION
NOT TO SCALE



1 TYPICAL PIPE TRENCH INSTALLATION & NOTES (11-14)
NOT TO SCALE

LIMIT OF ROCK PAYMENT

PRECAST CONCRETE STRUCTURES:
12" BELOW STRUCTURE,
STRUCTURE O.D. + 12"

TRENCHES:
6" BELOW PIPE O.D./CABLE INVERT,
PIPE O.D./CABLE + 12", MIN. 3' WIDE

POST & POLE BASE:
LIMIT OF CONCRETE BASE

PAVED SURFACES & BALL FIELD:
BOTTOM OF SUBBASE RELATIVE TO FINISH SURFACE

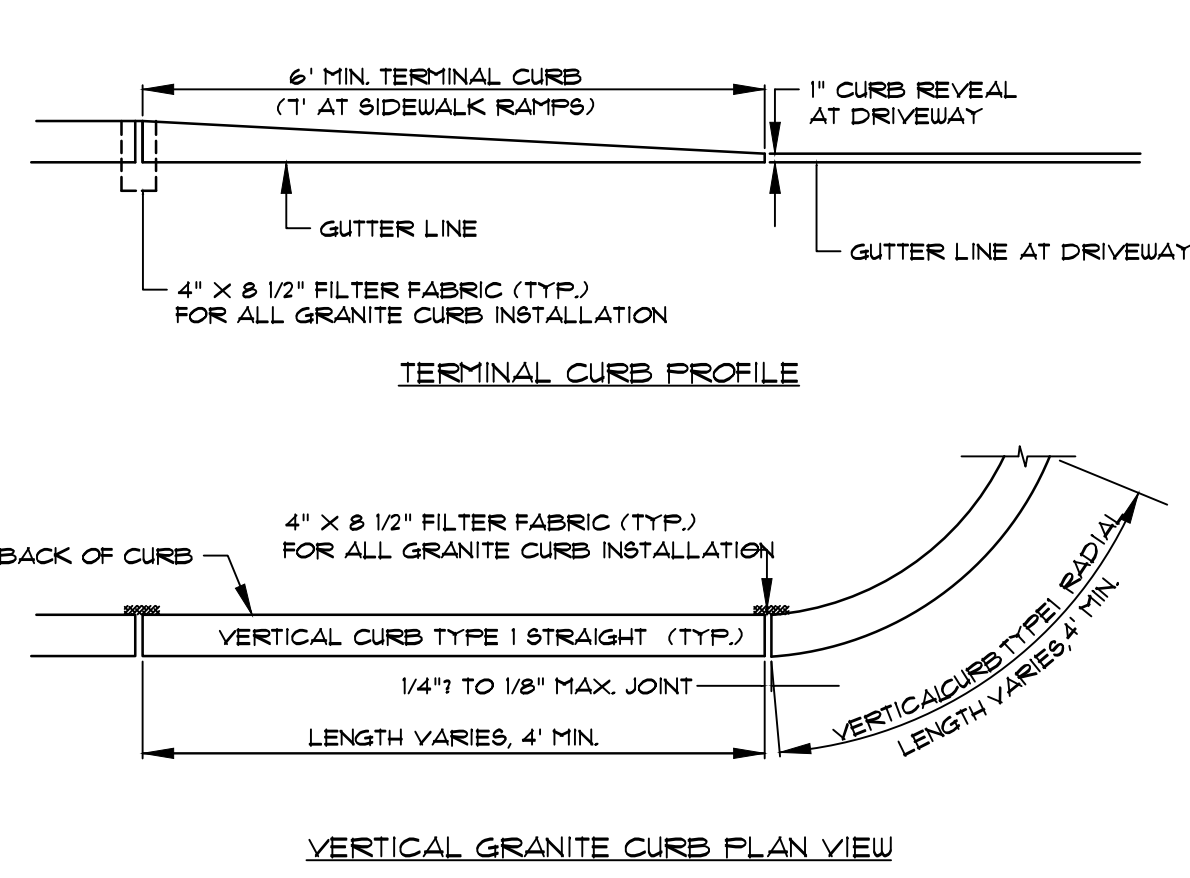
UNDERGROUND UTILITIES WARNING TAPE

IDENTIFICATION TAPE TO BE INSTALLED ABOVE ALL NEW UNDERGROUND UTILITIES AND ABOVE ANY EXISTING UTILITIES THAT MAY BE EXPOSED BY THIS CONSTRUCTION.

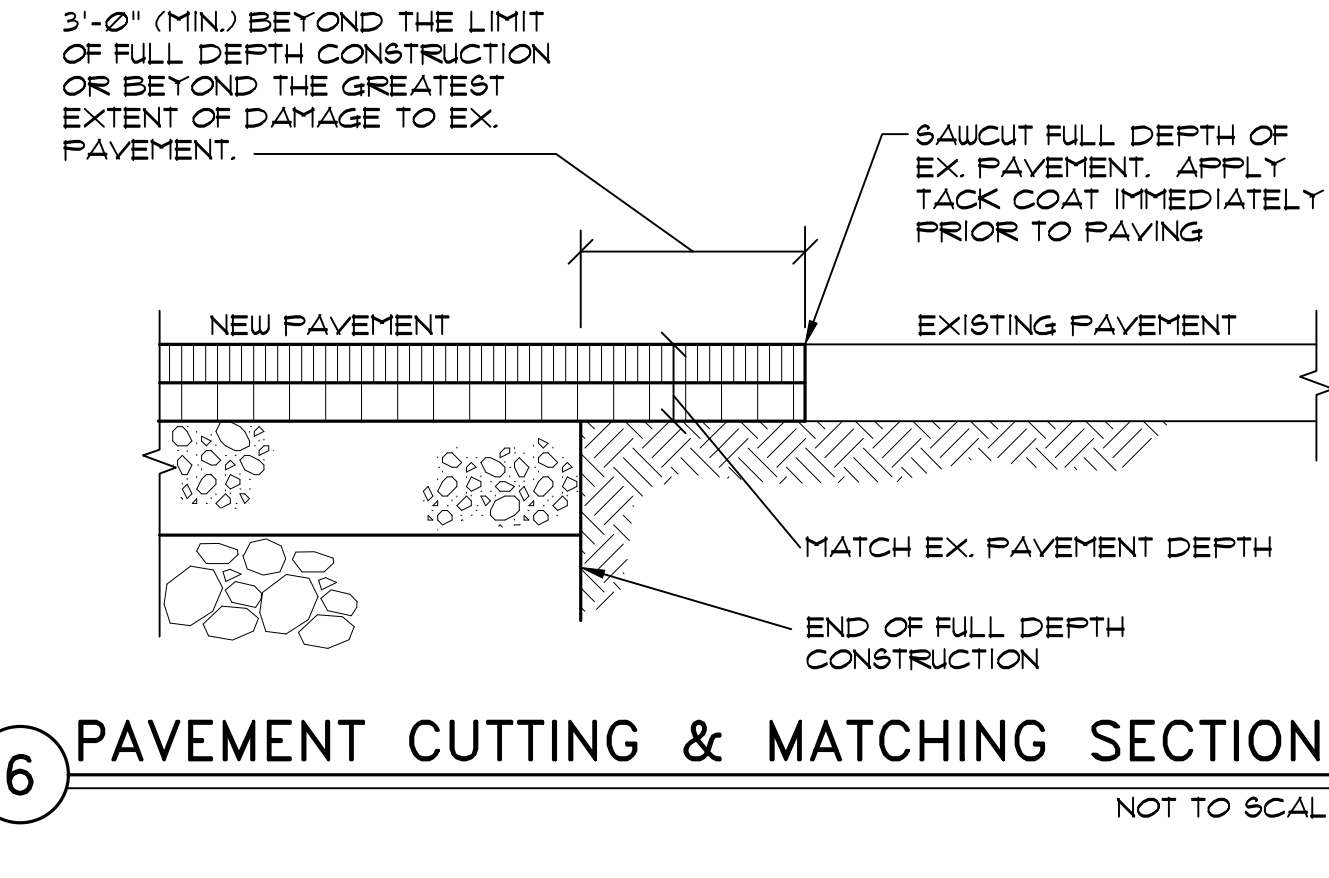
DETECTABLE UNDERGROUND MARKING TAPE TO BE PERMANENT, BRIGHT COLORED, CONTINUOUS-PRINTED PLASTICIZED ALUMINUM TAPE, INTENDED FOR DIRECT-BURIAL SERVICE NOT LESS THAN 3" WIDE x 5 MILS THICK. PROVIDE TAPE WITH BLACK PRINTING IDENTIFYING THE UTILITY. DETECTABLE WARNING TAPE REQUIRED OVER ALL WATER, SEWER, DRAINAGE, OR GAS UTILITIES. TAPE TO BE TERRA TAPE BY REEF INDUSTRIES, INC., www.reefindustries.com, OR EQUAL.

APWA UNIFORM COLOR CODE:

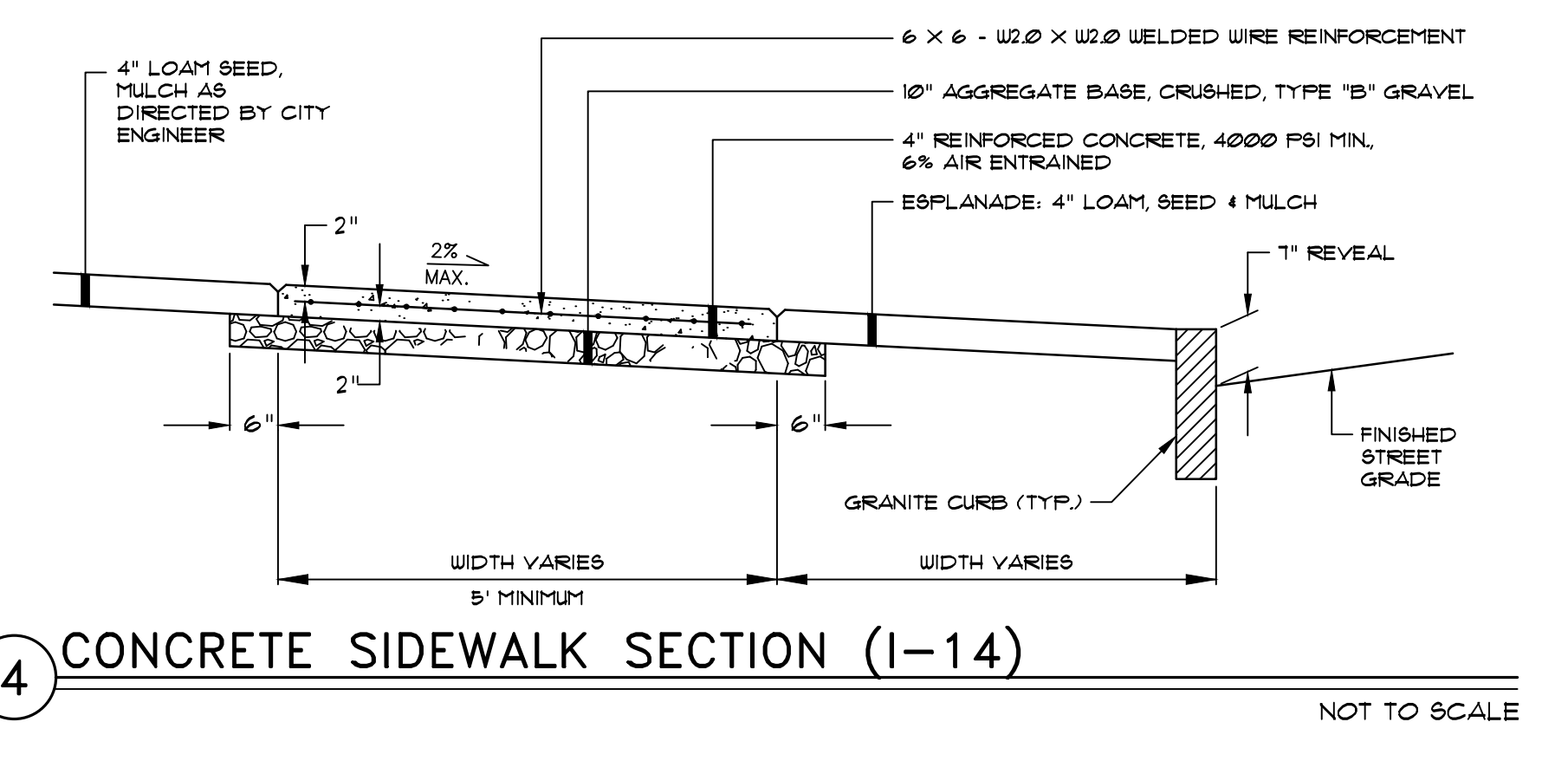
WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES



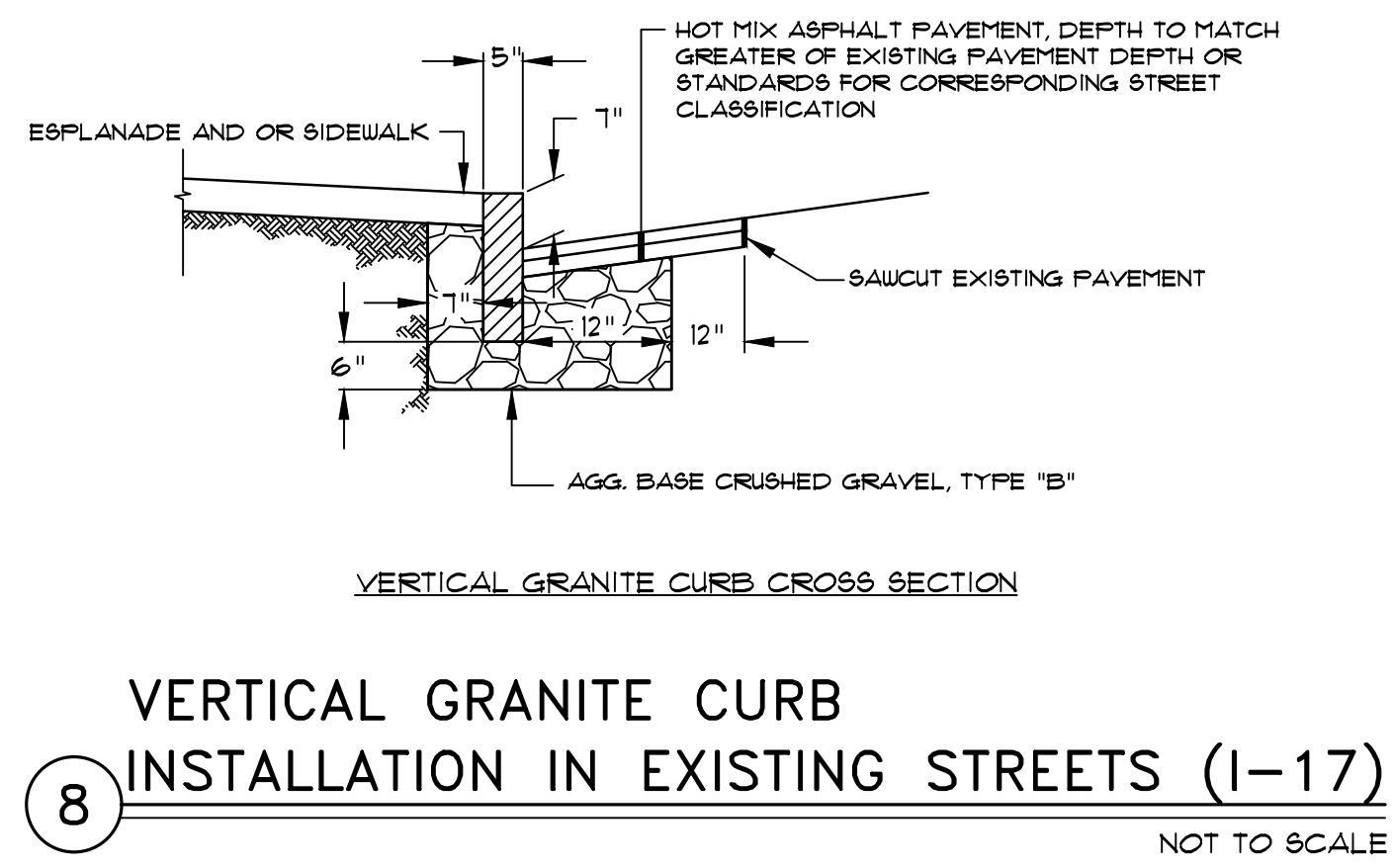
6 PAVEMENT CUTTING & MATCHING SECTION
NOT TO SCALE



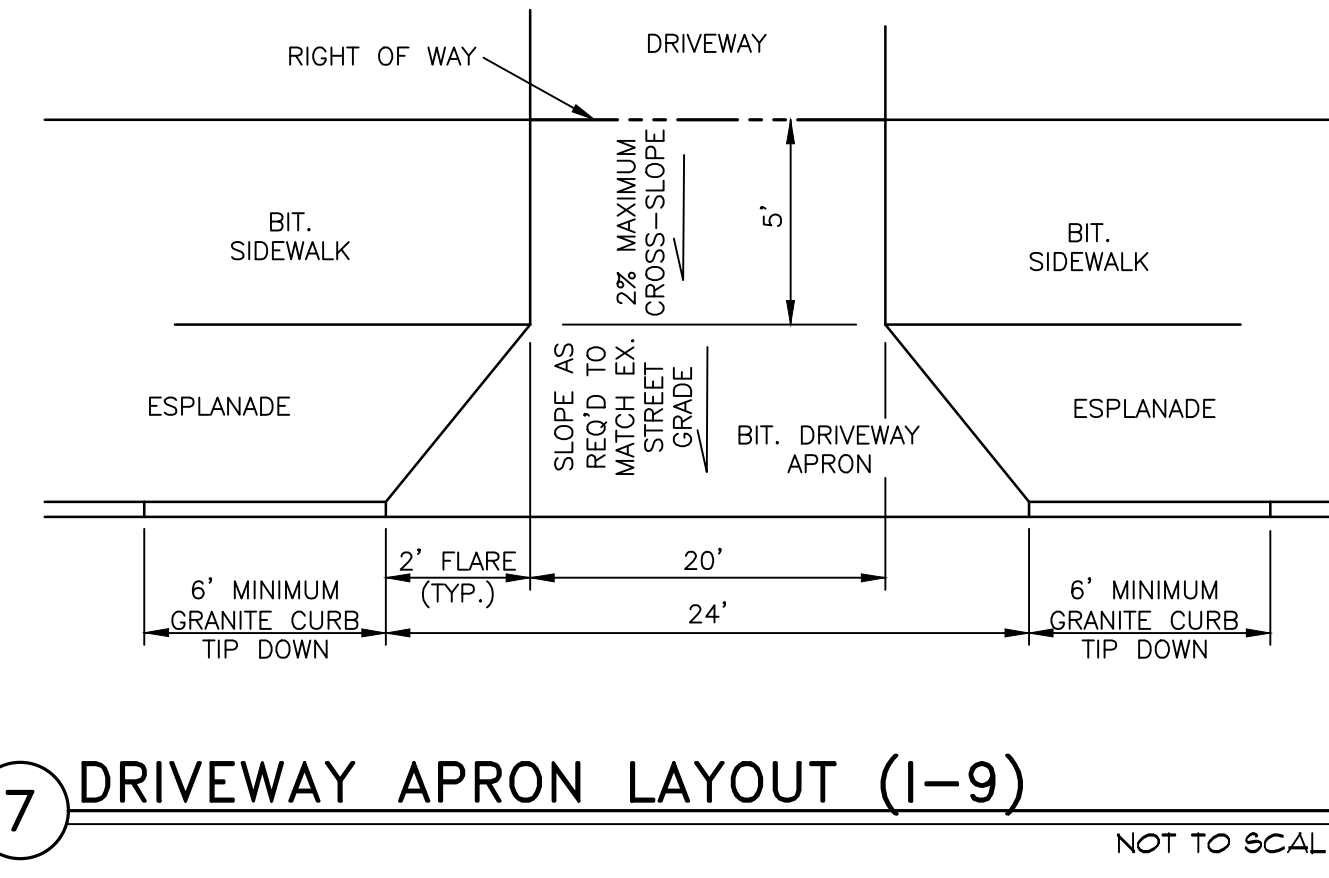
7 DRIVEWAY APRON LAYOUT (1-9)
NOT TO SCALE



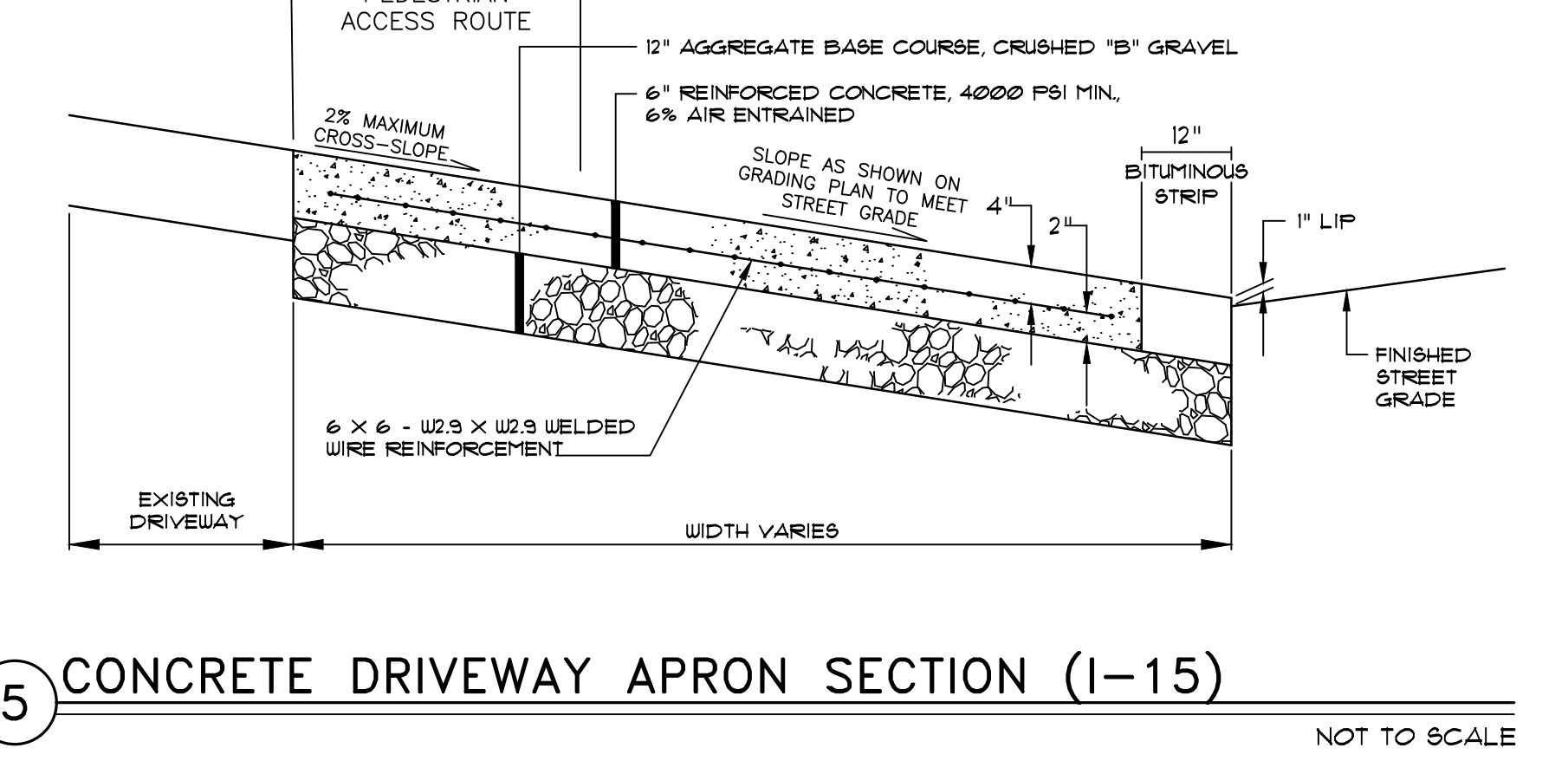
4 CONCRETE SIDEWALK SECTION (1-14)
NOT TO SCALE



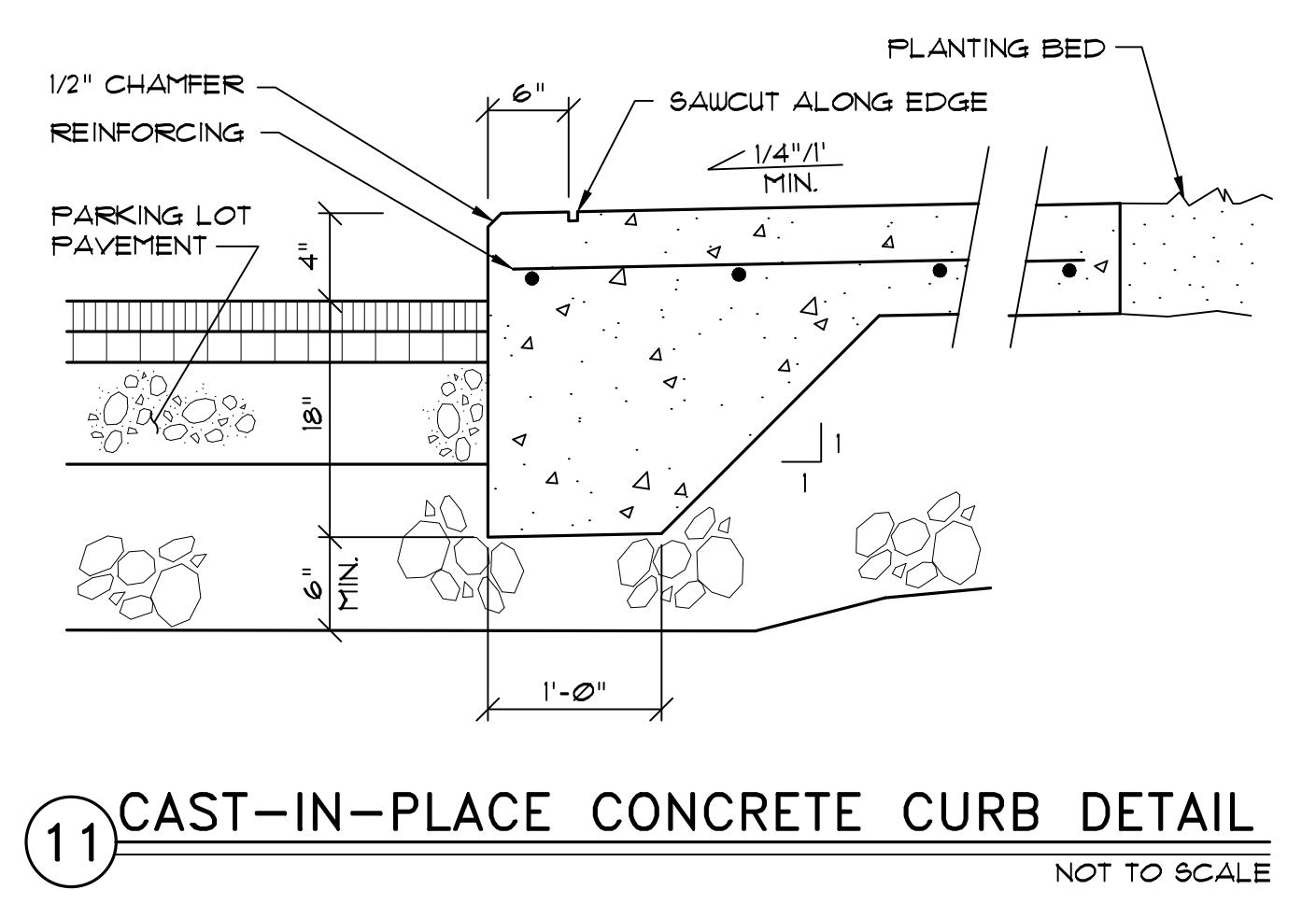
8 VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREETS (1-17)
NOT TO SCALE



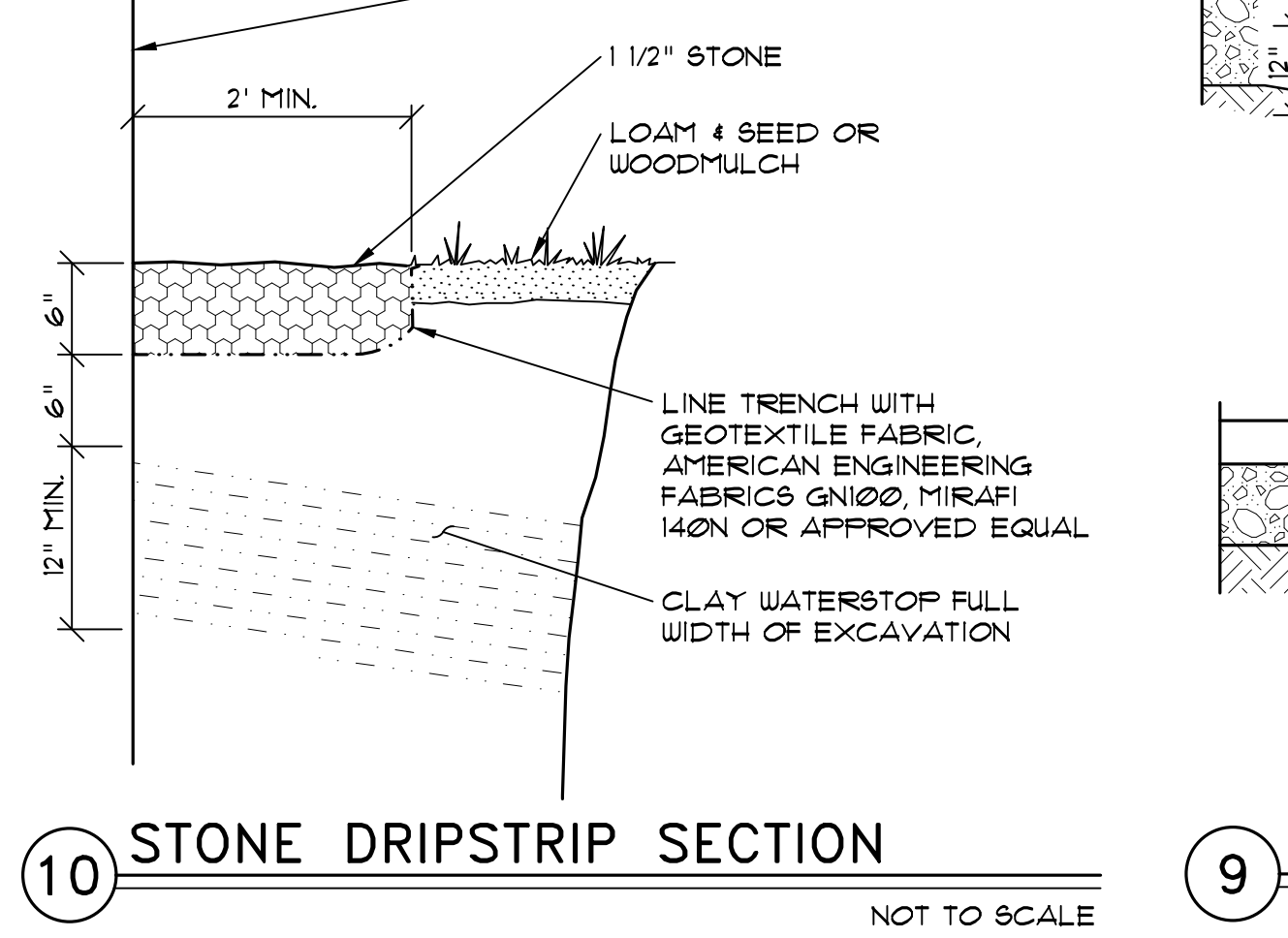
5 CONCRETE DRIVEWAY APRON SECTION (1-15)
NOT TO SCALE



9 SCHEDULE OF SURFACE FINISHES
NOT TO SCALE



11 CAST-IN-PLACE CONCRETE CURB DETAIL
NOT TO SCALE



10 STONE DRIPSTRIP SECTION
NOT TO SCALE

PINKHAM & GREER
CIVIL ENGINEERS

28 VANNAH AVE. PORTLAND, ME 04103
TEL: 207.781.5242 FAX: 207.781.4245

THOMAS S. GREER
REGISTERED PROFESSIONAL ENGINEER
MAINE LICENSE NO. 16286
EXPIRATION DATE 12-31-2025

REV.	DATE	DESCRIPTION
1	5/20/18	REV'D PER CITY REVIEW COMMENTS

VANNAH WHITE, INC.
28 VANNAH AVENUE, PORTLAND, ME

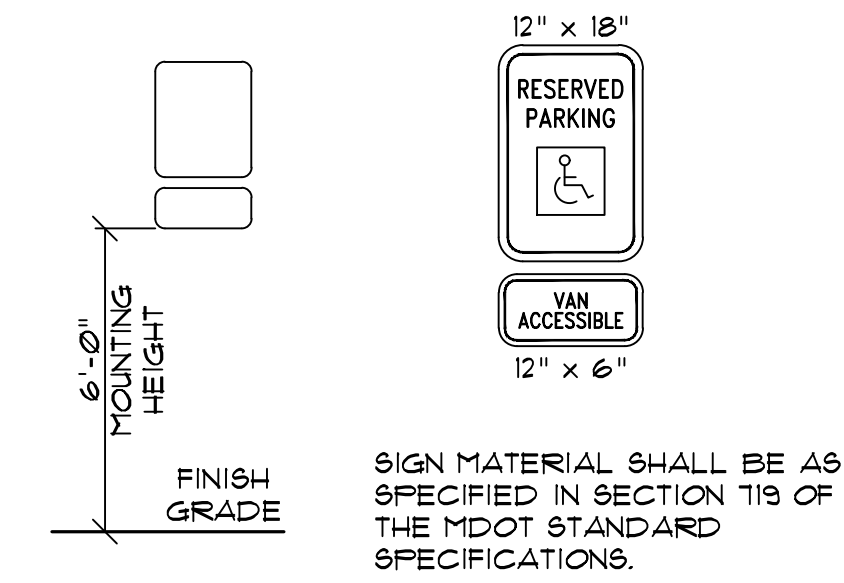
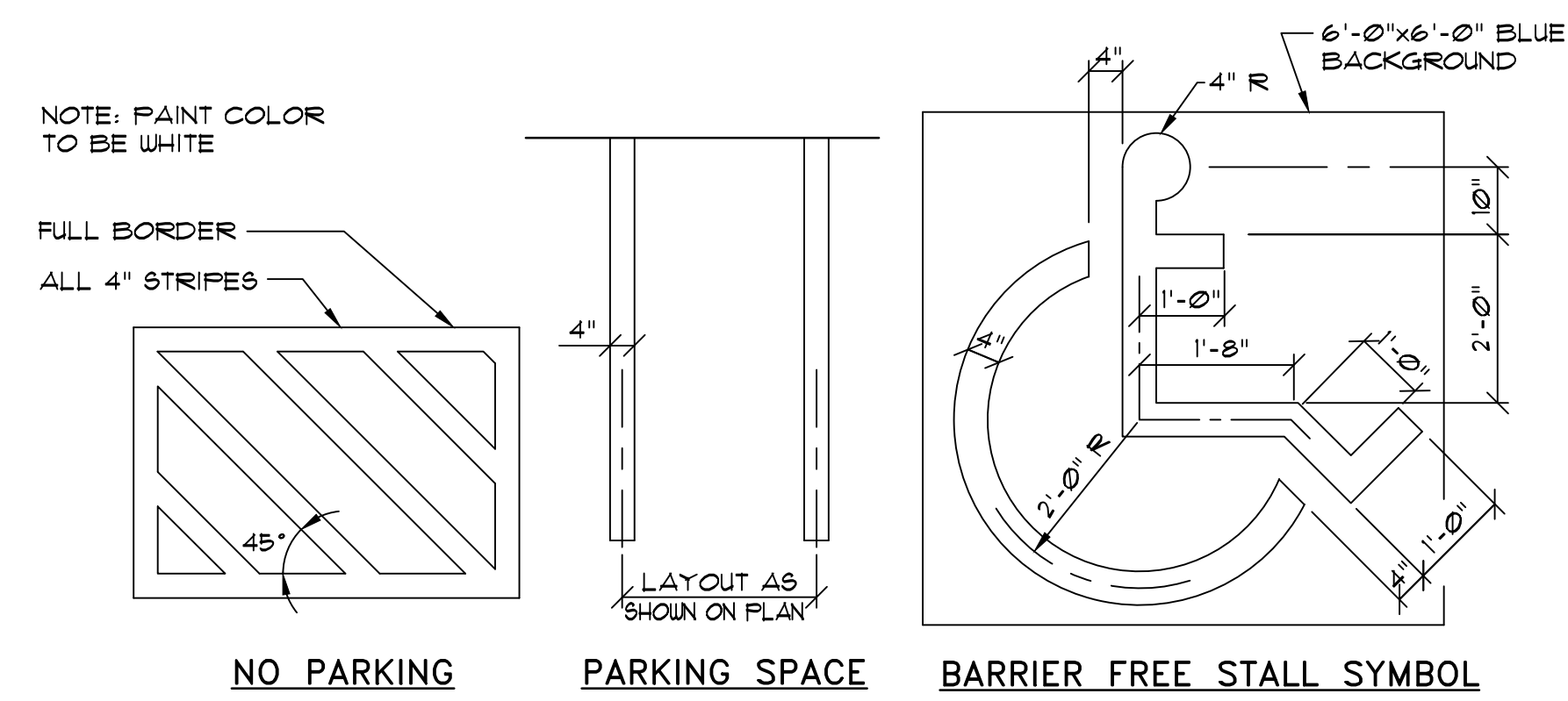
SCALE: AS SHOWN
DATE: MARCH 5, 2018
PROJECT: 17186

DRN BY: JDC
DESIGN BY: TSG
CHK BY: TSG

THE 28, a condominium
28 VANNAH AVENUE, PORTLAND, MAINE

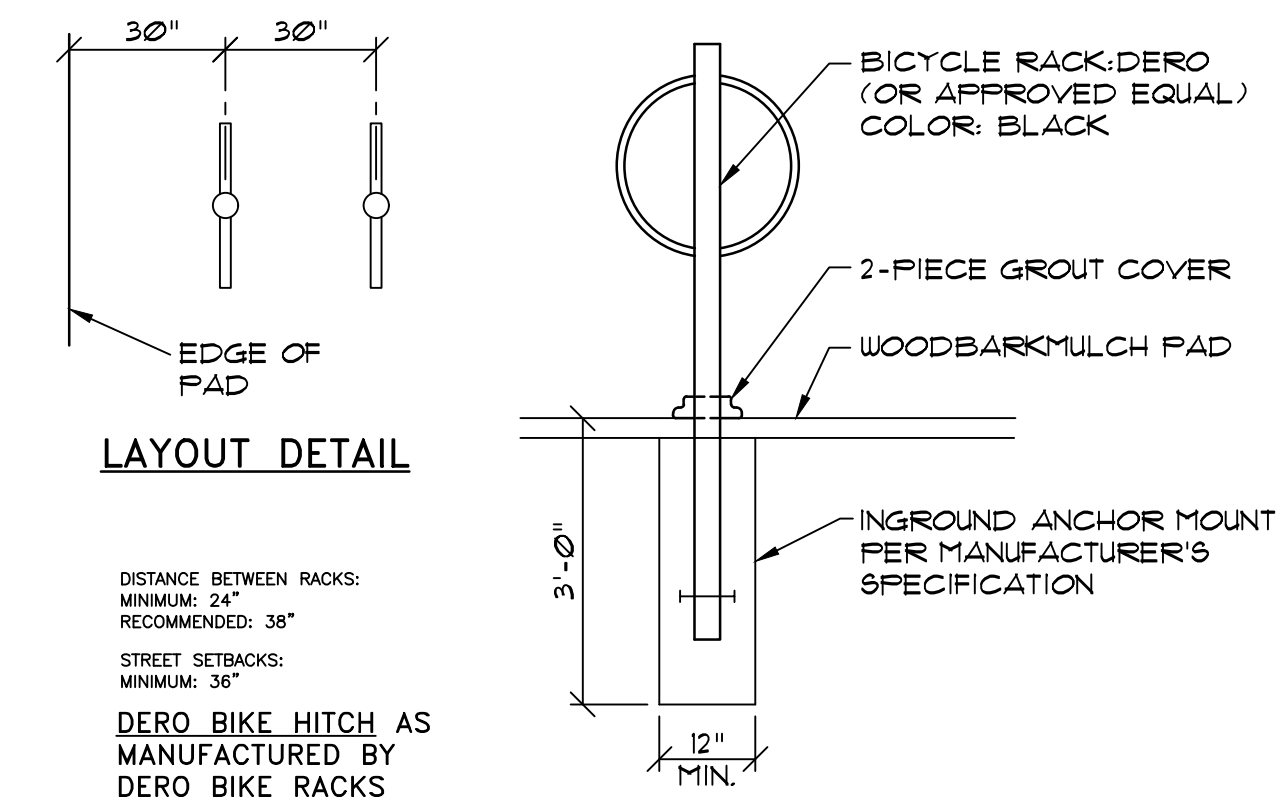
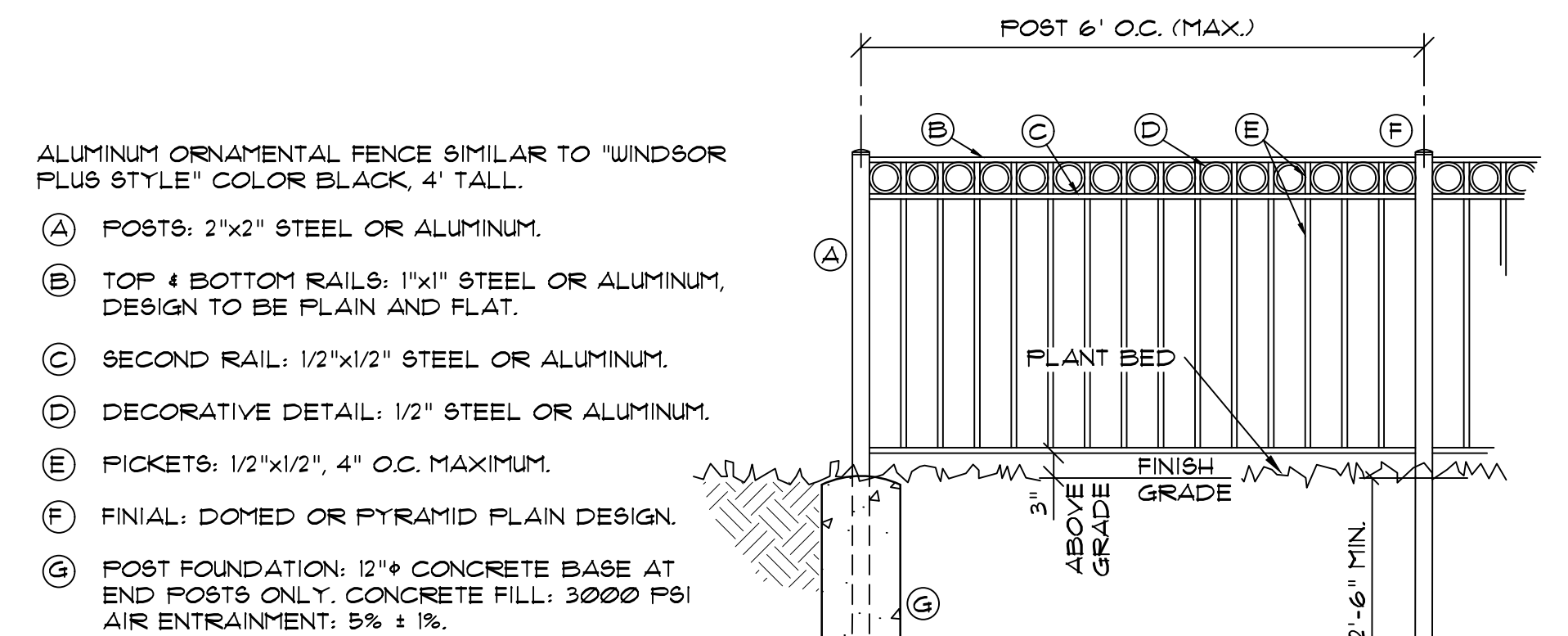
C3.1

SITE DETAILS



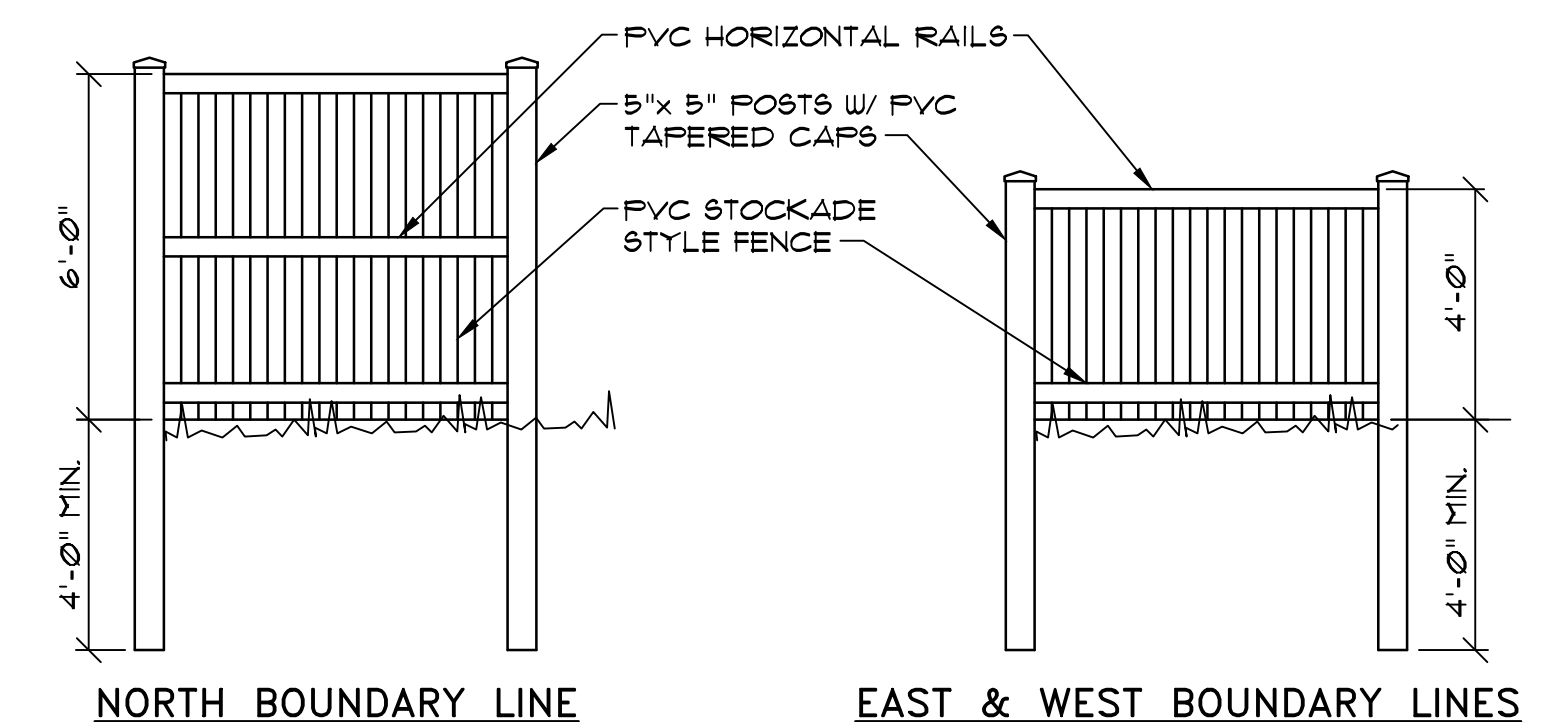
2 STRIPING DETAILS

1 ACCESSIBLE PARKING SPACE SIGN DETAILS



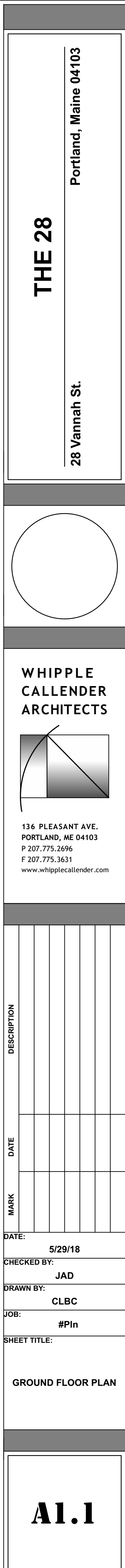
4 DECORATIVE FENCE DETAIL

3 EXTERIOR RACK DETAIL



4 STOCKADE STYLE FENCE DETAILS

VANNAH WHITE, INC.
 28 VANNAH AVENUE, PORTLAND, ME





1
A2.1
ELEVATION - EAST
SCALE: 1/4" = 1'-0"



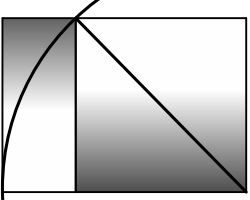
2
A2.1
ELEVATION - UNDER CANOPY
SCALE: 1/4" = 1'-0"



3
A2.1
ELEVATION - SOUTH
SCALE: 1/4" = 1'-0"

THE 28
Portland, Maine 04103
28 Vannah St.

**WHIPPLE
CALLENDER
ARCHITECTS**



136 PLEASANT AVE.
PORTLAND, ME 04103
P 207.775.3696
F 207.775.3631
www.whipplecallender.com

DESCRIPTION

DATE

MARK

DATE:

CHECKED BY:

DRAWN BY:

JOB:

SHEET TITLE:

ELEVATIONS - NORTH &
EAST

A2.1



1
A2.2
ELEVATION - WEST
SCALE: 1/4" = 1'-0"



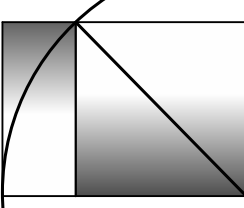
2
A2.2
ELEVATION - NORTH
SCALE: 1/4" = 1'-0"

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MARK	DATE	DESCRIPTION

DATE: 5/29/18

CHECKED BY: JAD

DRAWN BY: CLBC

JOB: #Pin

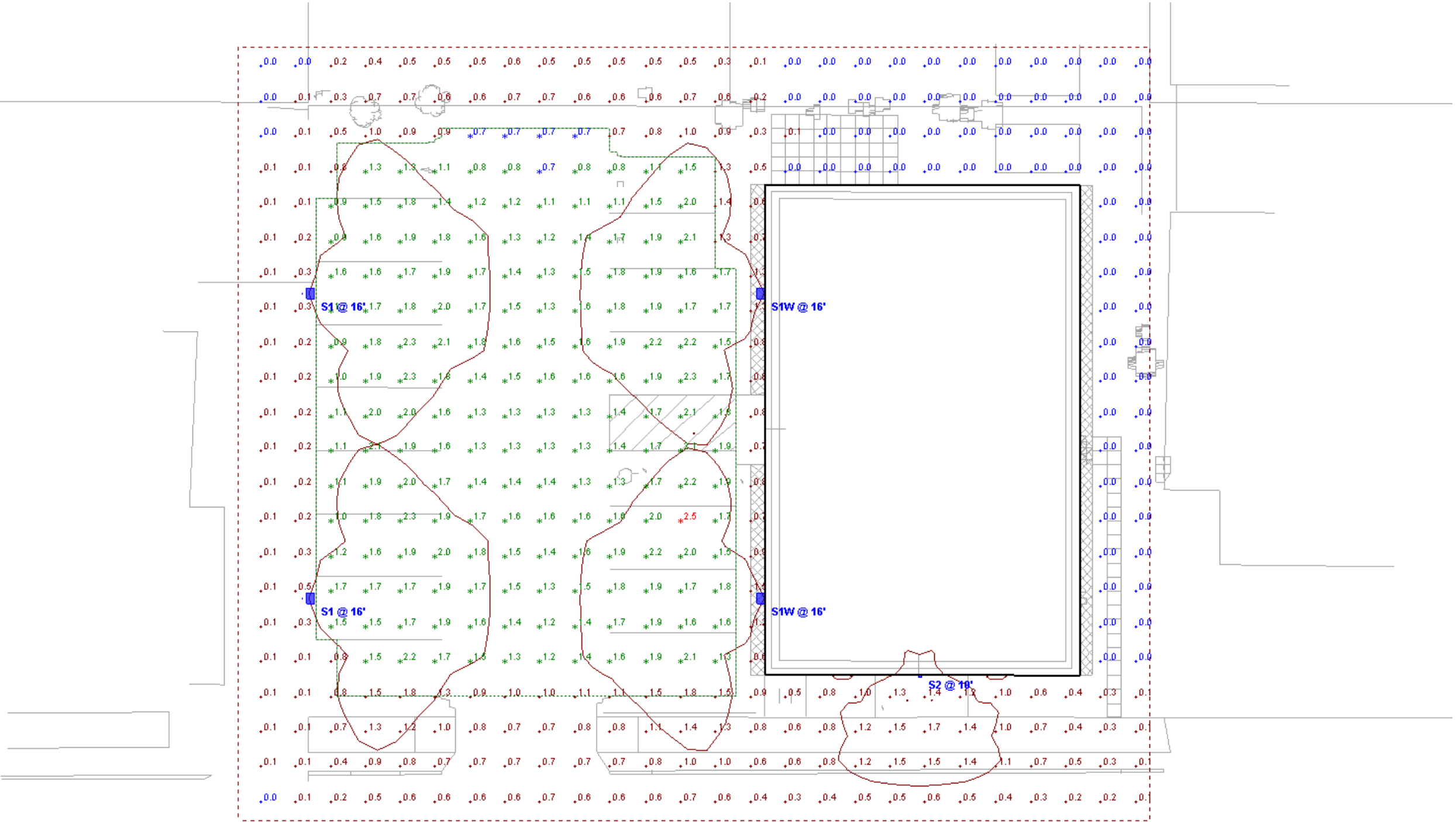
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A2.2

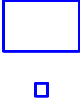


4195 The 28, Vannah Ave
Photometric

Designer
SAJ
Date
3/5/2018
Scale
Not to Scale
Drawing No.
E0
Summary



Statistics							
Description	Symbol	Avg	Max	Min	Max / Min	Avg / Min	Avg / Max
Overall Site	+	0.9 fc	2.5 fc	0.0 fc	N/A	N/A	0.4:1
Parking Area	X	1.6 fc	2.5 fc	0.7 fc	3.6:1	2.3:1	0.6:1

Luminaire Schedule											
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	S1	2	BEACON PRODUCTS	VP-S-22NB-50-4K-T4-BLC	SMALL VIPER	C-70-CRI DATA SHOWN IS SCALED FROM 3036	1	VP-S-22NB-50-4K-T4-BLC.ies	3554.546	0.75	53.65
	S1W	2	BEACON PRODUCTS	VP-S-22NB-50-4K-T4-BLC	SMALL VIPER	C-70-CRI DATA SHOWN IS SCALED FROM 3036	1	VP-S-22NB-50-4K-T4-BLC.ies	3554.546	0.75	53.65
	S2	1	Hubbell Outdoor	LNC-5LU-4K-3-X	WALLMOUNT LED TYPE 3	5- NICHIA 4K LEDS	1	LNC-5LU-4K-3-X.ies	1076.823	1	12.9



4195 The 28, Vannah Ave
Photometric

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SAJ
Date
3/5/2018
Scale
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Summary